

# Sustainable Growth Programme for Finland

Recovery and Resilience Plan

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# Sustainable Growth Programme for Finland

## Recovery and Resilience Plan

Finnish Government Helsinki 2021

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## Sustainable Growth Programme for Finland Recovery and Resilience Plan

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### Abstract

The Sustainable Growth Programme for Finland will support growth that is ecologically, socially and economically sustainable in line with the aims of the Government Programme. The Sustainable Growth Programme will boost competitiveness, investment, research, development and innovation, and efforts to raise skill levels. Funding for the Sustainable Growth Programme for Finland will be from the EU's one-off recovery instrument (Next Generation EU).

The Next Generation EU recovery package is divided into seven parts, of which the Recovery and Resilience Facility (RRF) is the largest by far. Each Member State must present a national

Recovery and Resilience Plan in order to receive RRF funding. Finland's Recovery and Resilience Plan will form part of the Sustainable Growth Programme for Finland.

The ministerial working group on sustainable growth in Finland has outlined the general objectives of the programme:

- Decrease in greenhouse gas emissions
- Productivity growth
- Raising the employment rate
- Faster access to care
- Progress in equality

This programme consists of four sections:

- 1) A green transition will support structural adjustment of the economy and underpin a carbon- neutral welfare society
- 2) Digitalisation and a digital economy will strengthen productivity and make services available to all
- 3) Raising the employment rate and skill levels will accelerate sustainable growth
- 4) Access to health and social services will be improved and their cost-effectiveness enhanced

**Keywords** economic policy, economic growth, sustainable development, green economy, digitalisation

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## Suomen kestävän kasvun ohjelma Elpymis- ja palautumissuunnitelma

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**Tiivistelmä**

Suomen kestävän kasvun ohjelmalla tuetaan hallitusohjelman tavoitteiden mukaisesti ekologisesti, sosiaalisesti ja taloudellisesti kestävää kasvua. Ohjelma vauhdittaa kilpailukykyä, investointeja, osaamistason nousua sekä tutkimusta, kehitystä ja innovaatioita.

Kestävän kasvun ohjelman rahoitus tulee EU:n kertaluonteisesta elpymisvälineestä (Next Generation EU). Elpymisväline jakaantuu seitsemään ohjelmaan, joista elpymis- ja palautumistukiväline (RRF) on kooltaan ylivoimaisesti suurin. Jäsenvaltion on esitettävä kansallinen elpymis- ja palautumissuunnitelma (RRP), jotta se voi saada elpymis- ja palautumistukivälineen rahoitusta. Suomen elpymis- ja palautumissuunnitelma on osa Suomen kestävän kasvun ohjelmaa.

Suomen kestävän kasvun ministerityöryhmä on linjannut ohjelman yleiset tavoitteet:

- Kasvihuonekaasupäästöjen vähenemä
- Tuottavuuskasvu
- Työllisyysasteen nosto
- Hoitoon pääsyn nopeuttaminen
- Tasa-arvon edistyminen

Ohjelma jakautuu neljään pilariin:

- 1) Vihreä siirtymä tukee talouden rakennemuutosta ja hiilineutraalia hyvinvointiyhteiskuntaa
- 2) Digitalisaation ja datatalouden avulla vahvistetaan tuottavuutta ja tuodaan palvelut kaikkien saataville
- 3) Työllisyysasteen ja osaamistason nostaminen kestävän kasvun vauhdittamiseksi
- 4) Sosiaali- ja terveydenhuollon palvelujen saatavuuden vahvistaminen ja kustannusvaikuttavuuden lisääminen

**Asiasanat** talouskasvu, talouspolitiikka, kestävä kehitys, vihreä talous, digitalisaatio

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## Finlands program för hållbar tillväxt Planen för återhämtning och resiliens

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### Referat

Finlands program för hållbar tillväxt stöder ekologiskt, socialt och ekonomiskt hållbar tillväxt i enlighet med målen i regeringsprogrammet. Programmet främjar konkurrenskraft, investeringar, en höjning av kompetensnivån samt forskning, utveckling och innovationer.

Programmet för hållbar tillväxt finansieras med medel från EU:s tillfälliga återhämtningsinstrument (Next Generation EU). Återhämtningsinstrumentet indelas i sju program av vilka faciliteten för återhämtning och resiliens (RRF) är det överlägset största. För att kunna få finansiering från faciliteten för återhämtning och resiliens måste en medlemsstat lägga fram en nationell plan för återhämtning och resiliens (RRP). Finlands plan för återhämtning och resiliens är en del av Finlands program för hållbar tillväxt.

Ministerarbetsgruppen för hållbar tillväxt i Finland har fastställt som programmets allmänna mål att

- minska växthusgasutsläppen
- öka produktiviteten
- höja sysselsättningsgraden
- påskynda tillgången till vård – främja jämställdhet.

Programmet bygger på fyra pelare:

- 1) Den gröna övergången stöder ekonomiska strukturomvandlingar och ett koldioxidneutralt välfärdssamhälle
- 2) Genom digitalisering och dataekonomi stärks produktiviteten och tryggas tillgången till tjänster för alla
- 3) Sysselsättningsgraden och kunskapsnivån höjs i syfte att påskynda en hållbar tillväxt
- 4) Tjänsterna inom social- och hälsovården görs tillgängliga för alla och produceras på ett mer kostnadseffektivt sätt

**Nyckelord** finanspolitiken, ekonomisk tillväxt, hållbar utveckling, grön ekonomi, digitalisering

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## INTRODUCTION

Finland's Recovery and Resilience Plan (RRP) is Finland's national plan for leveraging funding from the EU Recovery and Resilience Facility (RRF). This plan forms part of the Sustainable Growth Programme for Finland.

Funding for the Sustainable Growth Programme will be received from the EU RRF; the purpose of the Programme is to coordinate funding for various programmes from the RRF. The Ministry of Finance prepared the Programme in broad cooperation with other ministries, regional operators and the business and research sectors. Several hearings and stakeholder events were held concerning the Sustainable Growth Programme in autumn 2020 and spring 2021. On 27 November 2020, the Government submitted a government report to Parliament describing the proposed application of funds from the RRF in Finland. Parliament returned a statement on the report on 19 February 2021. The preliminary RRP was submitted to the European Commission on 15 March 2021.

The RRP was drawn up on the basis of the maximum financial contribution per EU Member State as defined in Annex IV of *Regulation (EU) 2021/241 of the European Parliament and of the Council of 12 February 2021 establishing the Recovery and Resilience Facility* (RRF Regulation), i.e. EUR 2.086 billion at current prices. As of now, this estimate of Finland's maximum available contribution is partly based on economic prognoses and therefore involves uncertainty factors. The final maximum contribution will be confirmed in summer 2022.

The RRP is to be adopted by the Government on 27 May 2021 and submitted to the EU. The European Commission will then have a maximum of two months to evaluate it. If the Commission approves, i.e. if the RRP fulfils the criteria of the RRF Regulation, then the Commission will make a proposal for a Council Implementing Decision. The Council usually adopts Implementing Decisions within four weeks of the Commission submitting a proposal.

The RRP incorporates Finland's National Reform Programme 2021 (Europe 2020 Strategy).

# I General targets

## National targets

The Sustainable Growth Programme for Finland will support growth that is ecologically, socially and economically sustainable in line with the aims of the Government Programme. The Sustainable Growth Programme will boost competitiveness, investment, research, development and innovation, as well as measures to raise skill levels.

The ministerial working group on sustainable growth in Finland has outlined the general objectives of the programme:

- Reduction of greenhouse gas emissions
- Productivity growth
- Raising the employment rate
- Access to treatment at hospitals
- Progress in equality

## This programme consists of four pillars:



A green transition will support structural adjustment of the economy and underpin a carbon-neutral welfare society



Digitalisation and the data economy will strengthen productivity and make services available to all



Raising the employment rate and skill levels will accelerate sustainable growth



Access to health and social services will be improved and their cost-effectiveness enhanced.

## **Pillar 1: The green transition will support structural adjustment of the economy and underpin a carbon-neutral welfare society (Green Transition)**

- Green transition solutions will be accelerated to facilitate significant reductions in emissions in Finland and elsewhere to support national targets for carbon neutrality and the circular economy. This will enable future sustainable growth as well.
- The aim is to make Finland a global leader in the fields of hydrogen and circular economy, high added value bioproducts, zero-emission energy systems and other climate and environmental solutions; to improve energy efficiency; and to accelerate the transition to fossil-free transport and heating. Actions to attain these targets include mobilising the widest possible range of investments in tangible and intangible assets that efficiently promote green transition and bring comprehensive solutions to the market.

## **Pillar 2: Digitalisation and the data economy will strengthen productivity and make services available to all**

- Digitalisation and the data economy will be boosted in private and public services so as to improve cost-efficiency and productivity and to make safe services for good everyday life available to everyone across the country.
- The targets are to create a competitive operating environment for businesses and to turn Finland into a world-class producer of data-driven services for digital societies, together with secure solutions for these services, including solutions to promote the digitalisation of transport.
- The digital leap in society at large will be encouraged through actions targeted at accelerating digital, technology and data investments.

## **Pillar 3: Raising the employment rate and upskilling will accelerate sustainable growth (employment and competence)**

- Raising the employment rate will be boosted with a client-oriented reform of services (employment and economic development services, work ability support, competence) and by leveraging digitalisation, promoting employment of persons with partial work ability, streamlining work-based immigration, enhancing integration and improving wellbeing at work.

- Long-term growth will be promoted by upskilling among young people and adults and by introducing opportunities for location-independent continuous learning, etc.
- Shared use of research infrastructures will be boosted, and R&D intensity will be raised in order to accelerate growth, also in the long term.
- Renewal, recovery and sustainable growth in sectors most affected by the pandemic crisis will also be accelerated by leveraging innovations and research findings in the creative economy and in the events industry.

#### **Pillar 4: Access to health and social services will be improved and their cost-effectiveness enhanced (health and social services)**

- Treatment, rehabilitation and service deficits will be reduced by reforming operating models and by introducing new digital services.
- Access to treatment will be improved nationwide by introducing new operating procedures (also in mental health services).
- This will contribute to the attainment of the targets of the health and social services reform.
- The target is to make services available to everyone and to reform them from the perspective of the individual and cost-effectively.

### **General targets of the EU Recovery and Resilience Facility**

The EU Regulation on the Recovery and Resilience Facility (RRF)<sup>1</sup> specifies six areas of policy or pillars that should be promoted in Member States' national plans.

#### **Green transition**

The Sustainable Growth Programme for Finland provides broad support for the targets of the Paris Climate Accord and the EU Green Deal and for implementation of the various components and strategies of the latter, while also being consistent with achieving the

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<sup>1</sup> Regulation (EU) 2021/241 of the European Parliament and of the Council of 12 February 2021 establishing the Recovery and Resilience Facility (OJ 2021 L 57 p. 17): <https://eur-lex.europa.eu/eli/reg/2021/240/oj>

ambitious carbon neutrality targets of the EU and of Finland. According to the EU Green Deal, attaining the ambitious climate target of the EU will require action in all sectors of society; at the same time, implementing the programme will carry the EU towards a sustainable economy.

Under the Green Deal launched by the European Commission, Europe is to be climate-neutral by the year 2050, efficient use of natural and other resources is to be boosted by transitioning to a pure circular economy, loss of biodiversity is to be halted and environmental pollution is to be reduced. It must be ensured that this transition will be fair and inclusive.

The prioritised investment packages in the Sustainable Growth Programme for Finland respond to the aforementioned challenges. Energy production is responsible for a substantial percentage of greenhouse gas emissions contributing to climate change. Reducing emissions will require the introduction of new, clean technologies in energy production and use. Similarly, attaining the carbon neutrality target will require a substantial reduction in emissions from industry. For industry to make the transition to carbon neutrality and the circular economy will boost the competitiveness of Finnish enterprises and create growth opportunities through new, innovative products, solutions and services. In the near future, industrial development will focus on the fourth industrial revolution, i.e. a shift towards smart, low-carbon industry and the circular economy.

Buildings account for about 32% of Finland's energy consumption and for about 30% of the greenhouse gas emissions from energy consumption. Renovating Finland's building stock is a vital component in Finland's transition to a carbon-free clean energy system.

Finland has an ambitious target of halving greenhouse gas emissions from domestic transport by 2030. In road traffic, the adoption of new motive power is a key requirement for reducing emissions, and this will require a comprehensive nationwide public and private distribution infrastructure for alternative energy sources. For example, biogas distribution and high-powered electric vehicle charging points will facilitate the transition in traffic. Another target is to curb climate change and to promote adaptive measures, to reverse the loss of biodiversity and to restore good water quality in waterways. The actions to be taken are geared towards the targets defined in the European Green Deal for a toxic-free environment and zero emissions, environmental cleanup and improvement, and restoring the natural functions of surface water and groundwater. As an example, spreading gypsum (an industrial by-product) in fields and recycling nutrients can facilitate the transition to the circular economy and reduce the nutrient load on the Baltic Sea and on waterways while also reducing greenhouse gas emissions.

50% of the Programme funding will be allocated to supporting the green transition, a percentage substantially higher than given in the Regulation. The 50% target is supported by the Programme policy of having a significant portion of investments and reforms be 100% supportive of the green transition and have a significant impact on emission reductions. Investments that fully support the green transition are those that address: the shift in the energy system; reforms and investments supporting the green transition and digitalisation in industry; low-carbon solutions for communities and transport; reducing the environmental and climate impacts of the building stock; and implementing environmental sustainability and nature conservation. Also, a substantial percentage of RDI activities are 100% supportive of the green transition. Sectors and investments listed, identified and evaluated as being contrary to the principle of Do No Significant Harm (DNSH) will not be directly or indirectly aided out of the Programme.

### Digital transformation

Digital transformation is a horizontal target running through several of the pillars in the Programme. Substantially more than 20% of the overall funding in the Programme will go towards supporting digital transformation. One of the four pillars in the Programme (Pillar 2: 'Digitalisation and the data economy will strengthen productivity and make services available to all') is wholly aimed at accelerating digitalisation and the data economy. Digitalisation will be boosted in private and public services so as to improve cost-efficiency and productivity and to make safe services for good everyday life available to everyone across the country.

The targets are to create a competitive operating environment for businesses and to turn Finland into a world-class producer of data-driven services for digital societies, together with secure solutions for these services. The investments and reforms in this pillar are 100% supportive of digitalisation and have to do with the digital infrastructure. Some of the actions under the green transition, the improvement of the labour market and competence, RDI activities and health and social services also support digitalisation.

Pillar 2 of the Sustainable Growth Programme for Finland provides strong support for a trend consistent with the Digital Economy and Society Index (DESI). In human capital and digital skills, improvements are sought through a package focusing on spearhead technologies. This includes the key R&D ICT investments, although such investments are also found in the other areas. The real-time economy and Digirail will have a particular impact on the use of the Internet by citizens and on digital technology integration and harmonisation and the creating of potential for the data economy. Broadband expansion will improve connectivity. Digital public sector services are a key target in all digitalisation projects in pillar 2 and in other pillars too. The target here is not simply to digitalise services but to eliminate processes and service needs. These actions are intended to

achieve a significant improvement in DESI scores. Cyber security and information security measures contribute to the competence and human capital component of the DESI.

### Smart, sustainable and inclusive growth

The European Commission provides strategic guidelines in its Annual Sustainable Growth Strategy for each year. The guidelines adopted by the Commission in autumn 2020 govern the proposed use of the Recovery and Resilience Facility. According to the Annual Sustainable Growth Strategy, the purpose of the RRF is to respond to the EU targets to achieve competitive sustainability and cohesion through its new growth strategy: the Green Deal. The purpose of the RRF is to strengthen actions responding to previously identified challenges: environmental sustainability, productivity, fairness and macroeconomic stability. Another aspect is to mitigate the adverse economic impacts of the coronavirus pandemic. According to the 2021 Annual Sustainable Growth Strategy, the guiding principles of the RRF are the green transition, digital transformation and productivity, fairness and macroeconomic stability. Finland's RRP is also built on these principles. The Commission also highlights European flagship areas in its Annual Sustainable Growth Strategy.

Pillar 1 in Finland's RRP ('A green transition will support structural adjustment of the economy and underpin a carbon-neutral welfare society') addresses the principles of the green transition in the Annual Sustainable Growth Strategy directly. It also responds to the targets in the European Green Deal of attaining a fair and prosperous society with a resource-efficient and competitive economy. The target under this pillar is to accelerate green transition solutions to facilitate significant reductions in emissions in Finland and elsewhere to support national targets for carbon neutrality and the circular economy. The aim is to make Finland a global leader in the fields of hydrogen and circular economy, high added value bioproducts, zero-emission energy systems and other climate and environmental solutions; to improve energy efficiency; and to accelerate the transition to fossil-free transport and heating. Research, development and innovation play a significant role in the action packages under this pillar. In accordance with the targets of the Annual Sustainable Growth Strategy, the purpose of public investments is to complement and steer private investments as necessary. Pillar 1 includes actions related to the European flagship area 'Renovate', because one of the action packages in pillar 1 addresses reducing the climate and environmental impacts of the building stock.

The action packages in pillar 2 ('Digitalisation and the data economy will strengthen productivity and make services available to all') are geared towards promoting digital transformation and improving productivity in accordance with the Annual Sustainable Growth Strategy. The target level for digital transformation in the plan is high, and more than 20% of the plan contributes to the attainment of digitalisation targets. In accordance

with the Annual Sustainable Growth Strategy, Finland's plan focuses on items such as reforms to improve online connections, for example by supporting digital infrastructure development in regions where infrastructure would not be built on market terms. The improvement of digital skills as emphasised in the Annual Sustainable Growth Strategy is also addressed in pillar 3 ('Raising the employment rate and skill levels to accelerate sustainable growth').

Pillar 3 is about promoting long-term growth by raising the average skill level among young people and adults and by introducing opportunities for location-independent continuous learning, for example. Actions under this pillar will boost shared use of research infrastructures and raise R&D intensity in order to accelerate growth in the long term. A significant percentage of the funding will be allocated to supporting RDI for the green transition. Pillar 3 is also about accelerating renewal, recovery and sustainable growth in sectors most affected by the pandemic crisis by leveraging research findings.

Pillar 4 ('Access to health and social services will be improved and their cost-effectiveness enhanced') is about ensuring that everyone living in Finland has equal access to high-quality health and social services. The target is to promote the introduction of new digital solutions and to expand the use of existing ones that have proven cost-effective, regionally and nationally. At the same time, new and increasingly client-oriented operating models streamlining access to treatment and services will be introduced, and the availability of services will be improved. Development and procurement of new digital health and social services solutions may also provide support for IT enterprises and development organisations.

### **Social and regional cohesion**

Finland's GDP per capita has grown more slowly than the EU average (EU27). GDP has grown more quickly in southern Finland than in northern or eastern Finland. However, employment figures have improved in northern and eastern Finland, and these regions are closing the gap with southern Finland. Attendance in higher education has increased nationwide, and here, too, northern and eastern Finland are approaching southern Finland. Chapter 4 contains a detailed discussion of regional statistics and the impacts of the Plan on regional cohesion.

The Sustainable Growth Programme for Finland supports recovery from the coronavirus crisis and social and regional cohesion. Regional and social cohesion are influenced by actions addressing digitalisation, education, employment and health and social services. For example, digitalisation of private and public services will secure safe, good everyday services for people everywhere in the country. This will also ensure location-independent employment, entrepreneurship and studies. Jobseekers will benefit from improved



services as Employment and Economic Development Offices gain more personnel and better IT systems. With increased resources and digitalisation in employment services, jobseekers will have better potential for finding employment, as they will have more support in the process. Investments in education will improve potential for studies, e.g. in the form of added starts at universities. Investments will be made to improve the pedagogical quality and diversity of studies. Continuous learning will be deployed to support the acquisition of new skills needed in working life and to facilitate the transition to new jobs of people in sectors impacted by structural change. This will also boost regional vitality.

### **Health and economic, social and institutional capacity for recovery**

The pandemic caused by the coronavirus (Covid-19) has had and continues to have significant health, economic and social impacts on people in Finland and everywhere in the world. Some of these impacts may turn out to be long-lasting. The pandemic has created unprecedented pressures on services in the social welfare and health care sector and demonstrated just how vital this sector is to the continued functioning of society at large. In addition to acute pressure on resources and expenditure, the pandemic has caused an increase in the treatment, rehabilitation and service deficit in health and social services nationwide and has significantly compromised access to care.

The Sustainable Growth Programme for Finland will promote and support the national structural reform planned for social welfare and health services (the health and social services reform or 'sote' reform). The key objectives of the health and social services reform are to reduce health and wellbeing inequalities, to secure equal and high-quality health and social services for all residents of Finland, to improve the availability and accessibility of services, to secure the availability of skilled labour, to respond to the challenges posed by social changes and to curb the increase in costs. The reform will provide improved support for the responsibilities for organising health and social services, enhance the capabilities of the authorities for responding to crises, and promote the creation of operating structures conducive to the recovery of society at large from crisis situations.

The Programme will serve to reduce the treatment, rehabilitation and service deficit caused by the pandemic (including in mental health services) by introducing new, more efficient and more client-oriented multidiscipline and multiprofessional operating models. Overall management of treatment and service chains will be streamlined. Funding will be organised to increase client advisory services, service referrals, remote appointments, remote rehabilitation, home services and mobile services. Also, operating models of community social work and outreach social work will be expanded, and collaboration with third-sector organisations will be stepped up. Service development will be approached with particular reference to the needs of the most vulnerable people in society. Programme investments will also go towards digital solutions for improving health and

social services to boost resource efficiency in providing services and to improve access to and availability of services.

### **Policies for the next generation, children and youth, such as education and skills**

Investments in the Sustainable Growth Programme for Finland will be allocated to actions to support young people in difficulties caused by the coronavirus crisis. In the interests of upskilling, long-term actions will be supported to facilitate renewal in the economy, mitigate the negative impacts of the coronavirus crisis and promote a fair transition towards a low-carbon economy. Starts at universities will be increased in fields with large numbers of applicants and a shortage of skilled labour, and in fields consistent with the sustainable development programme. Flexible utilisation of the education capacity of all of the universities in the country will be accelerated by introducing location-independent building of individual learning pathways. This will be achieved by opening up the national information resources for learning through cooperation between Finnish academic universities and universities of applied sciences. This will foster an operating environment for RDI that is encouraging and attractive for students, experts and investments nationally and internationally. Private-sector RDI investments and private-public partnerships will also be boosted.

Reforming continuous learning, raising the general educational attainment and implementing a digitalisation programme for continuous learning will support smooth transitions from working life to training and back throughout an individual's career. This reform will improve the potential of citizens on the one hand and working life on the other to respond to changes on the labour market and in society at large in the recovery from the coronavirus pandemic and also in the longer term. Targeted actions will improve the employment potential of underrepresented population groups in particular. Furthermore, the reform will support access to and availability of university education.

## **Sustainable Growth Programme for Finland and Country Specific Recommendations**

The Sustainable Growth Programme for Finland is based on and responds over a wide range to the Country Specific Recommendations adopted by the European Council for Finland. The Programme considers the key needs for reforms and investments given in the 2019 and 2020 Recommendations in particular, focusing on actions supporting a structural change in the economy with long-term positive impacts. The action plan for the Sustainable Growth Programme for Finland published in May 2021 reports in more detail on actions which are not funded with funding from the RRF but which are taken in response to the Country Specific Recommendations for Finland.

## ***2019 and 2020 Country Specific Recommendations for Finland***

### **2019 Recommendations**

The EU Council HEREBY RECOMMENDS that Finland take action in 2019 and 2020 to:

1. Ensure that the nominal growth rate of net primary government expenditure does not exceed 1.9% in 2020, corresponding to an annual structural adjustment of 0.5% of GDP. Improve the cost-efficiency of and equal access to health and social services.
2. Improve incentives to accept work and enhance skills and active inclusion, notably through well-integrated services for the unemployed and the inactive.
3. Focus investment-related economic policy on research and innovation, low carbon and energy transition and sustainable transport, taking into account regional disparities.
4. Strengthen the monitoring of household debt and establish the credit registry system.

### **2020 Recommendations**

The EU Council HEREBY RECOMMENDS that Finland take action in 2020 and 2021 to:

1. In line with the general escape clause, take all necessary measures to effectively address the pandemic, sustain the economy and support the ensuing recovery. When economic conditions allow, pursue fiscal policies aimed at achieving prudent medium-term fiscal positions and ensuring debt sustainability, while enhancing investment. Address shortages of health workers to strengthen the resilience of the health system and improve access to social and health services.
2. Strengthen measures to support employment and bolster active labour market policies.
3. Take measures to provide liquidity to the real economy, in particular to small and medium-sized enterprises. Front-load mature public investment projects and promote private investment to foster the economic recovery. Focus investment on the green and digital transition, in particular on clean and efficient production and use of energy, sustainable and efficient infrastructure as well as research and innovation.
4. Ensure effective supervision and enforcement of the anti-money laundering framework.

### **Investments in research and innovation, digitalisation and the green transition**

The Programme will promote the green transition in society at large, specifically a transition to a low-carbon economy and energy production and sustainable transport, with a broad-based package of investments and reforms. Together with a comprehensive reform of energy taxation, these actions are intended to reduce greenhouse gas emissions significantly while fostering growth in business, research, expertise and exports conducive to the green transition. These actions cover the investments and reforms needed for accelerating the energy transition. They acknowledge investments supporting the transition in industry, such as investments in hydrogen technology, electrification, carbon dioxide recovery and use in industry, circular economy demonstration plants, battery component recycling, reducing emissions in the process industry, and digitalisation.

In the area of sustainable transport, the Programme will facilitate reductions of emissions through building distribution infrastructure for electric vehicle recharging and low-emission fuels, and digitalisation of rail transport. The green transition will also be supported by reducing the climate and environmental impacts of the building stock. The Programme will support environmental sustainability with nature-based solutions. These actions will enable the attainment of the ambitious target in the Sustainable Growth Programme for Finland of using 50% of all Programme funding to foster the green transition. A significant percentage of this funding will provide leverage for private investments.

RDI is one of the mainstreamed themes in the Programme. The actions aim to increase quality and effectiveness by investing in partnerships where business drivers in international business networks will considerably increase their RDI activities in Finland and create ecosystems for new business activities whose value is in the billions. A further effect will be to strengthen expertise in and exploitation of key technologies for the green transition, to support innovative growth enterprises and to support research infrastructures and innovation environments maintained by enterprises and science organisations. RDI investments are also a key element in fostering the green transition. A broad RDI programme will be implemented to support the development of key technologies required for the green transition, and investments will be launched in areas such as the energy sector transition and energy efficiency, the circular economy and bioeconomy, materials efficiency and low-emission solutions for industry.

Investments and reforms will be deployed to strengthen the digital transformation and to support the attainment of a sustainable and efficient infrastructure. The quality and regional availability of telecommunications networks will be improved by adding high-speed connections. Digitalisation of rail transport will improve the quality and safety of services. The digital transformation will be accelerated for example by investing in solutions supporting real-time information exchange between enterprises and public

authorities, and by reinforcing testing and experimentation facilities and ecosystems for spearhead technologies such as 6G, AI and quantum computing. Digitalisation projects in public administration will improve the quality of services while improving productivity and cost-efficiency. Also, seamless services for businesses, employees, students and tourists arriving in Finland will be ensured to boost the competitiveness and attractiveness of the country. Investments in cyber security and information security support the digital transformation. These actions, and the introduction of digital solutions and investments in health and social services, will ensure that more than 20% of the overall funding will go towards the digital transformation.

### Labour market and upskilling

In accordance with the Country Specific Recommendations for Finland, actions to support employment and an active labour market policy will be strengthened through the Programme. An important reform in this respect has to do with the Nordic jobseeking model, in which incentives for finding employment are added on the one hand and employment services supporting the finding of a job are increased and improved on the other. This reform is estimated to have a significant employment impact. Another major employment reform in the Sustainable Growth Programme for Finland is the gradual removal of the 'unemployment pathway to retirement', i.e. extra days granted beyond the statutory duration of the earnings-related unemployment allowance. The actions proposed in the Programme support this reform specifically through investments in wellbeing at work (including mental health services and the public sector), occupational rehabilitation and coping at work. Investments in employment services resources will also augment the positive impacts of the reform. The Programme also contains actions to support people who fall outside the labour force, particularly young people. These actions will also mitigate the negative impacts of the Covid-19 pandemic on young people. The creation of a new intermediate labour market operator is proposed to alleviate the employment situation of people with partial work ability, which is weaker than the national average.

Investments in education and in upskilling foster employment. The Programme thus also addresses one of the key recommendations for the Eurozone, i.e. investing in education and skills. Changes in the labour market, the green transition and digitalisation require a high skill level, and the competence of the working-age population must be improved to meet the new demands of working life. A continuous learning reform will be carried out to improve the competence of the working-age population to correspond better with the needs of working life, so as to not exacerbate the talent shortage that already existed in certain fields in Finland before the coronavirus crisis or the mismatch of labour supply and demand. Starts at universities will be increased to address the shortage of skilled labour. Another response will be to streamline work-based and study-based immigration and to

build an automation-based digital infrastructure to support the immigration of skilled labour.

In addition to the aforementioned labour market reforms, Prime Minister Marin's Government has launched the parliamentary preparation of a comprehensive social security reform. The purpose of the social security reform is to create a system that is more clearly structured and functions better than the existing one and that will allow citizens to combine work and social security in changing life situations. The broad-based preparation of this reform will continue into the next electoral term. This reform does not form part of Finland's RRP, but it does address the Country Specific Recommendations for Finland, together with other reforms.<sup>2</sup>

The reform is being planned by a parliamentary committee whose term began in March 2020 and will expire in 2027. The work of the committee is divided into phases. First, they will define and describe in concrete terms the key problems in social security (2020–2021). Then, they will draw up a roadmap and policies regarding the resolution of key issues (2021). This will be followed by preparation of a plan for the phased comprehensive reform of social security, with milestones and proposals for component reforms independent of the overall reform (2021–2023). Implementation of the plan will begin in the next electoral term.

In summer 2020, the social security committee outlined four key problem areas in social security, one of which is combining paid employment and social security. The core of this problem area involves investigating and resolving situations created by the current social security system in which there is no incentive to find employment ('incentive traps'). Other issues to be dealt with are the complexity of social security, last-resort financial aid, basic social security and housing, and harmonisation of services and benefits.

Social security incentive traps have been dismantled in Finland through a number of tax and social security amendments, and employment incentives are better now than they were in the early 1990s. However, there are still problems involved in combining paid employment and social security, particularly in cases where a single household is receiving several overlapping benefits. For further discussion, the committee identified three kinds of incentive traps, caused by unemployment, income and bureaucracy.

Combining individuals' pay, pension and benefits details in the income register from the beginning of 2021 may go some way towards dismantling bureaucracy traps. This will result in a real-time comprehensive picture of an income earner's pay and benefits.

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<sup>2</sup> For more information on the social security reform, see the National Reform Programme (Appendix 5).

These details are used for example in calculating benefits, in imposing client fees and for supervisory activities performed by various authorities. Harmonising unemployment benefits and short-term employment will become simpler particularly when the income register can be used for calculating benefits and for imposing client fees.<sup>3</sup>

### **Improving access to social welfare and health care services**

The Sustainable Growth Programme for Finland will promote and support the national structural reform planned for social welfare and health services (the health and social services reform or 'sote' reform). This reform addresses the Country Specific Recommendations that Finland has been receiving from the EU since 2013 concerning effective design and delivery of administrative reforms in health care services to improve cost-efficiency and equal access.

Funding in the Sustainable Growth Programme for Finland will be allocated to making health and social services available to everyone living in Finland. Services will be reformed in a cost-effective and client-oriented way. Funding will be used to reduce the treatment, rehabilitation and service deficits incurred during the coronavirus crisis by reforming operating models and by introducing new digital services. These actions will accelerate access to treatment nationwide and introduce new, multichannel and multiprofessional operating procedures in health and social services.

### **Combating money laundering**

The Country Specific Recommendations for Finland have addressed points such as that the national risk assessment for money laundering and terrorism financing is outdated, that the Finnish financial supervisory authorities and the Financial Intelligence Unit are under-resourced and that information exchange between the Financial Intelligence Unit and the financial supervisory authorities is insufficient. As the operating environment changes, the need to update the national risk assessment for money laundering and terrorism financing becomes increasingly acute. One of the major challenges in improving information exchange between the competent authorities for combating money laundering is the increased volume of information for monitoring and investigation and how this could be effectively processed.

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<sup>3</sup> For more information on the income register, see the National Reform Programme (Appendix 5).

The Sustainable Growth Programme for Finland contains a project for enhancing the monitoring and implementation of the combating of money laundering, with a view to improving the ability of Finnish authorities to prevent money laundering in Finland and to boost the credibility of Finland's such ability in the international context. With these improvements, the authorities and private-sector operators involved in combating money laundering will be able to exchange up-to-date information efficiently, safely and reliable using digital solutions. Cooperation between authorities will be increased, and prevention measures will be jointly developed.

### **Household debt and establishing a positive credit register**

Household debt in relation to disposable income has doubled over the past 20 years, totalling 131% at end of the 3rd quarter of 2020. Concern for household debt was shown in the 2019 Country Specific Recommendations for Finland, where Finland was recommended to strengthen the monitoring of household debt and establish the credit registry system.

The positive credit register is considered a major tool for preventing over-indebtedness, and setting up the register is entered as a policy in the Government Programme of Prime Minister Marin's Government. A Government proposal for an Act on the positive credit register was completed in March 2021. The aim is for this register to have a broad information base, with comprehensive details on consumer credit and other loans taken out by private individuals. The plan is to have the system fully running by spring 2024.

The vast majority of household debt – more than 70% – has to do with housing. The volume of mortgage lending has grown rather steadily in recent years, at about 2% per annum, but the percentage of housing company loans in overall household debt has increased. It is therefore important that the positive credit register also include details on corporate loan shares, for which no centralised register currently exists. The Sustainable Growth Programme for Finland contains provisions for improving the Residential and Commercial Property Information System so that details on housing company loan shares will be collected in the system and relayed to the positive credit register; this will ensure that the latter register contains comprehensive information. The Programme will thus directly address the item on household debt and the credit registry system in the Country Specific Recommendations.



## ***European flagship areas***

The Sustainable Growth Programme for Finland will contribute to several European flagship areas. The following illustrates how these are divided among the pillars in the Programme:

### **Pillar 1:**

This pillar contributes to several European flagship areas. Investments supporting the transition in the energy system contribute to the 'Power up' flagship area. These investments are also linked to the 'Renovation Wave' and 'Recharge and Refuel' flagship areas. Green transition reforms and investments in industry contribute to the 'Power up' and 'Recharge and Refuel' flagship areas.

Also, providing aid for private and public recharging and refuelling infrastructure reduces emissions from traffic, thereby contributing to the 'Recharge and Refuel' flagship area. Phasing out oil heating contributes to the 'Renovation Wave' flagship area, enshrining its central principle of phasing out carbon-based energy and integrating renewable energy sources.

### **Pillar 2:**

The pillar as a whole supports the European flagship area 'Connect', which is aimed at fast rollout of rapid broadband services to all regions and households. The Digirail project supports the 'Recharge and Refuel' flagship area. Data structure creation contributes to the 'Scale-up' flagship area. Data leveraging and interoperability between sectors are also key issues in the 'Modernise' flagship area, under which key public services should be modernised and made available to everyone. Cyber security and information security actions are particularly relevant for the 'Reskill and Upskill' flagship area.

### **Pillar 3:**

Investments under this pillar in the digitalisation of public administration and public services, such as an online presence for employment services and work-based immigration, contribute to the 'Modernise' flagship area. Also, investments in raising the skill level and the reform of continuous learning contribute in particular to the flagship areas 'Modernise' and 'Reskill and Upskill'. RDI investments contribute to all the European flagship areas. These actions can create potential for the introduction of clean technologies and the development of renewable energy sources, for improving energy efficiency and resource efficiency, for promoting clean technologies in traffic and for increasing data cloud capacity and scientific computing. RDI investments in the green transition are connected to the flagship areas 'Power-up', 'Renovation Wave', 'Recharge and Refuel'.

**Pillar 4:**

The reforms and investments proposed under this pillar to support the introduction and efficient exploitation of digital solutions in health and social services parallel the European flagship area 'Modernise', whose aim is that the public administration should provide interoperable, customised and user-friendly digital public services.

## Gender equality and equal opportunities

One of the mainstreamed targets in the Sustainable Growth Programme for Finland is a broad-based promotion of equality, specifically regional, social and gender equality. It is important to evaluate the overall impact of the Programme and its actions from the equality aspect.

Implementing the Programme will be undertaken so as to promote gender equality on a horizontal principle and to prevent gender-based discrimination, in accordance with the EU Pillar of Social Rights, the UN Sustainable Development Goals and the Finnish Government's Action Plan for Gender Equality 2020–2023.

Finland's international Roma policy emphasises both the improvement of social conditions and the equal rights and inclusion of Roma. The wellbeing, health and equality of the Roma is being promoted by deploying the National Roma Policy 2018–2022. In addition, Roma rights are promoted through the UN human rights system and the human rights recommendations received by Finland from the UN.

The coronavirus pandemic has had significant impacts on gender equality. In the Finnish economy, economic downturns generally result in a faster decline in the employment of men than in the employment of women, but the employment of men has also historically recovered faster in the following upturn. The labour market impacts of the coronavirus pandemic have been exceptional from a number of perspectives, including gender equality. The impacts of the restrictions imposed to curb the pandemic have hit service industries dominated by women in particular, and as a result the employment of women declined more than the employment of men in 2020. On the other hand, Covid-19 mortality was higher among men than among women.

The Finnish labour market is gender-segregated. An analysis of pay differences between the genders shows that the average gross pay for men, excluding gender distribution by

sector, by occupation or by job duties, is 17.1% higher than the average comparable pay for women (the EU average differential being 15%). A clear gender gap may be found in types of employment relationships: 19% of women and 13% of men are in fixed-term employment. The gender gap is even more pronounced among part-time employees, with 22% of women and 10% of men being in part-time work in 2019.

Among employed Finns, single parents have the highest risk of poverty, and the majority of them are women. There have been no significant changes in the number of low-income individuals in Finland in recent years, their number remaining relatively stable from one year to the next. However, the coronavirus pandemic and its negative labour market impacts have had the effect of increasing the number of low-income individuals.

Actions in the Programme will have direct and indirect impacts on gender equality. For example, revitalisation aid for sectors suffering from the coronavirus crisis will partly be targeted at sectors dominated by women. Actions addressing wellbeing at work in the public sector and aimed at health and social services also concern fields where women are in a majority. Among the indirect impacts, accelerating digitalisation and improving regional availability of high-speed broadband may make location-independent work easier and thus contribute to regional equality, besides making it easier for both women and men to reconcile work and family life.

## II Description of reform and investment packages by pillar

### PILLAR 1: The green transition will support structural adjustment of the economy and underpin a carbon-neutral welfare society

#### Package targets:

Finland aims to be carbon-neutral by the year 2035 and to halt biodiversity loss by 2030. In addition, Finland aims to be the world's first fossil-free welfare society and is committed to halving emissions from traffic by 2030. Climate leadership and the innovations this produces can allow Finland to reduce greenhouse gas emissions while creating new jobs, boosting the economy and exports, and improving the opportunities to increase our positive carbon handprint and biodiversity. The worldwide market for clean solutions is growing at an accelerating rate. Finland is one of the most interestingly innovative countries in this field, and there is a global demand for our expertise. Preparation of sector-specific low-carbon roadmaps has shown that low-carbon technology will be a significant competitive advantage for Finnish enterprises in the future. In accordance with the targets, sustainable growth must be achieved by reducing the use of non-renewable natural resources and sustainably using renewable natural resources, and by reorienting production and consumption towards products less harmful to the environment and the climate. The Government Programme defines new sources of sustainable growth, such as energy and materials efficiency, carbon-neutrality, ecological investments, clean-tech, the circular economy and bioeconomy, and resource scarcity, all of which will foster growth trends in Finnish industry and provide building blocks for wellbeing.

The Green Deal is a new EU growth strategy that aims to make the EU into a resource-efficient and competitive economy. The proposals stress the urgency of structural changes in society. Europe is to be climate-neutral by the year 2050, efficient use of natural and other resources is to be promoted by transitioning to a pure circular economy, loss of biodiversity is to be reversed and environmental pollution is to be reduced. It must be ensured that this transition will be fair and inclusive. The solutions are designed to respond to enterprises' needs to increase the weight of environmental matters and biodiversity in their corporate responsibility and business activities.

Pillar 1 component areas: Energy system; Reforms and investments supporting the green transition and digitalisation in industry; Low-carbon solutions for communities and transport; Reducing the environmental and climate impacts of the building stock; and Implementing environmental sustainability and nature conservation. RDI actions addressing the green transition are described under pillar 3.

## ENERGY SYSTEM TRANSITION

### Description of component area:

**Policy area:** *energy and climate policy, competitiveness of industry, energy production, energy consumption, energy efficiency, energy transmission, energy infrastructure, energy storage, electrofuels, biogas and biofuels, hydrogen economy.*

**Targets:** *The key target in this component area is to facilitate the green and digital transition by increasing clean energy production and storage and by making the energy system crisis-proof. A further target is to integrate energy systems with one another more closely and to curb rises to electricity transmission charges.*

1. *Green and digital transition: Investments in the energy system and in clean energy production will facilitate the green and digital transition while achieving significant reductions in emissions. The target is to achieve a reduction of 2 Mt of CO<sub>2</sub>eq per year by 2026. A further target is to enable emission reductions in other areas of the economy through sectoral integration. The share of renewable energy sources in Finland's total energy consumption will be more than 40%. In accordance with the National Energy and Climate Strategy 2030, the target is to increase the use of sustainable energy so that it will come to account for more than 50% of total energy consumption in the course of the 2020s. Finland also aims to make energy consumption more efficient. The target is to deliver several new investments in production and demonstration facilities by 2026.*
2. *Jobs, growth and exports: The purpose of investments is to support reforms in the economy. A cost-efficient, low-emission and reliable energy system will improve our competitiveness. New energy solutions introduced in Finland will serve as references on the international market.*

### Reforms and investments

*The National Energy and Climate Strategy will be revised in 2021. The Strategy addresses reform needs related to the core energy infrastructure and clean energy. In accordance with the Government Programme, electricity and heat production in Finland must be made nearly emission-free by the end of the 2030s while also taking into account the perspectives of security of supply and reliability of delivery.*

**Reforms:**

1. *Significant reduction of energy use of coal by 2026 (P1C1R1)*
2. *Comprehensive reform of energy taxation (P1C1R2)*

**Investments:**

1. *Energy infrastructure investments in energy transmission and distribution, with reference to the district heating infrastructure for excess heat recovery and to facilitate integration of energy systems; linking wind power to the national grid; introducing new innovative technologies in distribution networks; and transmission of low-carbon gases and hydrogen, EUR 155 million (P1C1I1)*
2. *Investments in emerging energy technology, such as offshore wind power, large-scale solar power, biogas, renewable transport fuels, geothermal energy and heat recovery, EUR 161 million, of which EUR 6 million will be allocated to temporary human resources for environmental permits and procedures (P1C1I2)*
3. *Renewable energy investment in Åland: An investment in an energy system based on offshore wind power and non-fossil energy production on Åland in accordance with the overall targets in this component area, EUR 2.7 million (P1C1I3)*

**Estimated costs:** *Attaining Finland's climate-neutrality target will require tens of billions of euros in investments in the energy system. Several billions must be invested in the energy system every year in the near future. Applying funding from the RRF (EUR 318.7 million in total) to these investments will facilitate the transition.*

## Principal challenges and targets

### a) Principal challenges

Finland has set as a national target to be carbon neutral in 2035 and carbon negative soon afterwards. Finland also aims to have electricity and heat production nearly emission-free by the end of the 2030s. Energy production is responsible for a substantial percentage of greenhouse gas emissions contributing to climate change. Reducing emissions will require the introduction of new, clean technologies in energy production, use and storage.

In many cases, the best circumstances for clean energy production are to be found quite far from where the energy is to be consumed. Linking clean energy production to the grid, electrifying society and ensuring security of supply require major investments in electricity transmission and distribution infrastructure, in heating networks, in the transmission of low-carbon gases and in smart energy system integration. Finland's carbon-neutrality target will translate into a considerable increase in electricity consumption in industry.

Linking the energy networks of industry, transport and heating can help efficiently balance production and consumption in the various sectors. The electrification of industry and the rest of society will reduce greenhouse gas emissions in several sectors considerably. In the best-case scenario, the integration of energy systems is a cost-efficient way of leveraging the features of all systems.

#### **a) Targets**

*Finland aims to be carbon-neutral by 2035, and attaining this target requires a constant increase in clean energy production.* The target of promoting energy infrastructure investments is to facilitate smart system integration with clean energy. The principal target in promoting new energy technology is to commercialise technologies through demonstration and reference projects. At the same time, these will reform the structure of our energy economy and create products for the global market, where the demand for clean energy technologies is growing. The target is that our electricity and heat production will be nearly emission-free by the end of the 2030s.

Promoting energy system investments is consistent with Finland's National Energy and Climate Plan, the EU *Strategy for Energy System Integration* (COM(2020)299 final) and the EU *Hydrogen Strategy* (COM(2020)301 final). The energy system actions are related particularly to the 'Power-up' flagship area, and also to 'Recharge and Refuel' and 'Renovation Wave'. The actions also address the Country Specific Recommendations for Finland.

Various technologies and other solutions for attaining the aforementioned targets have been described in the low-carbon roadmaps drawn up for various sectors in Finland during 2020.

#### **b) National strategic circumstances**

Attaining the targets set will require a substantial reduction in emissions from energy production and industry. In Finland, emissions may be reduced for example by increasing electrification. Investments made in the energy system can help ensure the availability of cost-efficient electricity and other energy, which will incentivise energy-intensive enterprises to achieve carbon-neutral production while retaining cost-competitiveness.

## Description of reforms and investments in the component area

### a) Reforms:

#### Background to the reforms

##### European Semester, national reform programme and Council Recommendations:

In the 2020 Country Specific Recommendations, the European Council recommended that Finland should: Take measures to provide liquidity to the real economy, in particular to small and medium-sized enterprises; Front-load mature public investment projects and promote private investment to foster the economic recovery; Focus investment on the green and digital transition, in particular on clean and efficient production and use of energy, sustainable and efficient infrastructure as well as research and innovation.

In its 2021 Annual Sustainable Growth Strategy, the Commission emphasises the flagship area related to increased efficiency in energy production. Future-proof clean technologies should be frontloaded, and the development and use of renewables and their integration should be accelerated through modernised networks and improved connectivity.

Progress in energy production is of crucial importance to emissions trends. Transition to a low-carbon economy will require additional investments. Securing the funding needed is the key to attaining energy and climate policy targets.

#### Climate and Energy Strategy

A National Climate and Energy Strategy consistent with the Government Programme is under preparation. The Strategy will cover all sources of and sinks for greenhouse gas emissions. The focus will be on fulfilling the EU's climate and energy targets to 2030 and the climate neutrality target to 2035 in the Government Programme.

The solutions will be evaluated from the perspective of their impact and cost-effectiveness, while also taking into account regional differences and employment effects. Scenario calculations extending to 2040 will be used to evaluate the energy balance and greenhouse gas emissions trends in various sectors. These scenarios will be essential for evaluating the impacts of the various policy measures. Proposed legislation to be published by the Commission in a Communication related to the EU Green Deal in summer 2021 regarding tightening the targets for 2030 will be taken into account in the preparation of the Strategy.

The Strategy preparation is being coordinated by the Ministerial Working Group on Climate and Energy Policy. The strategy content should be completed in summer 2021 and the strategy is to be submitted as a report to Parliament in autumn 2021. Implementation of the Strategy will require investments in order to reduce emissions in the energy system.



### Reforms related to investments

The reforms related to the investment packages addressing the energy system transition are based on the Government Programme.

#### **REFORM 1:** Significant reduction of energy use of coal by 2026 (P1C1R1)

**Challenges:** The key challenge in implementing the reform is funding for energy transmission in order to ensure the increased use of clean energy in electricity and heat production resulting from the phasing out of coal, based on system integration concepts. To reduce the use of coal significantly will require major investments and aid for new technology investment projects that will facilitate commercialisation of new solutions and new business. New technologies, investments and energy efficiency will be needed in order to reduce emissions in the heating system while ensuring security of supply and cost-efficiency. Energy produced using coal amounted to about 60 PJ in 2019.

**Targets:** The following target is set in the Government Programme: Electricity and heat production in Finland must be made nearly emission-free by the end of the 2030s while also taking into account the perspectives of security of supply and reliability of delivery. Prohibiting the use of coal for energy production by 2029 will help attain this target. An important factor is to increase emission-free electricity and heat production and to ensure the required energy transmission in industry, transport and heating. Low-carbon gases may also be used for reducing emissions.

**Implementation:** Finland will significantly reduce the use of coal for energy production by 2026. The energy use of coal is to end by 2029. Phasing out the use of coal in Finland is also entered as a policy in the National Energy and Climate Plan and in the Government Programme. The Act Prohibiting the Use of Coal for Energy (406/2019) was enacted by Parliament in 2019.

**Stakeholder input:** The enterprises developing solutions contributing to the phasing out of coal and scientists in the field are responsible for attainment of the target.

**Expected complications:** The most significant complication in phasing out the use of coal has to do with linking new electricity and heat production schemes to the energy system, with energy transmission and with the usability of the technologies that are to replace coal. It is vital to introduce new energy transmission links.

**Reform target group:** Enterprises

**Implementation timetable:** Finland will significantly reduce the use of coal for energy production by 2026. Coal will be phased out beginning in 2029. Efforts will be made to bring forward the timetable of phasing out coal.

**State aid:** This reform is legislative in nature and does not require a review of the rules on State aid.

**REFORM 2: Energy taxation reform to consider technological advancements<sup>4</sup>**  
(P1C1R2)

**Challenges:** Reducing emissions from industry and heat production requires electrification of processes and introduction of new technologies. The electricity tax for industry and the tax on heating fuels have an impact on the profitability of the technologies used and on the potential for adopting new energy technologies.

**Targets:** The reform will improve the potential for industrial enterprises to electrify their processes and to adopt new energy technologies. The reform will also improve the operating potential of non-combustion heat production.

**Implementation:** Industry, mines, agriculture and 5+ MW machinery rooms are in tax category II. From the beginning of 2021, the electricity tax in category II was reduced to 0.05 cents per kWh, which is the EU minimum. Previously, the electricity tax in category II was 0.69 cents per kWh. The purpose of this measure was to promote electrification in industry and a low-carbon approach. Energy tax subsidies for fuels in energy-intensive industries will be phased out.

The tax on fossil fuels used for heating was raised by EUR 2.7 per MWh as of the beginning of 2021.

A report on the energy taxation of non-combustion heat production will be completed in May or June 2021.

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<sup>4</sup> The Government Programme states that the use of peat for energy production is to be halved by 2030. Because of an unanticipated rapid rise in the price of emission allowances, this target is set to be attained as soon as 2025. In order to alleviate the impact of this rapid change and to help peat producers and energy users adapt to the new situation, the Government decided in negotiations in April 2021 to raise the lower limit for tax-free minor use of peat. This will not compromise the Government's target of halving the use of peat for energy by 2030. At the Budget Session in autumn 2021, the Government will decide on the Medium-term Climate Change Policy Plan (KAISU plan) and the Climate and Energy Strategy, which will set out binding actions on emission reductions corresponding to the increase in emissions due to the tax changes.

**Stakeholder input:** The reform will improve the potential for industrial enterprises to electrify their processes and to adopt new energy technologies.

**Expected complications** The reform has already been implemented as regards electricity tax and heating fuel taxation. A report on the energy taxation of non-combustion heat production is being prepared. There are uncertainties regarding the other changes.

**Reform target group:** Industrial and energy enterprises

**State aid:** The restrictions imposed in EU rules on State aid will be considered in the preparation.

**Implementation timetable:** The Act on Excise Duty on Electricity and Certain Fuels entered into force on 1 January 2021.

Once the report on the energy taxation of non-combustion heat production is completed, legislation preparation is to be begun so that the amendments will mainly be in force at the beginning of 2022.

## Investments

### INVESTMENT 1: Energy infrastructure (P1C111)

**Challenges:** In many cases, the best circumstances for clean energy production are to be found quite far from where the energy is to be consumed. Linking clean energy production to the grid, electrifying society and ensuring security of supply require major investments in electricity transmission and distribution infrastructure, in heating networks, in the transmission of low-carbon gases (e.g. hydrogen) and in smart energy system integration.

Fingrid, the national transmission grid operator, estimated in its investment plan that the total investments required by 2030 will total EUR 1.4 billion, or about EUR 100 million per year. Investments in electrical substations, most of them for the purpose of connecting wind power to the national grid principally in northern Finland, and in power lines to increase electricity transmission capacity, will ensure that Finland remains a uniform region for the purposes of the electricity market while reducing transmission losses in the national grid.

#### 1.1 Electricity networks

Significant investments will need to be made to the national grid to enable the proposed additional electrification to be carried out in society at large. Investments in the

transmission grid will allow a significant volume of renewable electricity production to be connected to the national grid and will also increase electricity transmission capacity will ensure that Finland remains a uniform region for the purposes of the electricity market while reducing transmission losses in the national grid. Finland's National Energy and Climate Plan 2019 identifies the needs that need to be fulfilled in the electricity network infrastructure by 2030 in order to ensure security of supply, cost-efficiency, low-carbon target attainment in the energy sector and electrification in society at large.

An 800 MW AC power line is being planned between northern Finland and northern Sweden. This power line is to run from Messaure in Sweden via Keminmaa to Pyhäselkä, a distance of some 370 km. This is on the EU's list of Projects of Common Interest (PCI), and the plan is to use TEN-E funding for the project.

Implementation and full exploitation of the project will also require other investments in transmission capacity in Finland. Strengthening the transmission grid in northern Finland in particular will facilitate the connecting of wind power to the national grid. There are plans to fund investments in Finland out of RRF funding. However, the RRF funding will not be allocated to the aforementioned power line between Finland and Sweden that is on the PCI list, but to other investments in Finland.

There are also considerable investment needs in respect of electricity distribution networks due to their ageing structure and the need for improving their reliability. Throughout the 2020s, electricity networks will require annual investments in the hundreds of millions in order to improve reliability and to replace outdated parts of the grid.

A smart system and digital solutions can add flexibility and cost-efficiency to the electricity system, for example with various storage and flexible energy management designs. Making full use of the potential for flexible energy management and self-contained energy production in buildings requires the introduction of smart guidance systems and service platforms.

## **1.2 Investments to be made in the heating network for recovering surplus heat for district heating**

In accordance with the policies outlined in the Government Programme, the introduction and piloting of new, non-combustion district heating production methods will be promoted. It is estimated that in 2020 surplus heat in Finland amounted to 130 TWh, of which only 3 TWh was recovered and used for district heating. It is also estimated that a further 35 TWh of surplus heat could be recovered. With increased recovery of surplus heat, Finland could phase out coal in energy production even before 2029.

Investments addressing recovery of surplus heat involve building a transmission network and installing heat exchange pumps and related connections. The potential for recovering surplus heat must be assessed on a case-by-case basis.

A study commissioned by the Ministry of Economic Affairs and Employment indicates that the most cost-efficient heating systems make effective use of surplus heat. District heating storage can reduce the need for peak capacity boilers, which in turn can reduce the use of fossil fuels. Also, electrical heating technologies can assist the electricity system by providing flexibility, which is becoming an increasingly important factor.

Heat exchange pumps will be of great importance in recovering surplus heat and as part of a carbon-neutral energy system. Potential for recovering surplus heat in industry for use in district heating can be found in Finland.

### **1.3 Investments in low-carbon gas transmission**

There are projects being planned in Finland concerning low-carbon hydrogen production and biogas and biomethane production. These projects involve investment needs for low-carbon gas transmission. Some of these projects may require aid in order to be implemented.

These investment needs are estimated as being minor compared with investments needed for electricity networks and heating networks, but they are anticipated to grow in volume later in the 2020s.

#### **Targets**

The target is to launch an aid programme promoting electricity, heating and gas infrastructures during 2021. The projects will have a significant employment impact during construction.

Billions of euros will be invested in electricity networks in the near future. Electricity networks play an important role for the functioning of the internal energy market. Clean electricity production can be connected to the energy system via electricity networks.

Overall investments in heating networks for recovering surplus heat will total hundreds of millions of euros, and the emission reduction potential here amounts to several per cent of Finland's greenhouse gas emissions. Surplus heat recovery may even facilitate the phasing out of coal in energy production in Finland earlier than in 2029. Surplus heat recovery solutions provide employment for technology suppliers, the employment impact mainly being in technology installations, maintenance and upkeep, and indirectly in technology development.

Low-carbon gas transmission will allow reductions in process emissions. Investments in low-carbon gas transmission generate employment impacts in gas production and in industrial process development.

#### **Target to launch:**

- Projects to improve the electricity infrastructure and to improve electricity transmission capacity
- Projects promoting the heating infrastructure and sectoral integration
- Low-carbon gas transmission projects

#### **Implementation**

Energy infrastructure investments in electricity, heating and low-carbon gas transmission will be funded through a new aid programme to be set up or through separately notified projects. If possible, energy subsidies may be allocated (see Investment 2 for a more detailed description).

#### **Investment target group**

The action is targeted particularly at enterprises investing in building infrastructure. No limits on enterprise size are envisioned. The enterprises in question may be industrial companies or in the energy sector, or transmission system operators (TSO) or distribution system operators (DSO) for electricity or natural gas, within the limits of the State aid system.

According to the current Government Decree on the General Terms for Granting Energy Support, the aid will be allocated to machinery and equipment, buildings and planning costs that are essential for the investments. However, the percentage of planning costs is restricted, and aid will not be granted for example for feasibility studies or similar preliminary studies. In major projects, the aid is typically allocated to the extra costs incurred through applying new technology. Any legislative amendments required will be implemented in compliance with the rules on State aid.

#### **Compatibility with rules on State aid**

The current view is that the aid will be granted pursuant to the *General Block Exemption Regulation* (GBER), or else notification will be made to the Commission of the projects according to the *Energy and Environmental State Aid Guidelines* (EEAG).

#### **Timetable:**

The aid programme is to be prepared and the necessary amendments made during 2021. The application round will be launched as soon as the legislation is enacted.

The application round will proceed in several stages; for major projects in particular, aid decisions will be front-loaded and made during 2022. Major investments involve the

risk of whether they will be completed according to the timetable specified; this cannot be evaluated until the aid programme has been launched, on the basis of applications received.

Aid could be provided to minor projects also in 2023. The aid decisions will commit to payment of the aid in instalments payable later according to project progress, the payouts being based on actual costs. Aid instalments will probably be paid out between 2022 and 2026 for aid decisions made in 2022, and between 2024 and 2026 for aid decisions made in 2023.

## **INVESTMENT 2: Deployment of new energy technology (P1C1I2)**

### **Challenges**

Reducing emissions will require the introduction of new, clean technologies in energy production and use. Increasing clean energy production enables emission reductions in industry. Promoting clean energy reduces the negative external impacts of energy production.

The percentage of clean energy in the final consumption of energy has increased rapidly in Finland and is now among the highest in the EU. However, the majority of our energy system is still based on fossil fuels. By contrast, emission-free energy accounts for about 80% of electricity production. The percentage of renewable energy is about 55% in heating and cooling and about 20% in transport. These percentages must be raised substantially in order to reach the carbon-neutrality target. This, in turn, requires new energy technologies to be adopted.

New technologies always involve technical and financial risks. An enterprise adopting a new technology typically has to bear these risks alone. When such projects are successful, their benefits will accrue to society at large. Typically, costs in the next such projects are lower than in the pioneer projects, and problems initially encountered can be resolved at the planning stage. Therefore, in the absence of dedicated aid, enterprises do not have sufficient incentives and resources to be among the first to act and therefore assume the risks involved.

Another key challenge in renewable energy projects is that the investments must be heavily front-loaded, which increases capital costs and makes it more difficult to obtain funding.

The investment projects listed in this component area are similar in that they involve new energy technology at the demonstration stage and that in most cases they are large-scale projects. Investment aid will be of particular use in helping sectors where it is difficult and

expensive to achieve emission reductions ('hard-to-decarbonise sectors'). Examples of investments are given below.

### **1.1 Offshore wind power**

On 19 November 2020, the Commission issued a Communication outlining an offshore energy strategy for the EU ('An EU Strategy to harness the potential of offshore renewable energy for a climate neutral future'). In this Strategy, the Commission proposes a target for offshore energy production capacity to be achieved by 2030 and by 2050 and describes key measures for attaining this target.

Offshore energy production has the greatest potential for growth out of all renewable energy technologies. The Commission notes that tapping this technological and physical potential is crucial if Europe is to achieve its carbon emission reduction targets for 2030 and become climate neutral by 2050. The Strategy sets increasing the use of offshore renewable energy as one of the principal targets of the EU. The Strategy proposes to make offshore renewable energy a core component of Europe's energy system by 2050. Actions suggested include encouraging Member States to include reforms and investments related to renewables deployment, including offshore, in their national recovery and resilience plans.

The costs of offshore wind power have decreased dramatically worldwide, but the production technologies are still partly at the development stage. Also, the sea areas of the EU are very different from each other, and solutions applicable in one location cannot necessarily be transposed to another as is. Finland has only one actual offshore wind farm. The overall costs of building such facilities in Finland are increased for example by the fact that they need reinforced foundation structures because the sea freezes over in the winter.

Also, according to our national legislation, enterprises are themselves liable for the costs of the power line connecting to the national grid, unlike in certain other European countries where offshore wind power is more common. Moreover, although Finland has specialist expertise and infrastructure available for example at shipyards, more offshore wind power expertise and infrastructure and functions focusing on construction and maintenance at sea are needed. To drive this trend, at least one major-scale demonstration project must be built in the near future.

Finland currently does not have production aid systems such as feed-in tariffs available for new offshore wind farms. Instead, the aim is to shift from production aid to investment aid targeted at promoting new technologies.



## 1.2 Renewable transport fuels (electrofuels, biofuels)

The transport sector generates a significant percentage of all emissions in the global context, and achieving emission reductions in transport is typically more difficult and more expensive than in electricity and heating production, where several production technologies are already sufficiently competitive. Transport accounts for about 29% of all energy consumption worldwide (IEA 2020) and for about 21% of emissions from energy and industrial sources. Emission reductions are particularly hard to achieve in heavy land transport, in shipping and in air transport. So far, air transport has accounted for only a small percentage of all global emissions, but the number of flights is increasing rapidly. According to the IEA, passenger traffic increased by an average of 5% per annum between 2000 and 2019. Flights are now less emission-intensive, principally due to energy efficiency measures, and this has reduced the net impact on emissions. Nevertheless, more than 99.5% of the fuel used in air transport is fossil-based jet fuel, and it is therefore difficult to achieve substantial reductions in air transport emissions without the introduction of alternative clean fuels.

The Renewable Energy Directive stipulates that renewable energy must account for at least 14% of energy consumption in transport by 2030. The sub-target for advanced biofuels is 3.5%. It is estimated (AFRY 2020) that the demand for renewable fuels in road transport will almost double from about 20 Mtoe in 2020 to as much as 40 Mtoe in 2030. If transport electrification targets are not attained, demand for other renewable fuels will grow even more sharply. In liquid fuels, the greatest growth is expected in 'drop-in fuels'. An increase of about 8 Mtoe in the use of drop-in fuels is expected in road transport, while the combined demand under ReFuelEU and national targets in air transport in 2030 is estimated at 4 Mtoe. In the preparation of the national distribution obligation (2019), it was estimated that the target set for Finland for 2030 will require a biofuel volume of about 0.8 Mtoe (2019: c. 0.55 Mtoe).

Emissions from heavy vehicle traffic can be reduced quickly and cost-efficiently with biofuels and other renewable fuels. Many biofuels and electrofuels (Power-to-X) have the advantage of being usable by the current vehicle stock as is, meaning that achieving emission reductions will not require the building of major new infrastructure or alterations to vehicles. Emission reductions can thus be achieved quickly.

However, current biofuels are largely produced using food plants and fodder plants or other raw materials in which shortages may arise if production increases significantly. In the production of fuels from waste or surplus fractions, from sources such as seaweed and in 'Power-to-X' production, the technologies are still in the development phase. Also, EU legislation on biomass and renewable transport fuels has been in a constant state of uncertainty. Another challenge is that proof of concept in emerging technologies typically requires an industrial-grade facility to confirm that the technology works as

intended, and on the other hand, large-scale projects are more profitable than small-scale ones. However, investments such as this are often extremely front-loaded, and it is thus challenging to obtain funding for them. Because of the technological and regulatory risks and other challenges, not a lot of investments have been made in these new technologies in recent years.

The transport sector is not covered by the emissions trading system, except for air transport. The major steering mechanisms in the transport sector are fuel taxation and the distribution obligation. However, these typically only apply to ground transport. Only some individual countries have enacted blending obligations or distribution obligations in respect of shipping and air transport. As the vast majority of international cargo is transported by sea and by air, distribution obligations imposed by individual countries may compromise the international competitiveness of those countries. Deploying such steering measures will require a broader consensus on their necessity.

The Green Deal launched the ReFuelEU initiative to accelerate the adoption of sustainable aviation fuels. The European Commission is scheduled to publish a basic proposal for the legislation in early 2021. The European Commission notes that renewable aviation fuels have great potential for reducing emissions in air transport. The purpose of the ReFuelEU initiative is to boost the supply of and demand for renewable aviation fuels in the EU to reduce the environmental footprint of air transport and to help the EU attain its environmental targets. The target levels in the ReFuelEU initiative are 2% renewable aviation fuels by 2025 and 5% renewable aviation fuels by 2030.

The International Maritime Organisation's initial strategy on the reduction of greenhouse gas emissions from ships was adopted in spring 2018. This Strategy foresees a need to reduce carbon intensity as an average across international shipping by at least 40% by 2030, pursuing efforts towards 70% by 2050, compared to 2008.

Distribution obligations and fuel taxation are effective means for increasing the use of renewable fuels in transport. However, these steering measures are neutral in respect of the novelty of the production technology and do not encourage the adoption of new technologies still in the process of commercialisation. As distribution obligations become more peremptory, renewable fuels will be in short supply, which will probably drive up supplier prices. This will cause a significant increase in consumer prices in turn, which will have a detrimental effect on the purchasing power of households and on competitiveness, as logistics costs increase. For these reasons, it is important to augment the current steering measures with State aid specifically aimed at commercialising emerging technologies and at demonstration projects. Early promotion of new technologies can increase the supply of renewable fuels in the longer term, thus providing more alternatives and curbing pressures to increase prices.

### **1.3 Non-combustion heating production**

There are several alternatives to coal in energy production. Phasing out coal in heating production is being promoted with new non-combustion solutions such as heat recycling, sea water heat exchange pumps, energy storage, geothermal energy and surplus heat.

Finland has a significant geothermal energy potential whose profitability is being currently explored through studies and demonstration projects. It is estimated that the production potential for geothermal energy will be about 2 TWh by 2030.

Geothermal heat can be leveraged at various orders of magnitude. Regional geothermal heating systems can be built with geothermal boreholes less than 1 km deep (generally about 300 m deep), geothermal energy wells 1 to 3 km deep, or geothermal power plants 4 to 7 km deep.

There are some geothermal energy projects in progress in Finland, but there is as yet no experience of long-term use. Geothermal energy involves significant locational risks. For example, groundwater aquifers may limit the exploitation potential of geothermal energy.

### **1.4 Other renewable energy projects**

The main focus will be on the aforementioned large-scale demonstration projects. These themes could be augmented with other projects involving renewable energy and emerging technologies, such as the use of biogas in transport with inputs so far underused, large-scale solar power projects and energy storage projects.

#### **Targets**

The target is to set up the aid programme as soon as possible, so that projects could be launched beginning in 2022. The target is to launch one or more projects in the categories described above, provided that the projects for which applications are submitted can be delivered within the timetable given.

Demonstration projects will be leveraged to commercialise the technologies referred to above and to lay a foundation for their further development. Also, with an aid programme broader than before, project development can be accelerated, and thus the number of projects out of which some may be delivered without requiring aid, on the back of the first successful demonstration projects, can be increased.

The use of renewable energy will increase as a result of the direct impact of the projects and indirectly as the technologies are further developed and commercialised. No targets for power output or production have been set, because the importance of the initial demonstration projects is not in their direct impact. It was also considered that it is not feasible to set quantitative targets separately for each technology. What is more

important is to facilitate the development of several production technologies and to allow enterprises and the market to decide how much to invest in each particular technology.

The projects described above will have a significant employment impact during construction, albeit the impact differs greatly according by theme and project. New jobs will be directly created for example in biofuel projects. New jobs will be indirectly created in enterprises that produce and develop the technologies involved. However, this employment impact is difficult to estimate. As technologies are commercialised and become more widespread, they will foster growth and global export potential. Diversifying the energy system will make it more resilient and more flexible while reducing our dependence on imported fossil fuels. In 2017, about 44% of Finland's energy production relied on imported energy.

### **Implementation**

The aim is either to update the Government Decree on the General Terms for Granting Energy Support 2018–2022 (1098/2018) or to draft a completely new Government Decree. Aid granted pursuant to the aforementioned Government Decree will be based on existing processes and information systems. The aid is processed by Business Finland and by the Energy Department of the Ministry of Economic Affairs and Employment. The projects with the largest investment costs are processed at the Ministry of Economic Affairs and Employment, and therefore it is likely that the aid for this component area will be processed and decided upon entirely at the Ministry. Expanding the aid programme or preparing a new aid programme, and processing the aid cases, will require additional resources compared to the present situation.

A small portion of the funding will be allocated to hiring temporary human resources for environmental permits and procedures and for processing funding and projects between 2021 and 2023. The green transition package (component areas 1–3) involves major investments, and the risk is that without additional resources the processing of investment applications and the permit process will take 1–2 years. Out of the EUR 6 million allocation, EUR 2.25 million will be used for personnel costs in the Environmental Permits divisions of Regional State Administrative Agencies, because any individual investment may require several environmental or water permits. A further EUR 2.25 million will be used for personnel expenses in the Environment divisions of Centres for Economic Development, Transport and the Environment for environmental impact assessments, exemptions and promotion of offshore wind power construction. EUR 0.75 million will be allocated to the Vaasa Administrative Court for processing any complaints filed against environmental permit decisions. The remaining EUR 0.75 million will be allocated to local authorities and regions, which are the key authorities in promoting regional planning, construction permits and various energy projects and for permit application processes.

**Investment target group**

The action is targeted particularly at enterprises investing in the production facilities described above. No limits on enterprise size are envisioned, and it is not intended for the aid to be targeted at particular regions.

According to the current Government Decree on the General Terms for Granting Energy Support, the aid will be allocated to machinery and equipment, buildings and planning costs that are essential for the investments. However, the percentage of planning costs is restricted, and aid will not be granted for example for feasibility studies or similar preliminary studies. In major projects, the aid is typically allocated to the extra costs incurred through applying new technology.

The final selection of investment projects will be competitive, the main criteria being the significance of each project in terms of the impact of technology demonstration and the feasibility of each project.

**Compatibility with rules on State aid**

The current view is that the aid will be granted pursuant to the *General Block Exemption Regulation* (GBER), or else notification will be made to the Commission of the projects according to the *Energy and Environmental State Aid Guidelines* (EEAG). The Commission must be separately notified of projects involving offshore wind power and renewable transport fuels (EEAG).

Supporting the aforementioned themes is consistent with the current rules on State aid. However, the revising of the rules on State aid in the near future fosters uncertainty.

Some projects may receive support from other EU programmes or through national instruments. At the innovation stage, projects may find funding through the Horizon Europe programme, for example. In regions, some funding may be available through the Just Transition Fund (JTF). At the investment stage, funding may be available from the EU Innovation Fund. It will be ensured for all projects that their funding is in compliance with current rules on State aid, with particular reference to cumulative aid. Aid applicants must notify the authorities if their project has been granted or is being granted aid from other public funding sources.

**Timetable**

The aid programme is to be prepared and the necessary amendments made during 2021. The application round will be launched as soon as the legislation is enacted. If necessary, a preliminary round of applications for declaration of intent could be organised in 2021.

The application round will proceed in several stages; for major projects in particular, aid decisions will be front-loaded and made during 2022. Major investments involve the risk of whether they will be completed according to the timetable specified; this cannot be evaluated until the aid programme has been launched, on the basis of applications received.

Aid could be provided to minor projects also in 2023. The aid decisions will commit to payment of the aid in instalments payable later according to project progress, the payouts being based on actual costs. Aid instalments will be paid out between 2022 and 2026 for aid decisions made in 2022, and between 2024 and 2026 for aid decisions made in 2023. The final aid instalment (e.g. 20%) will only be paid out if the project has been completed.

### Investment and reform package for Åland (P1C1I3)

#### **Energy system based on offshore wind power and renewable energy production**

The project will focus primarily on strategic development target no. 6 in the Development and Sustainability Agenda for Åland (*a significantly higher proportion of energy from renewable sources, plus increased energy efficiency*). Another aim is to make a positive contribution to the Nordic energy market and to the attainment of renewable energy targets of Finland and of the Nordic countries.

The package will have a positive impact on the Province of Åland, for example in the form of establishing new enterprises, creating new jobs and increasing R&D investments. Project launching will create opportunities for enterprises on Åland to provide various services. Local labour will be needed by enterprises from outside Åland operating in the region. The projects will continue to have a positive impact on the labour market in Åland after completion as well. Project launching will increase demand for training in wind power, including further training. These investments will reduce greenhouse gas emissions. The projects also have a digitalisation dimension, albeit not a very prominent one relative to the overall scope of the project.

A large-scale offshore wind power component project and related 'power-to-X' measure will be implemented under the leadership of the Government of Åland. Because the project is very broad in scope and demanding in nature, external experts will have to be consulted. Part of the proposed funding will be used for offshore wind power consultant services. The Government of Åland has commissioned a roadmap from the Lappeenranta University of Technology to outline the potential of additional offshore wind power construction and increased electricity production. The roadmap will be completed in June 2021.

The energy production area defined in the Maritime Spatial Plan for Åland is about 1,000 sq.km., and the potential rated power of the offshore wind farm is estimated at 6 GW.

Because the technical design is very much in its early stages, a considerable quantity of various consultant services will be needed. Investments in new infrastructure will be needed for distributing the energy produced (electricity, hydrogen), including power lines and pipelines. The energy produced will be transmitted to mainland Finland and to Sweden, to be fed into their respective national grids.

The Government of Åland is preparing to commission preliminary studies for Åland to benefit as widely as possible from the future offshore wind power construction. These include seabed studies and measurements of wind conditions.

The completion of the offshore wind power project from start to finish is estimated to take 10 to 15 years. The planning and preparation phase is estimated to continue until 2024. It is very much early days in project planning at this point. Planning and preparation will be a public procurement subject to competitive tendering and funded out of the RRF.

Another renewable energy component project is about promoting production investments in solar energy. The energy and climate strategy for Åland sets as a target the building of 17 MW of solar energy capacity by the year 2030. The funding to be granted will be allocated to major solar power park investments made by enterprises, local authorities or communities. The investments will probably mainly be made between 2021 and 2025. There can be one or several projects to be funded. It is very much early days in project planning at this point. There is some interest in the potential funding for solar power parks. Any solar power production projects will be funded by investors, and RRF funding will cover part of the funding needs.

**Compatibility with rules on State aid:** Studies on offshore wind power will be commissioned through a public procurement procedure. Aid for solar power investments will be granted through competitive tendering (GBER, Article 41).

### Open strategic independence and security matters

No direct impact.

### Trans-border and multinational projects

Under investment 1.1, an 800 MW AC power line is being planned between northern Finland and northern Sweden. This power line is to run from Messaure in Sweden via Keminmaa to Pyhäselkä, a distance of some 370 km. This is on the EU's list of Projects

of Common Interest (PCI), and the plan is to use TEN-E funding for the project. It will be ensured when providing funding to RRF projects that there is no accumulation or overlap of funding.

The RRF projects are not directly related to the building of an AC power line between Finland and Sweden, but they do partly occupy the same geographical region in northern Finland, where wind power is a rapid growth industry.

### Green dimension in the component area

All investments in this component area will be implemented so as to facilitate reductions in greenhouse gas emissions and the mainstreaming of climate actions. The Do No Significant Harm principle will be complied with in accordance with Regulation 2020/852. Investments will be directed to renewable energy production and energy transmission.

The investment and reform package in component P1C1 is 100% supportive of the green transition.

Investments will be made in various forms of renewable energy production, such as offshore wind power (028 *Renewable energy: wind*), industrial-scale solar power (029 *Renewable energy: solar*), other renewable energy such as geothermal energy (032 *Other renewable energy*). 100% supportive of the green transition, reducing emissions and curbing climate change.

Transport biofuel production forms part of the intervention field *Biomass with high GHG savings* (030bis), reducing emissions by at least 65%, based on the calculation methods given in the Renewable Energy Directive (REDII). These requirements will be considered in the project funding decisions.

Projects concerning energy systems and energy storage aim to foster solutions to reduce the use of fossil fuels in energy systems and to promote integration of the energy system. The projects curb climate change by facilitating a transition to clean energy, in keeping with the intervention field *Smart Energy Systems (including smart grids and ICT systems) and related storage* (033).

Projects addressing district heating production and transmission are being planned to increase renewable energy production and surplus heat recovery. In district heating projects, life cycle emissions amount to 100 gCO<sub>2</sub>e/kWh, or they concern surplus heat in accordance with intervention field *High efficiency co-generation, district heating and cooling* (034bis). These requirements will be considered in the project funding decisions.



## Digital dimension in the component area

The investment and reform package in component P1C1 is 19% supportive of the digital transformation.

Energy infrastructure investments P1C111 have to do with the intervention field *Smart Energy Systems (including smart grids and ICT systems) and related storage* (033) and are 40% supportive of the digital transformation, because energy system investments promote the development of smart energy systems. Smart control and regulation of electricity, heating and low-carbon gas transmissions rely on digital solutions. Some investments concern digital control systems. Investments will also be used to promote energy storage potential. These requirements will be considered in the project funding decisions.

## Do No Significant Harm

The investment and reform package in component area P1C1 complies with the criteria of the Do No Significant Harm (DNSH) principle.

However, the criterion of biodiversity and ecosystem protection and restoration has been investigated in more detail for the reform P1C1R1 ('Significant reduction of energy use of coal'). The reform is in compliance with the DNSH principle in respect of this criterion too, because the replacement production investments (e.g. in wind power and wood bioenergy) will be made so that their impacts will not do significant harm, as ensured in local planning and permit processes. Finnish power and heating plants that burn wood biomass use fuels that are in compliance with the Renewable Energy Directive (REDII).

Similarly, the criterion of biodiversity and ecosystem protection and restoration has been investigated in more detail for the reform P1C1R2 ('Energy taxation reform to consider technological advancements'). The reform is in compliance with the DNSH principle in respect of this criterion too, because the production investments replacing fossil fuels will be made so that their impacts will not do significant harm, as ensured in local planning and permit processes. Finnish power and heating plants that burn wood biomass use fuels that are in compliance with the Renewable Energy Directive (REDII).

The criterion of biodiversity and ecosystem protection and restoration has also been investigated in more detail for the investment P1C111 ('Energy infrastructure'). The investment is in compliance with the DNSH principle in respect of this criterion too, for example because environmental impact assessments are performed for the projects when required by law, pursuant to the Act on Environmental Impact Assessments. If a project is likely to cause a significant detriment to natural values in an area protected under the Natura 2000 network, then environmental impacts must be assessed pursuant to the

Nature Conservation Act instead. Environmental permits will only be granted to projects that are fully in compliance with the Environmental Protection Act and the Waste Act.

For investment P1C112 ('Introduction of new energy technology'), four criteria have been investigated in more detail: Sustainable use and protection of water resources and natural resources in the sea; Transition to the circular economy; Preventing and reducing environmental contamination; and Biodiversity and ecosystem protection and restoration. However, the investment complies with the DNSH principle for these criteria because of the reasons given below.

Environmental impact assessments are performed for the projects when required by law, pursuant to the Act on Environmental Impact Assessments. If a project is likely to cause a significant detriment to natural values in an area protected under the Natura 2000 network, then environmental impacts must be assessed pursuant to the Nature Conservation Act instead. Environmental permits will only be granted to projects that are fully in compliance with the Environmental Protection Act and the Waste Act,

and with the Water Framework Directive in respect of protecting the sea. The placement of offshore wind farms must comply with the targets of the maritime management action plan and maritime management plans based on the Marine Strategy Framework Directive. In geothermal energy projects, potential adverse impacts on surface waters and groundwater will be considered in the placement and implementation of the projects. Projects that may be relevant for the criterion. For the transition to the circular economy, the national waste plan intended to promote the reuse of biodegradable material will be considered. By-products, scraps and waste with no other recovery potential will be used for biogas production. Transport biofuels will be produced using raw materials consistent with REDII that result in substantial emission reductions.

Investments P1C113 in Åland focus on reform needs related to clean energy. Potential trans-border impacts will be considered as the investment phase begins in offshore wind power projects.

For a more detailed discussion, see Appendix 3: DNSH tables.

### **Costs to be covered out of RRF funding:**

EUR 318.7 million, consisting of the following investments

- Energy infrastructure: EUR 155 million
- Investments in emerging energy technology: EUR 161 million
- Renewable energy investment in Åland: EUR 2.7 million

## INDUSTRY RENEWAL AND INVESTMENTS SUPPORTING THE GREEN AND DIGITAL TRANSITION

### Description of component area:

**Policy area:** *hydrogen economy, carbon dioxide capture and use, electrification and energy efficiency in industry, battery value chain, bioeconomy, circular economy, climate policy.*

**Targets:** *The key targets in this component area have to do with the green transition, jobs, business structure reform, sustainable growth and exports.*

**Green transition** *The purpose of investments in this component area is to promote reduction of emissions, resource efficiency and carbon handprint solutions in industry. The target is to achieve a combined reduction of 1 Mt of CO<sub>2</sub>eq per year by 2026 with these investments. Another target is to increase the reuse and recycling of materials, residues and waste in various value chains, such as the bioeconomy and battery manufacturing.*

**Jobs, growth and exports:** *The purpose of the investments is to support economic reform and new kinds of growth, employment and exports on the strength of the carbon handprint impacts of enterprises. Investing in high-tech solutions represents an opportunity for Finland to multiply the benefits of climate efforts, as Finnish know-how can help reduce emissions and create sustainable solutions worldwide.*

#### Reforms and investments<sup>1</sup>:

##### Reforms:

1. *Reform of the Climate Change Act and low carbon renewal of industries (P1C2R1)*
2. *Strategic promotion of the circular economy and reform of the Waste Act (P1C2R2)*

##### Investments:

1. *Clean hydrogen and CCS/CCU in industry, EUR 156 million (P1C2I1)*
2. *Direct electrification and low carbonisation of industrial processes, EUR 60 million (P1C2I2)*

- 3.** *Reuse and recycling of key materials and industrial residues, EUR 110 million; of which EUR 30 million for the bioeconomy and EUR 30 million for recycling solutions in battery manufacturing (P1C2I3)*

*RDI actions addressing the green transition are described under pillar 3.*

**Estimated costs:** *Significantly reducing emissions in Finnish industry and promoting reuse and recycling of materials will require investments totalling tens of billions of euros. In the funding period 2021–2026, green transition investments will amount to about EUR 2 billion, of which more than 10% will be covered with RRF funding (EUR 326 million in all).*

## Principal challenges and targets

### a. Principal challenges

The greatest and most urgent challenge facing humanity apart from loss of biodiversity is global warming. Finland aims to do its part to curb global warming with ambitious climate targets. The Government Programme of Prime Minister Marin's Government declares that Finland will become carbon-neutral by 2035. Attaining this target will require a significant reduction in industrial emissions. According to the sector-specific low-carbon roadmaps completed in summer 2020, it is possible to achieve the proposed reduction in emissions, but this will require investments amounting to tens of billions of euros in new innovations, in process electrification and in emission-free electricity production. These investments will not happen to the extent needed or in the time frame needed without public intervention, because they are not necessarily financially viable in their own right.

In an assessment of Finland's sustainable development policy, climate change, the state of the environment and overconsumption as well as the increasing inequality of society were identified as the greatest challenges in Finland. In order to attain our climate targets and halt biodiversity loss, we must pay more attention to the sustainable use of natural resources, employing the means of the circular economy. Pressures toward using virgin natural resources can be reduced through investments in industrial solutions promoting business models that enhance resource efficiency, materials reuse and significant increases in recycling. The consumption of non-renewable natural resources will decrease and the sustainable use of renewable natural resources may increase to the extent that the total consumption of primary raw materials in Finland in 2035 will not exceed what it was in 2015. The natural resources used to manufacture exported products are not covered by the target in this programme proposal.

The principal challenges involved in investments in this component area are:

- **High investment need and costs.** Tens of billions of euros in investments are needed to achieve a significant reduction in industrial emissions and to create high added value products manufactured from residues and waste from production processes.
- **Competitiveness of new solutions.** Low-carbon and sustainable solutions are not necessarily financially profitable as yet, compared with technology currently in common use. Public funding will be deployed to help these solutions become competitive.
- **Excess consumption and low recycling rates.** We must pay more attention to the sustainable use of natural resources, employing the means of the circular economy. The recycling rates for community waste, building waste, demolition waste and plastic packaging in Finland are low compared to the present and future requirements in EU directives and the national Waste Act. There is also plenty of unused potential in the use of industrial residues and waste. Finland's Circular Material Use rate (CMU) is lower than the EU average.
- **Great increase in electricity consumption and need for clean energy.** Significant reductions in industrial emissions and electrification of energy-intensive industries will greatly increase electricity consumption in the future, which in turn will require investments in renewable electricity production capacity (see the component area 'Energy system transformation'). Energy-intensive industries cannot make far-reaching changes to their processes before sufficient availability of renewable and clean energy has been ensured. In respect of increasing the use of low-carbon hydrogen, Finland is at a disadvantage for example because of a higher market price for electricity than in neighbouring countries and a lack of experience in the use of hydrogen in industry and transport applications.
- **Other challenges.** For enterprises to be willing to invest in low-emission processes and solutions, clear-cut EU-level regulation is needed to set the benchmarks for profitability.

## b. Targets

Low-carbon industry, sustainable batteries, electrification, and circular economy e.g. to increase the processing value of industrial residues will significantly contribute to the attainment of national and EU-level carbon-neutrality targets. The targets will have positive impacts not only on the climate and the environment but also on employment, economy reform, growth and the digital transformation. Promoting a low-carbon industry,

sustainable batteries, electrification and high-value circular economy products and solutions are at the core of the *New Industrial Strategy for Europe* (COM(2020) 102 final) and *A New Circular Economy Action Plan* (COM(2020) 98 final) and also form an important part of *A hydrogen strategy for a climate-neutral Europe* (COM(2020) 301 final), the *Battery Regulation* (COM(2020) 798/3 2020/353), *A European strategy for data* (COM(2020) 66 final), *An SME Strategy for a sustainable and digital Europe* (COM(2020) 103 final) and the EU Green Deal. Industrial reforms in these areas contribute to the RRF 'Power up' and 'Recharge and Refuel' flagship areas. The actions also address the 2019 and 2020 Country Specific Recommendations for Finland directly. The actions will promote the recommended actions given in the updated EU Bioeconomy Strategy and in the Council conclusions on that document.<sup>5</sup> The key targets for this component area are described below.

1. **Green transition:** The purpose of investments in this component area is to promote reduction of emissions and resource efficiency in industry. The target is to achieve a combined reduction of 1 Mt of CO<sub>2</sub>eq per year by 2026 with these investments. Another target is to increase the reuse and recycling of materials, residues and waste in various value chains, such as the bioeconomy and battery manufacturing. The target is, for example, to promote the materials circulation of plastics, textiles, electrical and electronic devices, battery materials, building materials and demolition materials.
2. **Employment and growth:** The investments in this component area are intended to have a combined employment impact of thousands of person-years between 2021 and 2026. Technology and production model reforms will reduce carbon footprints at home, and there is an even greater carbon handprint potential in exports. According to the roadmap for the technology industry, global demand for low-carbon solutions will increase by at least 20% per annum just to fulfil the climate commitments already made. This will translate into a growth of more than EUR 3 billion in Finland's annual exports. With recovery measures, the demand for low-carbon solutions may even double, which will boost Finland's annual export potential to more than EUR 30 billion.

### c. National strategic circumstances

The reforms and investments addressing low-carbon industry, electrification, sustainable batteries and high-value products are linked to the climate targets of the EU Green Deal and of Prime Minister Marin's Government. Investments in this component area

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<sup>5</sup> The updated Bioeconomy Strategy "A sustainable Bioeconomy for Europe: strengthening the connection between economy, society and the environment" – Council conclusions (29 November 2019).

support the national Climate Act to be updated in 2021, the National Climate and Energy Strategy and Medium-term Climate Change Policy Plan, and they will also promote the execution of the sector-specific low-carbon roadmaps in accordance with the Government Programme of Prime Minister Marin's Government while being consistent with the National Battery Strategy published in January 2021 and other aims for industry in terms of improving competitiveness and international growth, etc.

The Government Programme committed Finland to strategically promoting the circular economy. The Strategic Programme to Promote a Circular Economy, aiming for the year 2035, was completed at the end of 2020. The Government Resolution to implement that Programme was adopted in April 2021. The Waste Act, which is of key importance in regulating the operating environment of the circular economy, and the National Waste Plan are currently being revised in the interests of attaining the ambitious recycling targets mandated by the EU, etc. Recycling and preparation for reuse have acquired an increasingly important role in waste management legislation and in the National Waste Plan.

An update of Finland's National Bioeconomy Strategy will be completed during 2021. Its targets include increasing added value and leveraging bioeconomy residues along with promoting regional bioeconomies, while considering the limitations imposed ecological carrying capacity of the Earth.

Investments in low-carbon solutions in industry support the Government's target of Finland becoming carbon-neutral by 2035 and offer opportunities for scaling up solutions in the Finnish technology industry to translate them into global exports. Investments in hydrogen, carbon dioxide recovery and use and electrifying industrial processes and reducing their carbon footprint will have the combined effect of significantly reducing emissions from Finnish industry. Participating in the IPCEI Hydrogen links Finland to a European value chain and offers growth potential for enterprises in the field. Investments in the battery value chain support an EU-level transition to low-emission transport.

## Description of reforms and investments in the component area

### a. Reforms

#### **REFORM 1: Reform of the Climate Change Act and low carbon renewal of industries (P1C2R1)**

According to the Government Programme, Marin's Government will update the Climate Change Act so that the carbon-neutrality target can be achieved by 2035. Emission reduction targets for 2030 and 2040 will be included in the Act, in line with the path to carbon neutrality, and the target to 2050 will be updated. The target group for the Climate Change Act reform is society at large. The most significant steering measure

in the Act consists of the climate plans used to attain the curbing and adjustment obligations specified in the Act. The Act is principally binding only on central and local government authorities, but implementing the plans will extend their impacts to various sectors and private citizens, depending on the actions taken. As an example, the Government will revise the National Climate and Energy Strategy to apply to all sources of and sinks for greenhouse gas emissions, in coordination with the updating of the Medium-term Climate Change Policy Plan.

The sector-specific low-carbon roadmaps specified in the Government Programme were published in autumn 2020. Delivering on these roadmaps requires major investments whose impacts will extend decades into the future. Opportunities identified in the roadmaps include industrial process electrification, phasing out fossil fuels and emission reduction measures based on low-emission solutions. If all industrial processes in Finland were to be electrified, it will technically be possible to achieve emission reductions of 3.4 MtCO<sub>2</sub>. This electrification will increase electricity consumption in industry by about 11 TWh per year.

**Challenges:** In 2019, Finland's greenhouse gas emissions totalled 52.8 Mt CO<sub>2</sub> eq. According to the sector-specific roadmaps, the chemical industry aims to reduce its carbon footprint in Finland over the next 25 years so as to bring its current emissions of 5.7 Mt CO<sub>2</sub> eq per year (2019) to as close to zero as possible. Direct emissions from plants in the forest industry amounted to about 3 Mt CO<sub>2</sub> eq in 2019. In the technology industry, direct emissions in the various fields totalled about 4 Mt CO<sub>2</sub> eq in 2018. The majority of this came from metal processing, metal ore extraction and industrial mineral extraction. Emission reduction measures in the technology industry are mostly based on electrifying processes and machinery, on improving energy efficiency and materials efficiency, on the circular economy and on adopting digital solutions. The measures required will considerably increase electricity consumption.

Achieving significant reductions in industrial emissions will require investments amounting to tens of billions of euros. Low-carbon solutions are not necessarily competitive as yet, compared with technology currently in common use. What emerged in the roadmap preparation is that not all enterprises are able or willing yet to undertake a low-carbon shift, which makes it all the more important to proceed in coordinated cooperation and with competent leadership.

**Targets:** The Climate Change Act is to be revised and reinforced, and the National Climate and Energy Strategy and the Medium-term Climate Change Policy Plan will be updated in the interests of achieving carbon neutrality for Finland by 2035. The targets include promoting the emission reduction measures identified in the sector-specific low-carbon



roadmaps that are supportive of the Government's efforts to achieve a carbon-neutral Finland.

**Implementation:** The Ministry of the Environment is responsible for revising the Climate Change Act and for enacting the amendment, and for coordinating the updating of the Medium-term Climate Change Policy Plan. The Ministry of Economic Affairs and Employment is responsible for the preparation and implementation of the updating of the National Climate and Energy Strategy and of the National Bioeconomy Strategy.

Emissions from industrial processes will be reduced through investments made by enterprises; public authorities can influence how, when and to what extent they are made by offering funding to mitigate investment risks, within the confines of EU rules on State aid.

**Stakeholder input:** There are various stakeholders widely involved in the administrative reforms related to attaining Finland's carbon-neutrality target, such as industry representatives. Various sectors have also drawn up low-carbon roadmaps of their own. It is enterprises that are responsible for making investments to reduce greenhouse gas emissions; without these investments, the projects will not go forward. Principally, enterprises are expected to invest 60% to 80% on their own account in these investments.

**Expected complications** A potential complication for implementing the proposed administrative changes and for attaining climate targets may come for example from the emissions trading system not functioning in a way conducive to attaining the targets. Electrification may cause electricity consumption in industry to double, resulting in an increase of more than 50% in electricity consumption in Finland by 2050. Significant investments are needed to increase the capacity for low-emission electricity generation and to expand the transmission network.

**Reform target group:** The Climate Change Act is binding upon the authorities; it does not impose direct bans or obligations on enterprises, private individuals or industries. The Act defines the measures for attaining the targets specified in the Act. The target group for strategies, plans and programmes implementing the Climate Change Act includes sectors that generate greenhouse gas emissions. For example, 13 sectors have prepared sector-specific low-carbon roadmaps. The major emitters in industry are large corporations. Emissions from the ten largest industrial facilities in Finland constitute 75% of all of Finland's industrial emissions. The major emission sources are the steel, chemical, paper and concrete industries.

**Implementation timetable:** The Government's proposal for the amended Climate Change Act should be ready in 2021. The aim is for the revised Climate Change Act to be

enacted by Parliament and published by Q2/2022. The reform of the National Energy and Climate Strategy and the update to the Medium-term Climate Change Policy Plan will be completed in autumn 2021. The sector-specific low-carbon roadmaps are being put into practice. The National Battery Strategy was completed in January 2021, and the National Bioeconomy Strategy update will be completed in summer 2021. The assumption is that the strategies, plans and roadmaps related to the revised Climate Change Act will also be updated during the next electoral term (2023–2027).

**State aid:** This reform is legislative in nature and related to the roadmaps prepared by industries themselves and does not require a review of the State aid regulations.

### **REFORM 2: Strategic promotion of the circular economy and reform of the Waste Act (P1C2R2)**

As part of the Government Programme, there is a Strategic Programme to Promote a Circular Economy extending to 2035, implementation of which will begin in spring 2021. This Programme puts Finland at the cutting edge worldwide in seeking to reduce consumption of non-renewable natural resources and in limiting the overall use of domestic material natural resources.

The Waste Act, which is of key importance in regulating the operating environment of the circular economy, and the National Waste Plan are currently being revised in the interests of attaining the ambitious recycling targets mandated by the EU, etc. The waste management legislation reform includes amendments to the Waste Act and to several Decrees. The key changes include obligations for enterprises to collect packaging and biowaste separately and for packaging producers to assume the costs of packaging waste management, besides providing for implementation of the Single-Use Plastics (SUP) Directive and imposing a separate collection obligation for textile waste at regional collection points.

**Challenges:** In an assessment of Finland's sustainable development policy (2019), overconsumption was one of things identified as the greatest challenges in Finland. Going forward, we must pay more attention to the sustainable use of natural resources, employing the means of the circular economy. The circular economy is being promoted with a strategic programme aiming at the year 2035, where the key challenges are identified as: high overall consumption of natural resources; slow advancements in resource productivity; and low Circular Material Use (CMU) rate, meaning the percentage of recycled materials in all material use.

The recycling rates for community waste, building waste, demolition waste and plastic packaging in Finland are low compared to the present and future requirements in EU directives and the national Waste Act. We need much more sorting and much more

recycling capacity in order to attain the binding recycling targets. It may be challenging to implement separate collection obligations, because the roles and responsibilities in waste collection and transport are not clear. For example, having packaging waste collected separately will require a new kind of cooperation between local authorities and packaging producers. Digital waste management and product information systems are incomplete and under constant development.

**Targets:** In Finland's Strategic Programme to Promote a Circular Economy, aiming for the year 2035, the following targets are set for the sustainable and efficient use of natural resources:

- The consumption of non-renewable natural resources will decrease and the sustainable use of renewable natural resources may increase to the extent that the total consumption of primary raw materials in Finland in 2035 will not exceed what it was in 2015. The natural resources used to manufacture exported products are not covered by the objective.
- The productivity of resources will double by 2035 from what it was in 2015.
- The Circular Material Use rate (CMU) will double by 2035.

With regard to the targets, one of the key actions in the Strategic Programme is the agreement on a low-carbon circular economy society. Various sectors and bodies, such as business associations and local authorities, may accede to this voluntary agreement by setting targets and drawing up roadmaps on concrete actions to further the objectives of the Strategic Programme, i.e. to reduce the use of natural resources, to increase the use of recycled materials and to promote a low-carbon circular economy society. To support this agreement, scenarios extending to 2035 concerning the use of natural resources and their environmental and economic impacts will be prepared in collaboration with research institutions. These scenarios will help participants in the agreement process identify their most effective and concrete actions for selection for their roadmaps.

The target of the waste management legislation reform is to promote the circular economy and to grow the material reuse and recycling business and increase employment in it. The principal target, however, is to implement the binding recycling obligations in the EU Waste Framework Directive. The recycling rate of municipal waste will be raised from the present 41% to at least 55%. The recycling rate of plastic packaging will be raised from 31% to 50% in 2025 and to 55% in 2030. The recycling rate of building waste and demolition waste will be raised to at least 70%. Finland will introduce widespread collecting and processing of textile waste in 2023.

**Implementation:** The proposal for the Strategic Programme to Promote a Circular Economy was completed in December 2020. The Government Resolution to implement that Programme was adopted on 8 April 2021. A cross-sectoral steering group supported by ministries is coordinating and monitoring implementation of the Programme and will report to the Ministerial Working Group on Climate and Energy Policy. The revised waste management legislation will be enforced by the Ministry of the Environment. Enforcement of the Waste Act will be enhanced through publicity and training arranged for officials and other stakeholders. Among other things, the Ministry of the Environment will appoint a working group to monitor the implementation and effectiveness of 'End of Waste' regulation. Centres for Economic Development, Transport and the Environment will set up regional working groups to implement a nationwide waste management plan as per the Waste Act.

**Stakeholder input:** The Strategic Programme to Promote a Circular Economy contains more than 40 proposed actions for operators such as ministries, regions, local authorities, enterprises and private individuals.

**Expected complications:** Cross-sectoral commitment to strategic targets concerning the use of natural resources may prove challenging. However, this complication may be avoided with good coordination and sufficient dialogue and an increase in shared understanding, e.g. through shared scenarios.

**Reform target group:** The target group for the Strategic Programme to Promote a Circular Economy consists mainly of central and local government, but more broadly also includes enterprises and private consumers. The key target groups for the waste management legislation reform are local authorities, property owners and private and public enterprises.

**Implementation timetable:** The key actions in the Strategic Programme to Promote a Circular Economy will be begun in early 2021 and are intended to run across more than one electoral term. The framework for the low-carbon circular economy agreement is intended to have been drawn up and signed by key operators by Q2/2023.

The revised Waste Act will be enforced in 2021–2024.

**State aid:** This reform is legislative in nature and does not require a review of the State aid regulations.

## b. Investments

### **INVESTMENT 1: Clean hydrogen and CCS/CCU in industry (P1C211)**

The funding will be used to support investments for the commercial scaling up of pure hydrogen production and storage technologies. In Finland, hydrogen is used as a process raw material in industry and as a fuel in heat and steam production. Hydrogen is currently manufactured mainly from natural gas and as a by-product of chemical processes and, to a minor extent, by decomposing water by electrolysis. Hydrogen is required for example for producing renewable transport fuels. If pure hydrogen production is expanded to a competitive scale, fuel thereby produced could replace fossil fuels in heavy vehicle transports or used directly as a source for electric power with fuel cell technology.

Hydrogen will play an important part in creating low-carbon processes in the steel and chemical industries. Hydrogen will enable new approaches to mineral and metal processing because of its high combustion temperature. As an example, the plans to reform the production processes at the SSAB steel mill in Raahе, Finland's largest single source of emissions (7%), hinge on the availability of hydrogen.

The participation of Finnish enterprises in the IPCEI Hydrogen process being started in the EU links them to cross-border financial, research and industrial cooperation on hydrogen.

Carbon dioxide removal has the potential to grow into a huge market with a significant impact on curbing climate change. Carbon dioxide capture and utilisation (CCU) and carbon dioxide capture and storage (CCS) are important technologies with which the world's climate targets can be attained. Chemicals, fuels and materials can be produced without using fossil-based natural resources. It is also possible to produce new, valuable materials and products from carbon dioxide.

Finnish research institutions have worked with enterprises to model and develop innovative CCU and CCS concepts for some of the largest sources of CO<sub>2</sub> emissions in the world, with solutions for industry, transport, electricity production, heating, agriculture and forestry. Bio-CCS is currently the only carbon-negative technology usable on an industrial scale. Many innovations are approaching the point where they can be scaled up for industrial use.

**Challenges:** In late 2020, Business Finland commissioned VTT to prepare a roadmap for the hydrogen economy. Finland's challenges include a market price higher than in Sweden or Norway, a lack of experience in using hydrogen in industry and transport solutions, and a lack of salt caves that are commonly used for hydrogen storage. Hydrogen molecules are extremely small, and hydrogen transmission and storage require special features and special expertise.

Some of the challenges identified in the roadmap involve other EU Member States: These challenges have to do with development of directives and aid instruments, the price of hydrogen and the commercialisation of cost-efficient electrolysis technology for manufacturing hydrogen. The greatest challenge in carbon dioxide capture is translating the technologies from lab setups into affordable industrial solutions.

Carbon dioxide capture is a relatively young technology, and there are both technical and regulatory challenges involved in its use.

**Targets:** Finland and enterprises operating in Finland seek to achieve significant reductions in carbon dioxide emissions through hydrogen economy solutions and to strengthen their competitiveness. Solutions developed and implemented in Finland can be applied in other countries too, which will increase the carbon handprint of Finnish industries.

By participating in the IPCEI process and through national actions, Finland wishes to strengthen and highlight our expertise at various points in the value chain. Finnish enterprises are already familiar with the reagents required for hydrogen manufacturing; energy-efficient electricity management components, valves and storage units; digital monitoring and control systems; and logistics and testing environments for technological solutions.

Carbon dioxide capture and hydrogen production and the innovative industrial processes enabled by these are strongly linked to the circular economy, the whole point of which is to bind carbon to remove it from atmospheric circulation. In addition to fuel production (component area: 'Energy system transformation') there is another development trend that may be launched quickly: binding carbon in the soil.

The most significant hydrogen economy investments have to do with the development of hydrogen production, storage and distribution logistics, piloting and gradual introduction in industry. There are already investment-ready projects for separating hydrogen production from fossil fuels.

RRF funding will be allocated to investments in the hydrogen value chain where hydrogen is to be applied in industry, transport and possibly other new products and solutions based on the use of carbon dioxide. Hydrogen production in these projects is principally driven by low-carbon electricity. About 85% of the electricity produced in Finland is CO<sub>2</sub> emission free.

The target is to complete the selected projects and to use up the funding by the middle of 2026. Funding will not be allocated to hydrogen production from natural gas. Instead,

there are plans to use the funding to support solutions for carbon dioxide capture, storage and use.

**Implementation:** Business Finland is running several RDI programmes addressing the hydrogen economy and carbon dioxide capture, such as 'Bio and Circular Finland', 'Power to X', 'Smart Energy', 'Smart Manufacturing', battery and logistics programmes, a maritime traffic test bed and digitalisation promotion packages. If the IPCEI Hydrogen process is implemented within the RRF window, the first commercial applications will also be eligible for public funding.

In autumn 2020, Business Finland organised a national call for proposals for IPCEI Hydrogen, which showed that there are enterprises operating in Finland that are willing to participate in the IPCEI process. If implemented, the IPCEI Hydrogen process can enable significant investments in the hydrogen economy in Finland.

A small portion of the funding will be allocated to hiring temporary human resources for environmental permits and procedures and for processing funding and projects between 2021 and 2023. The green transition package (component areas 1–3) involves major investments, and the risk is that without additional resources the processing of investment applications and the permit process will take 1–2 years. Out of the EUR 6 million allocation, EUR 2.25 million will be used for personnel costs in the Environmental Permits divisions of Regional State Administrative Agencies, because any individual investment may require several environmental or water permits. A further EUR 2.25 million will be used for personnel costs in the Environment divisions of Centres for Economic Development, Transport and the Environment for environmental impact assessments, exemptions and promotion of offshore wind power construction. EUR 0.75 million will be allocated to the Vaasa Administrative Court for processing any complaints filed against environmental permit decisions. The remaining EUR 0.75 million will be allocated to local authorities and regions, which are the key authorities in promoting regional planning, construction permits and various energy projects and for permit application processes.

**Investment target group** The investment target group comprises major corporations in the energy technology sector and in energy-intensive industries, their supplier networks and SMEs that commercialise innovations. No limits on enterprise size are envisioned, and it is not intended for the aid to be targeted at particular regions or sectors.

**State aid:** IPCEI has its own rules on State aid, adopted in 2014; it allows for a broader range of aid for projects undertaken jointly by Member States than the provisions of the GBER. If the IPCEI Hydrogen process, which is coordinated by Germany, is delayed or cancelled, then Article 25 of the GBER may be referred to as the basis for State aid for RRF funding. CCS and CCU projects require a separate notification. It is probable that not all

projects will fulfil the IPCEI criteria, in which case their funding will be provided pursuant to the GBER and possibly a separate notification.

**Timetable:** According to the preliminary timetable issued by the Commission, prenotification for IPCEI Hydrogen will begin in spring 2021, project notifications will be submitted during 2021 and the Commission will make decisions in early 2022. As an innovation funding provider, Business Finland has the capacity to make the national funding decisions as soon as the Commission publishes its notification decisions in 2022 and, for an eventual second IPCEI Hydrogen, in 2023. If the IPCEI process is postponed or cancelled, the first funding decisions based on the GBER could be made in 2022 as part of the normal funding process and programme activities of Business Finland. Funding for projects requiring notification might then be delayed until 2023. The payouts and investments will be made between 2022 and 2026.

#### **INVESTMENT 2: Direct electrification of industry processes to reduce carbon consumption (P1C2I2)**

Prime Minister Marin's Government will encourage low-carbon solutions in industry by supporting energy efficiency and process electrification. Carbon dioxide emissions in industry will be reduced by improving energy efficiency through heat consumption and process electrification and by introducing hybrid solutions (electricity and combustion in combination) and by utilising heat exchange pump technology and surplus heat. In industry, emission reduction needs and potential have been identified in drying, heating and evaporation processes, in steam production, in furnaces and in the use of surplus heat. Solutions for making industrial processes more efficient and reducing their emissions include heat exchange pumps, electric steam generators and replacement of the technologies and raw materials used for combustion.

By electrifying processes and by transitioning away from fossil fuels, industry is preparing for the phasing out of coal for energy use in 2029 and at least halving the use of peat for energy use by 2030. The Government's decision to lower the electricity tax for industry encourages electrification.

Lowered costs of clean electricity production will improve the cost-efficiency of electrification in low-carbon solutions. It is possible to apply solutions in the processing industry that cut carbon dioxide emissions and improve energy efficiency. Such solutions may be applied in the forest industry, the concrete industry, the chemical and oil refinery industry and in metal processing. With certain reservations, similar technological solutions may be applied more broadly in community heating and in applications integrating several sectors, along with processes that recycle and refine materials in the circular economy. Electrification will accelerate projects to enable significant emission reductions in a variety of sectors and not just in Finland.



Investments in these solutions, such as industrial-grade heat exchange pumps, driers and steam generators, are estimated to happen in the following order, according to their cost-efficiency and technology maturity:

1. Industrial drying, heating and evaporation
2. Industrial steam generation
3. Industrial ovens and processes

**Challenges:** Industry uses fossil fuels that cause greenhouse gas emissions, both as raw materials and for heat and electricity production. In some industrial processes (steel, concrete and cement clinker), sufficient heat can only be generated using fossil fuels, with current technology. Emissions can be cut by improving energy efficiency and using recycled raw materials and, in the longer term, by developing new technologies (see e.g. the section on hydrogen).

Significant reductions in industrial emissions and electrification of energy-intensive industries will greatly increase electricity consumption in the future. Energy-intensive industries cannot make far-reaching changes to their processes before sufficient availability of renewable energy has been ensured.

**Targets:** The target with the electrification of industry and the rest of society is to improve energy efficiency and to reduce greenhouse gas emissions in several sectors considerably. Electrification of industry will also support smart system integration of clean energy in Finland. Investments in new technologies will reform the structure of our energy economy and create products for the global market, where the demand for clean energy technologies is growing.

With the investments funded as described herein, direct and indirect greenhouse gas emissions must decrease by an average of at least 30% from what they were prior to the investments if the climate criteria set by the EU for the funding are to be met.

The target is to complete the selected projects and to use up the funding by the middle of 2026.

**Implementation:** Investment project selections will be based on comparisons between the projects, the criteria including by how much the projects will reduce emissions.

The aim is to update the Government Decree on the General Terms for Granting Energy Support 2018–2022 (1098/2017) or to draft a completely new Government Decree. Aid granted pursuant to the aforementioned Government Decree will be based on existing

processes and information systems. The aid is processed by Business Finland and by the Energy Department of the Ministry of Economic Affairs and Employment.

Funding for the projects can also be allocated pursuant to the Government Decree on Investments in the Circular Economy and Sustainable Green Growth that entered into force at the beginning of 2021.

**Investment target group** The target group consists particularly of enterprises investing in the electrification and energy efficiency of industrial processes. No limits on enterprise size are envisioned, and it is not intended for the aid to be targeted at particular regions.

**State aid:** It is the current understanding that the aid will be granted pursuant to Articles 25, 36 and 38 of the GBER.

**Timetable:** The aid programme is to be prepared and the necessary amendments made during 2021. The application round will be announced when the legislation is in force and will proceed in two stages; for major projects in particular, aid decisions will be front-loaded and made during 2022. If necessary, a preliminary call for proposals could be organised in 2021.

Major investments involve the risk of whether they will be completed according to the timetable specified; this cannot be evaluated until the aid programme has been launched, on the basis of applications received. Aid could be provided to minor projects also in 2023.

### **INVESTMENT 3: Investments promoting reuse and recycling of key materials and industrial residues (P1C2I3)**

The investment aid will be used to accelerate the reuse and recycling of industrial residues and waste (e.g. bioeconomy) and other key materials (e.g. battery materials, plastics, textiles, packagings, electrical and electronic devices, construction waste, demolition waste). Funding will be allocated to the first commercial institutional applications, pilot projects and demonstration facilities, to introducing new technology to existing processes, and to digital platforms and service investments promoting reuse and recycling.

In a battery ecosystem operating on the principles of the circular economy, waste material generated in the production process and materials from disused batteries are returned to the battery manufacturing material flow. Recycling of battery materials and batteries requires investments in mechanical, thermal and chemical based recycling plants.

Demonstration plants using bioeconomy residues can produce new bio-based high-value products such as pharmaceuticals, cosmetics, building materials, interior design

products, foods, packagings and membranes to replace plastic. The forest industry, for example, generates plenty of residues in the form of sawdust, bark and slurry, which can be used to manufacture products to replace fossil raw materials, such as bio-coal for water purification and the metal industry, and lignin separated from black liquor for the battery industry.

There is also investment potential in the residues from the energy and steel industries: valuable raw materials can be recovered from slag and fly ash using new innovative methods, for example for further processing to substitute concrete or its constituent materials. According to the construction industry low-carbon roadmap, emissions from concrete production could be decreased by 17% from the present level if the percentage of alternative materials used for concrete could be increased to 25% instead of the present 15%. There are also growing expectations for the processing and reuse of construction waste and demolition waste.

Plastic recycling and reuse can be promoted through investments in next-generation mechanical recycling plants for the purpose of cost-efficiently improving the quality of recycled plastics. On the other hand, new chemical-based recycling technologies are emerging alongside mechanical recycling, allowing for plastic recycling without regard for restrictions caused by material composition or complexity.

Promising methods and ecosystems for textile recycling have been developed in Finland in recent years. There is interesting investment potential in demonstration plants and in commercial-scale sorting and processing plants for waste textiles.

Using mechanical, thermal and chemical recycling technologies, significant amounts of precious and rare metals can be recovered from electrical and electronic devices; primary production of these metals caused both climate emissions and environmental loads.

In addition to process and handling technologies, recycling and reuse can be promoted through digital platforms and service investments that facilitate new operating practices and business models.

**Challenges:** The recycling rates for community waste, building waste, demolition waste and plastic packaging in Finland are low compared to the present and future requirements in EU directives and the Waste Act as revised. Community waste comprises 3% of all waste generated in Finland, while construction waste and demolition waste comprise 12%. Achieving the binding recycling targets will require a great deal more processing capacity to be built in the 2020s. On the other hand, extending reuse and recycling to new product

and material categories will require new innovations, which are slow, expensive and risky to create.

There are many critical raw materials in electrical and electronic devices and in battery chemicals that cannot currently be recovered for reuse. Textile waste, construction waste and demolition waste have a significant environmental impact, but this can be reduced through reuse and recycling. There is a lot of material-intensive industry in Finland, such as bioeconomy plants whose residues and wastes offer potential for new business and innovations and also for finding replacements for virgin natural resources. Industry (excluding construction) accounts for about 82% of all waste generated in Finland.

It has been difficult to find funding in Finland for plant investments where recycling and reuse production would be scaled up to an industrial scale for the first time.

**Targets:** The general target is to accelerate investments for reuse and recycling that are consistent with the EU Circular Economy Action Plan, the Government Programme (including the Strategic Programme to Promote a Circular Economy, Plastics Roadmap) and the waste management legislation reform. This will help attain the increasingly tight recycling targets in respect of plastic packagings, community waste, construction waste and demolition waste. Another target is to support the National Bioeconomy Strategy and Battery Strategy by boosting investments for leveraging bioeconomy residues and recycling battery materials. There is an aim to introduce wide-ranging separate collection for textile waste in Finland in 2023, which will also require additional recycling and processing capacity. Bold investments are intended to generate new export business and enable scaling up of innovations.

From the perspective of environmental impacts, increasing reuse and recycling reduces the use of virgin raw materials, which in turn curbs loss of biodiversity and indirectly reduces CO<sub>2</sub> emissions. The aim is to open the first funding application round by the end of 2021 and to have all application rounds completed and funding decisions signed by the end of 2023. The target is to complete the selected projects and to use up the funding by the middle of 2026.

The investments funded must facilitate the conversion of at least 50% by weight of the waste or residues involved into recycled raw material in order to meet the climate and environmental criteria set by the EU for the funding.

**Implementation:** The funding will be channelled and subjected to competitive tendering through Business Finland pursuant to the Decree that entered into force at the beginning of 2021 whereby BF may grant aid to investment projects promoting the circular economy.

It is a prerequisite for the aid that the investments lead to better or more efficient environmental protection measures and reuse or recycling measures than traditional reuse and recycling processes with a similar capacity. The investments must go towards the latest technology in the field.

**Investment target group** Public and private enterprises, research institutions

**State aid:** Investment aid is granted through Business Finland pursuant to the rules on State aid in the GBER as applicable. The aid is based on Article 47 (Investment aid for waste recycling and re-utilisation) and/or Article 36 (Investment aid enabling undertakings to go beyond Union standards for environmental protection or to increase the level of environmental protection in the absence of Union standards) and/or Article 25 for demonstration plants (Aid for research and development projects) of the GBER.

**Timetable:** 2021–2026.

### Open strategic independence and security matters

No direct impact.

### Trans-border and multinational projects

With reference to investments in this component area, the participation of Finnish enterprises in the IPCEI Hydrogen process being started in the EU links them to cross-border financial, research and industrial cooperation on hydrogen.

### Green dimension in the component area

The reforms and investments in this component area are closely linked to the green transition. Industrial processes account for about 10% of Finland's greenhouse gas emissions. The target is to accelerate significant reductions in these emissions through investments in clean hydrogen, carbon dioxide capture and use, and direct electrification of industrial processes. Investments in the Finnish battery value chain will facilitate emission reductions in European transport and contribute to the circular economy.

There is considerable pressure to accelerate the reuse and recycling of industrial residues and waste and other key materials (e.g. battery materials, plastics, textiles, packagings, electrical and electronic devices, construction waste, demolition waste). Accelerating reuse and recycling will indirectly help curb the loss of biodiversity, because it will reduce pressure on using virgin natural resources. Reuse and recycling also indirectly reduce CO<sub>2</sub>

emissions, because recycled materials usually have a carbon footprint smaller than that of virgin materials.

The aim with investments enhancing the value added of bioeconomy residues is particularly to foster sustainable solutions to replace oil-based and other resource-intensive products.

Investment packages P1C2I1, P1C2I2 and P1C2I3 in component area P1C2 are 100% supportive of the green transition. All projects selected for funding will be subjected to competitive tendering through the funding application rounds. The specifications for all funding application rounds will include selection and eligibility criteria according to the technical guidance for DNSH (2021/C58/01). The selection and eligibility criteria also reflect the criteria set for attaining the 100% climate targets under intervention fields 032, 024b and 045a in Annex VI. Moreover, Finland complies with all current rules on State aid in funding decisions and considers the technical guidance for DNSH (C(2021) 1054 final). Projects must comply with the relevant binding EU and national environmental legislation.

Investment P1C2I1 ('Low-carbon hydrogen and carbon dioxide capture and use') is related to the intervention field *Other renewable energy sources (including geothermal energy)* (032), which is 100% supportive of the green transition. The action encourages the scaling up of hydrogen production using clean energy and its utilisation and of carbon dioxide capture and use/storage, so this action contributes directly to the attainment of the target of curbing climate change.

Investment P1C2I2 ('Direct electrification and low carbonisation of industrial processes') is related to the intervention field *Energy efficiency and demonstration projects in SMEs or large enterprises and supporting measures compliant with energy efficiency criteria* (024b), which is 100% supportive of the climate targets. With the investments funded as described herein, direct and indirect greenhouse gas emissions must decrease by an average of at least 30% from what they were prior to the investments if the climate criteria set by the EU for the funding are to be met. Process electrification will reduce carbon dioxide emissions into the atmosphere, because about 85% of Finland's electricity production is emission-free.

Investment P1C2I3 ('Investments promoting reuse and recycling of key materials and industrial residues') is related to the intervention field *Use of recycled materials as raw materials compliant with the efficiency criteria* (045a), which is 100% supportive of the climate targets. The requirement is that, as a result of the investment, more than 50% of the waste or residue concerned is leveraged as recycled raw material. The action thus directly supports attainment of the target to curb climate change. The investment aid will be used to accelerate the reuse and recycling of industrial residues and waste (e.g.

bioeconomy) and other key materials (e.g. battery materials, plastics, textiles, packagings, electrical and electronic devices, construction waste, demolition waste).

### **Digital dimension in the component area**

Investments in this component area principally contribute to the green transition but are also linked to the digital transformation. Digitalisation creates the potential – or may even be a necessity – for the implementation of the circular economy. Investments in the green transition make diverse use of the opportunities offered by digitalisation. Many novel solutions in energy technology are based on efficient leveraging of data and on smart control; similarly, many of the low-carbon approaches sought in industry partly rely on digital solutions.

For example, bioeconomy plants for high added value products and reuse and recycling plants are automated and rely on digital tracking, availability, reliability and reporting of raw materials and products. Data collected on batteries helps determine the potential for reuse for a battery that has reached the end of its service life in transport.

Green growth and the circular economy in particular combine many existing and completely new functions. This calls for new operating methods, means of cooperation and business models. Bringing these together and activities will be largely based on open data and its reliable sharing. Thus, this new leveraging of digitalisation is largely about change management.

Although the investment and reform package in component area P1C2 supports the digital transformation, no precise percentage target can be determined for it in accordance with the methodology for digital tagging in the RRF Regulation.

### **Do No Significant Harm**

The investment and reform package in the component area 'Reforms and investments supporting the green transition and digitalisation in industry' is compliant with the criteria of the DNSH principle.

However, the criteria for the component areas 'Sustainable use and protection of water resources and natural resources in the sea', 'Preventing and reducing environmental contamination' and 'Biodiversity and ecosystem protection and restoration' have also been investigated in respect of investment P1C2I1 ('Low-hydrogen carbon and carbon dioxide capture and use'). The investment does comply with the DNSH principle in respect of these criteria as well, for example because the volume of water needed for electrolysis in hydrogen production is not significant relative to the quantities of water available in

Finland. Environmental and water management permits will be applied for if necessary for the investments; environmental permits will only be granted to projects that are fully in compliance with the Environmental Protection Act and the Waste Act. If a project is likely to cause a significant detriment to natural values in an area protected under the Natura 2000 network, then environmental impacts must be assessed pursuant to the Nature Conservation Act instead.

The criteria for the component areas 'Preventing and reducing environmental contamination' and 'Biodiversity and ecosystem protection and restoration' have been investigated in detail in respect of investment P1C2I2 ('Direct electrification and low carbonisation of industrial processes'). The investment does comply with the DNSH principle in respect of these criteria too, because environmental permits will be applied for if necessary for the investments, and environmental permits will only be granted to projects that are fully in compliance with the Environmental Protection Act and the Waste Act.

However, the criteria for the component areas 'Sustainable use and protection of water resources and natural resources in the sea', 'Preventing and reducing environmental contamination' and 'Biodiversity and ecosystem protection and restoration' have also been investigated in detail in respect of investment P1C2I3 ('Investments promoting reuse and recycling of key materials and industry residues'). However, the investment complies with the DNSH principle for these criteria for example because environmental and water management permits will be applied for if necessary for the investments. Environmental permits will only be granted to projects that are fully in compliance with the Environmental Protection Act and the Waste Act. Environmental impact assessments are performed for the projects when required by law, pursuant to the Act on Environmental Impact Assessments. Many reuse and recycling processes use large quantities of water. There is no significant potential detriment to water resources here, because Finland has highly abundant water resources.

For a more detailed discussion, see Appendix 3: DNSH tables

### **Costs to be covered out of RRF funding:**

EUR 326 million, consisting of the following investments

- Clean hydrogen and CCS/CCU in industry, EUR 156 million
- Direct electrification and low carbonisation of industrial processes, EUR 60 million
- Reuse and recycling of key materials and industrial residues, EUR 110 million; of which EUR 30 million for the bioeconomy and EUR 30 million for recycling solutions in battery manufacturing



## REDUCING THE CLIMATE AND ENVIRONMENTAL IMPACTS OF THE BUILDING STOCK

### Description of component area:

**Policy area:** *Energy efficiency, repair construction, construction, housing, climate policy, material efficiency, circular economy, housing costs.*

#### **Targets:**

1. *Green transition / energy efficiency of buildings: Buildings account for about 32% of Finland's energy consumption and for about 30% of the carbon dioxide emissions from energy consumption. The long-term target is to phase out oil heating by the beginning of 2030 and to reduce carbon dioxide emissions from the building stock by 90% between 2020 and 2050.*
2. *This target will accelerate the introduction of technologies, services and operating models in the construction sector that curb climate change and foster low-carbon solutions, along with a change in operating practices and added productivity.*

#### **Reforms and investments:**

##### **Reforms:**

1. *Legislation governing construction will be developed to mandate low-carbon construction and a digital knowledge base.*
2. *Action plan to phase out fossil-based oil heating.*

##### **Investments:**

1. *Aid for converting building heating systems from fossil-based oil heating to energy-efficient heating, EUR 70 million*
2. *Low-carbon built-up environment programme, EUR 40 million*

##### **Estimated costs:**

*Phasing out oil heating in buildings will require total investments on the order of about EUR 2 billion. The RRF will be used particularly to encourage owners of low-rise residences to phase out oil heating and to bring forward these investments.*

*On the global scale, construction generates nearly 40% of all carbon dioxide emissions, and reducing these requires the construction sector to embrace significant changes in operating practices, materials and technologies in the near future. The turnover in this sector in Finland is more than EUR 30 billion per year.*

## Principal challenges and targets

### a. Principal challenges

On the global scale, construction and buildings generate nearly 40% of all carbon dioxide emissions, and reducing these requires the construction sector to embrace significant changes in operating practices, materials and technologies in the near future. The turnover in this sector in Finland is more than EUR 30 billion per year. The challenge here is to foster changes in operating practices, construction methods and construction products towards low-carbon alternatives with outcomes that are measurable and widely applicable. This requires the scaling up of best practices, an interoperable knowledge base, new innovations and aid for investments that will transform the sector.

The long-term target to phase out oil heating by the beginning of 2030 and to reduce carbon dioxide emissions from the building stock by 90% between 2020 and 2050 involves challenges, most significantly the large initial investment required. Investments may be hindered by how large the required investment is compared to the relatively low value of the building, by uncertainty in respect of the future value and use of the building, or by the low income or advanced age of the occupants.

Responding to climate change requires the sector to engage in experiments, be prepared for change and be able to react quickly. The challenge here is that the sector may be split into bold, innovative pioneers and more conservative deployers. Profitability has not improved greatly in the construction sector.

### b. Targets

The targets address the Country Specific Recommendations for Finland: more investments; support for employment; promoting private investments, and investing in the green and digital transition, particularly the use of clean and efficient energy. Renovating buildings to convert them from oil heating to systems that are more energy efficient and resource efficient directly addresses one of the key actions and flagship areas of the RRF (Renovation Wave).

1. Green transition / energy efficiency of buildings: Finland's long-term repair construction strategy 2020–2050, which has been submitted to the Commission, states the target of improving energy efficiency in the building stock and phasing out oil heating so as to reduce carbon dioxide emissions from buildings by 90% from the beginning of 2020 to 2050. As stated in the Government Programme, the aim is to phase out oil heating in public buildings by 2024 and in all buildings by the beginning of the 2030s.

2. This target will accelerate the introduction of technologies, services and operating models in the construction sector that curb climate change and foster low-carbon solutions, along with a change in operating practices and added productivity.

### c. National strategic circumstances

The Government's climate policy will be implemented through the Climate Change Act, the National Energy and Climate Strategy and the Medium-term Climate Change Policy Plan. The Climate Change Act is being updated, and the reform of the National Energy and Climate Strategy and the update to the Medium-term Climate Change Policy Plan will be completed in autumn 2021. Also, the building stock will be addressed in the reform of the Land Use and Building Act, where provisions will be enacted on low-carbon requirements over a building's entire life span, and in the long-term Repair Construction Strategy 2020–2050, which was completed in spring 2020. An action plan to phase out fossil-based oil heating is in preparation. The proposed reforms and investments support the targets stated in the strategies and in the Climate Change Act.

## Description of reforms and investments in the component area

### a. Reforms

**REFORM 1: Reform of the Land Use and Building Act (P1C3R1)** Legislation governing construction will be developed to mandate low-carbon construction and a digital knowledge base.

**Challenges:** So far, construction steering has mainly focused on governing energy efficiency during use. The provisions on low-carbon requirements for construction now being prepared address the carbon emissions of a building throughout its life span, from construction to demolition. This will include emissions during construction and from the materials used. In respect of information, the challenge is in life-span information management. At present, information needed to cover the entire life span of a building for curbing climate change and calculating carbon footprints is difficult to obtain.

**Targets:** Reducing emissions from construction and effecting an information-based change in the sector. Carbon footprint calculation helps identify the climate impacts of a construction projects and guides towards low-carbon choices that will have an effect over the entire life span of the building. After this reform, all new construction and repairs is to conform to low-carbon standards. Changes in technologies and materials together with a digital and interoperable knowledge base will create a sustainable framework for change in the sector. In respect of information, the target is to achieve information management

based on international standards that retains the integrity of information and enriches it throughout the building's life span, from investment decision to demolition.

**Implementation:** The reform of the Land Use and Building Act is broader in scope than normal legislative projects, as it involves broad-based investigations concerning the development of steering in the interests of achieving an effective and smoothly functioning system of steering. Legislation enacted in connection with the overall reform of the Land Use and Building Act will guide construction towards low-carbon solutions and provide for information management in digital and interoperable form throughout the life span of a building.

**Stakeholder input:** Legislation preparation will be undertaken in collaboration with the sector and with key stakeholders. The plan will be prepared in a parliamentary process.

**Expected complications** Creating a steering mechanism for low-carbon construction requires the creation and adoption of computation methods and information systems. This is a new kind of steering, with extensive information needs involving real-time building product information and products' environmental declarations.

**Reform target group:** The key target groups are builders, building owners, designers, contractors, the material industry and the authorities.

**Implementation timetable:** The reform of and amendments to the Land Use and Building Act will enter into force by stages from 2022. Carbon footprint guidance will take effect on building design as the preparation progresses (carbon footprint calculations are already being made in some projects), and the legislation is to be enacted no later than 2024.

**State aid:** This reform is legislative in nature and does not require a review of the State aid regulations.

## **REFORM 2: Action plan to phase out fossil-based oil heating (P1C3R2)**

**Challenges:** For oil heating, the challenge is to form an up-to-date overall situational picture of buildings that have fossil-based oil heating, who their owners are, what their energy consumption and emissions are, and which actions could be taken to encourage them to phase out oil heating. Investments may be hindered by how large the required investment is, whether in absolute terms or compared to the relatively low value of the building, by uncertainty in respect of the future value and use of the building, or by the low income or advanced age of the occupants.

**Targets:** The Government Programme states that the use of fossil-based oil for heating will be phased out in Finland by the beginning of the 2030s. Phasing out oil heating will make a significant contribution in this sector to the attainment at the national level of the EU climate targets set for 2030.

**Implementation:** The action plan to phase out fossil-based oil heating that is currently under preparation will chart the current use of oil heating by building type. The action plan will compile actions with a steering impact on reducing the use of fossil-based oil for heating so that the target of phasing out oil heating by 2030 as stated in the Government Programme will be attained. The actions are categorised according to the type of steering employed: aid and subsidies; taxes and tax subsidies; information-based guidance; legislative steering; energy efficiency agreements; public procurements; and funding instruments. No decisions will be made in the action plan regarding the introduction of or funding for the measures. Each ministry will be responsible for their respective measures, and decisions will be made in the central government budget process.

**Stakeholder input:** Stakeholders have been consulted in the drafting of the action plan, and a further round of consultation will be held for stakeholders.

**Expected complications** In respect of the action plan to phase out fossil-based oil heating, the major expected complications have to do with high investment costs, which will hinder oil heating replacements.

**Reform target group:** Central government, building owners and users, heating system manufacturers and installers, and the energy sector.

**Implementation timetable:** The action plan to phase out fossil-based oil heating is scheduled for publication in spring 2021.

**State aid:** The action plan does not include funding decisions and therefore does not require a review of the rules on State aid.

## b. Investments

### **INVESTMENT 1: Aid for converting building heating systems from fossil-based oil heating to energy-efficient heating (P1C311).**

**Challenges:** It is estimated that fossil-based oil heating is currently used in about 130,000 low-rise buildings. Oil heating is extensively used in many other kinds of buildings too. Converting oil heating to something else requires substantial financial investments, and building owners, particularly households, will not be willing to undertake this without

financial support, especially since returns on the investment incur over a long period of time.

**Targets:** The Government Programme states that the use of fossil-based oil for heating will be phased out in Finland by the beginning of the 2030s. Phasing out oil heating will make a significant contribution in this sector to the attainment at the national level of the EU climate targets set for 2030. The purpose of the aid is to accelerate the phasing out of oil heating in low-rise housing. Accelerating investments will have an employment impact. Some of the aid is to be allocated to help buildings owned by local authorities, parishes and associations to give up oil heating.

**Implementation:** As part of the green stimulus, Finland introduced an aid system for phasing out oil heating in low-rise housing in autumn 2020. Owners of low-rise residential buildings have expressed great interest in this aid. The aid system will be continued with the help of EU recovery funding. The aid can be rolled out quickly thanks to the existing aid system. An aid system was also introduced for buildings owned by local authorities in autumn 2020. Applications for this system have been slow in coming.

Among residential buildings, the aid is intended for owners of low-rise homes, and aid is granted on a first come, first served basis. The requirement is that the building is in regular residential use and that oil heating will be replaced with another heating system. The aid amounts to EUR 4,000 for water-air heat pumps, ground heat pumps and district heating, and EUR 2,500 for other approved heating systems. Based on applications received so far, the average investment cost is EUR 11,800 (for the EUR 4,000 aid) or EUR 6,600 (for the EUR 2,500 aid). Based on applications received so far, the most popular replacement heating systems are water-air heat pumps, followed by ground heat pumps. For local authorities, parishes and associations, the plan is to grant the aid as a percentage of investment costs (20% to 25%). The buildings involved are larger, and investment costs in most cases are between EUR 50,000 and EUR 150,000. Based on applications received from local authorities so far, the average investment cost is EUR 115,000.

Information guidance on phasing out oil heating is provided nationwide by Motiva Oy and by the Association of Finnish Municipalities. Row houses and apartment blocks, including social housing, are residential buildings that may receive aid out of a separate national energy aid system for improving energy efficiency; this system also covers phasing out oil heating.

**Investment target group:** Owners of low-rise homes, local authorities, parishes and associations, and suppliers and installers of heating systems.

**State aid:** The aid system complies with the rules on State aid in respect of households and local authorities. Preparation is under way for parishes and associations, with three options available: aid only for operators engaged in non-commercial operators; aid pursuant to the GBER; or aid awarded as de minimis aid.

**Timetable:** Aid could be awarded out of the aid system between 2021 and 2023.

## **INVESTMENT 2: Low-carbon built-up environment programme (Climate KIRADIGI, P1C312)**

**Challenges:** Buildings, construction products and construction constitute an important sector for addressing the combating of climate change, the adopting of low-carbon solutions and issues of the circular economy. Responding to challenges requires the sector to engage in experiments, be prepared for change and be able to react quickly.

A robust and up-to-date knowledge base is needed to support the green transition and the adoption of smart solutions.

**Targets:** This target will accelerate the introduction of technologies, services and operating models in the construction sector that curb climate change and foster low-carbon solutions, along with a change in operating practices and added productivity.

### **Implementation:**

1. Setting up a network of change experts to ensure availability of expertise and skills.
2. Launching an RDI aid programme to accelerate investments.
3. Producing a knowledge base and evaluation tools supportive of climate-favourable and low-carbon solutions.

The programme package consists of three aid programmes: An RDI aid programme (preliminary figure EUR 32–34 million), procurements for a knowledge base supportive of climate-favourable and low-carbon solutions (preliminary figure EUR 4–6 million) and an aid programme for development and coordination of joint ventures by Finnish enterprises aiming to export low-carbon solutions in the sector (preliminary figure EUR 2 million). In each of these, there will be a need for temporary human resources accounting for about 3% of the overall funding for the duration of the programme. The estimates are based on earlier similar programmes. The aid programme will be implemented using, as applicable, the mechanisms for peer review, transparent communications, results sharing, monitoring and evaluation established as best practices in the earlier KIRA-digi experimental programme. The programme will be administered, monitored and evaluated under the guidance of the Ministry of the Environment.

**Investment target group:** Companies in the real estate and construction sector and people who work in those companies, and research institutions.

**State aid:** The aid is acceptable pursuant to the provision in Article 25 of the General Block Exemption Regulation (GBER) in respect of aid for research and development projects. Also, in some cases aid can be granted as de minimis aid. The aid will mainly be granted on the basis of existing Business Finland funding instruments, terms and criteria. Aid will not be granted to projects that do not fulfil the criteria in the rules on State aid.

**Timetable:** Aid programme launch in autumn 2021. The programme will run until 2025, with evaluation and reporting in 2025 and 2026.

### Open strategic independence and security matters

No direct impact.

### Trans-border and multinational projects

The low-carbon knowledge base and computational models will be available across Europe, since the Climate KIRADIGI programme is compliant, as applicable, with interoperable information structures and international standards. There has been collaboration on this topic particularly with our neighbours Estonia and Sweden, and shared information structures can be tested internationally within the programme.

### Green dimension in the component area

Actions in this component area contribute to attaining the targets of curbing climate change by targeting reforms and investments at low-carbon solutions and innovations for curbing and adapting to climate change in the sector, along with transitioning away from using fossil-based oil for heating. The actions are intended to improve the energy efficiency of buildings and to reduce greenhouse gas emissions. The actions will implement the targets of the Long-term Repair Construction Strategy and of phasing out fossil-based oil heating, along with both national and EU-level targets of climate neutrality.

In investment P1C3I2, causing harm to the environment or to biodiversity is an exclusion factor for selection; project applicants must demonstrate that their project does no such harm and that it contributes to curbing and adapting to climate change. Projects must be based on verifiable low-carbon solutions or produce operating models or tools for implementing and verifying low-carbon solutions. The knowledge base being increasingly digital and innovations in materials and production will allow a reduction in the percentage of virgin raw materials used and thereby an improvement in environmental conservation.



The investment and reform package in the component area is 100% supportive of the green transition.

The principal gain from the phasing out of oil heating under investment P1C3I1 is the reduction in greenhouse gas emissions. Phasing out oil heating in low-rise housing falls under the intervention field Energy efficiency renovation of existing housing stock (025bis) and surpasses the requirement given, because it will improve greenhouse gas efficiency by more than 30% (corresponding to a substantial, 30% to 60% improvement in respect of greenhouse gases and consistent with the intervention field *Energy efficiency and demonstration projects in SMEs or large enterprises and supporting measures compliant with energy efficiency criteria (024ter)*, where the reduction requirement is 30%). In respect of buildings owned by local authorities, parishes and associations, the action falls under the aforementioned intervention field 024ter, achieving a reduction of 30% in greenhouse gas emissions. According to Finland's long-term Repair Construction Strategy, oil heating generates 263 g/kWh in greenhouse gas emissions. To be acceptable under the aid system, new heating systems must reduce greenhouse gas emissions by at least 30%, pursuant to the above criterion. The smallest reduction projected will come from a transition to district heating, which generates 160 g/kWh in greenhouse gas emissions, a reduction of 39%. Electric heating, by comparison, only generates 65 g/kWh in greenhouse gas emissions, representing a reduction of 75% if used to replace oil heating. New heating systems must also comply with the requirements of the EU Ecodesign and EPB Directives.

Investment P1C3I2, on the other hand, falls under the intervention field *Research and innovation processes, technology transfer and cooperation between enterprises focusing on the low carbon economy, resilience and adaptation to climate change (022)*, because its aim is to accelerate the adoption of technologies and operating models to curb climate change and promote low-carbon solutions in the construction sector, to foster changes in operating practices and to increase profitability. Also, some of the funding will fall under the intervention field Support to enterprises that provide services contributing to the low carbon economy and to resilience to climate change including awareness-raising measures (027) in producing such services (including publicity services). This will be implemented at the nexus of the public and corporate sectors, through Business Finland aid application rounds where the aforementioned criteria are given as conditions for being granted aid.

### **Digital dimension in the component area**

Although the investment and reform package in component area P1C3 supports the digital transformation as described below, no precise percentage target can be determined for it in accordance with the methodology for digital tagging in the RRF Regulation.

The digital knowledge base to be reinforced in the legislative reform will provide the foundation for several processes in society, for client-oriented service paths in public administration and for introducing and monitoring solutions to climate challenges. By leveraging digitalisation, automation and metering in buildings, energy use monitoring can be enhanced, energy use be made more efficient particularly during consumption peaks, and energy consumption and emissions from it reduced overall. Digitalisation and information models, when interoperable, will enable low-carbon compliance to be verified and monitored and will facilitate international cooperation and scalability. Employing interoperable information designs and complying with international standards will be considered an advantage when selecting projects for the programme.

### **Do No Significant Harm**

The investment and reform package in component P1C3 complies with the criteria of the Do No Significant Harm (DNSH) principle. For a more detailed description, see Appendix 3: DNSH tables.

### **Costs to be covered out of RRF funding:**

EUR 110 million, consisting of the following investments

- Aid for converting building heating systems from fossil-based oil heating to energy-efficient heating, EUR 70 million
- Investment programme to address climate change challenges in the construction and real estate sector, EUR 40 million

## LOW-CARBON SOLUTIONS IN COMMUNITIES AND TRANSPORT

### Description of component area

**Policy area:** *transport, energy, climate policy, community planning, environment*

**Targets:** *The purpose of the package is to achieve emission reductions and to transition to fossil-free transport. Finland's aim is to halve the greenhouse gas emissions of domestic transport by 2030 and achieve zero emissions from transport by 2045. Finland's specific aim with RRF funding is to increase capacity and promote digitalisation in rail transport (pillar 2) and to establish a comprehensive distribution for alternative motive power in order to facilitate the growth of the low-emission vehicle stock. The green transition in transport will create incentives for new kinds of business. Finland's challenges in the green transition in transport are the long distances and sparse population in our country.*

*The component area centrally addresses the flagship area 'Recharge and Refuel'.*

#### **Reforms and investments:**

*Attaining the emission reduction target in transport requires multiple reforms and investments.*

#### **Reforms:**

1. *Fossil-free transport roadmap (P1C4R1)*
2. *Tax reform in sustainable transport (P1C4R2)*

#### **Investments:**

1. *Promoting the replacement of fossil fuels by supporting the establishment of a public recharging and refuelling infrastructure for transport electricity, biogas and new motive power alternatives (P1C4I1), EUR 20 million*
2. *Promoting the replacement of fossil fuels by supporting private charging infrastructure in housing companies and at workplaces (P1C4I2), EUR 20 million*

**Estimated costs:** *Investments proposed to receive aid from the RRF are in the fossil-free transport roadmap. The costs proposed to receive aid from the RRF are those involved in the public and private recharging and refuelling infrastructure, totalling EUR 40 million.*

## Principal challenges and targets

### a. Principal challenges

Greenhouse gas emissions in 2019 from Finnish domestic transport totalled 11.1 million tonnes. The reduction of emissions has been very slow, and current measures do not reduce transport emissions in line with the targets set. The baseline projection shows that current measures will reduce emissions by a further 3.1 Mt. In order to attain the targets set, new actions should be taken to achieve a yet further reduction of 1.65 Mt in emissions by 2030. The new actions will be agreed on in 2021. The means for attaining the emission reduction target are set forth in the fossil-free transport roadmap.

The major challenges have to do with increasing the percentage of low-emission vehicles; replacing the vehicle stock; and ensuring a distribution infrastructure for alternative motive power. The percentage of sustainable mobility must also be increased. Vehicles running on alternative motive power currently constitute a very small portion of the vehicle stock, about 2.3%. It is vital to increase the percentage of electric vehicles on the roads, particularly electric cars. The lack of a charging infrastructure has been seen as the major obstacle to acquiring an electric car. Developing a charging infrastructure in Finland is challenging because the population is sparse in large areas of the country. Aid measures are needed particularly in regions where a charging infrastructure will not emerge on market terms. Public recharging and refuelling stations are not equally distributed in geographical terms in Finland: around 48% of all recharging points in Finland are in the Greater Helsinki area and in the Tampere and Turku areas.

### b. Targets

The target is to deploy temporary aid measures to support the transition from fossil fuels to alternative forms of motive power in transport. Another target is to promote digitalisation of traffic, which will further support attainment of transport emission reduction targets (pillar 2). Investments supporting the green transition in transport aim to reduce emissions and to renew the entire transport system in order to respond to the technological transition that is going on in transport.

Promoting the recharging and refuelling infrastructure also involves business opportunities, digital services, employment impacts during the project periods, and a regional dimension. For the moment, the recharging and refuelling infrastructure in Finland is unequally distributed in regional terms, and building the infrastructure should be supported particularly in regions where it will not emerge on market terms. Low-carbon transport investments are related to several important national and EU-level programmes and targets. The actions are consistent with the 2020 Country Specific Recommendations. It is noted in the Recommendations that attaining the target of carbon neutrality by 2035 will require considerable investments by Finland in sustainable

transport. The proposed investments contribute to the attainment not only of the targets in the Government Programme but also of the targets in the National Energy and Climate Strategy and in the Medium-term Climate Change Policy Plan. The actions also contribute to the attainment of requirements to be imposed by forthcoming EU-level actions (e.g. legislative initiatives under the Green Deal). The aim is to ensure that emission reductions in line with the increased target for 2030 and with the attainment of carbon neutrality by 2050 can be achieved in all modes of transport.

### c. National strategic circumstances

According to the Government Programme, transport emissions will be halved by 2030. The transport emission reduction target is vital for attaining the targets of the EU Burden-Sharing Agreement. The means for attaining the emission reduction target are set forth in the fossil-free transport roadmap. Thus, investments in sustainable transport directly support the climate targets in the Government Programme and are related to the EU Green Deal.

## Description of reforms and investments in the component area

### a. Reforms

#### **REFORM 1: Roadmap for fossil-free transport, which is a Government Resolution on the reduction of greenhouse gas emissions from domestic transport (P1C4R1)**

#### **Challenges**

The reduction of emissions has been very slow, and current measures do not reduce transport emissions in line with the targets set. Finland has already implemented effective measures such as a distribution obligation for biofuels. It is estimated that existing measures will lead to a further reduction in emissions of about 3.1 Mt by 2030. In order to attain the targets set, new actions should be taken to achieve a yet further reduction of 1.65 Mt in emissions by 2030.<sup>6</sup> The cost of emission reduction measures in transport is higher in relative terms than in many other sectors of society. Many of the potential actions will have a direct impact on business costs and consumer prices.

Another challenge in Finland is that distances are long and the population is sparse in large areas of the country.

<sup>6</sup> VTT baseline projection for greenhouse gas emissions from traffic 2020–2050, available at [https://api.59c5101502c5/LAUSUNTOPYYNTO\\_20210115060016.PDF](https://api.59c5101502c5/LAUSUNTOPYYNTO_20210115060016.PDF) (In Finnish).

**Targets**

A Government Resolution was issued on the fossil-free transport roadmap in spring 2021, with concrete means for how to attain the 2030 target and a description of a pathway to emission-free transport by 2045. The Ministry of Transport and Communications has commissioned impact assessments on the concrete emission reductions of the various actions, with a view to how the targets set can be attained in socially and regionally equitable ways. The Ministry of Transport and Communications has estimated that subsidies will be needed at least until about 2025, after which the number of cars could already be high enough to motivate the construction of the distribution infrastructure on market terms.

**Implementation**

The Government Resolution was issued in spring 2021. Several reforms are to be implemented by agencies (Finnish Transport and Communications Agency Traficom, Energy Authority, ARA – Housing Finance and Development Centre of Finland) and monitored by the Ministry of Transport and Communications. The Ministerial Working Group on Climate and Energy Policy will monitor the implementation of the resolution. Funding from the RRF will be allocated towards attaining the targets in the Government Resolution.

**Stakeholder input**

Key stakeholders contributed to the work of the working group that outlined the actions in the fossil-free transport roadmap. The preparation process was public, and stakeholders were heard in a consultation round in January and February 2021.

**Expected complications**

The Government Resolution is a preparatory decision that steers the work of the current Government. No funding is allocated to the actions in the roadmap in the General Government Fiscal Plan 2022–2025. Appropriations towards actions in the first phase of the roadmap will be discussed in connection with the 2022 central government budget and the General Government Fiscal Plan 2023–2026.

**Reform target group**

Enterprises and private citizens. The Government Resolution includes aid intended for enterprises and private citizens the execution of which requires new legislation to be enacted. Execution will depend on the appropriations allocated (see above).

**Implementation timetable**

The Government Resolution was issued in May 2021.

**State aid**

A review of the rules on State aid was performed with regard to the investments related to this reform.

**REFORM 2: Tax reform for sustainable transport (P1C4R2)****Challenges**

The transport tax system is already largely based on taxation of carbon dioxide emissions, and tax rates are high. As stated in the Government Programme, there is a need to reduce greenhouse gas emissions from transport even further, which may require more robust steering methods than at present. At the same time, however, revenue from the carbon dioxide based tax system is declining as cleaner motive power alternatives are increasing in popularity.

**Targets**

It is noted in the Government Programme of Prime Minister Marin's Government that significant emission reductions, a rapid shift in motive power, an automation-based technological transition that is already in progress and a wider availability of mobility services are required in the transport sector. Efforts will be launched to address these needs and to secure the fiscal base for tax revenue from transport over a period longer than the current electoral term. Social fairness and regional equality will be considered as emission reductions are being ramped up. It is further outlined in the Government Programme that company car benefits will be revised so as to favour, with a considerable margin, choosing a low-emission car and also give more equal weight to the choice of non-vehicular traffic, public transport and mobility services.

A civil service working group led by the Ministry of Finance discussing transport tax reform addressed the issue of company car benefits in its interim report, published in August 2020. The taxation of company car benefits was revised on the basis of this report as of the beginning of 2021. The taxable value of full electric vehicles used as company cars was reduced for the period 2021–2025, recharging electric cars was defined as a tax-free fringe benefit, and a charger acquired by the employer for the employee to install at home was ruled to be an accessory of the company car. Also, taxation of commuter tickets was simplified, and company bicycles were declared a tax-free benefit up to a value of EUR 1,200 per year. It was decreed that the tax-exempt part of the so-called mobility service package be determined in accordance with other tax-free employment benefits. The company car tax reform will be further prepared with a view to heavily encouraging users to select a full electric car or a low-emission car such as a natural gas powered car or a chargeable hybrid.

At the second stage, the working group will be reviewing all current transport taxes (fuel tax, car tax, vehicle tax and other transport taxes) and possible new taxes such as a kilometre tax. The working group will issue its final report in May 2021, with recommendations on the tax measures needed for enhancing emissions guidance in traffic and for securing the tax base.

**Implementation**

After the final report is published, the recommendations will be discussed in political debate, and any further investigations will be decided at the Government budget session in autumn 2021.

**Stakeholder input**

The working group consulted researchers, various organisations and key stakeholders.

**Expected complications**

So far, there are no political decisions as to how taxation should be reformed (except for the reforms of employment-related benefits already enacted).

**Reform target group**

Enterprises and private citizens.

**Implementation timetable**

The required legislation will be prepared after political debate. Legislation addressing changes to employment-related transport benefits was prepared in late 2020.

**State aid**

This reform is legislative in nature and does not require a review of the State aid regulations.

**b. Investments****INVESTMENT 1: Public recharging and refuelling infrastructure for electric and gas-powered vehicles (P1C4I1)****Challenges**

The percentage of vehicles using alternative motive power is still low in Finland at the moment – about 2.3% – and therefore building a recharging and refuelling infrastructure for electric and gas-powered vehicles is not yet very profitable as a business. The lack of a distribution infrastructure for alternative motive power is a key obstacle for acquiring an electric or gas-powered vehicle, and at the moment the infrastructure that does exist is regionally unequal. Finland is a country with long distances and large sparsely populated areas. Aid measures are needed particularly in regions where a recharging and refuelling infrastructure will not emerge on market terms.

**Targets**

The existing aid for building a public recharging and refuelling infrastructure (transport infrastructure aid granted by the Energy Authority) will be extended. The budget appropriation for this aid will be increased. The purpose of the investment is to develop a



recharging and refuelling infrastructure for electric and gas-powered vehicles nationwide, thus promoting the green transition in transport in a regionally and socially equitable way. Aid could be available not just for electricity and gas but also for other new kinds of transport motive power with underdeveloped distribution networks. Encouraging use of vehicles using alternative motive power will enable emission reductions. The investment will have an employment impact for the duration of the project, and it will benefit the enterprises building the infrastructure and local authorities, for example through the construction of recharging infrastructure for electric buses. The aid can also benefit enterprises offering recharging services and foster new business models.

#### **Implementation:**

This is an existing form of aid that will simply be increased. The legislation falls within the administrative domain of the Ministry of Economic Affairs and Employment. The Energy Authority decides on the granting of the aid on the basis of competitive tendering and reports on its application.

#### **Investment target group**

Enterprises and local authorities may apply for the aid. The recharging and refuelling points to be built with the support of this aid are public and thus available to all road users.

#### **State aid**

This is a form of aid that does not conflict with the rules on State aid. Refuelling infrastructure projects for completely new kinds of motive power, such as hydrogen, may require a State aid notification.

#### **Timetable**

Can be implemented immediately, with aid being granted in 2022–2023 and projects running up until 2026.

### **INVESTMENT 2: Private recharging infrastructure (P1C4I2)**

#### **Challenges**

The lack of a recharging infrastructure is the major obstacle to acquiring an electric car. Chargeable vehicles are mainly recharged at home and at work, and the lack of facilities for home recharging has been identified as one of the worst bottlenecks in transport electrification. Since cars are principally charged where they are stored, it is important for there to be a separate recharging point for every electric car. It will be advantageous for energy network capacity if recharging is mainly done when demand is low, i.e. at night. The purpose of providing public recharging points is to facilitate long-distance travel.

**Targets**

The existing aid for building private recharging infrastructure, available to housing companies (subsidies granted by the Housing Finance and Development Centre of Finland (ARA) for building recharging infrastructure for electric vehicles) will be extended, and it is proposed that it be expanded to cover workplaces as well, so that cars can be recharged there instead of at home. The budget appropriation for this aid will be increased. Encouraging use of vehicles using alternative motive power will enable emission reductions.

The aid will benefit enterprises engaged in building the infrastructure and will have an employment impact. Building private recharging infrastructure will provide consumers with added incentives to acquire low-emission and zero-emission electric vehicles, while lowering the costs of vehicle use.

**Implementation:**

This is a form of aid available to corporations that own residential buildings, and the annual appropriation for this aid will be increased. This aid is defined under a budget heading for which the Ministry of the Environment is responsible. The Housing Finance and Development Centre of Finland (ARA) grants the aid on the continuous application principle and reports on how the aid is used. Expanding the aid to cover workplaces will be prepared separately with the aim of including workplaces in the aid coverage as of 2022.

**Investment target group**

Currently, the aid is available to corporations that own residential buildings (housing companies, rental housing corporations, etc.) and parking companies owned by them. It is suggested in the fossil-free transport roadmap that the aid be expanded to include workplaces (enterprises and employers in other sectors).

**State aid**

As far as corporations that own residential buildings go, this is a form of aid that does not conflict with the rules on State aid. With regard to expanding the aid to workplaces, the preliminary intent is that the aid will be granted as de minimis aid.

**Timetable**

The projects to be funded will be selected and launched between 2021 and 2023 and implemented by 2026.

**Open strategic independence and security matters**

No direct impact.

## Trans-border and multinational projects

No direct impact.

## Green dimension in the component area

Transport emissions account for approximately one fifth of Finland's total greenhouse gas emissions and some 40% of emissions in the so-called effort sharing sector. Transport emissions have been decreasing in recent years, but at a rate that is too slow vis-à-vis the targets. Compared with 2018, domestic traffic emissions decreased by about 3 percent in 2019 (0.3 million tonnes). In addition to greenhouse gas emissions, adverse impacts caused by transport include other emissions harmful to the climate and to the environment, and noise. For the target of halving transport emissions by 2030, new actions must be taken to achieve further emission reductions of 1.65 million tonnes.

Supporting the distribution infrastructure is a relatively effective way of reducing greenhouse gas emissions from transport, above all by enabling an increasing number of consumers and enterprises to adopt cleaner means of mobility and transport. Significant environmental benefits can also be gained from replacing fossil fuels with low-emission or emission-free motive power.

This component area will make a major contribution to the green transition by supporting a shift away from fossil fuels in transport. The actions can also help prevent the negative regional and social impacts caused by the green transition. Transport emission reductions are vital for achieving the emission reduction target in the 'burden-sharing sector' by 2030 and carbon neutrality of the EU by 2050. Investments in this component area contribute directly to attaining the targets of the National Energy and Climate Strategy and the Medium-term Climate Change Policy Plan vis-à-vis emission reductions in the 'burden-sharing sector'. The investments form part of the national transport climate policy. The investments directly address the curbing of climate change.

Investment packages P1C4I1 and P1C4I2 in component area P1C4 are 100% supportive of the green transition.

Investments in public recharging and refuelling infrastructure for electric and gas-powered vehicles (P1C4I1) and in private recharging infrastructure (P1C4I2) have to do with the intervention field *Alternative fuels infrastructure* (077) and are 100% supportive of the green transition. The investments will be made in compliance with Directive (EU) 2018/2001. Investments in public recharging and refuelling infrastructure for electric and gas-powered vehicles (P1C4I1) will partly promote transport electrification and reduce emissions through a transition from fossil fuels to electric, biogas or other motive power. Investments in private recharging infrastructure (P1C4I2) will promote transport

electrification. The action will reduce greenhouse gas emissions from transport, as fossil fuel use will be partly replaced by electricity.

### Digital dimension in the component area

Although the investment and reform package in component area P1C4 supports the digital transformation, no precise percentage target can be determined for it in accordance with the methodology for digital tagging in the RRF Regulation. Aid for recharging and refuelling infrastructure will promote things like smart recharging and transport servicification.

### Do No Significant Harm

The investment and reform package in component P1C3 complies with the criteria of the Do No Significant Harm (DNSH) principle. For a more detailed description, see Appendix 3: DNSH tables.

### Costs to be covered out of RRF funding

EUR 40 million, consisting of the following investments

- Public recharging and refuelling infrastructure for electric and gas-powered vehicles, EUR 20 million
- Private recharging infrastructure, EUR 20 million

## ENVIRONMENTAL SUSTAINABILITY AND NATURE-BASED SOLUTIONS

### Description of component area:

**Policy area:** *Nature conservation, environmental protection, curbing of and adaptation to climate change, water protection, climate-sustainable forest management, circular economy.*

**Targets:** *Improving the state of the environment and of waterways, increasing biodiversity, promoting the circular economy and carbon neutrality and curbing of and adapting to climate change, boosting investment activity and technological innovations*

**Reforms:**

1. *Nature conservation legislation reform (P1C5R1)*
2. *Strategic promotion of the circular economy (see P1C2)*

**Investments:**

1. Gypsum treatment of fields and nutrient recycling (P1C5I1), EUR 20 million
2. Climate-sustainable actions in the land use sector (P1C5I2), EUR 10 million

**Estimated costs:** Investments proposed to be supported with RRF funding, total EUR 30 million

## Principal challenges and targets

### a. Principal challenges

Because of discharges of nutrients and hazardous materials, and as a consequence of climate change, the state of the oceans, of the Baltic Sea and of our inland waterways has not improved towards a good status in accordance with water resources management and marine management targets. Mineral phosphorus resources are declining, and recycled raw materials must be made available.

According to threat assessments of species and habitats in Finland (*Threatened species in Finland 2019*, SY5/2018) and an evaluation of the effectiveness of the Nature Conservation Act (SY 27/2010, SYKEra 19/2020), land use changes and intensive use of natural resources in particular contribute to the continued depletion of biodiversity, and legislation has not been able to halt this trend.

### b. Targets

As an example, spreading gypsum (an industrial by-product) in fields and recycling nutrients can facilitate the transition to the circular economy and reduce the nutrient load on the Baltic Sea and on waterways while also reducing greenhouse gas emissions. Introducing new methods boosts RDI investments and the competitiveness of enterprises in the sector. The actions proposed will improve the state of the environment and will support the targets of Finland's water resource management plans and marine environment management plans, the HELCOM Baltic Sea Action Plan and the EU Strategy for the Baltic Sea Region besides helping translate the expertise into export products.

Multibenefit effects are sought with nature-based solutions. Financial impacts include reuse of industrial residues and the business benefits of new solutions. For the environment, these solutions promote the curbing of and adaptation to climate change, reduce the discharge of harmful substances into waterways and help safeguard biodiversity.

Adopting smart forest management can reinforce carbon sinks, help adapt to climate change, safeguard biodiversity and reduce loads on waterways.

### c. National strategic circumstances

The Government Programme includes the target of halting the loss of biodiversity by 2030. The National Biodiversity Strategy up until 2030 is being revised. Funding and actions should be focused on areas in commercial use in order to attain the targets. The actions also support the delivery of the National Forest Strategy. The attainment of national climate targets and the implementation of plans pursuant to the new Climate Act, such as the land use sector climate plan will be supported along with the implementation of the National Climate Change Adaptation Plan.

The actions will support the targets of Finland's water management plans and maritime spatial plans, the HELCOM Baltic Sea Action Plan and the EU Strategy for the Baltic Sea Region, as required by EU legislation on water management. Finland's water management plans and Maritime Spatial Plan are being revised; the actions will promote both improvements in the state of the environment and biodiversity targets. Baltic Sea conservation actions support the national implementation of the Common Agricultural Policy (CAP). The actions implement the target in the European Green Deal to restore the natural functions of groundwater and surface water and the target set for the preservation and restoration of ecosystems and biodiversity to enable the achievement of the "no net loss" objective of the EU's biodiversity strategy. The actions also implement the National Bioeconomy Strategy, the National Biogas Programme and the nutrient recycling action plan.

## Description of reforms and investments in the component area

### a. Reforms

#### **REFORM 1: Nature conservation legislation reform (P1C5R1)**

##### **Challenges**

The Nature Conservation Act and other steering measures should be updated to better respond to current needs for strengthening biodiversity, not just conserving it. Preserving biodiversity outside nature reserves and maintaining ecosystem services should be better considered in decision-making; also, new actions are required for securing the functioning and effectiveness of habitat and species protection.

Deterioration of the ecological quality of habitats is one of the most significant factors threatening species in Finland. Their quality can be improved with the appropriate maintenance, refurbishment or restoration measures. About half of the habitat sites protected under the Nature Conservation Act are estimated to be in need of maintenance, at least in the long term. Climate change will create completely new challenges for the Nature Conservation Act and for restoration measures.

**Targets**

The Nature Conservation Act will be used to create the currently absent legislative basis for a national biodiversity strategy and for voluntary nature protection action plans that include restoration and active nature management. The Nature Conservation Act will also be amended with provisions concerning the financial aid system for restoration and maintenance measures. The measures for restoration and maintenance of threatened habitat types, species and landscape values that may be supported through the new aid system may foster new business operations in nature management and landscape management.

**Implementation:**

The reform of the Nature Conservation Act will be prepared in a broad-based working group during 2021. The Act will be enforced by the Centres for Economic Development, Transport and Employment, Metsähallitus and the Ministry of the Environment.

**Stakeholder input**

Stakeholders are involved in preparing this legislative reform. The reform of the Nature Conservation Act is also intended to improve procedures for citizens' participation, particularly in nature conservation planning.

**Expected complications**

The effectiveness of legislation may be compromised by insufficient resources, possible delays in enforcement and conflicting trends such as increasing use of natural resources and uncompensated land use that alters the environment.

**Reform target group**

The Nature Conservation Act addresses the safeguarding of biodiversity in general and activities in society at large that have a bearing on it. Thus, its target groups include various operators on the one hand and society at large on the other, the functioning of the latter ultimately depending on the state of biodiversity through vital ecosystem services.

**Implementation timetable**

The Government proposal for the Nature Conservation Act is to be submitted to Parliament in 01/2022, with a view to the Act entering into force during 2022.

**State aid**

This reform is legislative in nature and does not require a review of the State aid regulations.

**REFORM 2: Strategic promotion of the circular economy**

This refers to the reform 'Strategic promotion of the circular economy and reform of the Waste Act' (insofar as it concerns the strategic promotion of the circular economy), which can be found in this report under 'Industry renewal and investments supporting the green and digital transition' (P1C2).

**b. Investments****INVESTMENT 1: Gypsum treatment of fields and nutrient recycling (P1C511)****Challenges**

Eutrophication of the Baltic Sea remains the greatest single challenge for marine biodiversity, and new and broad-based actions are needed to combat it. According to Finland's water resources management and maritime environment management plans for 2016–2021, improving the status of waters by 2027 is not possible without substantial and cost-effective additional actions to manage diffuse pollution.

Mineral phosphorus resources are declining, and recycled raw materials must be made available. The recycled nutrient market is only just emerging in Finland, and it is competitively disadvantaged in relation to the mineral fertiliser market.

**Targets**

Gypsum treatment of fields is a new and efficient circular economy solution that reduces the phosphorus loading from agriculture to the Baltic Sea and promotes the preservation of carbon stocks in the fields. The efficacy of gypsum has been established in extensive field tests in Finland over the past ten years. The results show that the application of gypsum reduces the leaching of phosphorus from fields into waterways by half. Gypsum treatment helps fields retain nutrients and organic matter and thus improves the sustainability of the food production system.

The gypsum treatment complements other ways of combating eutrophication proposed in water resource and marine environment management plans. Because diffuse phosphorus pollution is expected to increase further due to climate change, the reductions in nutrients loads sought in the HELCOM Baltic Sea Action Plan and in national water resources management cannot be attained without all conservation measures in agriculture being implemented to their fullest extent.

Gypsum treatment makes use of a residue from the fertiliser industry, thus promoting the circular economy and fostering new, green business models. Gypsum treatment is being developed into an export product, because the adoption of the treatment in various countries around the Baltic Sea would have a significant impact on the state of the sea.



The state of the sea in areas such as the Archipelago Sea has a direct bearing on the potential for tourism.

Nutrient recycling reduces the discharge of nutrients into waterways, where they cause eutrophication and deterioration of quality. Producing recycled fertilisers and renewable energy using various biomasses can help replace fertilisers and fossil fuels made using virgin raw materials. The aim is to encourage innovations and investments and to develop steering measures that will help make nutrient recycling a profitable business.

### **Implementation:**

A survey has been made of fields suitable for gypsum treatment in Finland; with the strictest criteria, their combined area amounts to 540,000 hectares. Thanks to preparatory work in the Water Protection Enhancement Programme, the investment programme can be launched quickly. The programme includes developing an electronic search system for farmers, reforming legislation and creating operating models for the acquisition of gypsum and for spreading it in fields. The operating model was piloted in the Archipelago Sea area and found to work very well.

The nutrient recycling actions involve granting aid to promote the recovery and safe use of nutrients, particularly from community waste water and sludge, and symbiotic relationships for nutrient recycling among various operators forming recycling systems to leverage nutrient-rich waste or residue flows and/or biomasses in waterways. The projects will support the introduction of new technologies and methods for nutrient recycling, the production of competitive high value added end products, RDI investments and improved competitiveness of enterprises in the field. Projects will be selected particularly on the basis of their impact on combating climate change, on eutrophication and on biodiversity. The aim is to provide funding for 7 to 10 projects (at EUR 0.5 to 0.7 million each).

Funding is sought for the investment programme to allow the expansion of gypsum treatment between 2022 and 2024 and the providing of support to investment or RDI projects in nutrient recycling. The Southwest Finland Centre for Economic Development, Transport and the Environment will be the competent authority for gypsum treatment projects, while the Ministry of the Environment will manage nutrient recycling projects.

### **Investment target group**

The investment will concern industry and agriculture and also enterprises involved in planning, technology, contracting, logistics and other related fields. Other impacts concern carbon stocks in arable land, the status of waterways and biodiversity. The investments will also have an employment impact. The annual phosphorus load deposited in the Baltic Sea will be reduced by about 150 tonnes, and as a result the status of coastal and river waters and biodiversity will improve.

**State aid**

Gypsum provided for farmers to spread on fields constitutes State aid as per the EU General Block Exemption Regulation (GBER), for which the European Commission requires that the terms and conditions for such aid are defined in binding legislation. The Government Decree on Aid to Be Granted for Gypsum Treatment of Arable Land in 2020–2025 (510/2020) was adopted pursuant to the Act on the Organisation of River Basin Management and the Marine Strategy (1299/2004), allowing aid to be granted to farmers in accordance with the terms and conditions defined by the Commission and the rules on State aid. Nutrient recycling projects can be implemented as per the GBER or as de minimis aid pursuant to the Government Decree on State Aid Granted to Nutrient Recycling and Waste Water Management Energy Efficiency Projects in 2020–2026 (657/2020).

**Timetable**

The investments will be made in 2021–2025. Competitive tendering for the procurement, transport and spreading of gypsum will be launched in 2021, and the first gypsum deliveries will be made no later than 2022. The actions are intended to mainly be carried out in the period 2022–2023, during which 80% of the projected volume of gypsum is to be spread in the fields. The nutrient recycling projects will be selected and launched between 2021 and 2023. The investments will be completed in 2025 at the latest.

**INVESTMENT 2: Climate-sustainable actions in the land use sector (P1C5I2)****Challenges**

Natural Resources Institute Finland has estimated the emission reduction potential of climate actions in the land use sector. According to their report, the greatest potential in forestry has to do with forestation of drained peat forests. Fertilisation and retention trees can help reinforce carbon sinks at all growth sites. There are also other possible measures for increasing the climate sustainability of forests.

Curbing of and adaptation to climate change, safeguarding biodiversity and reducing the load on waterways require increasingly detailed information on locations, soil and nature values in the management and use of forests so that emissions from operations can be reduced, the health and resilience of the forest better managed and sinks maintained and reinforced.

**Targets**

Methods will be developed for forest management that are climate-sustainable and safeguard biodiversity, with reference also to development needs in growing continuous-cover forests. As methods improve, forestry may adopt more precisely targeted and pluralist harvesting and growing methods, with improved consideration for soil, nature values and waterway protection. Forest health and resiliency can then also be better

ensured by favouring mixed forests and by enhancing woodland biodiversity. This may lead to smart forestry, where new methods and technologies are developed for forest management and wood harvesting by applying information from multiple sources and improving available information. Information on the quality of the actions taken is an essential part of this. Smart forestry will safeguard and increase the carbon binding capacity of forests. Tree species that will thrive in their growth locations even as the climate changes will form varied, healthy and resilient forests that will continue to form effective carbon sinks in the future.

Method development can help boost added value, enhance forestry management chains and come up with new, nationally and globally applicable innovations.

#### **Implementation:**

The Ministry of Agriculture and Forestry will announce an application round for funding for development and training projects. Funding will be granted to at least 7 projects. The DNHS principle will be applied in project selection. Proposals will only be considered if they support adaptation to climate change and climate change risk management in accordance with intervention field 037 in the RRF Regulation.

#### **Investment target group**

The development benefits of the investment will accrue to operators in the forest sector: forest owners and enterprises and corporations involved in planning, technology, contracting or other functions in the sector. The impacts of the projected changes in operations will concern carbon stocks in arable land, the status of waterways and biodiversity.

#### **State aid**

The Ministry of Agriculture and Forestry may use the appropriation for central government grants or public procurements, or allocate aid to central government agencies or institutions. Funding will be granted pursuant to the Government Decree on the Aid Granted for Climate Measures in the Land Use Sector between 2020 and 2025 and the Appropriation Allocated for this Purpose (5/2021)

#### **Timetable**

The Ministry of Agriculture and Forestry will announce the project application round in 2021. Funding decisions will be made in 2022 and 2023. The projects must be completed no later than 2025.

#### **Open strategic independence and security matters**

No direct impact.

## Trans-border and multinational projects

No direct impact.

## Green dimension in the component area

Nature-based solutions and investments safeguarding environmental sustainability will be leveraged to yield multiple societal benefits in ways that are sustainable for the climate and for ecosystems. The actions will promote ecosystem services, waterway protection and carbon sinks. From the perspective of the green transition, the actions will promote curbing of climate change, adaptation to climate change and safeguarding of biodiversity. The investment and reform package in component area P1C5 is 100% supportive of the green transition.

Investment P1C511 'Gypsum treatment of fields and nutrient recycling' is related to the intervention field *Use of recycled materials as raw materials compliant with the efficiency criteria* (045bis) on the following grounds: The action contributes to all climate and environmental objectives defined in the EU Taxonomy Regulation (which defines which economic activities can be considered environmentally sustainable) directly or indirectly, particularly objectives 2 to 5. The action will reduce the phosphorus load on waterways that causes eutrophication (objectives 2, 3, 5) and the greenhouse gas emissions from the production of chemical fertilisers while increasing carbon binding in fields (objective 1). The action promotes the efficient use of resources by using residues generated in communities and industry (gypsum, biomasses) and promoting the transition of agriculture to the circular economy (objective 4). Diffuse pollution in the Baltic Sea is the greatest single challenge for marine biodiversity; gypsum treatment of fields is the most effective new method for combating this (objective 6).

Investment P1C512, 'Climate-sustainable actions in the land use sector', is related to the intervention field *Adaptation to climate change measures and prevention and management of climate related risks: others, e.g. storms and drought (including awareness raising, civil protection and disaster management systems, infrastructures and ecosystem based approaches)* (037) on the basis of an ecosystem-based approach as follows: Climate change increases the chances of forest damage. Biodiverse forests are more resilient to damage.

Tree species that thrive in their location and naturally belong in our flora are efficient carbon sinks, resistant to damage and best capable of adapting to a changing climate. The emergence of mixed forests may be fostered by considering minor variations in habitats and their soil and through nature management measures such as having groups of retention trees. The greatest potential in forestry has to do with forestation of drained peat forests. On peatlands, water level regulation is crucial for forest growth and for

emissions of greenhouse gases from the soil. Carbon sinks in forests can be substantially increased by using forest management methods for growing continuous-cover forests in nutrient-rich peatlands. Methods will be developed for forest management that are climate-sustainable and safeguard biodiversity. As methods improve, forestry may adopt more precisely targeted and pluralist harvesting and growing methods, with improved consideration for soil, nature values and waterway protection. Forest health and resiliency can then also be better ensured by favouring mixed forests and by enhancing woodland biodiversity.

### Digital dimension in the component area

Although the investment and reform package in component area P1C3 supports the digital transformation as described below, no precise percentage target can be determined for it in accordance with the methodology for digital tagging in the RRF Regulation.

The practical actions under the investments described above will require good cooperation between organisations. Successful deployment of the actions will require good information management and shared geographical information. The organisations executing these actions have various geographical information systems of their own; these will be fitted with the necessary interfaces so that the required geographical information will be available to all operators. Geographical information collected at sites will also be made publicly available and downloadable as applicable.

### Do No Significant Harm

The investment and reform package in component area P1C1 complies with the criteria of the Do No Significant Harm (DNSH) principle. For investment P1C5I1 ('Gypsum treatment of fields and nutrient recycling'), a more detailed study was done on compliance with the criterion 'Preventing and reducing environmental contamination'. The investment is compliant with the DNSH principle in respect of this criterion as well as others, because only advanced products and processing methods will be introduced. For a more detailed discussion, see Appendix 3: DNSH tables.

### Costs to be covered out of RRF funding:

EUR 30 million, consisting of the following investments

- Gypsum treatment of fields and nutrient recycling, EUR 20 million
- Climate-sustainable actions in the land use sector, EUR 10 million

## **PILLAR 2: Digitalisation and the data economy will strengthen productivity and make services available to all**

### **Package targets:**

Digitalisation is about improving operations with information and technology. This may involve the improvement of business operations or of administration. Improving services, processes and operating practices is an important part of digitalisation, and legislation and other regulatory items often also need to be updated. Digitalisation also requires skills development. The persons coordinating development and their managers must have an understanding of and competence in digitalisation as it applies to their sector. Users must also have sufficient skills for using the services provided. All this has already been going on in Finland for dozens of years, under a variety of headings. The results have mainly been good.

New technologies, potential for leveraging data and high-speed connections continue to create new opportunities for digitalisation. This not just about individual new technologies but about how to combine them. A smartphone is a highly complex technological entity where various sensors enable motion-based applications, for example, but the true potential of the device is in its network connection and the services and information available in the cloud. This can be taken as a metaphor for digitalisation as a whole. While individual modules must of course be in order, the real value in applications for users is generated by combining several technological features to work together. In addition to such individual innovations, there must be an infrastructure to facilitate new technologies and to provide the connections needed for deploying digital services. New technologies and new services must have high-quality, interoperable data in order to be effective. Tapping into the potential of digitalisation also calls for trust and integrated cyber security and information security.

Finland, like many of our competitor countries, has made good progress in digitalisation at the organisation level, and although there is still a lot of potential there, the best solutions for productivity and competitiveness arise when it is possible to combine information from multiple operators. This changes the nature of the development process. We need to create structures supportive of cooperation, data interoperability must be good, and there must be ground rules governing all the work being done. Ground rules can be established through regulation, but simply having common agreement has worked well in respect of the Internet, for example. The role of the public sector in this is not limited to regulation; the public sector must be an active participant at all stages of the process. In Finland, the data repositories of the public administration provide the groundwork in several fields.

In the international context, our most important operating domain is the European Union. Digitalisation is high up on the agenda of the current Commission and has now been amalgamated with climate actions through the concept of 'twin transition'. This happens to be a combination that works well for Finland, too. Digitalisation naturally also causes a climate load, but in our sparsely populated northerly land it can make operations more effective, because interconnectivity increases as the digital infrastructure is improved.

The digitalisation targets published by the Commission in February 2020 included a European Data Strategy. It is consistent in its targets with Finland's information policy and promotes a human-oriented data economy, which Finland also advocates. Other actions proposed by the Commission are also well in line with Finland's targets. Indeed, Finland undertook some of these actions as early as in the previous decade, and we were a few years early with information policy, too. For example, the Digital Europe Program (DIGITAL) includes several new technology items that are already current in Finland.

The European Data Strategy presents the concept of 'data spaces', which refer to establishing shared ground rules for a particular sector or industry and procedures for leveraging data. Health, transport, public administration and industry are examples of data spaces. This makes it easier to share and use data within sectors. Finland also emphasises data interoperability and its use across sector boundaries, i.e. between data spaces.

Reliable products and services are a crucial requirement for digitalisation. A high level of cyber security and information security and the concomitant expertise will uphold the competitiveness of our economy and society at large in all sectors. A Cyber Security Development Programme is currently in preparation, in accordance with the Government Programme and Finland's Cyber Security Strategy. The Development Programme is part of the implementation of the Finnish Cyber Security Strategy 2019 and the EU Cyber Security Strategy.

The Sustainable Growth Programme contains projects or programmes consistent with the aforementioned targets and principles and in line with EU actions. Because of their pioneering nature, some of the actions – such as financial management automation (Real Time Economy, RTE) – are approaches to automation at the level of society as a whole that are as yet unknown outside the Nordic countries.

## Summaries of the proposed projects and programmes:

- Improving the quality and availability of telecommunications networks
  - Augmenting network connections in areas where the commercial supply is insufficient
- Digirail project: digitalisation of the rail network
  - Designing and delivering a new national rail traffic management system (ERTMS) to replace the outdated train management system, using 5G technology.
- Corporate digital economy – RTE programme
  - Automating financial management by introducing e-invoices and e-receipts across the board. This will also facilitate digitalisation in other processes in enterprises.
- Programme for accelerating spearhead technologies
  - Making investments in the research and introduction of spearhead technologies that are vital for Finland.
- Virtual Finland programme
  - Creating a Virtual Finland service platform to improve Finland's competitiveness, enabling integrated digital service paths to be created combining public and private services for clients arriving in Finland – enterprises, employees, university students and tourists – and to boost exports of the service offering.
- Improving the Residential and Commercial Property Information System
  - A national system will be set up to contain technical and financial information of housing companies, to allow for digitalisation and the establishment of a positive credit registry in the field.
- Enhancing the effectiveness and transparency of RRP-based reforms and investments by improving information systems, administration, oversight and inspections
- Ensuring effective supervision and enforcement against money laundering
  - Combining information from various authorities and making it easier to file notifications of money laundering.
- Investing in cyber security research and exercises
  - The outcomes of the research will improve cyber security competence across the EU, while practice operations will improve the functional capacity of society at large in case of a cyber disruption.



The digital infrastructure is, as its name indicates, a project to foster operating potential. Investments in cyber security and information security practice and research also support digitalisation across a broad range. Other projects are scattered in various sectors, but there are synergy benefits to be found between them. These synergy benefits mostly have to do with sharing data. New solutions for leveraging data will be developed in all projects, along with new interoperability requirements. The building of data spaces is also taken into account in the projects.

This pillar is divided into three component areas:

Digital infrastructure

Accelerating the data economy and digitalisation

Digital security

## DIGITAL INFRASTRUCTURE

### Description of component area:

**Policy area:** *Digitalisation*

**Targets:** *The target is for Finland to have high-speed telecommunications networks facilitating the digital transformation that have nationwide coverage, are reliable and satisfy the needs of businesses, employment, studies, public services and citizens' everyday lives. Another target is to promote digitalisation of traffic, which will further support attainment of transport emission reduction targets.*

*Investments supporting the green transition in transport aim to reduce emissions and to renew the entire transport system in order to respond to the technological transition that is going on in transport. Digitalisation of rail transport will be promoted, which will lead to significant benefits in the form of improved service quality, reduced costs or reduced emissions. The green and digital transition in transport will create incentives for new kinds of business.*

#### **Reforms and investments**

*The investments are for delivering digitalisation of the rail network and for improving the quality and availability of telecommunications networks.*

#### **Investment package 1:**

**Investment: Digirail project:** *The target is to replace the train management system. Since the current train management system is coming to the end of its service life, and as required by EU regulation, Finland must begin introducing a new rail traffic management system in the current decade. The Digirail project will ensure safe train*

*operation in the future. When the Digirail project is delivered in a modern way, the investment will result in significant benefits in the form of added network capacity, improved service quality, environmental benefits, etc.*

**Investment package 2:**

**Investment:** *Improving the quality and availability of telecommunications networks: The target is to improve the quality and availability of telecommunications in areas of Finland where advanced telecommunications are not built commercially, and to co-ordinate broadband investment.*

**Estimated costs:** *Rail network digitalisation, EUR 85 million Telecommunications networks, EUR 50 million*

## Principal challenges and targets

### a. Principal challenges

Greenhouse gas emissions in 2019 from Finnish domestic transport totalled 11.1 million tonnes. The reduction of emissions has been very slow, and current measures do not reduce transport emissions in line with the targets set. The baseline projection shows that current measures will reduce emissions by a further 3.1 Mt. In order to attain the targets set, new actions should be taken to achieve a yet further reduction of 1.65 Mt in emissions by 2030. The new actions will be agreed on in 2021. The means for attaining the emission reduction target are set forth in the fossil-free transport roadmap.

Replacing the current train management system (JKV), which is nearing the end of its service life, is essential, and EU regulation requires the adoption of the European Rail Traffic Management System (ERTMS). Investments in rail transport will gain significant benefits in the form of increased digitalisation, improved service quality and environmental impacts.

The need for citizens and businesses to have comprehensive, high-quality and high-speed telecommunications connections will only increase as work and industrial production become increasingly digitalised and as service supply and demand migrate to digital channels. Currently, 4G networks reach more than 99.8% of Finland's population, and there are 5G networks in more than 100 communities. However, as at the end of 2020 only 65% of households had access to fixed high-speed broadband connections (download speed 100+ Mbit/s).

Reliable high-speed telecommunications connections are needed to support smart guidance, monitoring and automation systems of the future in industry, health care,

agriculture, forestry, transport, logistics, etc. Low fault tolerance in these connections weakens the reliability and usability of services, particularly in critical applications.

There are huge differences between regions in the availability of optical fibre connections. Availability is particularly low in rural areas. As at the end of 2019, 38% of Finland's households had access to an optical fibre connection. Although Finland has one of the highest coverage figures in Europe for 4G networks (including broadband 4G connections in rural areas), it is still a challenge to provide nationwide availability for fixed broadband connections allowing a download speed of 30+ Mbit/s. Only 9.12% of households in rural areas had access to fixed-network high-speed broadband allowing a download speed of 30+ Mbit/s in Finland in 2019, as compared to the EU average of 59.3% (Digital Economy and Society Index, DESI).

## **b. Targets**

Another target is to promote digitalisation of traffic, which will further support attainment of transport emission reduction targets. Investments supporting the green transition in transport aim to reduce emissions and to renew the entire transport system in order to respond to the technological transition that is going on in transport. Digitalisation of the rail network can help improve the energy efficiency of rail transport and create potential for its improved running and attractiveness.

The target is for Finland to have high-speed telecommunications networks and technological solutions for cloud-based services facilitating the digital transformation that have nationwide coverage, are reliable and satisfy the needs of businesses, employment, studies, public services and citizens' everyday lives. The overall target is to ensure the availability and quality of telecommunications networks across Finland and to ensure the establishment of networks that will promote the digitalisation of public services and transport. Investments will boost the availability of broadband connections in areas where they would not be built on market terms.

High-speed connections should be technology-neutral.

The target is to increase the availability of high-speed connections nationwide and thereby improve the resiliency, durability and efficiency of telecommunications networks. Also, the reliability of technological infrastructure and of the connections used by the public administration will be improved. Another target is to promote remote work and location-independent work.

According to the Country Specific Recommendations for Finland, we should focus our investments on the green and digital transition, specifically on building an efficient and durable infrastructure. According to the preamble to the Recommendations, amid health, environmental, regional and productivity concerns, continued efforts are needed to roll out high-speed broadband and to improve other digital infrastructure, with a view to rationalise logistics and maintain economic activity in remote areas. The Commission's recommendations on the CAP Strategy also advise Finland to utilise public subsidies to achieve 100% coverage in high-speed connections by 2025, which will be in line with the green transition. It was also recommended that synergy with national aid and other forms of EU aid should be ensured.

### **Flagship areas**

The pillar as a whole supports the European flagship area 'Connect', which is aimed at fast rollout of rapid broadband services to all regions and households. The Digirail project supports the 'Recharge and Refuel' flagship area.

## **c. National strategic circumstances**

In the Government Programme of Prime Minister Sanna Marin, Finland is committed to the ambitious target of the European Union according to which all households will have access to a high-speed broadband connection of at least 100 megabits per second by 2025. Finland wishes to be among the world leaders in telecommunications networks, as also stated in the Digital Infrastructure Strategy published by the Ministry of Transport and Communications in 2018.

As per the Government Programme, aid will be targeted to areas where no commercial broadband will be forthcoming before 2025. According to the General Government Fiscal Plan, EUR 5 million will be reserved for 2021 for the implementation of the national broadband project. For the administrative branch of the Ministry of Transport and Communications, the digital infrastructure strategy is of central importance.

Digirail: The Government made a decision on the first 12-year National Transport System Plan in April, and it was submitted to Parliament as a Government report. The Plan was prepared by the Ministry of Transport and Communications under the leadership of a parliamentary steering group. The purpose of the Plan is to ensure access to all of Finland, to make sustainable forms of mobility available and to improve the socioeconomic efficiency of the transport system. The need for delivering a project consistent with the Digirail study is identified in the Plan.

## Description of reforms and investments in the component area

### a. Investments:

#### **INVESTMENT 1: Digirail project, or rail traffic management digitalisation, or introduction of ERTMS and FRMCS (P2C1R1)**

The purpose of the Digirail project is to replace the entire train management system in the rail network with a European Rail Traffic Management System (ERTMS) by 2040. The purpose of rail traffic management is to ensure that speed limits, signals and signs are complied with, i.e. to prevent train collisions and accidents and hazards caused by excessive speeds. The rail traffic control system currently in use in Finland will reach the end of its service life at the end of the 2020s. Comprehensive digitalisation of Finland's rail traffic and introduction of the new ERTMS system and the related Future Railway Mobile Communication System (FRMCS), i.e. delivery of the Digirail project, is a key requirement for ensuring an acceptable level of service and continued functioning of rail traffic in the future. EU regulation requires Member States to use the ERTMS in the TEN-T core network and prohibits the development of proprietary national systems.

RRF funding will go towards the development and verification phase of the project, meaning the preparation of testing and piloting in laboratory conditions, on a test track and on a pilot track section that will then be given over to commercial rail traffic, between 2021 and 2026. The test laboratory will allow system parameter impact assessments to be conducted for Finland's entire rail network. The test track will allow testing of the new, radio-based system on the basis of the lab results in realistic conditions and with actual rolling stock. On the pilot track section that will then be given over to commercial rail traffic, only the new system will be used for rail traffic management.

The RRF funding provided to the Digirail project in the development and verification phase (2021–2026) is to be distributed as follows: EUR 3 million in 2021, EUR 4 million in 2022, EUR 6 million in 2023, EUR 15 million in 2024, EUR 28 million in 2025 and EUR 29 million in 2026. The investment will be weighted towards the end of the development and verification phase because testing on the commercial pilot track section will cost considerably more than testing in the laboratory or on the test track. The commercial pilot track section cannot be built until sufficient successful test results have been obtained in laboratory conditions and on the test track.

The overall investment of EUR 85 million will be distributed over the period 2021–2026 so that EUR 35 to 45 million will be allocated to the commercial pilot track section. The remainder will go towards establishing an ERTMS laboratory and a test track for developing an ETCS Baseline 3 system (the highest level), the FRMCS, automatic train functions and asset management.

### **Challenges**

Initially, availability of experts and acquisition of expertise will be challenges in the Digirail project.

### **Targets**

The purpose of the investment is to deliver testing and piloting to provide necessary information for preparing the introduction of a national ERTMS, specifically in the design of a modern national radio-based network and a Future Railway Mobile Communication System (FRMCS). The testing will concern areas identified as key factors for development, and the test results can be shared with other Member States. Finland will be one of the first EU Member States to deliver future-proof digitalised systems based on 4G/5G technologies for long-distance rail traffic. It will be evaluated in the project what synergy benefits could be found between developing railway communications of the future and developing other future communications systems. The investment will also result in the building of a permanent infrastructure and system on the commercial pilot track section.

After the development and verification phase, i.e. in the period 2027–2040, the Digirail project and hence the ERTMS will be introduced across Finland's entire rail network. A new digital train control system would make it possible to increase rail capacity, improve punctuality and increase the number of trains and passengers in the current railway network. It will also reduce the impact and duration of various disruptions. The new technology will help traffic run more smoothly across Finland's entire rail network, but particularly in areas where passenger volumes are high. A better and more punctual provision of trains will support the transition to sustainable modes of transport and reduce transport emissions. Increasing the proportion of rail transport is also an EU-wide objective that is strongly highlighted in the European Green Deal, the European programme on green development.

### **Implementation**

The Ministry of Transport and Communications and the Ministry of Finance are responsible for entering infrastructure funding in the central government budget. The Finnish Transport Infrastructure Agency, as custodian of the rail network, is responsible for infrastructure procurements in the Digirail project and for reporting (financial reporting and effectiveness).

### **Investment target group**

The investments will be used for infrastructure development and testing, and will thus be directed to the custodian of the national rail network, the Finnish Transport Infrastructure Agency.

**Compatibility with rules on State aid**

No issues related to the rules on State aid have been identified in the Digirail project. The funding of the construction of public infrastructure, e.g. roads and bridges, does not fall within the rules on State aid if the infrastructure so built is available to all operators at no charge. The Commission has ruled that although railway infrastructure operations may be commercial operations under certain conditions, building railway infrastructure generally does not have an impact on trade between Member States or distort competition if said infrastructure is available to potential users on equitable and non-discriminatory terms, as is the case here. Finland does not have, and there are no plans for, a railway infrastructure parallel to the proposed investment, and no private funding will be used for building this infrastructure.

**Timetable**

The ERTMS test laboratory will be operational in 2022 and will have conducted successful tests by the end of 2022. The test track will be built by 2024, and successful tests will have been conducted on it by the end of 2024. The results obtained on the test track will enable the finalisation of technical specifications for the pilot track section and allow the project to proceed to the next phase, testing on a pilot track section that will then remain in commercial use. Tests on the commercial pilot track section are expected to begin in 2026, and commercial traffic could begin in 2027.

**INVESTMENT 2: Improving the quality and availability of telecommunications networks (P2C111)**

The target is to improve the quality and availability of telecommunications in areas of Finland where advanced telecommunications are not built commercially, to coordinate national and EU-level broadband investments and to engage in active publicity on broadband connections. This investment will respond to both national and EU-specified digital infrastructure development targets.

Availability of high-speed and high-quality telecommunications connections should be guaranteed to all Finnish residents and all enterprises based in Finland, in the best possible way. High-speed and high-quality telecommunications connections can facilitate functions in citizens' everyday lives, multilocation employment and studying, and potential for enterprises and various organisations to operate and to provide services. In a large country with long distances, the importance of well-functioning connections is paramount, because service availability may be considerably more difficult in the absence of reliable telecommunications. Basically, advanced telecommunications networks are currently only available in urban and city areas, due to the higher demand in these areas. Improving digital infrastructure will boost competitiveness, as it will enable the leveraging of future developments in both private and public services nationwide (including 5G and the data economy). In an increasingly digitalised society, we cannot afford to let

anyone fall beyond well-functioning telecommunications connections, and therefore it is important to constantly keep in mind those areas where connections will not be improved on market terms.

Broadband connections are also funded out of the European Agricultural Fund for Rural Development (EAFRD), but this funding is mostly directed at 'village network' projects. In other words, national broadband programmes are not funded out of the EAFRD. As there are various kinds of broadband aid, the aim here is to consider synergies between the various aid programmes and to ensure that aid from multiple programmes is not allocated to the same costs. This is facilitated by the practices of the authorities granting aid under the national broadband aid programme and by actions for broadband promotion and aid coordination, one of the purposes of which is to draw up a separate plan on coordinating funding.

### **Challenges**

Finland's telecommunications infrastructure is principally market-driven. However, from the point of view of effective recovery, it is important to ensure that the stimulus money does not replace commercial investments and adversely affect the highly competitive telecommunications market. How actively operators apply for funding is also a challenge, along with the issue of how local authorities will commit to their share of the costs. Another challenge that may be identified is the coordination of funding from multiple sources and the boosting of expertise in and demand for high-speed broadband.

### **Targets**

Availability of high-speed connections will be improved in areas where they will not be provided on market terms, thus facilitating the development of a nationwide high-speed broadband network. RRF funding is intended to augment the national broadband support programme, which will be the vehicle for channelling that funding. Recovery measures could thus be launched very quickly. The aim is to allocate funding to broadband connections of at least 100/100 Mbit/s.

Another aim is to hire a coordinator for the national Broadband Competence Office (BCO), which is intended to prepare a funding coordination plan and to engage in publicity on broadband.

### **Implementation:**

The current national broadband aid programme is derived from the Act on Broadband Construction Aid, which includes provisions on the criteria for granting and paying out aid, on the competent authority and on the duties of that authority. In accordance with the national broadband aid programme, connections supplied to permanent residences, leisure residence, business premises and offices of the public administration are eligible



for aid. It will be ensured through market analyses performed by the competent authority that there is no network being built on market terms in the area in question, as required in the EU General Block Exemption Regulation (GBER). In practice, in projects covered by the aid programme the costs are shared by local authorities and the aid recipient in addition to the central government. Statutory public subsidies are divided into central government and local government contributions. It is also possible to obtain other public funding for such projects, up to a maximum of 100% of the eligible costs. Aid is allocated to construction costs of telecommunications networks that are essential for supplying services to residences or other user locations in the project area. The Act specifies the eligible costs and the local authority contribution categories in more detail. Local authority contributions depend for example on the urbanisation rate of the municipality and its financial situation, i.e. how great the financial burden would be on the local authority to participate in the programme. The minimum speed for connections to be built and the precise criteria for computing local authority contributions will be provided for by Government Decree. The currently valid national Act on Broadband Construction Aid is compliant with the GBER. Finland is aware that the GBER is being revised, and the amendment needs caused for national legislation by that revision, along with the potential notification requirement for the aid programme, will be considered.

Actions to promote high-speed broadband and to harmonise aid measures will form part of the implementation of this investment. A dedicated coordinator will be hired for the national Broadband Competence Office whose job will include planning the harmonisation of national and EU-level broadband funding so as to avoid overlapping. The coordinator will prepare a plan for funding harmonisation and engage in active publicity on broadband to raise public awareness about how and why these connections are being built.

### **Investment target group**

Telecommunications enterprises and broadband investors

### **Compatibility with rules on State aid**

The national broadband aid programme will basically be compliant with the GBER, but the potential notification need cannot be evaluated until the Commission adopts the final Regulation. The aid decisions will be made in 2023 at the latest, in accordance with the validity of the GBER. It will be ensured through market analyses performed by the competent authority that there is no network being built on market terms in the area in question and that State aid will not distort competition.

**Timetable**

The time frame for the broadband programme will be no later than Q3/2021–Q2/2026. The actions taken by the national Broadband Competence Office will be between 2021 and 2023.

**Stakeholder input**

All possible stakeholders will be involved in drawing up the broadband coordination plan: regions, responsible ministries and agencies, local authorities and telecommunications enterprises.

**Payroll costs**

According to the Commission's requirements, the funding allocated for the broadband programme must be analysed to show which payroll costs are allocated to the State aid authority and thus apply for a fixed term. These costs are strongly linked to the allocation of RRF funding and thus to recovery actions and are justifiable in that way. The duties of the State aid authority are net-budgeted, and there is no separate revenue available for the actions to be expanded, such as the administrative costs of granting RRF aid. Also, payroll costs account for less than 1% of the overall costs of the broadband programme, and this also makes the temporary payroll costs justifiable. The payroll costs in the broadband programme (EUR 487,500) will be for the period 2022 to 2026.

Dedicated personnel are needed for preparing the broadband coordination plan, for harmonising and coordination actions and for engaging in publicity, so that the work can be done efficiently within a short time frame with the best possible outcomes. The plan and the coordination required will be important particularly in the early phases of the funding allocation, and therefore these duties will only be for a fixed term. The current national Broadband Competence Office (BCO) has been operating on a virtual basis only, and its employees manage its functions alongside their other job duties. The work of the proposed dedicated coordinator specifically concerns the temporary recovery actions and is thus justifiably a fixed-term appointment. After that, the BCO will revert to virtual operations only.

Payroll costs for BCO coordination account for 70% of the whole, 30% being reserved for publicity. The payroll costs (including ancillary costs) will be distributed as follows: 2021 (startup), 20% or EUR 28,000; 2022 (execution), 40% or EUR 56,000; and similarly 2023 (execution), 40% or EUR 56,000.

### Open strategic independence and security matters

For each project, a risk assessment will be performed and a risk management plan drawn up, on the basis of which the essential security requirements for each project will be identified and dimensioned. Security risks will be managed over the life cycle of each project. With regard to products and services involved in the project, compliance with cyber security requirements will be verified, and certification systems will be employed as necessary.

In respect of information systems and telecommunications arrangements, information security assessments performed by the authorities or by authorised verification institutions will be drawn on as necessary.

Compliance with security requirements will be ensured in any public procurements related to the project. Security clearances will be obtained for individuals and for enterprises on an as-needed basis.

Finland's national legislation provides a solid foundation for secure 5G networks. Many of the measures listed in the EU *Technical Guideline on Minimum Security Measures* for communications networks were already previously included in our national legislation. In the interests of safeguarding the security of 5G networks and of implementing the measures required at the national level, amendments were made to the Act on Electronic Communications Services. The new national regulations on the security of telecommunications networks are consistent with the targets given in the aforementioned EU Technical Guideline. National legislation that entered into force at the beginning of 2021 contained enhanced provisions on the security of telecommunications networks, specifically in the form of the requirement to evaluate critical portions of telecommunications networks from the perspective of national security. Basically, it is not permitted to install devices that may compromise national security in the critical portions of any telecommunications network. The new Act also provides for an Advisory Board for Network Security for improved national cooperation. The purpose of the Advisory Board is to assist the competent authorities in their decision-making and to monitor technological developments and the application of network security legislation. Maintaining and improving the security of telecommunications networks is a continuous process, and amendments must be made to national legislation in keeping with technological advancements.

### Trans-border and multinational projects

No trans-border or multinational projects are involved.

### Green dimension in the component area

The Do No Significant Harm principle will be complied with in accordance with Regulation 2020/852.

Transport emissions account for approximately one fifth of Finland's total greenhouse gas emissions and some 40% of emissions in the so-called effort sharing sector. Transport emissions have been decreasing in recent years, but at a rate that is too slow vis-à-vis the targets. Compared with 2018, domestic traffic emissions decreased by about 3 percent in 2019 (0.3 million tonnes). In addition to greenhouse gas emissions, adverse impacts caused by transport include other emissions harmful to the climate and to the environment, and noise. For the target of halving transport emissions by 2030, new actions must be taken to achieve further emission reductions of 1.55 million tonnes.

Improvement of physical infrastructure will boost the green transition. Digitalisation of the rail network can help improve the energy efficiency of rail transport and create potential for its improved running and attractiveness. A new digital train control system would make it possible to increase rail capacity, improve punctuality and increase the number of trains and passengers in the current railway network. It will also reduce the impact and duration of various disruptions. The new technology will help traffic run more smoothly across Finland's entire rail network, but particularly in areas where passenger volumes are high. A better and more punctual provision of trains will support the transition to sustainable modes of transport and reduce transport emissions. Increasing the proportion of rail transport is also an EU-wide objective that is strongly highlighted in the European Green Deal, the European programme on green development.

The purpose of the Digirail project is designing and delivering a new national rail traffic management system (ERTMS) to replace the outdated train management system, using 5G technology. The project is 40% supportive of the green transition and 100% supportive of the digital transformation. According to *Regulation (EU) 2021/241 of the European Parliament and of the Council establishing the Recovery and Resilience Facility*, the European Rail Traffic Management System is supportive of the green and digital transition at the aforementioned percentages.

The purpose of the Digirail project is to promote digitalisation of rail traffic, which will further support attainment of transport emission reduction targets. Investments supporting the green transition in transport aim to reduce emissions and to renew the

entire transport system in order to respond to the technological transition that is going on in transport.

Telecommunications networks play a vital role in achieving a systemic green transition in society at large. As an example, telecommunications networks facilitate remote work and e-transactions, which reduces mobility and thereby potentially reduces transport emissions. Network-supported smart transport is efficient and optimised and conducive to attaining environmental targets. Improving the functioning of telecommunications networks will promote the curbing and management of climate risks, for example in respect of storms and heavy rains that will become more common in the future. Digital connections facilitate multilocality (residential or employment-related) and thus contribute to a reduction in transport emissions.

### Digital dimension in the component area

Telecommunications networks are a requirement for digitalisation. They maintain the competitiveness of the economy and of society at large in all sectors. Sustainably implemented digitalisation will enhance the resilience and functional reliability of society in case of unexpected crises and in normal circumstances.

Only 9.12% of households in rural areas had access to fixed-network high-speed broadband allowing a download speed of 30+ Mbit/s in Finland in 2019, as compared to the EU average of 59.3%. (Digital Economy and Society Index, DESI). The broadband programme is intended to promote the supply of high-speed connections in areas where market-driven supply has not emerged, such as in sparsely populated rural areas. The aid programme will also contribute to attaining the EU-level digital infrastructure targets linked to the green transition.

The proposed actions in rail transport will promote transport digitalisation. These actions will facilitate a transition from current traffic management systems to modern, network-based solutions. For the rail network, this means a transition from lineside transmitters to a modern system based on satellite navigation and from outdated TET-RA technology to broadband communications.

Regulation 2021/241 sets a binding target to allocate at least 20% to the digital transformation or challenges caused by it. Among the proposed transport investments, the Digirail project will contribute to digitalisation targets directly and to a significant extent.

The purpose of the Digirail project is designing and delivering a new national rail traffic management system (ERTMS) to replace the outdated train management system, using

5G technology. The project is 40% supportive of the green transition and 100% supportive of the digital transformation. According to *Regulation (EU) 2021/241 of the European Parliament and of the Council establishing the Recovery and Resilience Facility*, the European Rail Traffic Management System is supportive of the green and digital transition at the aforementioned percentages.

The purpose of the Digirail project is to promote digitalisation of rail traffic, which will further support attainment of transport emission reduction targets. Digitalisation of the rail network can help improve the energy efficiency of rail transport and create potential for its improved running and attractiveness.

Improving the quality and availability of telecommunications networks (P2C111): This investment is 100% supportive of the digital transformation. The target with this investment is to improve digital communications in areas of Finland where advanced telecommunications are not built commercially, to co-ordinate national and EU-level broadband investments and to engage in active publicity on broadband connections. Achieving a comprehensive and advanced telecommunications infrastructure will of course also require introducing and leveraging digital services. The investment contributes to the EU-level flagship area 'Connection'.

### **Do No Significant Harm**

Actions in this component area contribute to the green transition and to digitalisation in particular. The projects to be funded are not estimated to have any direct adverse impacts in the six areas considered. Because projects will be selected through competitive tendering, it is not possible to make an advance detailed estimate of the potential impacts of the actions.

The parties selecting the projects and deciding on the funding will stipulate in their application ads that applicants must analyse in their applications how their projects comply with the Do No Significant Harm principle. Project proposals that do not comply with this principle in accordance with the Commission recommendations will not be funded.

### **Costs to be covered out of RRF funding: EUR 135 million**

EUR 135 million, consisting of the following investments

- Rail network digitalisation, EUR 85 million
- Telecommunications networks, EUR 50 million

## ACCELERATING THE DATA ECONOMY AND DIGITALISATION

### Description of component area:

#### **Policy area:** *Digitalisation*

**Targets:** *The target is to create interoperable information entities at the national level for promoting the availability, quality and reuse of information, consistent with the EU Digital Services Act Package and Data Strategy, in certain key areas supportive of digitalisation in society at large: Corporate financial data (Real Time Economy, RTE) and the Residential and Commercial Property Information System.*

*6G, AI and quantum computing are among the most important areas for technological competitiveness in the future. So far, Finland is well placed in developing and applying these technologies, but global competition is fierce. Safeguarding our competitiveness will require substantial national investments, the leveraging of European investments and strategic global cooperation. In order to be an attractive environment for corporate RDI investments and a partner for EU-level and other international cooperation, Finland must be able to offer competitive circumstances and infrastructures for the collaboration needed to develop spearhead technologies.*

#### **Reforms and investments:**

- *Corporate digital economy – RTE programme, EUR 14 million*
  - *Automating financial management by introducing e-invoices and e-receipts across the board. This will also facilitate digitalisation in other processes in enterprises.*
- *Virtual Finland programme, EUR 9 million*
  - *Digitalisation of Finland's internationalisation services and streamlining processes for incoming foreign labour and enterprises.*
- *Accelerator programme for spearhead technologies, EUR 25 million*
  - *Making investments in the research and introduction of spearhead technologies that are vital for Finland.*
- *Improving the Residential and Commercial Property Information System, EUR 14 million*
  - *A national system will be set up to contain technical and financial information of housing companies, to allow for digitalisation and the establishment of a positive credit registry in the field.*
- *Enhancing the effectiveness and transparency of RRP-based reforms and investments by improving information systems, administration, oversight and inspections*

**Estimated costs:** *The total costs of the proposed projects are EUR 79 million.*

## Principal challenges and targets

### a. Principal challenges

Finland is at or near the top in several international comparisons. In the European DESI comparison, for example, Finland has been at the top for two years running. This does not mean that we have no untapped potential. In fact, we may observe that digitalisation and our advanced information policy is constantly bringing up new opportunities. The challenge in leveraging these is that we have to be able to work across various boundaries. Advancements can be pursued only to a certain extent within a single organisation, or even within a single sector, although there may be significant potential there if the sector as a whole is not already advanced in digitalisation.

By 'crossing boundaries', we mean using information from one organisation in another. This places demands on interoperability and process harmonisation. At the practical level, this may translate into significant changes to be made to existing information systems. Interoperability does not mean just technical compatibility; for example, the same term can mean different things in different contexts. This has come up in several national projects such as the income register, in the design of which it emerged that the concept of 'income' is defined in various ways. What is crucial is how far the information has been standardised at the time when a project or programme is launched. International standards are available to be applied in the proposed projects and programmes.

Unfortunately, adopting new standards is a slow process, and compliance is not always perfect. The quality of information may also leave something to be desired. Using information in another sector may reveal that there are shortcomings in the comprehensibility of the information. There must be functional solutions available for resolving all such issues, and in many cases it is the public sector – ministries and key agencies – that has to steer these projects or programmes.

The General Data Protection Regulation (GDPR) lays the groundwork for the use of personal data. If there are no clear sector-specific rules for the use of data, then such rules have to be created. Cyber security requirements must be set in accordance with how confidential the data to be processed is. These requirements apply to the processing of the data and to transferring data between organisations.

The Residential and Commercial Property Information System addresses the challenges arising from the low digitalisation rate in the building management and property management sector and the difficulty of compiling data on housing company loans. The percentage of household indebtedness accounted for by housing company loans has increased in recent years and is now estimated to be on a par with consumer credit.



There is currently no centralised register for housing company loans; the data only exist in the accounts of the individual housing companies. The aim is to collect housing company loan data in the Residential and Commercial Property Information System and have them relayed to the positive credit register. Establishing a positive credit register is mentioned in the Country Specific Recommendations for Finland issued by the European Council on 9 July 2019. The positive credit register depends critically on development of the Residential and Commercial Property Information System.

Corporate digital economy – Real Time Economy (RTE): There is currently no digitalisation of business documents and no infrastructure for this. Transferring business data between systems is currently not possible, and there is no steering or legislation on the matter. The basic structures for a real time economy do not exist, and this prevents process automation.

Microelectronics, 6G, AI and quantum computing are among the most important areas for technological competitiveness in the future. Finland and other digitally advanced Member States of the EU have proposed the design and deployment of these technologies as part of the strategic targets and actions of Europe's Digital Decade. So far, Finland is well placed in developing and applying these technologies, but global competition is fierce.

Safeguarding our competitiveness will require substantial national investments, the leveraging of European investments and strategic global cooperation. In order to be an attractive environment for corporate RDI investments and a partner for EU-level and other international cooperation, Finland must be able to offer competitive circumstances and infrastructures for the collaboration needed to develop spearhead technologies.

Information management and data definitions have evolved independently in various sectors over the years. In the real world, sectoral boundaries in the public and private sectors manifest themselves for example as discontinuities in data and duplicated work. The digital transformation will cut through the administrative branches. Achieving functioning cooperation will be the key challenge.

Finland is highly advanced in terms of the data economy but only ranks 14th in open data maturity.<sup>7</sup>

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7 European Commission (2019): *The Open Data Maturity Report 2019*. Available: <https://data.europa.eu/fi/highlights/open-data-maturity-report-2019-out-now>

## b. Targets

The proposed projects are separate but each promote both national and EU-level digitalisation targets. Their aim is to achieve more efficient leveraging of data, in keeping with information policy and the European Data Strategy.

The projects do not involve the development of services for citizens or enterprises except in a very minor way, but they lay the groundwork for such development. Virtual Finland is a platform for services aimed at international users and thus at enterprises seeking internationalisation and employees and enterprises relocating to Finland. The Residential and Commercial Property Information System can facilitate the creation of a positive credit register, which in turn enables a fairer deal for consumers when applying for loans. The purpose of the programme to accelerate spearhead technologies is to make investments in the research and introduction of spearhead technologies that are vital for Finland.

The projects offer direct or indirect opportunities for new investments. Encouraging corporate investments requires the projects to be open and to operate in ways that allows enterprises to gain a correct view of the risks involved. The reforms need to foster stability while laying down clear guidelines for further development. It has been to Finland's advantage that we have been able to build up digitalisation targets over several electoral terms.

Digitalisation is also intended to foster productivity growth. Simply introducing a new technology rarely improves productivity or competitiveness in itself. Operations must also be updated and processes automated for the benefits to be realised.

### **Flagship areas:**

Data structure creation contributes to the 'Scale-up' flagship area. Data leveraging and interoperability between sectors are also key issues in the 'Modernise' flagship area, under which key public services should be modernised and made available to everyone.

## c. National strategic circumstances

In accordance with the Government Programme, Finland is promoting the EU digitalisation policy, which regulates supranational platform services in sustainable ways and reinforces the digital internal market and competitiveness while promoting the privacy protection and digital operating potential of both citizens and enterprises. Finland is working towards creating an ethically, economically and socially sustainable data policy and a regulatory framework for AI policy.

In accordance with the Government Programme, a strategy for opening and leveraging public-sector data, including an action plan, will be drawn up, taking into account

privacy protection implications and potential legislative needs; also, sharing of data from enterprises and entrepreneurs within ecosystems will be encouraged, it will be ensured that private individuals can control data on them in public services ('own data' principle), information will be compiled on various means for improving the exercising of citizens' rights to administer their own data ('own data' principle), a register of the built-up environment will be created along with a data platform, and development of the Residential and Commercial Property Information Register will be continued.

The Government Programme defines targets for the digitalisation of financial management in enterprises, for shifting to a real time economy and for the broad adoption of e-invoices and e-receipts as part of boosting the technology and digitalisation capacity of the public sector, along with measures to combat the informal economy and to solidify the tax base. The target of having the best public administration in the world includes a determination to transition to a real time economy and is also linked to other targets in the Government Programme that have to do with improving the operating environment for enterprises and reducing administrative obligations imposed on enterprises. In its final report, submitted on 1 October 2020, the working group on digital means for the aftercare of the coronavirus crisis named transitioning to a real time economy as one of six prioritised proposals for action. Improving the Residential and Commercial Property Information System and creating a positive credit register are also included as targets in the Government Programme of Prime Minister Marin's Government.

## Description of reforms and investments in the component area

### a. Reforms

#### **REFORM 1: Corporate digital economy – RTE programme (P2C2R1)**

Creating structures for a real time economy, enabling enterprises to shift to a digital economy.

#### **Challenges**

Transitioning to a real time economy and to digital financial management in enterprises requires shared solutions and structures that at the moment do not exist.

#### **Targets**

Transferring digital financial data between organisations, automating financial processes in enterprises and reducing their administrative burden, and creating new services based on shared data. In a real time economy, the data contained in business documents (receipts, invoices, delivery documents) is in a uniform, machine-readable format (structured financial data), allowing automated data processing. The digital competence of operators in the national economy will increase, facilitating a significant increase in productivity in both the public and the private sector. The transition to a real time

economy also contributes to the prevention of the informal economy and the solidifying of the tax base.

The reform consists of the investments described below, the transition to a real time economy and any needs for legislative amendments identified in the course of the project. The ultimate target is to create a shared digital economy business area covering all the Nordic countries. To this end, there is ongoing collaboration with the Nordic Smart Government project (NSG).

### **Implementation:**

To be undertaken by the Finnish Patent and Registration Office together with the Tax Administration and the State Treasury (project organisation at the Finnish Patent and Registration Office). The project is ready for launching in early 2021. A strategic steering group led by the Ministry of Economic Affairs and Employment will be appointed for the project.

### **Stakeholder input**

Implementation will require close cooperation with operators in the private sector, including business associations and financial management service providers.

### **Expected complications**

Implementing the reforms depends on how committed the stakeholders are and on the scheduling of supporting actions.

### **Reform target group**

All enterprises, enterprises offering B-to-B services, public administration

### **Compatibility with rules on State aid**

The investment does not involve any measures with relevance for rules on State aid. Investments made by private-sector operators in their own operations will be encouraged and leveraged for the improvement of official reporting.

### **Payroll costs**

Fixed-term human resources to a total of 41.25 person-years for the period 2021–2024 will be recruited for the project organisation implementing the RTE programme coordinated by the Finnish Patent and Registration Office. These temporary additional resources are essential for implementing the reform and the related investments. Their duties will have to do with project management, coordination, administration and enhanced stakeholder liaisons. The project will also require the services of experts who can only be found in the organisations involved in the project. In order for the project to be successful, central government organisations must take an active role so that experts can be committed to

the project. This will ensure that the targets of and duties in the project will be correctly described. The fixed-term appointments will expire once the reform has been carried out.

### **Implementation timetable**

2021–2024

#### **REFORM 2: Virtual Finland (P2C2R3)**

According to Finland's Government Programme, the most sustainable means for strengthening general government finances in the long term is employment growth, including work-based immigration, in a way that also boosts public finances. Therefore, Finland should be an internationally attractive place to work and invest in.

The challenge for Finland and Finnish enterprises in increasing exports is that we have low international recognition. Rapidly improving Finland's external competitiveness and increasing the GDP will require digital enhancement of the operating environment of export enterprises, creating a global capital market for growth enterprises and enterprises seeking internationalisation, establishing an industry for software exports and rapidly productising data economy solutions for export.

#### **Targets**

The target is that a foreign individual relocating to Finland for work or a foreign enterprise setting up operations in Finland can find the service processes they need in a user-friendly one-stop shop on the Virtual Finland service platform. This will be a platform where digital service paths for various target groups will be assembled. The platform is also intended to function as a marketplace where Finnish public-sector and private-sector bodies can offer their services for a wide range of immigration needs and also sell their solutions.

This marketplace will be a layer linking to all other e-services.

#### **Nature and scope of the reform**

The Virtual Finland service platform includes an investment for: an international service website; a service marketplace for Finnish enterprises, growth enterprises and investors; and, at the RRF phase, the integration of two service processes on the platform for selected target groups, such as foreign enterprises and individuals. The service integration into the service platform will be executed on the basis of a jointly designed architecture and by mutual agreement between the parties to the service platform. Each operator in the service process will link their own existing service or data, through interfaces, into the digital service process offered to clients. The funding is to cover the integration of selected service processes but not the development of the information systems and services of the participating organisations that will be linked; each operator will be liable for the funding of their respective services. After the RRF funding phase, the Virtual Finland platform is

intended to function as an open service platform where existing or forthcoming services related to the target groups' service processes can be linked as agreed separately and on separately obtained funding.

**Implementation:**

The development will be undertaken as an ecosystem collaboration between authorities, with each party being responsible for integrating their service into the scheme as jointly determined in the project. A project leader body and project managers will be appointed. Which authorities will participate in the project will depend on the service processes selected; the following are two examples of service processes and the authorities responsible for them to be integrated into the service platform. Firstly, there is the entry process for foreign nationals; the authorities involved are Business Finland, the Digital and Population Data Services Agency, the Finnish Immigration Service, the Ministry for Foreign Affairs, the Ministry of Education and Culture, local authorities and the required private-sector services. Secondly, there is the entry process for foreign enterprises; the authorities involved are Business Finland, the Digital and Population Data Services Agency, the Finnish Immigration Service, the Ministry for Foreign Affairs, the Tax Administration, the Finnish Patent and Registration Office, private-sector services and local government services. Two such services can be integrated into the service platform during the RRF funding phase so that they will be ready for clients to use.

After the RRF funding phase, Virtual Finland will remain an operating model and platform in which services for further target groups will be integrated (e.g. university students, unlisted companies, seasonal workers, tourists, export enterprises). Some of the services to be integrated after the RRF funding phase will be new services, while others may replace existing processes such as filling in and mailing hard-copy forms and physically visiting an office for transactions – at the moment, the latter actually requires travelling to another country in some cases. Even after being set up as described above, the service platform will remain a continuously evolving entity where more and more services will be integrated.

Integrating the service processes described above requires the Virtual Finland platform to enable the following functions: identification of individual and corporate users; digital identity; reliable data sharing among the parties involved in the platform; and a core digital process for entry into the country. Once these have been established, service processes for selected other target groups can be created (e.g. university students and investors).

Virtual Finland will be implemented so that it will be possible to link other public and private services and platforms to it, such as Talent Boost services and a digital immigration infrastructure development package, for which implementing changes in the permit process and in immigration legislation require a cross-sectoral digitalisation

project involving the Ministry of Economic Affairs and Employment, the Ministry for Foreign Affairs, the Ministry of the Interior, the Ministry of Social Affairs and Health, the Ministry of Education and Culture and the Ministry of Finance. The digital services in pillar 3 of the RRF plan can also be integrated into the Virtual Finland platform. Those investments do not duplicate the costs in the Virtual Finland project.

### **Stakeholder input**

Ministries, the Finnish Innovation Fund Sitra, Business Finland, the Tax Administration, the State Treasury, the Digital and Population Data Services Agency and the Finnish Patent and Registration Office will participate in the preparation.

### **Expected complications**

Virtual Finland will be undertaken as an ecosystem collaboration between selected authorities and private-sector operators, with each party being responsible for integrating their service into the scheme as jointly determined in the project. Therefore, the overall timetable depends on the timetables of the parties involved, and the project requires a carefully designed and graduated implementation plan along with robust project management.

### **Cost estimate**

The cost estimate of the project out of RRF funding to be received by the Ministry for Foreign Affairs is EUR 9 million, allocated to the virtual service platform and the integration of selected key services as follows, analysed by year:

- In 2022, about EUR 3 million:
  - First production version of the shared platform, EUR 2 million
  - Integration of the first service process, EUR 1 million
- In 2023, about EUR 3.5 million:
  - Continuing development of the shared platform, phase 1, EUR 1.7 million
  - Integration of the second service process, EUR 1.1 million
  - Support service development, EUR 0.7 million
- In 2024, about EUR 2.5 million:
  - Continuing development of the shared platform, phase 2, EUR 0.7 million
  - Further service process development, EUR 0.8 million
  - Support service development, EUR 1.0 million

The sums given above are estimates made during the initial preparation; they will be further specified in project planning and realisation.

The Finnish Government will also pay contributions to the development out of central government budgets. The Ministry for Foreign Affairs has been granted an appropriation of EUR 2 million in the central government budget for development of the Virtual Finland platform in 2020–2021.

### **Payroll costs**

Fixed-term human resources to a total of c. 6 person-years for the period 2022–2025 will be recruited for the project organisation implementing the Virtual Finland project in central government, max. c. EUR 0.6 million. These temporary additional resources are essential for implementing the reform and the related investments. Their duties will have to do with project management, coordination, administration and enhanced stakeholder liaisons, and supervisory duties in respect of the technology and the architecture. The fixed-term appointments will expire once the reform has been carried out.

### **Reform target group**

The target group for the reform consists of foreign enterprises, experts, students and investors interested in Finland and Finnish enterprises operating on international markets.

### **State aid**

The reform and its investment do not involve any State aid.

### **Implementation timetable**

2021–2025

## **REFORM 3: Accelerator programme for spearhead technologies (P2C2R2)**

### **Challenges**

Finland's competitiveness and that of Europe as a whole requires investments in applied research into and adoption of emerging technologies. Enterprises have not had sufficient access to testing environments with a high level of service so as to be able to try out innovations applying spearhead technologies in a functioning, reliable and safe environment.

Another challenge in respect of spearhead technologies is that enterprises have lacked the ability to carry innovations into mass production sufficiently quickly.

### **Targets**

The target is to safeguard the competitiveness, information security and sovereignty of Europe by setting up testing environments and experiment sites for AI, 5G/6G and



quantum technologies where enterprises can test innovations applying spearhead technologies in actual user environments, such as research infrastructures of universities or other public bodies, or innovation environments jointly created by enterprises and other operators. Another target is to increase the effectiveness of RDI investments supporting the digital transformation and to accelerate new corporate investments and EU collaboration. A yet further target is to increase the capacity for design and manufacture of semiconductor chips in Europe, possibly as part of a trans-border IPCEI scheme. The testing and experimental environment concept will also support RDI actions in other areas funded out of the RRP.

### **Implementation:**

Funding national applied RDI and supporting innovation infrastructures, i.e. testing and experimentation facilities having to do with microelectronics or 5G/6G technologies, AI or quantum technology. In respect of AI, these testing and experiment sites may adjoin a trans-border EU scheme as applicable, in which case the Digital Europe Programme could be involved. The funding will be channelled through the competitive-tender funding instruments of Business Finland. Projects will be selected on the basis of the quality and effectiveness of their RDI operations and according to how they promote digitalisation. Project criteria will be specified so as to ensure that the projects comply with the Do No Significant Harm principle.

If possible, a new funding mechanism and project portfolio will be created in addition to existing instruments, enabling enterprises to participate in the IPCEI on Microelectronics.

### **Stakeholder participation**

Enterprises are significant stakeholders in this reform. Dozens of Finnish enterprises have been involved in the dialogue on the development of the microelectronics value chain, and 10 applications were received in the preliminary round of IPCEI applications. Enterprises' own investment and development projects will be headlined in the implementation. In IPCEI activities, public funding will generally cover 5% to 20% of the overall investment, depending on how the IPCEI operates, meaning that enterprises have to contribute 80% to 95%.

In projects supported with R&D funding, enterprises provide at least 50% of the funding. The participating enterprises are mainly key players in the technology industry and telecommunications sector, and innovative SMEs.

### **Expected complications**

The notification process in the EU for the IPCEI possibly to be used for microelectronics value chain development is demanding and may be delayed. Thus, the eventuality of having to fund value chain development with R&D aid must be considered. Successfully

building testing and experimentation facilities on the basis of open application rounds requires an overall national plan and seamless cooperation between the parties.

#### **Cost estimate**

The budget for the programme comprises EUR 15 million for microelectronics value chain development and EUR 10 million for testing and experimentation facilities.

#### **Reform target group**

Enterprises engaged in technology development, SMEs and research institutions

#### **Compatibility with rules on State aid**

All the testing and experiment environments to be funded (innovation infrastructures) are consistent with the research infrastructures defined in the rules on State aid. In the funding granted by Business Finland, current aid programmes compliant with the Group Block Exemption Regulation (GBER) and existing Business Finland funding services will be employed. Innovation infrastructures will be funded, depending on the project content, either out of the Business Finland aid programme for building and renewing research infrastructures (SA.58495) or the aid programme for innovation cluster operations and investments (SA.58496). Any IPCEI aid that may be forthcoming for microelectronics value chain development will be notified separately as part of the IPCEI process. Aid for other microelectronics development will be channelled through the competitive-tendering process of Business Finland.

#### **Timetable**

2022–2025

#### **Flagship areas**

The spearhead technology programme supports the EU flagship area 'Scale-up'. DNSH details are given under the investments.

### **REFORM 4: Improving the Residential and Commercial Property Information System (P2C2R4)**

#### **Challenges**

The data needed for the housing and property market is not available in interoperable, machine-readable form. This is an obstacle to digitalisation in the sector. The Residential and Commercial Property Information System addresses the challenge of registering housing company loans. The percentage of household indebtedness accounted for by housing company loans has increased in recent years and is now estimated to be on a par with consumer credit. There is currently no centralised register for housing company loans; the data only exist in the accounts of the individual housing companies. The aim is to collect housing company loan data in the Residential and Commercial Property

Information System and have them relayed to the positive credit register. Establishing a positive credit register is mentioned in the Country Specific Recommendations for Finland issued by the European Council in 2019. The positive credit register depends critically on development of the Residential and Commercial Property Information System.

### **Targets**

Interoperable, machine-readable data will enable e-services to be built and decision-making processes to be automated. The reform will improve consumer protection in buying a home, add competition in the building management sector and make data on the financial and technical status and repair needs of housing companies available to various operators. The Residential and Commercial Property Information System can facilitate the creation of a positive credit register, which in turn enables a fairer deal for consumers when applying for loans.

### **Implementation:**

The data content of the Residential and Commercial Property Information System will be augmented with the data content of building manager's certificates, which are issued for home purchasing and loan granting purposes. A standard will be devised, interfaces for data transfer designed and a basic data maintenance facility provided for those companies that do not have a building management system in place. The reform will be implemented in a technology-neutral way, and housing companies will thus be able to choose for themselves how to maintain their data and which technology to use. In respect of the data processed in the Residential and Commercial Property Information System, general data security standards will apply. Investment preparation and implementation monitoring will be undertaken in broad-based cooperation between the key ministries, other authorities and stakeholders. Coordination with other public administration development projects will be ensured.

### **Stakeholder participation**

Housing companies, shareholders, enterprises (building managers and estate agents) and credit institutions. The investment will also create a reliable data foundation for new, emerging business.

### **Cost estimate**

The project budget is EUR 14 million.

### **Reform target group**

Housing companies, shareholders, enterprises and credit institutions.

### **Compatibility with rules on State aid**

The reform does not involve State aid within the meaning of Article 107 of the Treaty on the Functioning of the European Union. The actions do not include benefits granted out of government funds to enterprises in a particular sector in the form of direct or indirect funding or by eliminating costs incurred by the enterprises in their operations. The reform involves guidance of the interoperability and availability of data needed in several functions in society at large, through legislative means, and the development in support of this change of services in an information system maintained by the central government.

Housing companies are not businesses; they are a vehicle for collective management of real property mainly for residential purposes. The reform will add to the administrative burden of housing companies by changing the requirements concerning the availability of administrative data on the housing company and its disclosure to shareholders, estate agents, banks and the authorities. The reform will create an opportunity for maintaining and transferring the data in machine-readable form, with the aid of the Residential and Commercial Property Information System. Enterprises and credit institutions will benefit from the data being interoperable and in machine-readable form insofar as they themselves invest in improving their processes and in digitalisation of their services. State aid will not be granted for said development in connection with the further improvement of the Residential and Commercial Property Information System. In applying the funding received for the reform to the improvement of the Residential and Commercial Property Information System, the legislation on public procurements will be complied with.

### **Payroll costs**

The changes to be made to the Residential and Commercial Property Information System will be determined in a fixed-term further development project; the implementation project will be led by the National Land Survey of Finland. The payroll costs incurred through this change are specific to the project and therefore only apply for a fixed term. The project requires expertise on the system being updated that currently only exists in the National Land Survey of Finland. External consultants will be employed in the implementation. Payroll costs incurred in system maintenance will be covered with data service fees charged for system use, as per normal procedure.

Payroll costs account for about 20% to 30% of the total investment. 300,000 The total investment will be c. EUR 14 million between 2021 and 2026, of which payroll costs will account for c. EUR 2.8 – 4.2 million. This estimate is based on experiences in setting up the Residential and Commercial Property Information System.

### **Timetable**

2021–2026

## **REFORM 5: Enhancing the effectiveness and transparency of RRP-based reforms and investments by improving information systems, administration, oversight and inspections**

### **Challenges**

The new form of funding aid from the RRF is contingent on the outcomes achievable through the reforms and investments described here, in accordance with the interim and final targets of the RRP. Performance-based funding imposes particular demands for the coordination, administration, oversight, reporting and inspections of the RRP. Organising these duties requires legislation-level changes to the powers and duties of authorities.

Ensuring the effectiveness and efficiency of the RRP requires targeted, temporary additional spending to ensure that the RRP administration and oversight system runs smoothly. A coherent information system is vital for the cost-efficiency of coordination, administration, oversight, reporting and inspections. The systems currently in use need further development, and the new system must be brought quickly on line. The information for implementation also involves regulatory needs (including ownership, datafile controller, traceability and sufficient retention period for documents).

### **Targets**

The target is to ensure administration, oversight and reporting of implementation of the RRP comprehensively and transparently. Transparency of the monitoring and oversight of funding use and funding effectiveness is of crucial importance both nationally and at the EU level. The Act Implementing the Recovery and Resilience Plan will ensure comprehensive and clear rules for the duties of the authorities in respect of the implementation of the RRP. The Act will also ensure comprehensive legislative provisions on the implementation information system.

Targeted additional spending will support the efficiency and effectiveness of implementation of the RRP. This will be ensured by using and further improving consistent collaboration practices and information systems. Using a new kind of results-based funding aid will require new practices and procedures of monitoring and reporting that can then later be used for verifying the impacts of EU funding.

### **Implementation:**

An action module will be launched in 2021 (Q2/2021) to implement the reform required for monitoring, oversight and inspection arrangements for the RRP, consisting of a comprehensive information system solution, legislative preparation and the introduction of an efficient administration, monitoring and inspection system. An inter-ministry working group will be set up to prepare for implementation, and the essential temporary procurements and human resources will be secured. The work of the working group will be built on in a legislation preparation project led by the Ministry of Finance in

cooperation with the executing ministries, leading to a Government proposal for supplementary legislation with the aim of ensuring the efficient application of the EU Regulation, transparency of the implementation and full usage of Finland's funding allocation. The legislative amendment needs have to do with defining the duties and division of responsibilities of the authorities participating in the implementation of the RRP, and with the implementation information system. In order to satisfy the requirements of the RRF Regulation, the necessary information system solutions will be determined and procured under the leadership of the Ministry of Finance in cooperation with the executing ministries.

The authorities responsible for RRP coordination, for submitting payment requests to the Commission, for administration and oversight of RRP implementation and for inspections will be determined in the legislation preparation process.

These authorities will begin their operations at the beginning of 2022 at the latest. A more detailed description of the duties, obligations and powers of these authorities is given in chapter 3.

#### **Stakeholder input**

The transparency that will be achieved in RRP implementation with this reform will lay the groundwork for continuous informing and inclusion of stakeholders.

#### **Expected complications**

The timetable for delivering the information system solutions and legislation preparation is demanding.

#### **Reform target group**

The reform will have a direct impact on the authorities and operators involved in implementing the RRP and, more broadly and indirectly, on all parties that will benefit from the transparency, efficiency and effectiveness of RRP implementation.

#### **Compatibility with rules on State aid**

The reform does not involve State aid. National and EU legislation applies to public procurements.

#### **Timetable**

The working group will be set up in Q2/2021.

The information system will be online in Q4/2021.

The legislation will enter into force in Q4/2021.

The authorities responsible for coordination, administration, oversight and inspections of the RRP will begin operations in Q4/2021.

## **b. Investments**

### **INVESTMENT: REAL TIME ECONOMY (RTE) INVESTMENTS**

#### **INVESTMENT 1: Real time economy (RTE) ecosystem design and delivery (P2C2I1)**

##### **Challenges**

The operators must commit to the ecosystem and to the rules drawn up for it. The interoperability of the ecosystem must be ensured at the national, Nordic and EU levels. Permanent solutions must be found for operational funding for the ecosystem.

##### **Targets**

The investment will support the development of technological solutions, rules and an administrative model between the public administration and the private sector. The target is to have a minimum viable ecosystem (MVE) up and running by the end of 2022. The ecosystem will be online, and at least e-invoices and e-receipts will be transmitted through it. The operators in the ecosystem are enterprises, the telecommunications operator and authorities.

##### **Implementation:**

Public-private partnership with support from the project organisation (Finnish Patent and Registration Office).

##### **Investment target group**

Public administration, all enterprises, enterprises offering financial management services.

##### **Compatibility with rules on State aid**

The investment does not involve any measures with relevance for rules on State aid. Investments made by private-sector operators in their own operations will be encouraged and leveraged for the improvement of official reporting.

##### **Payroll costs**

Fixed-term human resources to a total of 41.25 person-years for the period 2021–2024 will be recruited for the project organisation implementing the RTE programme coordinated by the Finnish Patent and Registration Office. These temporary additional resources are essential for implementing the reform and the related investments. Their duties will have to do with project management, coordination, administration and enhanced stakeholder liaisons. The project will also require the services of experts who can only be found in the organisations involved in the project. In order for the project to be successful, central government organisations must take an active role so that experts can be committed to the project. This will ensure that the targets of and duties in the project will be correctly described. The fixed-term appointments will expire once the reform has been carried out.

##### **Timetable**

2021–2022

## **INVESTMENT 2: Enabling data sharing; seamless management and distribution of corporate data, and financial reporting to the authorities (P2C2I2)**

### **Challenges**

There are no existing structures for data sharing and management. Such a structure must be built in collaboration with private-sector operators so that the interfaces and data are standardised and interoperable. The requirements of the General Data Protection Regulation (GDPR) and issues related to business secrets and other forms of privacy must be taken into account in respect of the information content of the data to be shared.

### **Targets**

Creating data sharing structures so as to enable automatic or almost automatic reporting to the authorities. Interoperable interfaces enabling the sharing of financial data defined, documented and published. Enterprises can use event-specific business data in applications and systems of their choice. This will enable the creation of innovative platforms, added competition on the market and potential for new added-value services.

### **Implementation:**

The project organisation (Finnish Patent and Registration Office) will coordinate the design and delivery of the standard interfaces and the design and delivery of the criteria for data sharing.

### **Investment target group**

Public administration, all enterprises, enterprises offering financial management services, other users of the data.

### **Compatibility with rules on State aid**

The investment does not involve any measures with relevance for rules on State aid. Investments made by private-sector operators in their own operations will be encouraged and leveraged for the improvement of official reporting.

### **Payroll costs**

See investment 1.

### **Timetable**

2021–2024



**INVESTMENT 3: Business e-documents (P2C2I3)****Challenges**

The digital infrastructure does not allow the widespread introduction of business e-documents in society at large. Not all the standards required are yet available.

**Targets**

Creating the structures needed and introducing business e-documents (e-invoices, e-receipts and e-procurement messages) Adoption of business e-documents compliant with the project definitions (e-receipt, e-invoice and e-procurement messages) has been facilitated by publishing the information content of the documents, and the adoption of those documents has begun in the ecosystem.

**Implementation:**

The project will be coordinated and steered by the project organisation (Finnish Patent and Registration Office).

**Investment target group**

E-invoice and e-receipt operators, enterprises, enterprises offering financial management services, public administration.

**Compatibility with rules on State aid**

The investment does not involve any measures with relevance for rules on State aid. Investments made by private-sector operators in their own operations will be encouraged and leveraged for the improvement of official reporting.

**Payroll costs**

See investment 1.

**Timetable**

2021–2023

**INVESTMENT: INVESTMENTS IN THE ACCELERATOR PROGRAMME FOR SPEARHEAD TECHNOLOGIES****INVESTMENT 1. Microelectronics value chain (P2C2I4)****Challenges**

The basic technologies of digitalisation include electronic and photonic components, devices, systems and software. The Covid-19 crisis and geopolitical transition have revealed weaknesses in the European product and service value chain and in digital technology self-sufficiency that constitute a threat to European wellbeing and the competitiveness of enterprises.

Although the European telecommunications industry is still in a reasonably good market position at the moment, the sector is changing rapidly, and the race for 6G technology has begun. The importance of semiconductors for competitiveness is being heightened, which is why key operators such as Nokia and Ericsson are making substantial investments in acquiring independent capability to design integrated circuits and to develop manufacturing ecosystems. For product-specific semiconductor projects to succeed is extremely important and depends on seamless cooperation in a complicated value chain. The semiconductor industry is a highly capital-intensive industry, with production facility investments in the billions.

IPCEI (Important Project of Common European Interest) is a mechanism through which the Commission supports European strategic value chains and obtains for Member States the right to support the necessary capabilities for translating new innovations into mass production. The role of IPCEI projects in EU industrial policy is growing. One of the new IPCEI projects being formulated concerns microelectronics whose key area of application is telecommunications. About 20 Member States are participating in the preparation of the IPCEI with the lead of the Commission.

### **Targets**

The target of the investment is:

- To accelerate and increase investments by Finnish enterprises in developing microelectronics production value chains
- To increase semiconductor component design capability and manufacturing capacity in Finland and elsewhere in the EU
- To enable Finnish enterprises to contribute to the development of a European microelectronics value chain.

Through eventual IPCEI projects, this investment has the potential to generate about EUR 100 million in private investments. Through these projects, the competitiveness of Finnish enterprises and research institutions will improve, they will engage in closer cooperation, and the effectiveness of RDI investments will increase. Finnish enterprises will be involved more broadly and to a greater extent in the implementation of the EU's industrial policy and in the European value chains thereby generated.

### **Implementation:**

The EU Commission is preparing the IPCEI project with a view to a notification being submitted at the beginning of 2022. In Finland, implementation will be the responsibility of Business Finland, as with previous IPCEI projects and applying previously created operating models. Business Finland held a preliminary application round for the project in February 2021. The preliminary feedback indicated that there is a great deal of capability among enterprises for investments that are eligible for aid hereunder. Projects must satisfy the digitalisation criterion and comply with the Do No Significant Harm principle.

Based on the outcome of the preliminary application round and the RRP decision, the Ministry of Economic Affairs and Employment will prepare the national decision to join the IPCEI project. At the same time, the feasibility not only of IPCEI but of other forms of aid as well for attaining the targets in the proposed projects will be evaluated. For the projects selected for the IPCEI procedure, Business Finland will launch a process for further project preparation, support enterprises in this preparation and take the enterprises' projects forward for approval in IPCEI decision-making. For other projects, the normal application procedures, processing and aid criteria of Business Finland will apply.

### **Stakeholder input**

Business Finland and the Ministry of Economic Affairs and Employment engaged in dialogue on microelectronics value chain development and the IPCEI project with Finnish enterprises during 2020. On the strength of this dialogue, Finland became one of the signatories of a political joint declaration on processors and semiconductor technologies. There were dozens of Finnish enterprises and their innovation partners present at the event launching the call for proposals in February 2021. Enterprises' own investment and development projects will be headlined in the implementation. In IPCEI activities, public funding will generally cover 5% to 20% of the overall investment, depending on how the IPCEI operates, meaning that enterprises have to contribute 80% to 95% in matched funding.

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### **Expected complications**

The EU notification process is demanding, and it may be delayed. Enterprises and Business Finland need resources to allocate to preparing enterprise projects so that they are eligible for approval.

### **Reform target group**

Enterprises that design and manufacture microelectronics.

### **Compatibility with rules on State aid**

Notification will be made of the eventual IPCEI as part of the IPCEI process. In the funding for RDI projects implemented in some other form, current aid programmes compliant with the Group Block Exemption Regulation (GBER) and existing Business Finland funding services will be employed.

### **Timetable**

2022–2024

## **INVESTMENT 2: 6G, AI and quantum computing development facilities (P2C2I5)**

### **Challenges**

6G, AI and quantum computing are among the most important areas for technological competitiveness in the future. Finland and other digitally advanced Member States of the EU have proposed the design and deployment of these technologies as part of the strategic targets and actions of Europe's Digital Decade.

So far, Finland is well placed in developing and applying these technologies, but global competition is fierce. Safeguarding our competitiveness will require substantial national investments, the leveraging of European investments and strategic global cooperation. In order to be an attractive environment for corporate RDI investments and a partner for EU-level and other international cooperation, Finland must be able to offer competitive circumstances and infrastructures for the collaboration needed to develop spearhead technologies.

'Development, testing and experiment facilities' are physical and digital innovation infrastructures offering access to advanced technology devices, tools, components and knowledge bases, thus enabling enterprises and research institutions to engage in experiments in applying advanced technologies, use case testing and learning from the experiments. These infrastructures do not compete with market operators and are openly available to all operators in the EU on equitable terms.

Thanks to earlier investments, Finland is well placed for further improvement of development facilities for telecommunications, AI and high-performance computing. There are practical models available for cooperation between enterprises and research institutions; by using and further tweaking these, development facilities can be raised to the level mandated by intensifying competition and technological advancements. The EU is making significant investments in testing and experimentation facilities, for example through the DIGITALEUROPE and Horizon Europe programmes, creating trans-border European entities in which Finland needs to participate.

### **Targets**

The target of the investment is:

- To create competitive development facilities in Finland e.g. for AI applying edge computing, future telecommunications technology and quantum computing applications
- To participate inter alia in the establishment of a European AI testing and experiment facility (AI TEF) on the basis of capabilities created through national investments and to reinforce these facilities in ways that are supportive of the European entity.

- To renew the national 5G testing network and its operating model with reference for example to the emerging Open RAN and 6G radio technologies and the needs of sector-specific applications
- To create a development facility for software needed for quantum computing, e.g. by using the Lumi supercomputer in the EURO-HPC network.

The investment will have the effect of increasing corporate investments in spearhead technologies and in development facilities and their RDI activities. As experiments become easier and more numerous, the threshold for enterprises to apply spearhead technologies will become lower, the digital transition will be accelerated, new technologies will be adopted more rapidly in new products and services, and the competitiveness of enterprises will improve. Competitive development facilities will boost cooperation between enterprises and research institutions, and the volume and effectiveness of RDI investments will increase. Foreign investments in Finland will also increase. The investment will cause Finnish enterprises and research institutions to be more widely and more diversely involved in developing spearhead technologies, in EU programmes focusing on those technologies, and in the European and global innovation and value networks emerging from these activities.

#### **Implementation:**

The projects establishing experimentation facilities will be selected in an open application round conducted by Business Finland. Projects must satisfy the digitalisation criterion and comply with the Do No Significant Harm principle. The aim in project selection will be to increase the effectiveness of the facilities from the current level and to build synergies both at home and at the European level. The selection criteria will be given in the call for applications. The current telecommunications testing network coordinated by VTT (5GTNF) will be overhauled, with the major participating universities of technology (Oulu, Tampere, Aalto) and their partners (enterprises and city local authorities) run mutually complementary projects to improve the experimentation facilities. The AI development facility is to be improved through national actions and, as applicable, by enabling participation in the AI TEF project that forms part of the DIGITALEUROPE programme. One of the aims is to have a testing and experimentation facility on the EDGE AI theme located in Finland, with partners such as SocHub (Tampere University) and Micronova (VTT). Establishment of the quantum computing development facility will involve cooperation between CSC – IT Center for Science, which operates the Lumi supercomputer, and VTT, which is responsible for procurement of the quantum computer.

#### **Stakeholder input**

Enterprises play a key role, particularly as part-funders of development facilities and the Business Finland projects using those facilities and as direct users of the facilities. Enterprises will fund at least 50% of these projects. The participating

enterprises are mainly key players in the technology industry and telecommunications sector, and innovative SMEs. Large enterprises will also participate in creating the telecommunications and AI development facilities.

### **Expected complications**

Ensuring seamless cooperation between the operators involved and building effective project portfolios requires active cooperation between ministries, Business Finland, city local authorities, universities and VTT.

### **Reform target group**

Enterprises engaged in technology development, SMEs and research institutions

### **Compatibility with rules on State aid**

All the testing and experiment environments to be funded (innovation infrastructures) are consistent with the research infrastructures defined in the rules on State aid. In the funding granted by Business Finland, current aid programmes compliant with the Group Block Exemption Regulation (GBER) and existing Business Finland funding services will be employed. Innovation infrastructures will be funded, depending on the project content, either out of the Business Finland aid programme for building and renewing research infrastructures (SA.58495) or the aid programme for innovation cluster operations and investments (SA.58496).

### **Timetable**

2022–2025

### **Open strategic independence and security matters**

For each project, a risk assessment will be performed and a risk management plan drawn up, on the basis of which the essential security requirements for each project will be identified and dimensioned. Security risks will be managed over the life cycle of each project. With regard to products and services involved in the project, compliance with cyber security requirements will be verified, and certification systems will be employed as necessary.

Promoting spearhead technologies will reinforce Europe's open strategic autonomy and Finland's role as a provider of and expert in selected autonomous technologies.

In respect of information systems and telecommunications arrangements, information security assessments performed by the authorities or by authorised verification institutions will be drawn on as necessary.

Compliance with security requirements will be ensured in any public procurements related to the project. Security clearances will be obtained for individuals and for enterprises on an as-needed basis.

## Trans-border and multinational projects

### Corporate digital economy – RTE programme

The RTE programme is a national reform project. However, it will involve cooperation among the Nordic Countries (Sweden, Denmark, Norway, Iceland, Finland) in the Nordic Smart Government project (NSG).<sup>8</sup> The ultimate target of this cooperation and of parallel national reforms is to create a shared digital economy business area covering all the Nordic countries. The interoperability of the solutions adopted will be ensured at the Nordic and European levels.

### Virtual Finland

The aim is to create trans-border services with Estonia and/or the Nordic countries during the RRF period, and more broadly with other EU Member States thereafter.

The platform will initially enable data exchange on individuals and enterprises between governments, on the 'digital trust' principle. Later, the platform is intended to facilitate data exchange based on open standards (e.g. 'smart border' solutions) and data exchange needed for international trade. The aim is to create trans-border services with Estonia and/or the Nordic countries during the RRF period, and more broadly with other EU Member States thereafter.

### Microelectronics value chain

The project is rooted in the European operating framework, policy target and, possibly, IPCEI notification. Projects will be delivered through EU-level cooperation and, for the IPCEI, through a joint operating organisation with the aim of reinforcing European value chains.

### 6G, AI and quantum computing development facilities

The AI development facility will be delivered, as applicable, as part of the EU-wide AI TEFs network to be created in the DIGITALEUROPE programme. The AI development facility will contribute to the European high-performance computing (EuroHPC) scheme.

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<sup>8</sup> <https://nordicsmartgovernment.org/>

### Green dimension in the component area

The digital public services component area as a whole supports national targets and the targets of the Commission in implementing the green transition. The most significant impacts will be in emission reduction as transactions, official business and the providing of services are relocated from physical meetings to digital channels. The solutions based on emerging technologies proposed in this component area consume less energy than conventional solutions. Measuring the rate of transition to digital transaction channels will allow the estimating of the reduction in our carbon footprint.

The criteria for granting funding in the application rounds will include promoting the green and digital transition and compliance with the Do No Significant Harm principle.

### Digital dimension in the component area

This component area is robustly supportive of the targets of the digital transformation. Streamlined, client-oriented digital services will save time and resources for both clients and officials while fostering growth and wellbeing. The proposed reforms and investments will enable research and deployment of emerging technologies, facilitate the national rollout of a digital operating model and enable the providing of new digital services for end users.

The corporate digital economy – RTE programme is 100% supportive of the digital transformation. The project target is to promote digitalisation in enterprises by facilitating transfer of electronic financial documents and financial management in enterprises. The project will create a basic infrastructure as needed for transitioning to a real time economy, with widespread adoption of e-invoices and e-receipts, and considering the needs of the very smallest enterprises in the digital transformation.

The Virtual Finland reform is 100% supportive of the digital transformation. A platform facilitating the digitalisation of services will be developed in the reform. The service platform, the services to be integrated into it and their use will be fully digital. Some of the services will be new services, while others may replace existing processes such as filling in and mailing hard-copy forms and physically visiting an office for transactions – at the moment, the latter actually requires travelling to another country in some cases.

Reform P2C2R4, 'Improving the Residential and Commercial Property Information System', is 100% supportive of the digital transformation. It involves converting the data currently only transferable on paper into digital form and standardising and harmonising that data in the process. An operating environment will be built in the project where data can be transferred between information systems in structured form; also, the services required for this function will be built in the Residential and Commercial Property Information



System. The project specifically concerns the promotion of digitalisation and the building of services required for electronic operating models.

Investment P2C2I4 is 100% supportive of the digital transformation. Investments in developing the microelectronics value chain will increase the capacity of enterprises to design and deliver environmentally friendly next-generation semiconductors and smart, digitalisation-enabling products based on them.

Investment P2C2I5 is 100% supportive of the digital transformation. The 6G, AI and quantum computing testing and experiment facilities will accelerate the application of emerging technologies in products and services, also for SMEs and startups. Testing the functioning of emerging technologies is vital for the progress of digitalisation.

### **Do No Significant Harm**

Actions in this component area contribute to the green transition and to digitalisation in particular. The projects to be funded are not estimated to have any direct adverse impacts in the six areas considered. Because projects will be selected through competitive tendering, it is not possible to make an advance detailed estimate of the potential impacts of the actions.

The parties selecting the projects and deciding on the funding will stipulate in their application ads that applicants must analyse in their applications how their projects comply with the Do No Significant Harm principle. Project proposals that do not comply with this principle in accordance with the Commission recommendations will not be funded.

### **Costs to be covered out of RRF funding:**

EUR 79 million, consisting of the following investments

- Corporate digital economy – RTE programme, EUR 14 million
- Virtual Finland programme, EUR 9 million
- Accelerator programme for spearhead technologies, EUR 25 million
- Improving the Residential and Commercial Property Information System, EUR 14 million
- Enhancing the effectiveness and transparency of RRP-based reforms and investments by improving information systems, administration, oversight and inspections, EUR 17 million

## DIGITAL SECURITY

### Description of component area:

**Policy area:** *Digitalisation*

**Targets:** *The proposed reforms support the sustainable growth strategy of the European Union, the green and digital transition. Basic capability for considering cyber security and information security issues needs to be established on a mainstreaming basis in society at large, involving private individuals, local government and central government authorities, enterprises and corporations. Development measures for enhancing cyber security and information security in the systems needed for critical infrastructure and leveraging of data. Cyber security and information security are an absolute requirement for the digital transformation. Actions to combat money laundering will involve updating and building digital systems to enable more efficient analysis of data and exchange of information required for monitoring, etc., between operators both nationally and across borders. The proposed actions will further improve the interoperability of the situational pictures compiled by the various authorities, the effectiveness of monitoring measures and the efficiency of leadership and resource allocation up to and including the EU level.*

**Reforms and investments:**

*Reform 1: The target in effective prevention of money laundering is that the authorities and private-sector operators involved in combating money laundering will be able to exchange up-to-date information efficiently, safely and reliably using digital solutions. Information acquisition by the authorities and automated data collection will be boosted under this reform. Another aim of the reform is to increase cooperation between authorities and to improve prevention measures. The reform involves needs for legislative amendments in respect of several of the investments, EUR 10 million.*

*Reform 2: Implementation of the cyber security development programme in the form of exercises, and investments in cyber security research. Research investments have to do with civilian competence in cyber security – European Cybersecurity Training Programme, EUR 10 million.*

**Estimated costs:** *The total costs of the project are estimated at EUR 20 million.*

## Principal challenges and targets

### a. Principal challenges

While technological advancements are creating new digital procedures, an increasing number of services is becoming dependent on the undisrupted and secure operation of telecommunications services, telecommunications networks, satellite systems, radio bands and information systems and of the providing of these services. Disruptions of digital services, telecommunications services or networks may have a major impact on the supply of services that are of vital importance for society at large. Security problems in digital government services can undermine the trust that people, communities and organisations place in government authorities. Cyber security research is a cornerstone of a smoothly running digital society, and as such its research is currently underfunded. Technical and functional exercises in cyber security are not organised often enough to guarantee the competence of technical maintenance personnel in various cyber disruption scenarios. The report of the working group examining data security and privacy protection in critical sectors also notes that the digital society consists of numerous interdependent operators that rely on reliable and secure connections and information systems to function. This is particularly important to the functioning of critical services in society.

Exchange of up-to-date information plays a crucial role in the successful prevention of money laundering and terrorist financing. Improvements in information sharing will directly impact the prevention of money laundering and terrorist financing in Finland referred to in the Money Laundering Act. The principal operators in combating money laundering are the monitoring authorities specified in the Act on Preventing Money Laundering and Terrorist Financing, who monitor that the parties with a notification obligation comply with their duties in combating money laundering. For the monitoring authorities, the challenge is how to efficiently process the masses of data accumulated in and necessary for their oversight activities and how to share these data in a timely manner with other key authorities. The national official registers that are of vital importance to the combating of money laundering do not meet all the criteria set for them in terms of data content and usability, and because of this they require further improvement. As the operating environment changes, the need to update the national risk assessment for money laundering and terrorism financing becomes increasingly acute. The currently available national risk assessment on money laundering and terrorist financing dates from 2015; an update will be completed in 2021. On the basis of the updated risk assessment, prevention measures can be appropriately targeted at at-risk areas, though keeping in mind that the operating environment is changing all the time. The aforementioned challenges may be alleviated by developing digital tools, and another purpose of the project is to enhance international cooperation and information exchange.

## **b. Targets**

The preconditions for a strong national cyber security are the necessary competence and broad-based participation at all of the different levels of society. Cyber security exercises are maintained and promoted. Active exercising plays a central role in developing the prevention and management of cyber attacks and solving them. The providers of digital solutions and services must be able to produce secure services in critical sectors. Citizens in turn must be able to use the services produced by the digital information society securely and recognise the risks related to the use of different devices, products and services. The best and most cost-efficient way of raising the level of cyber security competence among citizens is to teach everyone basic skills and build on that competence. Society must for its part respond to this need so that trust can be increased. The cyber security and information security measures in the Sustainable Growth Programme for Finland also facilitate the implementation of the recommendations of the working group examining data security and privacy protection.

By 2026, the authorities and private-sector operators involved in combating money laundering will be able to exchange up-to-date information efficiently, safely and reliably using digital solutions. Another aim is to augment cooperation between the various authorities and to plan combating actions together. The reform for ensuring effective monitoring and implementation of prevention of money laundering will support the green and digital transition of the EU and respond to the Country Specific Recommendations for Finland, which addressed points such as that the national risk assessment for money laundering and terrorism financing is outdated, that the Finnish financial supervisory authorities and the Financial Intelligence Unit are under-resourced and that information exchange between the Financial Intelligence Unit and the financial supervisory authorities is insufficient.

## **c. National strategic circumstances**

Prime Minister Sanna Marin's Government Programme sets targets for the development of national cyber security with regard to improving the situation picture, intensifying international cooperation and enhancing national coordination. The need to improve the overall state of national cyber security was identified in the government resolution of 2019 on Finland's Cyber Security Strategy. The Cyber Security Strategy is part of the implementation of the Security Strategy for Society (2017) and the EU Cyber Security Strategy. The Development Programme is part of the implementation of the Cyber Security Strategy. Under the Development Programme, efforts to increase citizens' competence and to expand cyber security research must be stepped up as digitalisation progresses. The project in the administrative branch of the Ministry of Transport and Communications will provide broad-based support for digitalisation in society at large.

Cyber security and information security investments are particularly relevant for the 'Reskill and Upskill' flagship area.

The Government Programme of Prime Minister Marin's Government contains an entry on the finance market to the effect of ensuring sufficient resources for the authorities, improving information exchange and enhancing supervisory activities in order to prevent money laundering and terrorist financing. The Action Plan for Tackling the Grey Economy and Economic Crime for 2020–2023 also addresses money laundering in target 4.2. 'The obstacles to sharing information in the national prevention of money laundering and terrorist financing and the need to share information on these offences will be examined'. The reform for ensuring effective monitoring and implementation of prevention of money laundering will respond to the aforementioned Government Programme entry and Action Plan target.

## Description of reforms and investments in the component area

### a. Reforms

#### **REFORM 1: Ensuring effective supervision and enforcement against money laundering (P2C3R1)**

##### **Challenges**

The growing volume of data in the monitoring and investigation of money laundering and terrorist financing is a challenge. As the operating environment changes, the need to update the national risk assessment for money laundering and terrorist financing becomes increasingly acute. The currently available risk assessment dates from 2015; an update will be completed in 2021. The Financial Supervisory Authority has improved its oversight capabilities, but its resources are still insufficient, and it has not yet been possible to fully apply the risk-based approach to oversight. Notifications of suspicious business transactions have increased markedly, but the Financial Intelligence Unit does not have sufficient resources to analyse the data. Information exchange between the competent authorities in combating money laundering must be improved and enhanced. Boosting operations by automating data processing and analysis is vital for resolving these challenges.

##### **Targets**

Investments in the reform on combating money laundering will be used:

- to improve the availability, processing, analysis and use of information (data) by each of the supervisory authorities,
- to improve information exchange, information use and cooperation between the various authorities,

- to enhance risk-based monitoring in the combating of money laundering to increase the risk of being caught,
- to improve the potential for deploying warning examples and other enforcement measures,
- to improve the capability of the Finnish competent authorities to prevent money laundering in Finland, and
- to boost the credibility of money laundering prevention measures in Finland in the international context.
- The financial markets and the money laundering undertaken on them are by their nature international, cross-border activities.

The purpose of the proposed changes to the monitoring system for bank accounts and payment accounts is to enhance the prevention, detection and prosecution of money laundering and terrorist financing. The current approach in Finland has been found to be expensive and complicated for both the competent authorities and the private sector, and in its current form it will not attain the targets envisioned when the system was designed, either in preventing money laundering and terrorist financing or in combating the grey economy.

Building a desktop for the supervisory authority for preventing money laundering is intended to make the data necessary for various monitoring measures readily available, to help form an overall picture of the risk assessment in respect of the subjects being monitored, and to facilitate the efficient and proportionate targeting of monitoring measures.

The purpose of the investment intended to make the register of beneficial owners more up-to-date, broader in coverage and more correct is to create a comprehensive, up-to-date and quality-confirmed register of beneficial owners to benefit enterprises, the authorities and the parties subject to notification obligations pursuant to the Money Laundering Act. Transparency of data on the beneficial owners of enterprises and corporations is a fundamental necessity for global regulation.

In the investment 'Digitalisation of the investigation of money laundering', the key targets are to ensure that the work of the Financial Intelligence Unit is based on correct, up-to-date and comprehensive source data and that the investigations are undertaken using methods enabling the processing of increasing quantities of data. Another target is to ensure that these efforts will be increasingly driven by target-based and phenomenon-based actions rather than processing individual notifications and aimed at activities with societal significance and impact in terms of criminal investigation.

The purpose of the investment to maintain and update the national risk assessment on money laundering and terrorist financing is to deliver an information platform and a risk assessment tool. The information platform will ensure that the data are updateable, shorten the time required for drawing up a national risk assessment and enable the maintaining of a national situational picture and statistical data. The purpose of the risk analysis tool is to harmonise risk assessments and to ensure the comparability of the risks and risk levels identified in national risk assessments completed at various times.

**Implementation:**

1. Launching the project required for the reform. The purpose of the project is to determine the national target state and strategy for the prevention of money laundering and terrorist financing, to coordinate development measures, to improve cooperation between the operators and to engage in publicity.
2. The investments included in the project must be designed and guided.
3. The competent ministries and other authorities will ensure that the investment targets are unambiguously complied with, that the actions taken are result-oriented and that there is a clear timetable to be followed.
4. Digital tools will be deployed for the use of the authorities and private-sector operators involved in the prevention of money laundering and terrorist financing.
5. The national competent authorities will ensure that appropriate monitoring is undertaken pursuant to the action plan and the preparation of legislative amendments identified as necessary.

**Stakeholder input:** The stakeholders for this reform are the authorities involved in the prevention of money laundering and terrorist financing, and parties with a notification obligation pursuant to the Money Laundering Act. The authorities who are stakeholders here are making their own investments under this reform.

**Cost**

The overall costs of this reform will consist of the payroll costs of the required administrative personnel and the costs of individual investments between 2021 and 2026. The overall costs are estimated at EUR 12,121,500, of which at least EUR 10,000,000 is expected to come out of the Recovery and Resilience Facility.

The reform includes the following investments:

- Compiling application and adding account event details to the bank and payment account monitoring system, cost estimate EUR 1,600,000
- Supervisor's desktop, cost estimate EUR 500,000
- Improving the register of beneficial owners to make it more up-to-date and correct and with wider coverage, three component projects, cost estimate EUR 5,000,000
- Digitalisation of money laundering investigations, four component projects, cost estimate EUR 3,971,500
- Digital tools for national risk assessments of money laundering and terrorist financing, cost estimate EUR 400,000

In addition to the above investment costs, the overall costs of the reform, EUR 12,121,500, include:

- reform administration and investment project management, EUR 600,000
- facilitation of initial stage of the reform, EUR 50,000

Payouts of the contributions from the Recovery and Resilience Facility (RRF) towards the costs of the reform will be distributed as follows:

2021: EUR 6,000,000

2022: EUR 2,000,000

2023: EUR 2,000,000

### **Expected complications**

The project will require a wide range of public authorities to have human resources well acquainted with the substantive content at the design, delivery and introduction phases, and the availability of these resources is limited. The introduction phase for the new solutions may be prolonged, due for example to the length of agreement periods in current supplier agreements. If the required legislative amendments cannot be enacted in the planned timetable, or if their content differs from what was envisioned, this will have a direct impact on the attainment of the targets. Extensive high-quality telecommunications and guidance are needed before the project start to ensure allocation of the required resources. Involving a wide range of operators and committing them to joint measures before the delivery phase, such as the definition of a shared target state.

### **Reform target group**

This reform concerns the authorities involved in the prevention of money laundering and terrorist financing, and parties with a notification obligation pursuant to the Money Laundering Act.



**Implementation timetable**

Milestone in 2023: Programme projects designed and piloted. In 2026: Digital tools for the authorities and private-sector operators working on preventing money laundering have been deployed.

**REFORM 2: Investing in cyber security research and exercises (P2C3R2)****Challenges**

While technological advancements are creating new digital procedures, an increasing number of services is becoming dependent on the undisrupted and secure operation of telecommunications services, telecommunications networks, satellite systems, radio bands and information systems and of the providing of these services. Disruptions of digital services, telecommunications services or networks may have a major impact on the supply of services that are of vital importance for society at large. Security problems in digital government services can undermine the trust that people, communities and organisations place in government authorities. Cyber security research is a cornerstone of a smoothly running digital society, and as such its research is currently underfunded. Technical and functional exercises in cyber security are not organised often enough to guarantee the competence of technical maintenance personnel in various cyber disruption scenarios.

**Targets**

These actions will contribute to implementation of the cyber security development programme being prepared in the administrative branch of the Ministry of Transport and Communications: the exercises form part of the programme, and research investments are a supporting function. The research project and the cyber security exercise function are briefly described below, with their targets.

**b. Investments****INVESTMENT 1: Cyber security exercises (P2C3I1)****Challenges**

Technical and functional exercises in cyber security are not organised often enough to guarantee the competence of technical maintenance personnel in various cyber disruption scenarios.

**Targets**

The target is to maintain and enhance cyber security exercise activities. Cyber security exercises improves the resilience of society at large and preparation for cyber security disruptions. Active exercising plays a central role in developing the prevention and management of cyber attacks and solving them.

A cyber security exercise is a means for various organisations to practice and improve their operations without compromising their production environments. The exercises form part of security and risk management in any given organisation. Technical and functional cyber security exercises can help improve the competence of technical personnel, functional processes and the effectiveness of deviation management.

The principal target of exercises is to improve operational continuity management in organisations and to improve risk management vis-à-vis cyber security. The exercises focus on the organisation's internal processes and processes of external actors that are connected to them via interfaces.

An individual exercise includes a modelled technical mock-up environment, further development of the mock-up environment for future exercises, running the exercise itself (including providing facilities for it), and reporting on development points in the organisation's operations. The aim is to hold four exercises per year for various operators. Three exercises will be held in 2021 to develop the exercise environment for the future. About 2,000 employees in public administration will be trained in the forthcoming 19 exercises.

**Implementation:**

University holding the technical and functional cyber security exercises, and public administration organisations participating in the exercises.

**Stakeholder input**

University holding the exercises, and public administration organisations.

**Payroll costs**

Payroll costs will be incurred in respect of the university employees organising the exercises.

**Expected complications**

No identified complications

**Investment target group**

University holding the technical and functional cyber security exercises, and public administration organisations participating in the exercises.

**Compatibility with rules on State aid**

Rules on State aid do not apply. Procurement of cyber security exercises is agreement-based, and the beneficiaries are the public administration organisations participating in the exercises.

**Stakeholder input**

University holding the exercises, public administration

**Timetable**

Q2/2021 – Q4/2025

**INVESTMENT 2: Civilian competence in cyber security – European cyber security training and action plan (P2C3I2)**

In today's world, cyber security skills are basic civic skills for residents of Europe, irrespective of age. Sufficient cyber security competence is an important component in an individual's perceived sense of security and ability to use the services and solutions provided in the digital operating environment. Generally, the best and most cost-efficient way of increasing cyber security is to teach the everyone basic skills and build on that competence. The target of the research is firstly to compare how European countries have already provided cyber security training to their citizens and secondly to create a shared European model and platform for the teaching and improvement of cyber security skills so that this can be used equally in all EU Member States.

In the first phase of the research project, data will be collected from all EU Member States on how they each provide training in basic cyber security skills for their citizens and to summarise these data. Concepts for a cyber security game on a digital platform will be outlined.

In the second phase, a shared digital platform and content will be created for teaching and learning cyber security skills. This can then be updated from time to time. Completing development of a European cyber security game and game platform.

In the third phase, the platform and content will be published and made available to all Europeans in various language versions and with updated game functions. The training platform will be online in August 2024.

**Implementation:**

The research project will be undertaken in Finland, in collaboration between key universities engaged in cyber security research and consortia thereof.

**Stakeholder input**

The research plans will be drawn up in collaboration between key universities engaged in cyber security research and consortia thereof.

**Payroll costs**

Payroll costs will be incurred in hiring researchers for the universities or consortia formed by them.

**Expected complications**

No identified complications

**Investment target group**

Key universities engaged in cyber security research in Finland and consortia thereof.

**Compatibility with rules on State aid**

Does not fall under the rules on State aid, because the investment will be carried out as an investment pursuant to the Act on Public Procurement and Concession Contracts.

**Timetable**

Q2/2021 – Q4/2024

**Combined costs for both investments, EUR 10 million**

2021: EUR 2 million

2022: EUR 3 million

2023: EUR 2.5 million

2024: EUR 1.5 million

2025: EUR 1 million

**Open strategic independence and security matters**

For each project, a risk assessment will be performed and a risk management plan drawn up, on the basis of which the essential security requirements for each project will be identified and dimensioned. Security risks will be managed over the life cycle of each project. With regard to products and services involved in the project, compliance with cyber security requirements will be verified, and certification systems will be employed as necessary.

Protection for any security-classified information that may be generated or used in the project will be appropriately provided. In respect of information systems and telecommunications arrangements, information security assessments performed by the authorities or by authorised verification institutions will be drawn on as necessary. Compliance with security requirements will be ensured in any public procurements related to the project. Security clearances will be obtained for individuals and for enterprises on an as-needed basis.

### **Trans-border and multinational projects**

Cyber security: Competence research will involve creating a joint European model and forum for teaching and improving cyber security skills, which can then be used equally in all EU Member States.

### **Green dimension in the component area**

Cyber security exercises and research will support digitalisation, and digitalisation will play a major role in the systemic green transition of society.

### **Digital dimension in the component area**

Cyber security and cyber security competence are an essential requirement for a wide-ranging digital transformation in society at large and 100% supportive of the digital transformation. In accordance with the EU Sustainable Growth Strategy, this component area promotes the design and delivery of highest-quality digital competence while contributing to attainment of the target of protecting against cyber attacks. Cyber security is a mainstream topic running through all sectors. Investments in R&D in this component area support digitalisation in the economy, social life and society at large over a very wide range.

The reform 'Ensuring effective supervision and enforcement against money laundering' will support the green and digital transition in the EU. With these improvements, the authorities and private-sector operators involved in combating money laundering will be able to exchange up-to-date information efficiently, safely and reliably using digital solutions.

Reinforcing a sustainable infrastructure and digitalisation in the authorities' supervisory duties will improve operational reliability, make the monitoring more effective and allow for efficient targeting of resources.

The reform 'Ensuring effective supervision and enforcement against money laundering' is 100% supportive of the digital transformation, because the target of the investments is to raise the automation rate through legislative amendments and system development. The reform will enhance data transfer by reducing instances of manual procedures in transmitting, receiving and processing data, because at present there either is no data transfer or it is undertaken manually and the processes are inflexible, slow and challenging. Adopting dedicated telecommunications systems for the authorities for data exchange and storage will also improve privacy protection and strengthen citizens' rights.

## **Do No Significant Harm**

No impacts

### **Costs to be covered out of RRF funding:**

EUR 20 million, consisting of the following investments

- Ensuring effective supervision and enforcement against money laundering, EUR 10 million
- Implementation of the cyber security development programme in the form of exercises, and investments in cyber security research, EUR 10 million

## PILLAR 3: Raising the employment rate and upskilling to accelerate sustainable growth

The coronavirus crisis has considerably weakened the employment situation in Finland. In addition to this, there are long-term structural challenges in the labour market that require solutions.

In particular, Finland will be dealing with the pressures of an ageing population long before many other nations. Our working-age population is decreasing, and structural unemployment is at a high level. Also, technological transitions are driving a change in the sectoral structure and occupational structure of the labour market, and this will be reflected in future competence needs. Increasingly many people find themselves obliged to change occupations because of the shift in the labour market and particularly because of digitalisation.

Finland's competitiveness and wellbeing are built on competence, research and innovations. Investments in RDI activities, the green transition and improved competence will help reinforce our long-term growth potential and resilience in accordance with the Recommendations issued in the European Semester. These investments will, for their part, reinforce the supply of labour safeguarding Finland's competitiveness, which is a prerequisite for renewal in businesses and in society at large. With investments, the conditions and ability of SMEs to operate in a global environment changed by the pandemic and to exploit market opportunities will improve. As a result, the number of export companies will increase and the export base will be strengthened, the competence and competitiveness of growth sectors will improve, and the value added to the economy and employment will grow.

### **Package targets:**

1. Raising the employment rate will be boosted with a client-oriented reform of services (employment and economic development services, work ability support, competence) and by leveraging digitalisation, promoting employment of persons with partial work ability, streamlining work-based immigration, enhancing integration and improving wellbeing at work.
2. Long-term growth will be promoted by upskilling among young people and adults and by introducing opportunities for location-independent continuous learning, etc.
3. Shared use of research infrastructures will be boosted, and R&D intensity will be raised in order to accelerate growth, also in the long term. The green transition will be supported with significant RDI investments.

4. Renewal, recovery and sustainable growth in sectors most affected by the pandemic crisis will also be accelerated by leveraging innovations and research findings in the creative economy and in the events industry.

**Component areas:**

Employment and labour market

Upskilling and continuous learning

Raising of the intensity, effectiveness and ambition level of RDI activities

Sectors suffering from the coronavirus crisis and leaders of international growth

## EMPLOYMENT AND LABOUR MARKET

### Description of component area:

**Policy area:** *Labour market policy*

**Targets:** *Improvement of the employment rate will be accelerated in accordance with the Government's target. Public employment services will be reformed with a view to increasing their effectiveness through robust jobseeking support and enhanced jobseeking activities. The functioning of the labour market and the meeting of supply and demand will be reinforced by leveraging all available labour potential. Finland's attractiveness to foreign skilled labour will be boosted to strengthen our competitiveness. The work ability and coping at work of employed persons will be supported in the interests of extending working careers.*

*Another target for the reforms and investments proposed for receiving funding is to mitigate the impacts of the pandemic in certain identified target groups and to improve the digital service system and structures.*

*In respect of population groups excluded from working life, social exclusion among young people will be combated and the service system improved by adding to multidiscipline services under the Youth Guarantee.*

*In respect of partly incapacitated persons, the target is for partly incapacitated unemployed persons to find and retain jobs. The target is to build a diverse service package to support work ability, consisting of social services, health care and rehabilitation services, employment and economic development services, and employment services. The availability and quality of services to support work ability must be consistent with the service needs of the unemployed, and the effectiveness of the services will improve.*



*Means and methods for supporting mental health and work ability will be distributed for the use of workplaces and occupational health care services. Consideration will be given to employees of various ages and workplaces in various sectors. The actions taken will also improve the resilience of workplace communities and thereby help them respond to the transition in working life.*

**Reforms and/or investments:**

- 1. In the Nordic labour market service model, the service process for an individual client of an Employment and Economic Development Office will be revised in respect of their obligations and jobseeking support. At the same time, the digital systems of employment and economic development services will be renewed. EUR 90 million (of which EUR 70 million for implementing active labour market policy as per the Nordic labour market service model and EUR 20 million for digital development).*
- 2. International recruitment will be made simpler through extensive digital solutions (including building a world-class digital infrastructure to support immigration of skilled labour), EUR 20 million.*
- 3. In multiprofessional cooperation, the service system for young people will be enhanced to further prevent the exclusion of young people from the labour market and their wider social exclusion. As a concrete action, the multiprofessional services of the Ohjaamo guidance points will be augmented in accordance with the recommendations given in the evaluations made, EUR 13 million.*
- 4. Employment of the most disadvantaged unemployed persons with partial work ability will be promoted by setting up a new intermediate labour market operator in Finland to broker employment relationships and services. The service system for persons with partial work ability will be developed through robust cooperation and competence. Support measures for mental health and work ability will be reinforced, because these are prerequisites for employment and productivity, EUR 47 million.*

**Estimated costs: EUR 170 million For some investments, matched funding is provided, as the aid recipients have their own funding as well.**

## Principal challenges and targets

### a. Principal challenges

#### **Attaining the employment target and ensuring the effectiveness of the service system**

The employment rate is influenced by structural features of the labour force. According to a forecast completed by the Ministry of Finance in May 2021, employment declined very distinctly in 2020, even though the employment trend picked up as of May. Sectoral differences in this trend have been observed. Because of the uncertain economic situation, the labour market is not attracting new employees at the moment. This manifests itself in increases in the number of people outside the labour force and the number of people in disguised unemployment. According to the short-term forecast issued by the Ministry of Economic Affairs and Employment in November 2020, the number of long-term unemployed persons has been increasing. Also, sudden structural changes have a significant impact in the areas where they occur. In addition to cyclical impacts, there are long-term structural challenges in the labour market that must be addressed. Structural unemployment has remained at a high level, and therefore the employment target is not easy to attain. For example, among persons with partial work ability there are sub-groups of people who are practically unemployable and thus face the threat of being permanently excluded from the labour market. Also, technological transitions and climate change are driving a change in the sectoral structure and occupational structure of the labour market, and this will be reflected in future competence needs. How Finland will cope in global competition is also a challenge.

Responding to employment challenges requires cooperation among several policy areas. In employment and economic development services, responding to these challenges requires changes to the service strategy and a readiness to overhaul the service system. In employment and economic development services, identifying the client's service needs is paramount. Despite this, shortcomings have been found in the identifying of clients' individual needs. The changes so far made in updating jobseeking plans and in how clients are contacted are steps in the right direction but not adequate. The entry in the Government Programme in respect of revising employment services to support rapid re-employment of people becoming unemployed addresses a number of challenges.

Services need to make use of the benefits of multiprofessionalism and cooperation, and there must be a readiness for service reform. A continuous development process involves addressing gaps in existing services and continuously improving services to better meet the needs of the clients using them.

All domestic labour reserves must be considered in efforts to increase employment. Employing persons with partial work ability and extending working careers involve challenges to common attitudes too. Promoting immigration of foreign labour is an

important part of attaining the employment target, specifically the need to attract the best and most potential skilled workers from abroad.

Digitisation and upheavals at work will cause the disappearance of certain jobs, but will also mean the creation of new, more productive industries, businesses and jobs. These new opportunities must be supported in all ways by promoting upskilling, reskilling, deployment of new technologies and dissemination of new ideas.

The opportunities offered by digitalisation can be leveraged better than at present to support attainment of the principal targets and to enhance services. Development points need to be identified in various functions by making use of the potential of digitalisation.

**Vulnerability of the service system and challenges in accessing services.** Because of the coronavirus pandemic, our service system is currently unable to cope with the volume of service needs and is thus jeopardising the attainment of the employment targets stated in the Government Programme. Regional coverage, equal access to service and equal service quality are not currently provided. Unemployed persons have less access to supportive and preventive work ability services than employed persons, even though unemployed persons have more chronic illnesses and their perceived health is worse. According to the OECD (2020), an amazing 70% of Finland's unemployed have more than one obstacle to employment. A large percentage of Finland's unemployed report poor health as an obstacle to employment, and mental health problems are an important factor. There is a huge need for easily accessible multiprofessional services.

**The negative wellbeing impacts of prolonged unemployment** extend far and wide and are reflected not only in people of working age but also in other age groups: families, children and adolescents. In February 2021, there were about 96,000 long-term unemployed persons, 52% more than at the same time in the previous year. The long-term unemployed accounted for 29% out of all unemployed persons. In 2020, the average number of long-term unemployed persons in any given month was about 75,000, an increase of 19% on 2019.

In 2020, Employment and Economic Development Offices listed an average of 33,000 unemployed jobseekers with partial work ability who had a disability or a chronic illness. Of these, 40% were long-term unemployed persons. The number of persons with partial work ability registered as unemployed jobseekers does not illustrate the true size of the target group.

Youth unemployment has increased substantially since the start of the pandemic. The employment statistics for February show that long-term unemployment has increased at a worrying rate among young people as well. At the end of February 2021, unemployed jobseekers under 30 years of age numbered about 74,700, of whom 14% were long-term

unemployed. The percentage of long-term unemployed in this age group has increased almost every month since March 2020. Because of the coronavirus pandemic, the labour market situation for those graduating in 2020 and 2021 is poor.

**Mental health and work ability issues add to costs and deplete the employed working-age population.** Mental health problems are the leading cause of disability pensions and absences due to illness in Finland. Every year, 5.2 million working days are lost because of mental health problems. There are now more than 58,000 people of working age who have retired on a disability pension because of mental health problems. Mental health problems affect people of working age in particular, and those who retire on a disability pension for mental health reasons are relatively young, the average age being 44. Even before the pandemic, many workplace communities were coping with a state of continuous change and uncertainty. During the coronavirus pandemic, professionals in many critical fields, such as the health care and social welfare sector, have been in the front line caring for the safety and health of patients, clients and citizens. Stress at work, if prolonged, may compromise a person's work ability and bring their career to a premature end. This has knock-on effects on patient safety, client satisfaction, readiness and preparedness, and also on the attractiveness of various occupations, which in turn affects how well employees can be recruited and retained in those fields.

## b. Targets

The employment target set in the Government Programme is a key target of considerable importance. It is acknowledged in the Government Programme that raising the employment rate is challenging and that the essential thing is to increase the labour market participation of persons with partial work ability, the difficult to employ and immigrants. The high employment target extends across electoral terms, because it is such an important factor for the sustainability of public finances. It is important to ensure that supply and demand meet on the labour market irrespective of cyclical circumstances.

The targets address the recommendation given to Finland in 2020 whereby actions to support employment and to boost an active labour market policy should be reinforced and the recommendation given to Finland in 2019 whereby skills and active participation should be improved, particularly through well-integrated services aimed at the unemployed and the inactive. Similarly, the availability of international skilled labour must be boosted, and international recruitment must be made simpler through a streamlined and expedited immigration process. Quick permit processing will improve the availability and supply of labour. Growth in work-based and study-based immigration will have impacts across all of society – for the dependency ratio, the employment rate and the sustainability gap. Streamlining work-based and study-based immigration and simplifying international recruitments will help Finland succeed in global competition for skilled

labour, promote internationalisation of business and innovations, and attract investments to Finland. Streamlining immigration processes will boost Finland's profile as a model country of good governance while responding to the needs of international skilled workers and society at large.

The target in reinforcing an active labour market policy is to reform and reinforce the service capacity of employment and economic development services in a significant way. Responding to the service needs of the unemployed, providing jobseeking support and encouraging clients towards active jobseeking have been evaluated as being significant means for increasing employment.

Another target is to continue developing multiprofessional services so as to break down the silo mentality. These targets apply particularly to services for young people and for persons with partial work ability. Another target is to foster new service production to promote employment of persons with partial work ability.

The European Council recommended that Finland take action in 2020 and 2021 to boost support for finding employment, to reinforce an active labour market policy and to improve the availability of social welfare and health care services. These actions are connected to the flagship area 'Modernise'.

**Raising the employment rate.** For the target of a 75% employment rate to be attained, the availability and quality of services supporting work ability must correspond to the service needs of the unemployed. This, in turn, requires effective measures to augment the potential of the target group for finding and retaining employment and, more broadly, to contribute to preventing work ability issues from arising in the first place.

**Introduction of a partnership model between effective services and various administrative branches.** Effective services supporting employment will be designed as a smoothly running and permanent component of social welfare and health care services and of employment and economic development services. Cooperation with the Social Insurance Institution (Kela) will be enhanced. A partnership model will be deployed to shape service systems in various regions into a well-functioning entity. Multiprofessional teams for work ability support and a dedicated client worker model will be created for social and health centres. Customised service paths will be crafted for clients using client participation methods. The social welfare service path supporting employment will be reinforced, and effective forms of supported employment, such as practical work training, will be introduced. The focus is on reinforcing low-threshold and preventive services, early identification of the need for work ability services, service needs assessments and ensuring the availability of services.

**Equalising differentials caused by the coronavirus pandemic.** The target is to equalise regional differences in service availability that have been exacerbated by the coronavirus pandemic, to increase the employment rate among persons with partial work ability, and to provide support for work ability and functional capacity. The impacts of the coronavirus pandemic on the mental health of persons of working age will be considered. Young people at the start of their working careers who have found it difficult to find employment or to cope at work because of the crisis will be considered. Particular attention will be paid to supporting the work ability of front-line workers who have been controlling the pandemic. The coronavirus crisis has accelerated the digital transformation in working life, while causing difficulties in some sectors because of mobility restrictions and a rapid decline in demand.

**Promoting the mental health and work ability of employed persons.** The target is to help workplaces manage mental health and work ability risks and to add to resources contributing to this. This will manifest itself as the distribution and adoption of practices supportive of mental health and work ability at workplaces and in occupational health care and as a shift in the focus of efforts to support work ability from reactive to preventive measures and to providing support for coping at work. The aim with these actions is to reduce absences due to illness and retirement on disability pensions, which in turn will increase the availability of capable labour and reduce costs caused by work ability problems. Another target is to improve the capacity of workplaces to respond to changes in working life and in society at large, to extend working careers and to increase the attractiveness of critically important occupations. In order to secure the basic structures and functioning of the welfare state, we must safeguard the supply of labour for critical occupations and the availability of services; this, in turn, will strengthen the social cohesion and crisis resilience of society at large.

### c. National strategic circumstances

The actions and targets outlined in the Government Programme must be considered along with the Government's policies on employment actions stated at the government budget session (September 2020).

During its current term, the Government will take employment measures that bolster the economy, aimed at achieving an employment-generating impact amounting to 80,000 new jobs. As an example, the age group of over-55s has a lower employment rate in Finland than in the other Nordic countries, and there is thus clear employment potential there. In December 2020, the Government outlined actions to promote the employment, coping at work and work ability of over-55s while improving their skills and providing change security. One of the policies specifically targeted at over-55s was the elimination

of the additional days that may be granted to statutory earnings-related unemployment allowance (also known as the 'unemployment path to retirement').

The Government outlined that the additional days will be phased out so as of 2023 so that the minimum age for being granted additional days will be raised from the present 62 years by one year (to 63) for those born in 1963 and by a further one year (to 64) for those born in 1965. The availability of additional days will be completely eliminated for those born in or after 1965.

The target with raising the minimum age for additional days granted to earnings-related unemployment benefit and eventually eliminating them is to prolong working careers and thereby to reduce unemployment and increase employment. The right to additional days is a factor that increases unemployment among the elderly, because it has had the impact of employers targeting dismissals specifically at elderly employees. Secondly, the right to additional days may reduce incentives for employment among the ageing unemployed, which in turn may make re-employment more difficult. The minimum age for the right to additional days has been raised before, resulting in an increase in the re-employment rate of the age group in question and a shift forward by one year of the decline in the probability of re-employment. The Ministry of Finance estimates that eliminating the additional days will bring an additional 7,900 employees into the workforce.

The TE Services Strategy describes the vision for the TE services over the next few years, where strategic partnership, digitalisation and the individuality of customer service are key drivers of activities. The Strategy is a transitional strategy outlining the priorities of TE services in the next few years. An action plan on needs for revising integration measures for immigrants will be prepared and submitted to Parliament in spring 2021. Specific targets have been set for the various policy areas, such as increasing work-based immigration of skilled employees and improving opportunities for graduating international students to find employment in Finland.

It is outlined in the Government Programme that the services of the Ohjaamo guidance points will be augmented. The RRF-funded incentive model will reinforce the Ohjaamo scheme and complement the national strategy for augmenting these services.

Finland will be implementing a structural change in employment services, covering local authority employment experiments, the reshaping of TE services and deployment of the Nordic labour market service model. The Government also committed to developing the intermediate labour market in the Government Programme. The service package for work ability support is also connected to the ongoing social security reform and the preparation of the national health and social services reform.

The reforms proposed by the Ministry of Economic Affairs and Employment and by the Ministry of Social Affairs and Health will reduce the qualitative and quantitative shortcomings in services for unemployed persons with partial work ability, both the shortcomings that have emerged during the coronavirus pandemic and those that already existed before that.

In accordance with the Government Programme of Prime Minister Marin's Government, a work ability programme will be created for persons with partial work ability to help them find employment. The work ability programme will be jointly implemented by the Ministry of Economic Affairs and Employment and the Ministry of Social Affairs and Health. Pilot projects will be launched to deploy effective services and practices. The work ability programme will be designed to support unemployed persons with partial work ability in finding employment, to prevent prolonged unemployment and disability and to help those in a disadvantaged labour market situation to participate in working life. However, the current actions in the work ability programme do not provide regional or equal coverage in services for unemployed persons with partial work ability. Investments in service availability, service quality, competence and revising of content are needed.

In addition to the aforementioned labour market reforms, Prime Minister Marin's Government has launched the parliamentary preparation of a comprehensive social security reform. The purpose of the social security reform is to create a system that is more clearly structured and functions better than the existing one and that will allow citizens to combine work and social security in changing life situations. The broad-based preparation of this reform will continue into the next electoral term. This reform does not form part of Finland's RRP, but it does respond to the Country Specific Recommendations for Finland, together with other reforms.

The reform is being planned by a parliamentary committee whose term began in March 2020 and will expire in 2027. The work of the committee is divided into phases. First, they will define and describe in concrete terms the key problems in social security (2020–2021). Then, they will draw up a roadmap and policies regarding the resolution of key issues (2021).

This will be followed by preparation of a plan for the phased comprehensive reform of social security, with milestones and proposals for component reforms independent of the overall reform (2021–2023). Implementation of the plan will begin in the next electoral term.

In summer 2020, the social security committee outlined four key problem areas in social security, one of which is combining paid employment and social security. The core of this problem area involves investigating and resolving situations created by the current social



security system in which there is no incentive to find employment ('incentive traps'). Other issues to be dealt with are the complexity of social security, last-resort financial aid, basic social security and housing, and harmonisation of services and benefits.

Social security incentive traps have been dismantled in Finland through a number of tax and social security amendments, and employment incentives are better now than they were in the early 1990s. However, there are still problems involved in combining paid employment and social security, particularly in cases where a single household is receiving several overlapping benefits. For further discussion, the committee identified three kinds of incentive traps, caused by unemployment, income and bureaucracy.

Combining individuals' pay, pension and benefits details in the income register from the beginning of 2021 may go some way towards dismantling bureaucracy traps. This will result in a real-time comprehensive picture of an income earner's pay and benefits. These details are used for example in calculating benefits, in imposing client fees and for supervisory activities performed by various authorities. Harmonising unemployment benefits and short-term employment will, in particular, become simpler when the income register can be used for calculating benefits and for imposing client fees.

The proposed reforms and investments will support implementation of the national health and social services reform where responsibility for providing these public services will be transferred from local government to newly created wellbeing services counties.<sup>9</sup> These actions will further the attainment of the targets of this structural reform as outlined in the Government Programme: to reduce health and wellbeing inequalities, to secure equal and high-quality health and social services for all Finns, to improve the availability and accessibility of services, to secure the availability of skilled labour, to respond to the challenges posed by social changes and to curb the increase in costs.

The National Mental Health Strategy 2020–2040 emphasises the continuity, target-oriented nature and constant updating of mental health policy and actions across electoral terms. Each Government selects its preferred practical actions to undertake in the area of mental health work for its electoral term.

The Strategy has five focus areas: mental health as human capital; mental health for children and young people; mental health rights; broad-based services that meet people's needs; and good mental health management. An action plan for working life and good mental health has been launched on the basis of the Mental Health Strategy.

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<sup>9</sup> HE 241/2020 [https://www.eduskunta.fi/FI/vaski/KasittelytiedotValtiopaivaasia/Sivut/HE\\_241+2020.aspx](https://www.eduskunta.fi/FI/vaski/KasittelytiedotValtiopaivaasia/Sivut/HE_241+2020.aspx) (in Finnish).

The reform and investment package presented here will make a substantial contribution to the framework of working life reforms and programmes launched under the Government Programme of Prime Minister Marin's Government (work ability programme, WORK2030 programme, rehabilitation action plan, social services development programme).

## Description of reforms and investments in the component area

### **REFORM 1: Nordic labour market services model (P3C1R1)**

#### **Challenges**

The employment situation in Finland has declined considerably due to the coronavirus crisis. Employment decreased sharply in the first half of 2020, and the decline is projected to accelerate towards the end of the year, as the slowness of recovery from the disease limits overall production and reduces demand for labour. In addition to cyclical impacts, there are long-term structural challenges in the labour market that must be addressed. Also, technological transitions are driving a change in the sectoral structure and occupational structure of the labour market, and this will be reflected in future competence needs.

At the government budget session in September 2020, the Government determined that it will adopt employment measures that bolster the economy, aimed at achieving an employment-generating impact amounting to 80,000 new jobs. The measures decided in the 2020 Government budget session, combined with the Government's earlier employment measures, are expected to generate 31,000–36,000 jobs. This includes the systemic change in shifting towards adopting the Nordic labour market service model. The estimated employment impact of the Nordic labour market service model will be 9,500 to 1,000 additional jobs. This estimate is based on examples derived from empirical research literature whose outcomes were scaled by the Ministry of Finance to make them applicable to Finland.

Employment and economic development services (TE services) and business services at Centres for Economic Development, Transport and the Environment that fall within the administrative branch of the Ministry of Economic Affairs and Employment will be reformed as a systemic whole in accordance with the policies outlined in the Government Programme and other development targets, drawing as applicable on experiences gained in preparations during the previous electoral term. The additional investment in active labour market policy as decided by the Government will make it both possible and essential to raise the level of service while revitalising the service structure. The new TE service strategy, local authority employment experiments, preparation of a permanent service structure for TE services, the Nordic labour market service model and the reform of the continuous learning service organisation all contribute to an employment policy

geared towards raising the employment rate and thus play a central role in the reform of these services for supporting rapid re-employment of unemployed jobseekers. Employment services will be reformed to support rapid re-employment, with services enhanced particularly at the start of unemployment to enable closer attention to the varying individual needs of unemployed persons.

### **Targets**

The Nordic labour market service model is an essential component of the Government's reform of employment services. A key element in the model is overhauling the jobseeker service process to make it more individual. This model will bring a substantial increase in meetings between jobseekers and TE authorities and in customised support offered to jobseekers.

The service process is being reformed based on the assumption that jobseekers will be offered more employment support at various stages in the jobseeking process. With this reform, experts in TE services will interview unemployed persons at two-week intervals during the first 3 months of their jobseeking process (max. 7 times). The first one-on-one meeting or contact (jobseeking discussion) with the jobseeker will be held within 5 working days of the start of the jobseeking process. The content of the interviews will be customised according to the jobseeker's service needs. Currently, jobseekers are interviewed no more than two times within the first 3 months. Later, the jobseeker's service needs will be reassessed and the employment plan will be revised 3 months after the previous service needs assessment if the jobseeker's unemployment continues unchanged. After each 6 months, if the jobseeker is still unemployed, a new month-long intensive period of jobseeker discussions will be held, with discussions every 2 weeks. The maximum number of contacts for a jobseeker during one year will be 14 instead of the current 5.

The reform will involve an active jobseeking obligation; the intention is that this will be implemented through a quantitative jobseeking obligation and appropriate support services. Jobseeking reporting presupposes an improvement of online systems. Also, the plan is to graduate the unemployment benefit sanctions.

The service process described in the model will apply to all jobseekers who are clients of public employment and economic development services in Finland. In 2019, 769,000 individual jobseekers received services from Employment and Economic Development Offices (TE Offices), compared to 1.1 million in 2020.

With the introduction of the above model, it is estimated that between 2 and 2.5 million jobseeker interviews will be held each year, although the number of interviews may be lower in the first year. Meetings in person will be strongly recommended in the interview

process. Currently, some 1 million jobseeker interviews are held annually; in other words, the number of interviews and the availability of support for finding employment will increase considerably. It is estimated that interviews at the start of the jobseeking process will significantly reduce the flow of jobseekers into long-term unemployment.

Delivering the model is expected to add about 1,200 person-years to the human resources requirements of the TE Offices. In 2019, the human resources of TE Offices amounted to 3,148 person-years, so a 40% increase will be needed. The resource needs calculation includes the current number of jobseeker starts, the flow of jobseekers onto the open labour market and the potential increase of this flow with the introduction of the model, the increase in the work and interview volume of experts at TE Offices, the assumed duration of the new interviews and the varying interview requirements for various jobseeker groups. The resource needs may be reviewed no earlier than 2025.

The most significant employment impacts of this reform have to do with the intensive service period at the start of the jobseeking process. It is therefore estimated that the employment impacts and positive impacts on public finances generated by the model will be fully realised as of 2025. Human resource needs may be revised in 2025 in view of the labour market situation at that time.

The digital amendments required for the service process in the Nordic labour market service model will be made to the service information systems. New elements will be designed and delivered, such as a shared appointment booking system, and the Messages service in the Suomi.fi portal will be extended to jobseeking self-reporting. The reform consists of six modules:

1. Defining the changes required for the service process and of the new functions (appointment booking, self-reporting, new service needs assessment tools, online guidance service).
2. Making changes to the current client management production system (URA and online services).
3. Making changes to the new client management production system (TEA).
4. Specification, procurement and introduction of the operating model for the appointment bookings system.
5. Specification, procurement and introduction of the jobseeking self-reporting tool (Messages service).
6. Specification and introduction of the needs for change in the online guidance system ohjaustaverkossa.fi.
7. Determining of an automatic jobseeker profile on the labour marketplace.

The change needs will be prepared in a joint initial definition project for both production systems. Digital changes will be executed in four stages: definition, delivery, testing and introduction. After the joint initial definition project, further work on the two systems will diverge into separate development and change management processes. The costs of the necessary digital changes will be spread over 3 years. According to the preliminary plan, 80% of the costs will go towards outsourced services and 20% towards payroll costs of experts at the Development and Administration Centre for Centres for Economic Development, Transport and the Environment and for Employment and Economic Development Offices (KEHA Centre). The cost allocation will be specified as preparation progresses and procurement decisions are made on the technological solutions required for the reform (e.g. the appointment booking system). The cost estimate for the required changes and investments (in 2021–2023) is based on previous experiences particularly in the TE-Digi project (KEHA Centre) concerning the actual costs and preliminary work volume estimates for system development following a similar logic.

The reform is expected to generate long-term impacts in keeping with the targets of the RRF. The Nordic labour market service model will efficiently address individual challenges pointed out in the Country Specific Recommendations for Finland. The target with the service model is to address the 2020 recommendation for supporting employment and for reinforcing active labour market policies and the 2019 recommendation to “improve incentives to accept work and enhance skills and active inclusion, notably through well-integrated services for the unemployed and the inactive”. The reform will also significantly contribute to fulfilling the evaluation criteria of the national RRP.

The Nordic labour market service model is estimated to increase employment by about 10,000 people. The most significant impact will come from job search discussions, which will be organised every two weeks in the early stages of job search. The jobseeking obligation and closer monitoring of jobseeking efforts included in the model are also expected to boost employment. The overall evaluation consists of the sum of the employment impacts of the components.

Nordic research literature suggests that active meetings with the unemployed (meetings in person) are a cost-efficient way for reducing unemployment.<sup>10,11</sup> Jobseeking discussions at the beginning of the jobseeking process are estimated to help an additional 8,900 persons

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10 Cheung, Maria et al.: Does job search assistance reduce unemployment? Experimental evidence on displacement effects and mechanisms. IFAU Working Paper 2019:25; <https://www.ifau.se/en/Press/Abstracts/does-job-search-assistance-reduce-unemployment-experimental-evidence-on-displacement-effects-and-mechanisms/>

11 Maibom, Jonas – Rosholm, Michael – Svarer, Michael; Experimental Evidence on the Effects of Early Meetings and Activation. *The Scandinavian Journal of Economics*. Volume 119, Issue 3, July 2017, Pages 541–570; <https://doi.org/10.1111/sjoe.12180>.

find employment. The quantitative jobseeking target, jobseeking reporting and the impact of early jobseeking discussions are evaluated with reference to the studies conducted by Arni & Schiprowski (2018) and Lombard (2019). Based on the findings of Arni & Schiprowski, the impact of the jobseeking obligation is estimated to increase employment by about 2,000.<sup>12</sup> The findings of Lombard (2019) suggest that jobseeking reporting tied to the jobseeking obligation, and therefore closer monitoring of jobseeking efforts, will increase employment by about 2,400 in the Finnish context.<sup>13</sup>

Mandatory job offers for jobseekers will be abandoned as part of the Nordic model. In 2018, TE Offices made about 250,000 mandatory job offers for jobseekers. Abandoning mandatory job offers is estimated to decrease employment by about 2,800, based on the findings of van den Berg (2019).<sup>14</sup> Halving the longer qualifying periods is estimated to decrease employment by about 200, based on the findings of Busk (2016).<sup>15</sup>

The employment impacts are expected to be fully realised by 2025, when the majority of the current jobseeker population is expected to no longer be unemployed, whether by having left the labour force, having found employment or having become newly unemployed after a period of employment.

However, employment impacts will begin to emerge as soon as jobseekers enter the new model in 2022.

The principal impacts of the Nordic labour market service model have to do with a shorter cycle in client meetings and with attention to the quality of the service provided. Additional service resources are needed particularly for a strong start in the jobseeking process, i.e. initial contacts and meetings. The aim is to provide more support to jobseekers at different stages of job search. Positive employment impacts are directly correlated to the number and skill level of personnel and to the digital development underlying the reform.

The Nordic labour market service model is expected to help balance public finances through boosting employment. The estimated contribution to public finances through

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12 Arni, Patrick – Schiprowski, Amelie; Job Search Requirements, Effort Provision and Labor Market Outcomes. IZA Discussion Paper Series No. 11765, August 20189; <http://ftp.iza.org/dp11765.pdf>.

13 Lombardi, Stefano; Threat effects of monitoring and unemployment insurance sanctions: evidence from two reforms. IFAU Working Paper 2019:22; <https://www.ifau.se/globalassets/pdf/se/2019/wp-2019-22-threat-effects-of-monitoring-and-unemployment-insurance-sanctions-evidence-from-two-reforms.pdf>.

14 van den Berg, Gerard J – Hofmann, Barbara – Uhlendorff, Arne; Evaluating Vacancy Referrals and the Roles of Sanctions and Sickness Absence. The Economic Journal, Volume 129, Issue 624, November 2019, Pages 3292–3322; <https://doi.org/10.1093/ej/uez032>.

15 Busk, Henna; Sanctions and the exit from unemployment in two different benefit schemes. Labour Economics, Volume 42, October 2016, Pages 159-176; <https://doi.org/10.1016/j.labeco.2016.09.001>.

employment improvement is about EUR 230 million per year as of 2025. This calculation is based on the estimate of the Ministry of Finance whereby each person who finds employment has a positive impact of about EUR 23,000 per year on public finances. This consists of decreased income transfers and increased tax revenue. Income transfers on the expenditure side will amount to EUR 16,500 on average, the total reduction in public expenditure thus being about EUR 165 million.

On the plus side, tax revenue will increase by about EUR 65 million. The Nordic labour market service model will increase central government expenditure by EUR 70 million per year, and the easing of qualifying periods in the reform will increase unemployment benefit expenditure by an estimated EUR 16 million per year, so the net reduction in public spending achieved by the reform will be EUR 79 million per year. On the whole, the reform will have a permanent positive net effect of EUR 144 million on public finances. This impact is expected to be achieved in full at a time when a large majority of the persons currently unemployed are no longer unemployed or are in a new period of unemployment following employment and therefore subject to a new 3-month period of support for jobseeking and employment. Assuming that this will apply to about 90% of jobseekers within 3 years, the employment impacts would be fully achieved in 2025.

#### **Implementation:**

The Ministry of Economic Affairs and Employment is responsible for this priority. Progress in implementing the model is discussed regularly by the Ministerial Working Group on Promoting Employment, specifically in subgroup 2 (Services, benefits and inclusion). Membership of the working group is broad, including representatives from various ministries and labour market organisations.

#### **Stakeholder input**

The target of the reform is that increased activeness in jobseeking will translate into an increase in labour supply. An increase in labour supply, in turn, will have a positive impact on employment, with vacancies being filled quicker than before. Also, an increase in the labour supply is expected to increase the number of vacancies available, because an increase in the labour supply will increase employers' confidence in finding employees for new jobs created. The reform may thus even increase the overall number of recruitments. An increase in the supply of employment may also boost the demand for employment.

The principal target groups of the reform comprise the individual clients of employment and economic development services. The major employment impacts of the Nordic labour market service model have to do with intensive client contacts at the start of the jobseeking process, which will require an increase in personnel at Employment and Economic Development Offices amounting to a total of 1,200 person-years. The reform is being prepared in consultation with stakeholders.

**Expected complications**

Availability of funding may be a risk for ability to implement the reform. The reform will require funding for hiring additional personnel for one year so that the reform can be implemented. Without additional funding, the entire reform and hence its employment impacts will be jeopardised. The human resources need is consistent with the revised cycle of interviews and client meetings. The calculations also consider what an appropriate case load per case worker would be. The additional human resources proposed are vital for implementing the reform, because no matter how digital tools have evolved, meeting clients more often in person is a labour-intensive process. Also, there is a backlog of interviews that must be dealt with at the start of the reform. The aim is that after the first year, the additional human resources will be funded out of the central government budget, and this funding need is included in the General Government Fiscal Plan for 2022–2025. The reform is expected to generate employment growth and thereby have a positive net impact on public finances; in other words, despite the considerable cost of the reform, its rewards are expected to be even greater. RRF funding proposed to be allocated to launching the reform is essential for implementing the reform, because it will take time before its positive impacts on public finances will begin to be seen.

Moreover, in May 2021 the Finnish Government decided that public employment and economic development services will be transferred from central government to local government. This is a wide-reaching reform that may also have a bearing on the implementation of the Nordic labour market service model.

**Reform target group**

See the Stakeholder input

**Compatibility with rules on State aid**

The reform does not involve any State aid. The reform is about improving Finland's public administration.

**Implementation timetable**

- Government proposal during 2021, legislation to enter into force in January 2021 and partly in May 2022
- Information system changes: Changes to URA (unemployment benefits, jobseeking discussions) during 2021; changes to TEA by May 2022 (the above and the quantitative jobseeking obligation)
- Additional personnel for TE Offices and municipal experiments: Recruitment to begin in autumn 2021.
- Training/orientation for TE Office personnel: During 2021, based on the KEHA Centre skills plan



## **REFORM 2: Eliminating the right to additional days to unemployment benefit (the 'unemployment path to retirement') (P3C1R2)**

During its current term, the Government will take employment measures that bolster the economy, aimed at achieving an employment-generating impact amounting to 80,000 new jobs. As an example, the age group of over-55s has a lower employment rate in Finland than in the other Nordic countries, and there is thus clear employment potential there. In December 2020, the Government outlined actions to promote the employment, coping at work and work ability of over-55s while improving their skills and providing change security. One of the policies specifically targeted at over-55s was the elimination of the additional days that may be granted to statutory earnings-related unemployment allowance (also known as the 'unemployment path to retirement'). The Government outlined that the additional days will be phased out so as of 2023 so that the minimum age for being granted additional days will be raised from the present 62 years by one year (to 63) for those born in 1963 and by a further one year (to 64) for those born in 1965. The availability of additional days will be completely eliminated for those born in or after 1965.

### **Targets**

The target with raising the minimum age for additional days granted to earnings-related unemployment benefit and eventually eliminating them is to prolong working careers and thereby to reduce unemployment and increase employment. The right to additional days is a factor that increases unemployment among the elderly, because it has had the impact of employers targeting dismissals specifically at elderly employees. Secondly, the right to additional days may reduce incentives for employment among the ageing unemployed, which in turn may make re-employment more difficult. The minimum age for the right to additional days has been raised before, resulting in an increase in the re-employment rate of the age group in question and a shift forward by one year of the decline in the probability of re-employment. The Ministry of Finance estimates that eliminating the additional days will bring an additional 7,900 employees into the workforce.

Another, parallel target is to prepare for other changes in the Government proposal concerning unemployment benefits for over-55s and how they are funded; the purpose of these is to promote employment for over-55s by improving their skills and by providing change security.

### **Implementation:**

The Department for Insurance and Social Security at the Ministry of Social Affairs and Health is responsible for the elimination of the right to additional days to earnings-related unemployment benefits; the Department is similarly responsible for preparing the other actions in this package insofar as they concern the funding of unemployment security, the Employment Fund and its duties, and the duties of the Social Insurance Institution and of unemployment funds. Because of this, the project to be launched to prepare the reform

will also consider other actions decided upon in connection with the gradual elimination of the right to additional days for the purpose of boosting employment among over-55s. By exception to the above, the decisions on rehabilitation and the taxation decisions, for which the Ministry of Finance is responsible, will be prepared in separate projects. Membership of the working group is broad, including representatives from various ministries and labour market organisations. The Social Insurance Institution (Kela) and private unemployment funds will be consulted. Preparation will be launched once the necessary policy decisions have been made.

### **Stakeholder input**

See 'Implementation' above.

### **Expected complications**

The new elements of change security targeted at over-55s pursuant to the Government decision must be evaluated in relation to the equality provision in section 6 of the Constitution of Finland. Actions pursuant to the Government decision will also add to the administrative burden and costs of employers in certain cases of dismissal.

### **Reform target group**

The principal target group of this reform comprises wage earners aged 55 or above. The most significant employment impacts have to do with the gradual elimination of the right to additional days of earnings-related unemployment benefits.

### **Compatibility with rules on State aid**

This is a legislative reform with no State aid impacts.

### **Implementation timetable**

Government Proposal during the spring session of Parliament in 2022 (January or February, in practice), legislation to enter into force in January 2023 (civil service proposal, subject to policy decisions by the Government).

Information system changes: Implementation of the Government decision package in respect of over-55s will require changes to be made to the information systems of the Employment Funds and possibly of the Social Insurance Institution and private unemployment funds (change security and its funding), but a more detailed evaluation of the project in this respect requires policy decisions to be made by the Government.

Training/orientation for personnel of the Social Insurance Institution, the Employment Fund and private unemployment funds: Provided by the operators themselves during 2022, in collaboration with the Ministry of Social Affairs and Health if necessary

Recruitment of additional personnel for the Employment Fund to manage any eventual new duties in respect of change security (assuming that future policy decisions by the Government introduce new duties for the Employment Fund)

### **REFORM 3: Streamlining work-based and study-based immigration and easing international recruitment (P3C1R1)**

The Government Programme of Prime Minister Marin's Government sets specific targets for increasing work-based immigration of skilled labour and improving opportunities for graduating international students to find employment in Finland. The focus in work-based immigration is on sectors that suffer from a labour shortage as identified in the Government Programme and also on specialists, students and researchers essential for RDI in spearhead industries and growth industries. The Government Programme states as a target under 'Finland built on trust and labour market equality' (3.5) to achieve an averaging processing time of one month for all work-based and study-based residence permits as soon as possible. Also, a fast track residence permit process is to be created for specialists and startup entrepreneurs and their family members.

In order to attain these targets, the Ministry of Economic Affairs and Employment, the Ministry of the Interior, the Ministry of Education and Culture and the Ministry of Social Affairs and Health have launched an extensive cross-sectoral development project addressing immigration legislation and permit procedures as part of the Talent Boost action plan, the aim being to accelerate permit processes through a wide-ranging reform of national legislation (particularly the Aliens Act, 301/2004) and by creating a new, flow-maximising process concept. Enactment of the legislative amendments and adoption of the revised processes will require a substantial cross-sectoral digitalisation project (Ministry of Economic Affairs and Employment, Ministry for Foreign Affairs, Ministry of the Interior, Ministry of Education and Culture).

### **Challenges**

A swift residence permit process is a key factor for the attraction, recruitment, entry, skill availability and integration of foreign skilled labour. The current residence permit processes are seen by clients, employers, the business sector and universities as slow and complicated. For Finland to have permit processes that are too slow prevents skilled labour from being recruited from abroad in a timely manner to respond to the needs of enterprises and of RDI activities, besides being a detriment to the reputation of the country among enterprises and potential skilled labour.

The project currently under way to revise immigrant legislation and permit procedures is about preparing legislative amendments, reshaping processes and improving official procedures. This will require changes to be made in system development,

communications and client guidance; most of these needs cannot be met within the framework of current budget appropriations.

The Finnish Immigration Service has been granted additional funding for processing work-based and study-based residence permit applications, for reducing the backlog and for undertaking system development in 2021–2022. Fixed-term additional resources will be allocated to meet acute personnel needs in permit processing and also to the maintenance and continuous improvement of the electronic system and to critical system development items. Once these fixed-term human resources are no longer available, it will become increasingly important to respond to changes in the operating environment for work-based immigration through digitalisation.

### **Targets**

The reform will improve the availability of skilled labour and will ease international recruitment in Finland by streamlining the permit processes for work-based and study-based immigration. The aim is to achieve a permanent reduction in processing times for work-based and study-based residence permits along with long-term improvements in efficiency and productivity in the operations of the Finnish Immigration Service and other relevant organisations.

One of the principal means for streamlining the permit processes will be revising chapter 5 of the Aliens Act (301/2004). Legislation in respect of students, researchers and interns will also be revised (719/2018). The reform will further include a review of the official procedures involved with work-based and study-based residence permits. The target of the reform is to bring into force the legislative amendments prepared in the project to revise immigrant legislation and permit procedures.

The reform will help Finland succeed in global competition for skilled labour, promote internationalisation of business and innovations, and attract investments to Finland. Streamlining immigration processes will boost Finland's profile as a model country of good governance while responding to the needs of international skilled workers and society at large

### **Implementation**

The project will be implemented as part of the Talent Boost programme. Preparation and execution of the reform are the responsibility of the Development Project of Immigrant Legislation and Permit Procedures appointed by the Ministry of Economic Affairs and Employment, the Ministry of the Interior, the Ministry for Foreign Affairs, the Ministry of Education and Culture and the Ministry of Social Affairs and Health, and of the Permit 22 project of the Finnish Immigration Service. Project progress will also be reported to the Talent Boost steering group.

**Stakeholder input**

In addition to the ministries that appointed the development project, several operators in various administrative branches will participate in delivering the reform, including the Finnish Immigration Service, Business Finland, Employment and Economic Development Offices and Centres for Economic Development, Transport and the Environment. Business-sector operators (e.g. the enterprise council), universities and other educational institutions, municipal business services and the immigration advisory service will also be considered in the development process.

**Expected complications**

Identified risks include challenges in cross-sectoral development and steering, resourcing issues particularly in respect of the Finnish Immigration Service and the Ministry for Foreign Affairs, and the limited scope available for boosting client services. Other potential obstacles to high-quality delivery of the reform include shortcomings in integrating system and process development and challenges in the ability and readiness of organisations to embrace change in a rapidly shifting operating environment.

The aforementioned challenges will be addressed through long-term national budgeting, investments in recruitment and orientation processes and support for integrating system and process development into day-to-day work and management. Success will require sufficient support for deployment of the changes envisioned and high-quality overall coordination of the cross-sectoral development involved.

Unexpected phenomena in the field of immigration must be allowed for. The still challenging pandemic is anticipated to cause timetable problems for example in the piloting of the 'fast track', because the pandemic still restricts client services provided by foreign missions and external service providers.

**Reform target group**

The target group for the reform comprises foreign labour, foreign students, Finnish businesses, the RDI sector and universities.

**Compatibility with rules on State aid**

The reform does not involve any State aid. The reform is about improving Finland's public administration and legislation.

**Implementation timetable**

According to the preliminary plan, legislative amendments in respect of the processing of residence permit applications (chapter 5 of the Aliens Act, 301/2004) are to enter into force in summer 2022. Legislative amendments in respect of students, researchers and interns are to enter into force in February 2022. Initial actions in respect of official

procedures will be introduced during 2022. In the interests of productivity, the development work will continue until the end of 2024, at which time the reform will be complete.

### **INVESTMENT 1: World-class digital infrastructure to support migration of skilled labour (P3C111)**

This investment package will support Reform 3 ('Streamlining work-based and study-based immigration and easing international recruitment') by ensuring the capability of entry permit systems and other information systems to deal with the needs of work-based and study-based immigration and to improve the productivity of permit procedures in the long term. The investment will also reinforce communications and client advice capabilities. The following development actions will be taken as part of the investment package for the digital infrastructure of immigration:

1. new digital structures and functions
2. system integrations and data transfer interfaces
3. system development for filing and processing applications
4. implementing the fast track
5. skills for cross-administrative knowledge-based management
6. client advisory service, communications and marketing supporting the revised process
7. improvements in usability and performance, readiness for introduction and expanded automation rules, as required in the reform

The cost estimates for this investment packages were prepared on the basis of preliminary scenarios delivered by experts at the Finnish Immigration Service, the Ministry for Foreign Affairs and Business Finland. The cost estimates and the content of the development items will be further specified once the decisions-in-principle, detailed specifications and work volume estimates for the project models have been completed. At this time, the cost estimates are based on the broadest project model, and they were prepared in such a way that it is possible to adjust the development items flexibly according to changes in the operating environment.

Delivering on the development items will require an estimated 20 person-years in temporary human resources, front-loaded towards the first years of the investment period. These person-years will mostly be allocated to the Finnish Immigration Service. It is estimated that one person-year will be allocated to Business Finland, and person-years may also be allocated to the Ministry for Foreign Affairs, depending on the implementation scheme. The allocation of person-years will be specified as the investment package is launched. The additional human resources may be provided either by reallocating job duties of existing employees or by recruiting additional employees.

Established practice in system development at the Finnish Immigration Service shows that for each EUR 1 million or so in outsourced services, 3 person-years in internal human resources are required to support it. It is not possible to outsource human resources in system development, because these duties require in-house expertise and are included in the Client's responsibilities in the digital development outsourcing scheme. The additional person-years will cover:

- a full-time operational architect responsible for example for project management, monitoring and reporting, finances, risks and supervision of the technical team,
- a full-time tester and quality assurance officer, and
- a substantive expert e.g. for operational specifications, testing, approval, training, publicity and change management.

The total costs of the investment package are about EUR 20 million. Funding for the investment package will be mainly allocated to the Finnish Immigration Service, which is the owner of the most important information system (UMA). Funding will also be allocated, as agreed separately in the project, to budget items of the foreign affairs administration, Employment and Economic Development Offices, Centres for Economic Development, Transport and the Environment, Business Finland and the administrative branch of the Ministry of Education and Culture.

No national funding has been allocated for this investment.

### **Challenges**

Fixed-term additional investments are ineffective if there is no long-term commitment to the reform across electoral terms. The challenges for this investment package are the largely the same as for the reform it supports. Digital development items require specific expertise, and finding and retaining suitable system experts has been identified as a challenge. Legislative amendments and process reforms needed to accelerate and streamline work-based and study-based immigration will cause extensive digital development needs that must be implemented with a timetable quicker than is customary in development cycles. Also, the legislative amendments and process revisions involved in the reform will cause needs for client publicity and workplace communications that must also be addressed quickly, at a high level of quality and with cross-sectoral relevance.

### **Targets**

The principal target of the digital infrastructure investment package is an automation-driven and client-oriented overall process that significantly reduces the throughput time for work-based and study-based residence permits from what it is now. The quantitative

target is to accelerate the processing of work-based and study-based residence permits to bring the average processing time down to 30 days.

The indicative benchmark for processing times is the average overall processing time for processing residence permit applications by employees, experts and growth entrepreneurs, which was 82 days in the period 2018–2020 (weighted by number of permits). However, the benchmark figure varies greatly depending on the permit category. The benchmark given above does not consider the differing processing times of permit applications based on studies, entrepreneurship or other work. Therefore, the benchmark figure is indicative only.

A milestone will be set of accelerating the processing of residence permit applications by specialists and growth entrepreneurs so that the average processing time for applications under the fast track scheme will be 14 days and that this average will be maintained in the long term.

Details on the content and timetable of the development items can be found under 'Timetable'.

### **Implementation:**

The investment package for a digital infrastructure in immigration is a substantial cross-sectoral project where several administrative branches share responsibility for its completion. The investment package will be coordinated by the Ministry of Economic Affairs and Employment and steered by three further ministries (Ministry for Foreign Affairs, Ministry of the Interior, Ministry of Education and Culture). The investment package has been prepared on a front-loaded basis jointly with key participants such as the Finnish Immigration Service. The steering group for the investment package will be the steering group for the Development Project of Immigration Legislation and Permit Procedures or a newly set up separate steering group if necessary.

Principal responsibility for delivering the project is with the Finnish Immigration Service, which is the owner of the most important information system (UMA). The Ministry for Foreign Affairs will also play a key role in information system development, because it supervises the missions abroad that receive residence permit applications and because it is the owner of the visa system. The Finnish Immigration Service will have principal responsibility for communications and for client advice. Business Finland, Employment and Economic Development Offices, Centres for Economic Development, Transport and the Environment and operators in the administrative branch of the Ministry of Education and Culture, and other essential operators as necessary, will participate in the project on a discretionary basis, as appropriate for each development item.



The investment will not generate a need for permanent personnel increases, only fixed-term personnel specifically assigned to the development items in the project.

### **Investment target group**

The target group for the digital infrastructure for immigration processes comprises all persons applying for work-based and study-based residence permits in Finland; family members of specialists and growth entrepreneurs applying for a residence permit on the basis of family ties; enterprises recruiting international labour; and educational institutions receiving international students. Streamlining and accelerating the permit processes will benefit several official bodies, advisory organisations, clients, businesses and the education sector.

### **Compatibility with rules on State aid**

The investment does not involve any State aid. The investment concerns the improvement of the digital infrastructure of Finland's public administration.

### **Timetable**

Several development actions will be taken as part of the investment package for the digital infrastructure of immigration. The development items vary in scale and effectiveness, their timetables partly overlap, and the implementation of one will affect the timetable and order of others. The timetable and order of the development items will be determined on an iterative basis as the project progresses. The timetable will be influenced by decisions-in-principle to be made in the project to reform immigration legislation and permit procedures (e.g. legislative amendment outline, decisions on how to proceed), technical specifications and workload estimates. What is essential to consider in planning how to proceed are the iterative cycles of agile development and flexible scheduling in order to be able to prioritise the development items and further specify them in ways that guarantee the optimum outcome from the perspective of the overall target.

The following development items are included in the investment package for the digital infrastructure of immigration:

#### **1. new digital structures and functions**

- augmenting the role of employers and educational institutions, EUR 2.5 million
- improving the consultation stage of the startup permit process, EUR 0.325 million
- developing the required digital structures and functions according to the decisions-in-principle to be made in the project to improve immigration legislation and permit procedures during 2021, EUR 1 million

2. **system integrations and data transfer interfaces**
  - integration of visa and residence permit systems, data exchange interfaces with the income register and Vera, integration of the cash flow system into the UMA system, EUR 1.5 million
  - other data exchange improvements related to the process (including VHS interface), EUR 0.5 million
3. **system development for filing and processing applications**
  - Enter Finland service development (including forms), EUR 0.4 million
  - expanding the range of the Kamu chatbot, EUR 0.5 million
  - improvement and automation of requests for supplementary information and interviews, EUR 1 million
  - direct delivery of residence permit cards, EUR 0.175 million
4. **implementing the fast track**
  - system development for national visas (D visa), EUR 4 million
  - outsourced application for receiving residence permits, EUR 2.1 million
5. **skills for cross-administrative knowledge-based management**
  - improving statistics compilation and reporting, EUR 1 million
6. **client advisory service, communications and marketing** supporting the revised process, EUR 0.2 million
7. **improvements in usability and performance, readiness for introduction and expanded automation rules**, as required in the reform, EUR 3.5 million

Two milestones have been set for this investment package:

**Milestone:** Introducing a fast track process for experts, growth entrepreneurs and their family members in order to shorten the average processing time for permits. The aim is to accelerate processing of fast-tracked permit applications to bring the average processing time down to 14 days.

The fast track pilot will be launched once the technical structures and client communication facilities have been completed and once the issues in respect of legislation on the processing of personal data have been resolved. Criteria for measuring processing times will be specified as part of this development item. Introducing the fast track will involve piloting features such as new digital structures and functions for the adoption of and automatic filing for D visas. The target is for the fast track to go live in Q2/2022.

**Overall target:** The average number of days needed to process work-based and study-based residence permit applications will be reduced. Criteria for measuring processing

times will be specified as part of this development item. The quantitative target is to accelerate the processing of work-based and study-based residence permits to bring the average processing time down to 30 days by the end of the project period (Q4/2024).

The following development items will be executed in the first phase of the investment package:

- Technical development items related to the introduction of the fast track. These development items include improvement of the e-transaction service (EF) and the UMA service with features such as partial automation and service design. New data exchange interfaces between UMA – VISA (visa system) and UMA – OLEDES (Ministry for Foreign Affairs outsourcing application). Descriptions and improvements of client paths.
- Direct delivery of residence permit cards
- Further development of the Compliance Report (VHS) interface
- Development and automation of requests for supplementary information
- improving the consultation stage of the startup permit process – UMALite
- First phase of statistics compilation and reporting development

Development items for communications are mainstreamed through the technical development items in the investment package. The first modules for client guidelines, communications and marketing will be completed as the fast track is ready for launching as part of the first milestone. At the next phase, guidelines, communications and marketing will likewise be deployed to respond to the specific needs of each development item. The development items for communications will include client satisfaction surveys whose findings will be used in project planning and in the evaluation of target attainment.

#### **REFORM 4: Enhancing multiprofessional services for young people (P3C1R4)**

##### **Challenges**

This reform involves enhancing multiprofessional services at Ohjaamo guidance points, which are low-threshold services for young people. This action particularly concerns disadvantaged young people and addresses issues in the current service system identified in studies. The reform supports and reinforces other actions to improve the wellbeing, education and employment of young people undertaken with national funding and ESF funding. The Ohjaamo guidance points, which have been operating since 2015, have received an estimated EUR 53 million in public funding. This includes both ESF funding and national funding. The present reform will enhance the multiprofessional service capabilities of the Ohjaamo guidance points in responding to the diverse needs of young people. The purpose of RRF funding is to allow reallocation of existing permanent resources, not to create a new permanent expenditure item. The target is that after the RRF funding period, the Ohjaamo guidance points will have improved their multiprofessional

capabilities and will be better able to respond to the needs of young people. The incentive-based model will encourage local authorities to add to Ohjaamo personnel, and training organised on both national and RRF funding will help integrate social welfare and health care with these low-threshold services. Local authorities will not be required to recruit new permanent personnel; recruitment will only be necessary for the fixed term covered by the RRF funding. The plan is to attain the target by creating strong incentives for local authorities and for the forthcoming wellbeing services counties to integrate Ohjaamo guidance points into social welfare and health care services on the one hand and into education and training services on the other. The incentive-based model relies on the assumption that after the RRF funding period the person-years recruited or reassigned to Ohjaamo guidance points by local authorities will carry on working according to the procedures created, if they have been hired as permanent employees. In other words, the RRF funding is intended as a temporary catalyst for change.

It is also possible that some municipalities or wellbeing services counties will not retain the same human resources after the RRF funding period. But on the other hand, the entire Ohjaamo concept was originally created based on the very same premise as in the incentive-based model proposed here. When the Ohjaamo guidance points were set up, ESF-funded personnel were employed for setting them up, and experts from Employment and Economic Development Offices were brought over to them. Local authorities assigned plenty of youth workers and also some public health nurses, social workers and social advisors to the Ohjaamo guidance points. During that funding period, the operations were brought up to speed, and eventually this service became a basic service provided with no additional budget funding required. Ohjaamo guidance points continue to be supported and improved through a variety of development projects, but their basic operations are a fixture. The history of the Ohjaamo scheme shows how well the incentive-based model works in practice. Finland has experience of similar incentive-driven development efforts.

Establishing a practice as permanent relies on successful strategic management, incentives for local authorities and the training and development elements integrated into the incentive-based model.

The purpose of the Ohjaamo scheme was never to increase the number of employees in youth services but instead to revitalise workplace culture and operating practices. Most of the experts from various sectors who work at Ohjaamo guidance points have permanent posts in their respective organisations. Ohjaamo is not an organisation unto itself; it is a service provided by a consortium of organisations. If an Ohjaamo guidance point is shut down, the employees return to their home organisations. This principle applies in the incentive-based model too. When a local authority recruits a new Ohjaamo employee or updates the job description of an existing employee to weight it towards Ohjaamo, the local authority may apply for funding from the RRF for hiring another

person. The incentive-based model allows for the payroll costs of recruitments totalling about 53 person-years. Since each local authority is required to provide a matched contribution of 1 person-year, this translates into a pool of about 106 person-years available for Ohjaamo operations.

The incentive-based model creates a temporary incentive for local authorities to either a) recruit new employees for their Ohjaamo guidance point, or b) rewrite an existing employee's job description to make them more closely involved with it. In accordance with policy guidelines, the incentive-based model will be principally aimed at social welfare and health care services and at experts in the education and training sector. Studies show that Ohjaamo guidance points should have a closer connection to the aforementioned sectors. The incentive-based model will make it very attractive for local authorities to pursue a closer connection between the social welfare and health care sector and the education and training sector on the one hand and these low-threshold services on the other. The incentive-based model reduces the risk for local authorities in developing the new operating model. There is currently a shortage of labour in social welfare and health care services, which has the effect of making local authorities unwilling to assign 'seconded' employees to the development of a new low-threshold service. The incentive-based model reduces the risk for local authorities in developing the new operating model. Various studies, surveys and reports show that young people need low-threshold wellbeing services.

The incentive-based model will ensure that local authorities have the potential and sufficient direct incentive to maintain and improve the multiprofessional service capability of Ohjaamo guidance points. At the moment, about 50% of Ohjaamo personnel come from municipalities and 25% from Employment and Economic Development Offices. The majority of the municipal employees involved are youth workers. The remaining workers are from the Social Insurance Institution (Kela) and NGOs, etc. The incentive-based model brings a stronger presence of social welfare and health care services and of expertise in the education and training sector to the Ohjaamo guidance points, in keeping with policy outlines. Surveys conducted among Ohjaamo clients reinforce the message that the demand for low-threshold mental wellbeing services for young people is high relative to the capacity of the system. Studies of the effectiveness and operations of the Ohjaamo scheme particularly recommend increasing the present of social welfare and health care employees in the service network <https://tietokayttoon.fi/-/10616/tutkimus-nuoret-hyotyvät-monialaisia-palveluita-tarjoavista-ohjaamoista> (in Finnish).

Enhancing multiprofessional capabilities helps Ohjaamo guidance points to respond to the diverse needs of young people. Of the young people who are clients of Ohjaamo, about 30% need information on employment, 22% need upskilling, and 26% have

wellbeing or income issues. Young people also turn to Ohjaamo for information and support for example on coping with everyday life, on health and on hobbies.

The incentive-based model will make it more worthwhile for local authorities to enhance the multiprofessional capabilities of Ohjaamo guidance points. The point of the reform is not only to provide more resources for Ohjaamo operations but also more broadly to improve the Ohjaamo system and their multiprofessional services. Local authorities making use of the incentive-based model can draw on a support structure for multiprofessional services. This support structure will improve the capacity of local authorities to establish the presence of social welfare and health care services and of education and training services at Ohjaamo guidance points. Around the incentive-based model there is a robust peer-learning network for Ohjaamo participants, through which knowledge and best practices are shared. The support structure will work on an effectiveness assessment for multiprofessional service and will also create models for evaluating the long-term impacts of the incentive-based model. The effectiveness assessment will strengthen the incentive for local authorities to establish this operating model as permanent in the future.

Basically, all Ohjaamo guidance points can apply for support through the incentive-based model, even if a guidance point applying is already offering social welfare and health care services or education and training services. Otherwise, the programme would not be equitable. All Ohjaamo guidance points will benefit from the enhancement of multiprofessional services, even those that already offer the kind of services referred to in the incentive-based model. If only those Ohjaamo guidance points that already offer social welfare and health care services or education and training services were able to access the incentive-based model, then the model would only reward those units that already have multiprofessional services in place.

### **Targets**

The target is that from 2024 local authorities (or wellbeing services counties) will have practices in place for the assignment of experts from social welfare and health care services on the one hand and from education and training services on the other to low-threshold multiprofessional guidance points for young people. The idea is to link the aforementioned sectors more closely to Ohjaamo guidance points during the RRF funding period. The professionals concerned may be student counsellors, social advisors, public health nurses or social workers. This requires training, peer learning and research. Support measures will be offered both through a nationally funded coordination unit and through training projects in the ESF+ programming period. The incentive-based model together with national and ESF+ funding forms a strong foundation for improving the operations of the Ohjaamo guidance points. No ESF projects have been discussed in practical terms as of yet, but ESF projects will not be used to hire employees for Ohjaamo duties. An ESF

project might provide training for experts but will not pay for personnel. The Ohjaamo guidance points were originally launched with ESF-funded personnel, but their operations have now become standard.

The role of the incentive-based model will be to provide leverage encouraging local authorities to increase the availability of social welfare and health care services and of education and training services at Ohjaamo guidance points. The end result will be that local authorities (or wellbeing services counties) will have created models for integrating social welfare and health care services and education and training services into low-threshold service points for young people. There are already social welfare and health care services being offered to young people on a low-threshold principle, but multiprofessional services are a new approach that will take time to establish and requires a change in workplace culture. In practice, the incentive-based model means that by recruiting new expertise for an Ohjaamo guidance point, the local authority is eligible for funding for another resource through the model. This will reduce the risk involved in developing a new area of operation in basic public services.

The aim is to raise the combined percentage of social welfare and health care professionals and of education and training sector professionals to 60% of Ohjaamo personnel. This does not mean hiring extra employees; the existing personnel should simply be tied more closely to providing low-threshold multiprofessional services for young people. Ohjaamo is not an organisation unto itself and cannot recruit employees. All Ohjaamo employees are employed by a background organisation, whether in local government, an Employment and Economic Development Office or an NGO. The point is thus in increasing the contribution of experts assigned from social welfare and health care services and from education and training services. No new experts need be hired.

What is essential is that during the RRF funding period the operating models must be modified so that the operations can continue within the framework of the local authority's resources thereafter. In other words, the point is not to increase the payroll costs of local authorities but to encourage them to reallocate their expert resources differently so as to enhance their support for multiprofessional services.

The incentive-based model will supplement other national measures for strengthening the Ohjaamo network. There are currently 70 Ohjaamo guidance points around the country, with about 1,000 experts assigned there for at least one day a week. Ohjaamo guidance points have been coordinated under the ESF-funded Kohtaamo project. The Kohtaamo project will expire at the end of 2021, after which coordination aid will be provided through a nationally funded aid structure. Ohjaamo guidance points have also been supported out of other targeted ESF-funded projects and through a nationally funded aid project. The ESF-funded aid projects have focused on issues such as fostering

a multiprofessional workplace culture, improving career counselling provided at Ohjaamo guidance points and offering mental wellbeing services.

In the bigger picture, investing in the improvement of the Ohjaamo network continues the trend of expanding and improving multiprofessional services. Over the past decade, numerous low-threshold multiprofessional service concepts have emerged. The Ohjaamo network forms part of this trend. In autumn 2020, the Government also made a policy decision to review and renew the legislation governing multiprofessional services. The incentive-based model is directly aimed at strategic development of multiprofessional services.

RRF funding will also be used for providing training for Ohjaamo employees with special reference to multiprofessional services and to low-threshold services. Experience has shown that experts must be trained in order to achieve a shift in and renewal of workplace culture.

#### **Implementation:**

Recruitments made by local authorities for Ohjaamo services must be for experts in social welfare and health care services or in education and training services, as specified above. Instrument funding will be channelled through the KEHA Centre in the employment and economic development administration. It must be ensured in the preparation that the personnel recruited through the RRF will have access to the local authority's information systems and a direct link to the municipal social welfare and health care services. The funding will be tied to employment contracts, which must specify the Ohjaamo connection.

Preliminary timetable for preparation:

- 2021 March–May: Preparing criteria on the basis of which local authorities may apply for funding.
- 2032 May–August: Ensuring that local authorities have enough information to make use of the incentive-based model.
- 2021 August: Local authorities may apply for funding to recruit personnel. The employment relationships may last until the end of 2024.
- Q2/2023: The target is that the local authorities using the incentive-based model will have made plans on how their operations will continue beyond 2024 and what support measures they require for this. Municipal officials responsible for the project are to attend a development training course on how to establish the incentive-established model as permanent.
- Q4/2024: The target is for 60% of Ohjaamo guidance points to offer social welfare and health care services and education and training services on site.

Funding will be allocated on the basis of applications from local authorities and agreements with the Ministry of Economic Affairs and Employment. Applications



must be accompanied by details on the new expert working at the Ohjaamo guidance point and their job description. If the new employee recruited or reassigned to the Ohjaamo guidance point by the local authority has an employment relationship with a shorter duration, aid may be applied for via the incentive-based model to even out the employment relationship to the same length as that of the person-year recruited by the local authority. If the local authority is considered not to be using the funding as prescribed, the funding may be clawed back.

### **Stakeholder input**

Extensive stakeholder networks are involved in the work of Ohjaamo guidance points, including municipal sectoral authorities, NGOs and enterprises. Each Ohjaamo guidance point has different networks, and it is not possible to describe them in detail here. However, many studies have highlighted that Ohjaamo guidance points have the potential to become local and regional focus points for providing services for young people. Integrating social welfare and health care services into multiprofessional services will enhance the network. Stakeholders are supportive of young people needing social welfare and health care services, and conversely, an improved availability of these services will support the efforts of stakeholders at the Ohjaamo guidance points.

### **Expected complications**

There are a few identifiable potential complications, such as local authorities not being interested in the incentive-based model or there being no social welfare and health care personnel available for recruitment. On the other hand, there is preliminary interest in and expectations for the incentive-based model in local government.

### **Reform target group**

The target group for the reform consists of the 70 Ohjaamo guidance points and the local authorities hosting them. Some of the Ohjaamo guidance points are hosted by a joint municipal authority, but in these cases too the incentive-based model is targeted at individual municipalities.

### **Compatibility with rules on State aid**

The reform is being implemented with State aid. The reform is about improving Finland's public administration and does not involve a competitive field.

### **Implementation timetable**

2021–2024. The funding application round will be opened in summer 2021.

## **REFORM 5: Launching a new intermediate labour market operator offering employment and services for persons with partial work ability (P3C1R5)**

### **Challenges**

The Government Programme states that, as part of the efforts to raise the employment rate, the participation of persons with partial work ability on the labour market should be increased. A person with partial work ability has a significantly lower chance of being hired in a recruitment situation over a person who is not similarly impaired. Efforts are made in projects under the Government's work ability programme to lower this recruitment threshold. The purpose of these is to develop services offered to the target group and to direct demand for labour at the target group, for example by promoting the inclusion of an employment obligation in public procurements. There are already intermediate market operators in Finland offering fixed-term employment for persons with partial work ability. However, there are those among persons with partial work ability for whom finding employment on the open labour market, even with the services now being developed or through the current intermediate labour market operators, is not possible. These persons with partial work ability are at a particularly high risk of being permanently excluded from the labour market.

### **Objectives of the reform**

The target is to create a new, systematic, target-oriented and business-driven intermediate labour market operator in Finland, set up as an enterprise, with the task of helping persons with partial work ability to adapt into and find a placement on the labour market. In its mid-term policy review session, the Government decided to establish a special-assignment company, to hire persons with partial work ability for long-term employment relationships and then offer them as temporary agency workers to other employers. One aim of the company is that some workers will eventually find employment in the open labour market. Another purpose for this company to be set up pursuant to the Government decision is to provide employment for people with developmental disabilities who are currently in community employment that is not an employment relationship. The new company will fulfil its mission by offering subsidised, custom-made employment and the support needed for entering the open labour market. Long-term employment will be offered to those persons with partial work ability for whom the open labour market is not an option. Prime Minister Marin's Government decided to allocate EUR 10 million per year as a government grant to the new special-assignment company in the central government spending limits for the period 2022–2025. The Government expects the new special-assignment company to generate an employment impact of 1,000 persons employed by the end of 2025.

### **Implementation of the reform**

The first phase of the reform was completed when the investigator submitted a proposal on the intermediate labour market operator on 9 February 2021. The investigator

proposed the setting up of a new body, either an unincorporated state enterprise with subsidiaries or a state-owned enterprise with subsidiaries. In both proposed models, the actual business will be conducted by the state-owned special-assignment company. Implementation of this model will require an Act to be enacted on the duties and organisation of the special-assignment company and on the grounds for its government grants. The implementation will also require that the duties of the company are spelled out in its Articles of Association.

In its mid-term policy review session, the Government ruled that the model will be implemented in the form of a state-owned special-assignment company whose operations will initially focus on the most disadvantaged persons with partial work ability and will initially be launched in 2 or 3 regions to be determined in further planning. Further planning is currently ongoing under the leadership of the Ministry of Economic Affairs and Employment and consists of: a) the Act on the new special-assignment company (intended to enter into force in early 2022 and providing for the purpose, duties, spheres of operation, official cooperation, organisation, funding arrangements and ownership steering); b) drafting of the Articles of Association for the new special-assignment company; c) ownership steering arrangements; d) arrangements to ensure competition neutrality; e) selection process for employees; f) arrangements for services available alongside the work and their relationship to the current service system. The further planning will ensure that operations can be launched in early 2022.

### **Investment for the reform**

The funding to be applied for is intended for the initial investments needed for the startup phase of the new special-assignment company that will conduct the operations specified in the reform. Operations will initially be launched in at least two regions. This will require equity funding for a wholly state-owned limited liability company, which will be used for procurement of facilities, tools and equipment, for the marketing required for launching business operations and for combating negative attitudes towards persons with partial work ability, and for payroll costs of the new company. Following the example of Samhall in Sweden, the new intermediate labour market operator will be expected to generate about 40% of its turnover from the sales of products, services or the labour of persons with partial work ability. However, it is probably that sales will not reach this level in the first few years. RRF funding will be used to cover costs during the lower sales in this initial phase and to cover initial investments of the company.

The only task of the new intermediate labour market operator set up as an enterprise is to provide a Service of General Economic Interest (SGEI) in providing employment for persons with partial work ability for whom finding a job would be impossible without

the help of such an operator. The funding need for providing this service is permanent in nature. The funding need will be covered with a government grant paid out by the central government annually. This grant has been set at EUR 10 million per year in the government discussion on spending limits. The RRF funding being sought will apply to the special circumstances in launching the company, at which point payroll costs and the cost of procuring facilities, equipment and possibly raw materials will be the greatest relative to sales. The company, being a new operator, will not have such resources available of itself. The costs of the operations are currently estimated at EUR 25,000 per person for whom employment is provided, from which sales revenue may be subtracted once the initial investments have been made. Thus, RRF funding will be used in 2022 and 2023, and thereafter sales should account for about EUR 15,000 per person for whom employment is provided. The funding for the intermediate labour market provider will not include any income security payable directly to the persons for whom employment is provided. The persons with partial work ability to be hired for the new company will be hired on normal terms and conditions of employment and pay. The equity funding for the new company and the government grant paid for the SGEI provided will not include income security payable directly to the employees.

#### **Compatibility with rules on State aid**

According to the proposal, the key duty of the business-oriented intermediate labour market operator will be to provide employment for the most disadvantaged persons with partial work ability. The company will thus have the exact same target group as Samhall Ab in Sweden, which is why the new company will be tasked with a special assignment: to provide employment for persons in the target group as an SGEI. The European Commission confirmed in its decision SA.38469 that the sheltered employment provided by Samhall is an SGEI as referred to in Article 2(1)(c) of the SGEI Decision. Because of the equivalence of the target group and the employment measures, the government grants to be paid to the new intermediate labour market operator to be set up in Finland will similarly constitute compensation for the SGEI provided.

Because the issue of distorting competition was raised in respect of Samhall in Sweden, the competitive advantage of the new intermediate labour market operator in Finland will be restricted as part of this reform. The investigator proposed that the market share of the new intermediate labour market operator should be limited and that its pricing should be subjected to scrutiny by an independent committee.

#### **Timetable**

The investment for the reform is to be implemented in 2022–2023.

## **INVESTMENT 2: Extension of the work ability programme and IPS model (P3C112)**

### **Challenges**

Service shortcomings in work ability support undermine the potential for supporting the work ability and functional capacity of persons with partial work ability. It is likely that these shortcomings also exacerbate socioeconomic differentials in work ability, functional capacity and wellbeing between population groups. Multiprofessional services for persons with partial working ability who are unemployed and have mental health issues are not equally available or of equal quality in Finland's various regions, nor are they equally client-oriented or supportive of employment. Social welfare and health care services, employment and economic development services, Social Insurance Institution (Kela) services, local government employment services and occupational health services do not work smoothly together. Integrated services and improved content are needed, and methods for supporting work ability must be more widely adopted and new procedures developed for referring clients to services with a low threshold and for identifying service needs. The research data available on the impacts of services for persons with partial work ability is insufficient.

The Ministry of Social Affairs and Health has awarded government grants to 22 projects out of the work ability programme for supporting the work ability of the unemployed. Work ability support services still do not have nationwide coverage.

### **Targets**

Actions of the work ability programme will be extended to cover 5 regions. The aim is to make work ability support services equally available and accessible. Multiprofessional cooperation and client advisory services for work ability support packages have been established between employment services on the one hand and social welfare and health care services on the other, with the services integrated into social welfare and health care services and into public employment and economic development services. Extension of the work ability programme will extend coverage of the programme to an estimated additional 1,100 unemployed persons with partial work ability.

The Individual Placement and Support (IPS) operating model will be extended to six hospital districts in order to facilitate equitable entry to and exit from the labour market of persons with mental health issues and their job retention. Expanding the IPS model will extend coverage of the services to an estimated additional 450 clients. Expanding the IPS operating model will facilitate equitable entry to and exit from the labour market of persons with mental health issues and mental health rehabilitees and their job retention.

The individual placement and support (IPS) model involves implementing evidence-based practical work training to support employment as a service incorporated into integrated psychiatric treatment and rehabilitation. The target group comprises persons of working

age (18 to 64) diagnosed with mental health problems. In order to expand the model to nationwide coverage, 6 projects funded with government grants will be launched. According to the OECD (2020), an amazing 70% of Finland's unemployed have more than one obstacle to employment. Mental health problems are a major factor.

Findings show that 37% on average of those receiving IPS services had found employment when the target group consisted of persons with mental health problems. The impacts of the method are thought to be diagnosis-neutral and suitable for other challenging target groups too.

Professionals in services for the unemployed and operators in the workplace know how to support the work ability and employment of persons with partial work ability in a client-oriented, multiprofessional way. Additional human resources are needed for regional coordinators to ensure that the investment is properly carried out.

The execution, outcomes and impacts of the work ability support will be evaluated with a study. A register study will be conducted in the evaluation and monitoring study for the purpose of following employment and earning periods, use of unemployment benefits and other benefits and use of services (employment services, health care services, rehabilitation services, social services).

### **Implementation:**

The investment is a coherent package whose elements are mutually complementary.

1. Extension of the work ability programme: The Ministry of Social Affairs and Health will launch an application round for central government grants to local authorities and joint municipal authorities in order to increase the regional coverage of the service package for unemployed persons with partial work ability. In order to ensure the competence of professionals and the quality of services in various services such as revising the content of health examinations for the unemployed, a multiprofessional network will be set up in the regions.
2. Expanding the IPS model: The Ministry of Social Affairs and Health will launch an application round for central government grants to hospital districts. The projects involve modelling the practices for implementing evidence-based IPS model in practical work training as a service incorporated into integrated psychiatric treatment and rehabilitation. To support the regional projects, the Finnish Institute for Health and Welfare will 1) recruit a regional coordinator, 2) provide IPS method training for hospital districts, and 3) extend the introduction of the quality tool to hospital districts.

3. Strengthening the know-how of professionals: Digital training for work ability support will be designed and delivered for social welfare and health care services, employment services, rehabilitation services, professionals in NGOs and operators in workplaces. The training will be aimed at professionals who work in services for persons with partial work ability. Digital training for trainers of work ability coordinators will be designed and delivered to support the launch of work ability coordinator training in the training system.
4. Work ability coordinators will be appointed for Employment and Economic Development Offices to support implementation of actions in the work ability programme and the IPS model.
5. Impact assessment in planning: The actions, outcomes and impacts of the work ability programme and the IPS model will be evaluated with a multimethod, multilocation and multiactor study. The findings can be used as input in the social security reform.

#### **Investment target group**

Unemployed persons with partial work ability, jobseekers and workplace communities, professionals in social welfare and health care services and in employment and economic development services, local authorities, joint municipal authorities and workplaces.

#### **Compatibility with rules on State aid**

No conflicts with rules on State aid have been discovered in the project planning. Investments will be made with the aid of government grants paid out to local authorities, joint municipal authorities and hospital districts. The investment does not concern a competitive business.

#### **Timetable**

The reform will be implemented in 2022–2024.

### **INVESTMENT 3: Mental health and work ability as prerequisites for employment and productivity. (P3C1I3)**

#### **Challenges**

Workplaces and occupational health care services do not have sufficient competence, means or methods for helping employees with mental health issues or for supporting their work capability, or for addressing risk factors in a timely fashion. It is particularly challenging to understand the importance of proactive work ability support and the need to focus actions not only on the individual but also on the workplace environment. Performing effective actions is complicated by the fact that information on mental health, work ability support and fostering wellbeing at work is fragmentary. It is difficult to find relevant information on the websites and in the digital services of various operators, and

it is difficult to estimate which solution is the best fit for which situation. Even if effective actions or relevant information content exist, they may remain undiscovered.

Even before the coronavirus pandemic, mental health issues and perceived stress at work tended to concentrate in particular employee groups. Some may have been able to work remotely, while others have had to continue working in client service despite the pandemic. This forced them to work in fear of themselves and their family members falling ill.

In remote work, on the other hand, problems included a lack of social support and the challenges of reconciling work and other life and taking appropriate breaks. Indeed, the coronavirus pandemic has created new occupational safety and health challenges for workplaces. It is of particular concern how young employees are coping. Young employees have been slower than others in recovering from work-related stress during the pandemic. The lacklustre economic outlook caused by the pandemic complicates access to working life particularly for young people.

In these exceptional circumstances, many workplace communities have been obliged to take rapid action and to adapt to constant change. For an organisation to remain functional, it must have workers who feel well and resilient workplace communities. In many critical fields, such as in social welfare and health care services, psychosocial environmental loads in the workplace environment can be considerable even under normal conditions, as in challenging encounters with clients and patients. Managing psychosocial stress and having access to proactive mental health support are of crucial importance in exceptional circumstances. Prolonged work-related stress is associated with various physical conditions, such as musculoskeletal disorders and diabetes and with the risk of occupational accidents.

The challenges here include: a lack of ability in identifying work ability risks; the fact that work ability support measures tend to be reactive rather than proactive; focus on the problems of an individual with no organisation-level measures; dysfunctional cooperation; ambiguities in responsibilities for work ability support measures; and shortening of work careers.

### **Targets**

The target of these actions is to boost employees' mental health and work ability in working life. As part of deployment, previously developed methods and approaches for supporting mental health that have been assessed as effective will be distributed to workplaces and occupational health care services. These methods include the 'Wellbeing at work test' (a self-assessment tool), adapting an employee's work to correspond to their work ability, or assigning an employee shifts so as to support recovery and regaining of work ability. Digitalisation and service design of existing forms of support for mental



health and work ability will be undertaken. Virtual mental health support training and coaching sessions will be designed, the content of which will be available for use beyond the end of the project period. The package will include actions to increase awareness of rehabilitation and familiarity with the services of the Social Insurance Institution (Kela). A shift in workplace culture is also sought, for the purpose of focusing on proactive work ability support in cooperation with occupational health care.

A virtual portal will be set up on the 'single digital gateway' principle to make it easier to find information on work ability support – the 'Work Ability House'. The virtual 'Work Ability House' will bring together methods, services and information content produced by various service providers, evaluated as being of high quality and effective. The 'Work Ability House' will contain tools for work ability assessment and a guidance service for finding methods for particular service needs; these methods will be immediately available, with guidance on how to use them. The 'Work Ability House' will consider the needs of employers (supervisors, HR), methods for employees' self-assessment and self-help work ability support methods, the information needs of occupational health care professionals and methods for working with clients. The virtual 'Work Ability House' will also refer users to the appropriate services (e.g. rehabilitation services) or provide information on benefits (e.g. partial sickness allowance).

For young people and for people of working age starting their working career or transitioning, low-threshold mental health support will be provided along with tools and knowledge for supervisors for helping young employees. Work ability, wellbeing and coping will be supported particularly in the occupations worst hit by the coronavirus pandemic and those where the perceived workload constitutes a health risk.

The purpose of the investment package is to foster robustly proactive work ability leadership rooted in the identification of human resources and risks and manifesting itself at the strategic level in the organisation. Organisations will be taught to identify needs for various kinds of support at various stages of an employee's career (young, mid-career, ageing) and to create career paths contributing to work ability. Managing disability risks will affect the cost trends of disabilities.

The actions to be taken will consider simultaneous support for mental and physical work ability, the link between workplace environment factors and employees' mental health, and the link between mental health and factors such as occupational accidents, costs, turnover and skills. Capacity for renewal and change agility will be fostered in workplace communities.

**Implementation:**

The Ministry of Social Affairs and Health is responsible for steering the implementation. For the actual implementation, an application round for government grants will be announced and the necessary procurements will be made, or a jointly funded project will be launched. There are several possible project participants and partners: research and development institutions in the sector, professional organisations, wellbeing and health organisations, the Social Insurance Institution (Kela), academic universities and universities of applied sciences, vocational education institutions, young people's workshops and student organisations.

The module concerning support for various occupations will be prepared in tandem by the Ministry of Social Affairs and Health and the Ministry of Finance. The action plan for working life and good mental health will be partnered with in respect of means and methods to support mental health. In respect of support for persons with partial work ability, the work ability programme will be partnered with. The networks will also cooperate closely with the WORK2030 programme included in the Government Programme. Other programmes, projects and networks will also be considered in cooperation.

**Investment target group**

The investment target group comprises supervisors and managers at workplaces, personnel, HR professionals, occupational safety and health officers, shop stewards and occupational health care experts. Actions will be targeted at both large and small workplaces. The target group further includes young employees at the beginning of their work careers, young people transitioning from training to employment, supervisors at the young employees' workplaces, and bodies that provide guidance and training for young people in vocational education and training.

**Compatibility with rules on State aid**

No conflicts with rules on State aid have been discovered in the project planning. The investments will be partly made with the aid of government grants. The investment is aimed at development work in the public sector or the third sector and not at competitive business.

**Timetable**

The actions will be carried out in 2022–2024.

### Open strategic independence and security matters

No direct impact.

### Trans-border and multinational projects

No direct impact.

### Green dimension in the component area

The actions in this component area will not have demonstrable positive impacts on the targets of the green transition, such as emission reductions or the adoption of renewable energy sources, but neither will it have negative impacts.

### Digital dimension in the component area

The investment and reform package in this component area is 24% supportive of the digital transformation.

Investment P3C1R1 'Nordic labour market service model' is related to the intervention field *Government ICT solutions, e-services, applications* (011) and is 100% supportive of the digital transformation, because the investment will involve creating the high-quality online services required for the client-oriented approach in the Nordic labour market service model and systems supporting the functions of employment services.

Investment P3C1I1 'World-class digital infrastructure to support migration of skilled labour' is related to the intervention field *Government ICT solutions, e-services, applications* (011) and is 100% supportive of the digital transformation, because the investment concerns information technology solutions and services for which the central government is responsible and which are used to support the administrative duties of the public administration. The investment will reinforce ICT services and telecommunications solutions that support the discharging of the duties of the public administration in various organisations and promotes the streamlining of residence permit processes through digitalisation.

Also, digital online tutoring and online platforms for support for mental wellbeing are being developed for the Ohjaamo guidance points. The support structure forms part of this bigger picture.

The reforms and investments support the digital transformation in various administrative branches, including in the duties of operators in employment and economic development services and social welfare and health care services. Digital solutions will significantly change the potential for evaluating clients' work ability and functional capacity with

jointly and nationally agreed indicators. Going forward, a shared knowledge base will facilitate leading with information in matters to do with work ability and employment support. Comparable nationwide data will support the deployment of best practices. The investments will facilitate new potential for clients themselves to monitor their work ability and functional capacity.

### Do No Significant Harm

The investment and reform package in the component area complies with the criteria of the Do No Significant Harm (DNSH) principle. For a more detailed description, see Appendix 3.

### Costs to be covered out of RRF funding

Investments in the package: EUR 170 million.

- Nordic labour market service model (investments in ICT systems and added resources for Employment and Economic Development Offices as required for implementing the model), EUR 90 million
- Streamlining work-based and study-based immigration and easing international recruitment (building an automation-based digital infrastructure to support the immigration of skilled labour), EUR 20 million
- Supporting young people (enhancing multiprofessional services and effectiveness at Ohjaamo guidance points), EUR 13 million
- Wellbeing at work, productivity and improving work ability in working life (setting up a new intermediate labour market operator, service system for persons with partial work ability, mental health actions to support work ability, public-sector work ability programme), EUR 47 million

## UPSKILLING AND CONTINUOUS LEARNING REFORM

### Description of component area:

**Policy area:** *Education and training*

**Targets:** *The reforms and investments in this component area will support upskilling and raising educational attainment and reskilling existing competences to cater to new competence needs in working life. Upskilling and raising educational attainment will boost the long-term growth potential and renewal of working life, enterprises and society at large. Digitalisation will be used to build completely new services for continuous learning and upskilling that can be provided across levels of education*

and across sectoral boundaries, and location-autonomous and time-independent. Forecasting of competence needs shows that the need for labour with university-level qualifications in particular will increase, and it is thus vital to reform university education systemically, making use of digitalisation.

#### **Reforms:**

1. *The aim with the continuous learning reform is to reform the competence services offered to the working-age population and how they are provided, to improve the forecasting of changes in working life and to target training and guidance to under-represented groups and to sectors undergoing structural change. Improving guidance and the mapping of skills will help people remain employed and part of the workforce and also make the individual investments in education and training more effective. The actions presented here will establish structures and operating models required for the reform and will accelerate implementation of the reform.*
2. *The continuous learning digitalisation programme will consist of two mutually complementary projects: a digital service package for continuous learning, spanning the entire education system across administrative boundaries, and a digitalisation and flexible learning package for the university level. The changes sought are systemic in nature and will facilitate the revitalisation of digital services, operating models and processes to support competence renewal. With these solutions, an increasing number of people will have access to or can be easily referred to the latest knowledge and education at reasonable cost, while the quality of the education will improve and its effectiveness will increase.*
3. *Upskilling, reforming continuous learning and digitalisation and modernisation of education in Åland will consist of three modules: digitalisation and modernisation of education; improving and updating digital control and leadership systems; and new learning paths in digitalisation, automation and renewable energy in study modules.*

#### **Investments:**

1. *Starts at universities will be increased to fuel the renewal of the national economy and to mitigate the negative impacts of the coronavirus crisis by improving access by young people to university studies.*

#### **Estimated costs:**

***The overall costs of the continuous learning reform will be about EUR 84 million, of which EUR 44 million is to be covered out of the RRF.***

***The overall costs of adding starts at universities will be about EUR 35 million, of which EUR 15 million is to be covered out of the RRF.***

***The overall costs of the continuous learning digitalisation programme will be about EUR 46 million, which is to be wholly covered out of the RRF.***

***Åland: The overall costs of upskilling, continuous learning reform and digitalisation and modernisation of education will be EUR 2.7 million, which is to be wholly covered out of the RRF.***

## Principal challenges and targets

### a. Principal challenges

Working life is changing rapidly, and so are its competence requirements. The principal change factors are globalisation, technological advancements and age structure. An increasing number of people find themselves having to switch occupations.

Technological advancements eliminate old jobs and occupations but also create new employment. The change is asymmetrical in terms of the skills required, because the majority of the new jobs created require university-level competence. At the same time, the employment outlook for people without post-comprehensive education is declining as the number of low-skill jobs decreases. The employment rate for persons of working age who had no education beyond comprehensive school was only 43% in 2018, yet there are more than 300,000 of them in the labour force.

Structural change in the economy is picking up pace with the coronavirus pandemic. Unless the skills of the population can match up to new demands in working life, the potential of growth industries in revitalising the labour market and in fuelling economic growth cannot be realised. It is better for both individuals and society at large if transitions from job to job or from occupation to occupation do not proceed via unemployment. Without carefully considered investments in upskilling, we are facing a shortage of skilled labour that will hinder economic renewal and, at the same time, increasing unemployment among people with a low educational attainment. We will then be unable to leverage the potential of growth industries.

The OECD noted in its report *Continuous Learning in Working Life in Finland*, published on 19 February 2020, that Finland faces significant challenges in alignment of education and training, leading to disproportionate concentration of education and the complete exclusion of certain population groups from upskilling and a mismatch of supply and demand on the labour market.

Digital skills and competencies must be reinforced to support the upskilling needed to deal with the transition in working life and in society at large, and this will require improvement of both infrastructures and services. Digitalisation supports a society of continuous learning that is networked in new ways, is location-autonomous and facilitates new kinds of services. This will require secure and reliable services, practices and processes.

## **b. Targets**

The target is to invest in upskilling and raising educational attainment in Finland and to reform the continuous learning system to correspond to future competence needs. Raising skill levels and educational attainment will boost the long-term growth potential and renewal of working life, enterprises and society at large, and employment.

Existing services supporting continuous learning and upskilling will be updated, and new services will be created to make smart use of knowledge bases and to bring together existing online services on a client-oriented basis and across administrative boundaries. These services will help renew operating models in upskilling and education to support continuous learning.

The continuous learning reform and the continuous learning digitalisation programme address the recommendation given in the 2020 European Semester whereby Finland should improve the skills of adults, including those with a low educational attainment, in fields of relevance for the labour market. Reskilling and continuing education are in a key role in retaining employability in the labour force in an economy that is becoming increasingly digital and increasingly green. The reforms also address the 2019 recommendation to improve incentives to accept work and enhance skills and active inclusion, notably through well-integrated services for the unemployed and the inactive. The recommendations given in the 2020 European Semester also raised the importance of ensuring a sufficient number of university starts vis-à-vis the employment outlook in each field and region.

The continuous learning reform and digitalisation programme support the EU flagship area 'Reskill and Upskill', where investments and reforms are expected to focus on digital skills and training and on upskilling in all age groups.

Upskilling and continuous learning reform support the targets of the social rights pillar for equal opportunities and access to the labour market so that everyone will have the right to high-quality, inclusive teaching, to training and lifelong learning for upskilling and reskilling that will allow them to function as full-fledged members of society and to engage with the labour market.

The continuous learning reform and digitalisation programme will support smooth transitions from working life to training and back throughout an individual's career. Targeted actions will improve the employment prospects of under-represented groups in particular and will facilitate the reskilling of persons currently employed in sectors undergoing structural change. The reform will also boost regional vitality.

On the social scoreboard of indicators, the reform will boost 'Adult participation in training', 'Tertiary education attainment' and 'Individuals' level of digital skills'. The reforms and investments will also have an indirect impact in reducing the gender gap in employment, increasing general government expenditure in education, raising the employment rate and lowering the unemployment rate.

The reforms and investments also contribute to the targets of the European Skills Agenda, the Pact of Skills, the European training area and the new *VET Recommendation (2020/C417/01)*.

### c. National strategic circumstances

The component area is linked to the Government Programme objective that states that the level of education and competence among the population will rise at all levels of education, differences in learning outcomes will decrease, and educational equality will increase, and also that continuous learning will be reformed.

According to the Government Programme, a parliamentary reform of continuous learning will be undertaken to respond to people's lifelong need for upskilling and reskilling. The outline for parliamentary preparation of the reform was completed in December 2020 ('Competence secures the future. Parliamentary policy approaches for reforming continuous learning.').

The parliamentary group outlined 27 actions for attaining the targets. EU RRF funding will be used for funding actions with significant leverage for achieving the reform. The parliamentary reform project will continue until 31 March 2023.

At the government budget session in autumn 2020, the Government decided to reinforce the organising of continuous learning. In accordance with the Government decision, the Ministry of Education and Culture and the Ministry of Economic Affairs and Employment will work with labour market organisations and regional administrations to set up a service centre for continuous learning and employment services that could open in 2021. The service centre will play a key role in delivering the key actions in the continuous learning reform.



The vision for Finnish higher education and research in 2030 stated that Finland needs more skilled labour, high-quality university-level education and RDI activities than at present, along with robust links to new information produced elsewhere. The Government Programme states that we will look for solutions to increasing the level of education, reducing the backlog of applicants and addressing the lack of skilled workers across sectors and regions by significantly increasing the number of starts in higher education. In the interests of upskilling and raising educational attainment, the Government has already decided to increase the number of starts at universities by more than 10,000 in the period 2020–2022.

It is also noted in the Government Programme that digitalisation will be mainstreamed at the various levels of education and that the university system will be developed as a platform for learners and continuous learning. Information systems will be improved to facilitate the flexible completion of studies at various universities.

## Description of reforms and investments in the component area

### a. Reforms

#### **REFORM 1: Reform of continuous learning (P3C2R1)**

##### **Challenges**

Technological transition, internationalisation, global challenges, the state of the environment and climate change are shifting competence requirements in the population. The coronavirus pandemic has, among other things, accelerated the rate of change in digitalisation and the transition in working life, thereby raising new challenges in the labour market.

The OECD noted in its report *Continuous Learning in Working Life in Finland*, published on 19 February 2020, that Finland's education system is of a high quality and that Finnish adults have a high skill level and high participation in adult education. However, Finland faces significant challenges in alignment of education and training, leading to disproportionate concentration of education and the complete exclusion of certain population groups from upskilling and a mismatch of supply and demand on the labour market. In order to respond to future changes in working life, Finland should be able to pursue a more comprehensive policy of continuous learning and to focus education and training much better than at present. The OECD recommended for example that Finland should draw up a comprehensive strategy for continuous learning, make training offers more labour market relevant, develop a programme of short courses as an alternative to degree programmes, strengthen steering mechanisms in training offers and systematise the use of skill assessment and forecasting information. The OECD further recommended support measures, such as outreach activities, guidance and tailored education programmes, for adults with low skills.

## **Targets**

The continuous learning reform will boost the long-term growth potential and renewal of working life, enterprises and society at large while improving employment and regional vitality. It will also make education and training programmes more responsive to the needs of working life and make the service system more flexible and reactive. The reform will speed up our recovery from the coronavirus crisis and improve the availability of skilled labour. The aim is to avoid a lack of competence becoming an obstacle to the recovery of working life and of society at large. The reform will also improve the employment prospects of under-represented groups in particular and will facilitate the reskilling of persons currently employed in sectors undergoing structural change.

The policy outline for the parliamentary continuous learning reform as specified in the Government Programme was completed on 17 December 2020. The reform project will continue until 31 March 2023. In 2021 and 2022, the actions needed for implementing the policies will be charted, including legislative amendments, funding and operating models. The targets and actions under RRF funding have been defined so as to support attainment of the targets of the parliamentary reform. The actions presented here will establish structures and operating models required for the reform and will accelerate implementation of the reform. After the project period, the parliamentary continuous learning reform and the continued operation of the structures set up will be funded out of the central government budget.

The parliamentary reform includes targets set for long-term development and key indicators for monitoring this. The most important indicators are: skill level and educational attainment of the working-age population; participation in continuous learning; and skills shortages underlying recruitment problems in enterprises. Target levels will be set for these key indicators during spring 2021.

Effectiveness monitoring for continuous learning actions will be designed as part of the parliamentary reform. The VN TEAS project will involve investigating the effectiveness of continuous learning actions launched in 2020 and creating a qualitative and quantitative monitoring system. The project results will be available in 2022.

## **Nature and scope of the reform**

The purpose of the continuous learning reform is to manage continuous learning as a phenomenon-based, mainstreamed approach. This is a major systemic reform across administrative boundaries for the purpose of comprehensively analysing the offering, funding and benefits of the education and training provided for the working-age population. The reform will have an impact on the upskilling and reskilling of Finland's entire working-age population. The actions proposed for funding under the EU RRF will enhance and accelerate this systemic reform.

**Implementation:**

The continuous learning reform will involve improving access to and the effectiveness of forecasting data; creating an education and training offering that is based on forecasting data, has working-life relevance and is targetable; and increasing outreach activities, support measures and low-threshold education and training for under-represented population groups. Guidance, skills surveys and competence needs assessments will be deployed to prevent the flow of people of working age into unemployment and out of the labour force, and simultaneously to improve the supply of skilled labour. Competence identification tools will be developed to improve the targeting and effectiveness of education and training investments.

Key measures include the following:

- Setting up a continuous learning and employment service centre to allocate continuous learning resources and to facilitate putting the reform into practice.
- Launching training programmes to address structural changes in working life. Focusing training specifically on the digital transformation (at least 15% of the training to be funded) and the increasing presence of online platforms and new production methods in working life and in society at large, and on providing citizens with a command of these new tools. Training will also be provided to support a just transition to a carbon-neutral society (at least 5% of the training to be funded). Designing, piloting and delivering a supplementary training model independent of level of education.
- Improving the skills of population groups under-represented in training (e.g. the elderly) through outreach activities, guidance services, support measures and low-threshold training. Introducing studies to enhance basic skills and capability for further study.
- Developing a forecasting system for labour and competence needs, with specific reference to the need for upskilling among the working-age population. Particular development points include the medium-term forecasting model, classification of competence needs and a new forecasting reporting system.
- Enhancing guidance coordination. Compiling information on the availability and quality of guidance services, practices and tools for the use of providers of guidance services. Improving the skills of professionals in guidance services and providing them with continuing education on digital skills, language and culture awareness, the green transition and promoting gender equality.
- Designing and delivering models for identifying individuals' competence needs and for motivating and launching upskilling at workplaces. The aim here is to prevent individuals from drifting into unemployment and out of the labour force.

- Creating tools and methods for identifying competence acquired at the workplace or elsewhere by augmenting the frame of reference for degrees and other qualifications, or by introducing digital badges and other skills descriptions.

The Ministry of Education and Culture and the Ministry of Economic Affairs and Employment are jointly responsible for the progress of the reform and for steering the continuous learning and employment service centre, which in turn is responsible for providing funding for training and other skills services and, to a large extent, for coordinating development measures. The training funded by the service centre will be provided by educational institutions, universities and other providers of knowledge services. The service centre will work closely with regional operators. Development of the forecasting of labour and competence needs will be the responsibility of the National Agency for Education, the KEHA Centre – i.e. the Development and Administration Centre for Centres for Economic Development, Transport and the Environment (ELY Centres) and Employment and Economic Development Offices (TE Offices) – and the service centre. The KEHA Centre and the service centre will be responsible for work on guidance, competence assessment and validation. This is to be undertaken in close cooperation with stakeholders.

### **Stakeholder input**

The continuous learning reform will be monitored and supported by a parliamentary group with representatives from all parliamentary parties. The work of the parliamentary group will be supported by a group of representatives of trade union federations. The reform will also have an extensive monitoring group with representatives from key national stakeholders and from various levels of regional administration.

Allocation of the appropriations for the continuous learning and employment service centre will be governed by a body consisting of representatives of central labour market organisations.

A coordinating project will be set up for improving forecasting, involving the Ministry of Education and Culture, the continuous learning and employment service centre, the National Agency for Education and the KEHA Centre.

Labour market organisations and other key stakeholders will be involved in the competence assessment and validation project.

### **Expected complications**

Potential complications for implementing the reform include: delay in the launch of the continuous learning and employment service centre; conflicting targets of the parties

involved; lack of necessary technological know-how; and changes in the operating environment. Delays may lead to additional costs and postpone the attainment of benefits.

If necessary, obstacles will be reacted to, and operations will be adapted by prioritising essential elements so that the targets set can be attained.

### **Reform target group**

The actions of the continuous learning reform are aimed at everyone, regardless of their labour market status: employed persons, unemployed persons and persons outside the labour force. The new, targeted training will be principally aimed at employed persons and persons outside the labour force, who currently have only limited potential for finding flexible, tailored training packages. The target here is to encourage upskilling among the working-age population, thereby facilitating remaining at work and mitigating the risk of unemployment. The training offering will be mainly aimed at competence needs arising with the emergence of new innovations or technologies.

The target group for the actions in the reform includes operators providing the services: education and training providers, universities, educational institutions and other providers of knowledge and guidance services. Development projects will be deployed to improve the quality and consistency of services offered to individuals and enterprises.

### **Compatibility with rules on State aid**

Some of the funding will be allocated to educational institutions and universities that form part of the public education system and are therefore under public supervision. However, their operations are not considered business operations, and thus the rules on State aid do not apply.

Some of the funding will be allocated to education and training providers through procurement procedures that align with the TFEU principles. This will ensure that no single operator will gain an advantage, assuming that prices are set at market rates.

The exact distribution of funding between the two has not yet been decided.

### **Implementation timetable**

The continuous learning reform will be implemented in 2021–2024.

## **REFORM 2: Continuous learning digitalisation programme (P3C2R2) Challenges**

### **Challenges**

The ability of Finnish society to thrive in global competition depends on a high skill level.<sup>16</sup> Finland's education system needs a systemic overhaul to be able to offer the newest skills and upskilling amidst increasingly tight international competition. The coronavirus crisis has exacerbated acute problems in the labour market and accelerated structural change, and therefore the performance of the education system and employment services must be ramped up in the very short term.

Digitalisation is a major change driver and resource for the future. It will have an impact on skill and competence requirements in working life and on means for upskilling in keeping with changes in the operating environment. The digital transformation is a huge systemic change, requiring broad-based, long-term shifts in attitudes, practices and structures, all happening at the same time.

We must seek solutions to how the public administration, universities and education providers can operate across administrative boundaries and how the various upskilling operators and services can act in diverse environments to formulate the solutions required by learners.

An extensive digitalisation programme is needed to produce learning-oriented operating models, digital services and knowledge bases to cater to individuals and to support We need to develop existing and new digital services to support continuous learning and systemic revitalisation of universities and their client-oriented and needs-oriented service packages in order to support systemic change in society at large.

The digital transformation and new smart services depend on reliable, available high-quality data. Because of the fragmented nature of currently available data, new knowledge bases must be built and existing ones expanded so that the required data will be of high quality and available to the various services on time and correspond to a wide range of information needs. We must shift from an organisation-oriented approach to a client-oriented approach. Learners must be given the opportunity to grow their skill capital flexibly, depending on their circumstances at any given time, throughout their lives.

The continuous learning digitalisation programme will consist of two mutually complementary packages: a digital service package for continuous learning, spanning

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16 National Agency for Education (2020): *Koulutus ja työvoiman kysyntä*. Available: [https://www.oph.fi/sites/default/files/documents/koulutus\\_ja\\_tyovoiman\\_kysynta\\_2035.pdf](https://www.oph.fi/sites/default/files/documents/koulutus_ja_tyovoiman_kysynta_2035.pdf) (in Finnish).

the entire education system across administrative boundaries, and a digitalisation and flexible learning package for all universities. The compatible solutions to be devised in the programme will offer an improved range of services, service chains and service packages to cater to clients' needs while reducing duplication of work by various operators and making more efficient use of resources and practices.

The digitalisation programme will genuinely overhaul operating practices across administrative boundaries, as it will be jointly set up by the Ministry of Education and Culture, the Ministry of Economic Affairs and Employment (including the National Agency for Education and the KEHA Centre) and universities. Actions will be taken forward in close cooperation with stakeholders.

The point here is not just to build a digital infrastructure but to achieve a broader reform of operating practices and cultures and the legislative framework so as to harness the full potential of digital solutions.

The continuous learning digitalisation programme addresses the recommendation to focus investments on the green and digital transition. The reforms also address the 2019 recommendation to improve incentives to accept work and enhance skills and active inclusion, notably through well-integrated services for the unemployed and the inactive. The reform is related to the flagship area 'Reskill and Upskill'.

### **Targets**

The target is to deliver a continuous learning digitalisation programme to facilitate and accelerate an overhaul of the education system and employment services by creating a digital operating environment and new services. The changes being sought are systemic in nature, and their positive impacts will be multiplied through increased efficiency in education investments.

Changes can be achieved in stages, and some services can be brought on stream relatively quickly.

There are currently both national services and operator-specific services supporting continuous learning. As an example, Studyinfo.fi is a service that is already up and running. It is a portal for applying to degree programmes, upper secondary schools, vocational education institutions, academic universities and universities of applied sciences. The service had some 14.3 million users in 2020, with an average of 42,000 daily visits. Job Market Finland represents a significant reform in digital employment services.

However, the current digital services are too disparate, incompatible and insufficient for attaining the target envisioned here. As an example, private individuals do not have

access to education and training search engines with a broad offering available in a flexible and timely manner nationwide (e.g. degree programme components, modules, study packages, targeted training). There is also no relevant labour market information to enrich the information on education and training offerings. There is thus great variation in whether an individual can find the information and support needed to make decisions about education, training and a work career. Secondly, the persons requiring upskilling, education organisations and guidance service providers do not have access to nationwide digital skill survey services or guidance or career planning services. Thirdly, it is currently not easy for learners to piece together the package they need from the education and training offering on various levels of education or to make use of data relevant for themselves. Fourthly, it is currently not possible to build digital packages or chains in education and training services, knowledge services or employment services to respond to clients' needs in an optimal way.

### **Nature and scope of the reform**

The reform is a major client-oriented and cross-sectoral project for which two administrative branches are jointly responsible: the Ministry of Education and Culture and the Ministry of Economic Affairs and Employment, along with universities. The reform aims to achieve a systemic and functional change. Several operators will make use of the services to be devised in the reform: individuals, education and training operators, the employment and economic development administration, guidance service providers and workplaces. The service is estimated to have several million users per year.

### **Implementation:**

The Ministry of Education and Culture is responsible for coordinating the reform package with the Ministry of Economic Affairs and Employment and the Digivisio project organisation, in which all universities are involved. The digitalisation programme consists of two mutually complementary and closely connected packages: a continuous learning digital service package covering the entire education system across administrative boundaries, and a programme to reinforce digitalisation of higher education and flexible learning.

#### *1. Continuous learning digital service package*

The target is to build a nationwide digital service package for continuous learning, available to individuals throughout their lives to facilitate smooth transitions from education and training to working life and vice versa.

It consists of interconnected intelligent online services, such as services for assessing competence and identifying prior learning, guidance services, search services for education, services for the provision of education, and related data



resources. The digital services to be created will be independently usable by clients or available during guidance service sessions, lending support to decision-making. The digital services will be easily accessible, independent of time or place.

The service package will be built up of existing services and their knowledge bases (Studyinfo, Job Market Finland) and completely new services and knowledge bases (e.g. guidance and survey service) along with MyData solutions. The existing robust service infrastructure will allow new services to be quickly set up and introduced; it provides a sustainable and cost-efficient platform for the service package, allowing integrated development, as opposed to all the services being created and maintained separately.

The services in the package will improve the potential of citizens on the one hand and workplaces on the other to respond to changes on the labour market and in society at large in the recovery from the coronavirus pandemic and also in the longer term. Citizens will be more involved in society at large, they will have better potential for finding and retaining employment, the employment rate will rise, the balance of public finances will improve, and society will grow stronger in competitiveness and resilience. The new services in the service package will facilitate and accelerate the design and delivery of new, innovative education and training models.

The service package will support the targets of the continuous learning reform and the operations of new service structures, such as the continuous learning and employment service centre, the adoption of the Nordic labour market service model, the evolution of multiprofessional services, the availability of education and training, the improvement of guidance services for citizens and employers, and the reinforcement of regional service ecosystems. The solutions will further sustain cross-sectoral cooperation, the availability of skilled labour, the matching of labour supply and demand and the general functioning of the labour market.

The package is a significant and pioneering venture prepared in cross-sectoral cooperation, and it will have a broad impact across various client groups. The Ministry of Employment and the Economy and the Ministry of Education and Culture are responsible for delivering the component area. Planning for the continuous learning digital service package began in 2020, and development can begin in late spring 2021. The performance agreements in both administrative branches contain provisions for the implementation of the package.

## 2. *Enhancing digitalisation of higher education and flexible learning*

Opportunities for all learners to engage in flexible learning will be guaranteed by reforming Finnish higher education through digitalisation (Digivisio 2030).

Digitalisation is a major force for change in society and will require realignment in operating practices, in the providing of teaching and in the content of education at universities. With enhanced digitalisation of higher education, shared data and shared platforms will facilitate quick and cost-efficient service development, and with universities having intercompatible data models, all solutions can be used whenever and wherever learners wish. Supply and demand of education will meet in a client-friendly and efficient way.

With enhanced digitalisation of higher education and of flexible learning, services and content can be created to cater to learners at various stages in their work careers or life spans, so as to contribute to high skill levels in the adult population, national competitiveness and international impact.

The aim is to create an open and acknowledged learning ecosystem that fosters learning results through its quality, diversity, flexibility, efficiency and adaptability to learners' life situations and needs. The aim is that degree students, lifelong learners and those without a student place can study flexibly, selecting courses from all Finnish higher education institutions irrespective of organisational boundaries and geographical location. The learning ecosystem will also provide a platform for research, artistic work and innovations, thus yielding broad-based benefits for individuals, for working life and for society at large.

The aim is to support flexible and open higher education by reforming the operations of universities and by creating customised education and training offerings, making it easier for learners to find the teaching content they need and making higher education more easily available to population groups who traditionally do not progress to higher education. The solutions produced will promote upskilling in all age groups, allow for location-autonomous learning, offer learners guidance through a variety of means including AI in various life situations and facilitate the offering of e-learning content of high quality in terms of pedagogy and content, thus maximising the use of the resources of universities in teaching and in offering education and training. The shifts in cultures and practices that are sought here will increase the resilience of universities and also support international education and teaching cooperation.

This is a historically unique higher education development project, and as such it is backed by all Finnish academic universities and universities of applied sciences. Finnish universities currently have more than 1,400 information systems. Some amalgamated solutions have been achieved in various university development projects, but progress in digital services has so far been up to individual universities or consortia of universities. While this has allowed for agile experimentation, the lack of compatible data platforms and a national knowledge base makes it impossible to achieve the targets of Digivisio 2030 with current arrangements. Without major structural overhauls, an increasing volume of resources will be tied up simply in transferring data and in building compatibility between individual systems. A package to catalyse reform, digital competence and international competitiveness throughout the entire university sector will require a profound shift in principles, operating models, information management and system architecture. This package supports the higher education and research vision, Digivisio 2030.

The Ministry of Education and Culture is responsible for coordinating the reform package with universities and the Digivisio 2030 project organisation. Services can be provided nationwide, by an individual university, by a consortium of universities or by enterprises. Some solutions will be such that their production and maintenance should be integrated into the common framework of national services. All Finnish universities are in favour of Digivisio 2030, the project to digitalise higher education, and they launched a joint planning effort in autumn 2020.

The mutually complementary solutions will offer an improved range of services, service chains and service packages to cater to clients' needs while reducing duplication of work by various operators and making more efficient use of resources and practices. Implementation will be based on open data as far as possible. The data required by the services will be made available to third parties as well, as far as possible.

In the continuous learning digitalisation programme, a digital service package for continuous learning, spanning the entire education system across administrative boundaries will be created, along with a digitalisation and flexible learning package for the university level. This will be delivered in stages and will consist of the following:

1. a jointly defined overall architecture
  - descriptions of the operating and management model for permanent services
2. investigating and enacting any legislative amendments needed
3. new digital structures and functions
  - identity management
  - smart guidance and charting services
  - one-stop shop for education and training offerings and labour market data
  - management and use of own data according to the Mydata principle
  - support for forecasting with information generated in the service, and improving the usability of forecasting information in the service
  - design of client-oriented, cost-efficient service chains
4. system integrations, data transfer interfaces and knowledge bases
  - expanding knowledge data, education and training offering data and labour market data and making them available to all services (according to open data principles)
  - information solutions for reinforcing the digitalisation of higher education and of continuous learning
  - other improvements to service chains and information management processes
5. skills for cross-administrative knowledge-based management
  - improving services and analytics by leveraging data from various administrative branches
6. fostering and supporting changes in operating practices and cultures in administration, at universities and at educational institutions
7. consistent client guidance that supports the updated process and utilises digital solutions

The Digivisio project run by ministries and universities has the capability to launch the continuing learning digitalisation programme as soon as the funding is confirmed.

### **Stakeholder input**

The continuous learning digitalisation programme will be carried forward in cross-sectoral cooperation between education and training operators, the employment and economic development administration and other stakeholders while considering other national development trends. A network will be set up for stakeholder cooperation, ensuring the involvement of various stakeholder groups. The package will be designed and delivered jointly by the Ministry of Education and Culture, the Ministry of Economic Affairs and Employment, the universities' Digivisio 2030 project, the National Agency for Education, the Centres for Economic Development, Transport and the Environment, the KEHA Centre

and other education and training operators. The work will be steered by a separate group, ultimately by the central government.

### **Expected complications**

Potential complications for implementing the reform include: conflicting targets of the parties involved; lack of necessary technological know-how; and changes in the operating environment. Delays may lead to additional costs and postpone the attainment of benefits. If necessary, obstacles will be reacted to, and operations will be adapted by prioritising essential elements so that the targets set can be attained.

### **Reform target group**

The target group for the reform consists in particular of private individuals looking for education and requiring education and training services; universities and other education and training operators; guidance service providers; working life representatives and operators; the employment and economic development administration; other parties in the public administration; and, ultimately, society at large. The improved knowledge base will also benefit decision-makers and decision-making processes. Services

The services will be available to clients either independently or in guidance sessions, and they will support other continuous learning services and service structures.

### **Implementation timetable**

The digitalisation programme will be built up in stages between 2021 and 2024. Planning began in 2020, and development can begin in late spring 2021.

### **State aid**

The investment does not involve any aid falling under EU rules on State aid.

## **REFORM 3: Upskilling and continuous learning reform, digitalisation and modernisation of education, Åland (P3C2R3)**

### **Challenges**

Technological transition, internationalisation, global challenges, the state of the environment and climate change are shifting competence requirements. At the same time, the coronavirus pandemic has accelerated digitalisation and changed the face of employment while raising new challenges on the labour market.

The pandemic has caused substantial financial damage and unemployment in the Province of Åland, and some changes on the labour market and in competence needs are likely to be permanent. The impacts of the coronavirus pandemic, with closed borders and severe restrictions on travel, constituted the worst possible scenario for businesses and the economy in Åland. Shipping and tourism were hit the hardest: passenger travel

decreased by 67% and overnights decreased by 56% in 2020. Shipping is a livelihood, but it is also the logistics system of Åland, carrying the majority of goods and people. The impacts of the pandemic have spread to other sectors too: turnover is down in the transport, accommodation, restaurant, retail, industry, fishing and construction sectors. In 2020, the GDP of Åland declined by 16%, and the unemployment rate rose to its highest level in modern times, 9.5% – and up to as high as 13.1% for under-25s.

Because it is probable that the business structure of Åland will undergo a profound and permanent change, it is likewise probably that many current skillsets are at risk of becoming obsolete and that people with such skillsets will face increasing difficulty in finding employment on the labour market. There is a great need for reskilling, not least at the university level, to enable employment in new sectors and to boost recovery and economic growth in Åland. Åland has one of the lowest average educational attainments in Finland (ÅSUB statistics), which further underlines the need for continuous learning and upskilling in a world of increasingly rapid change and digitalisation. The Province of Åland consists of islands, and it is therefore bound by the same geographical restrictions and demands as all other island and rural regions in Europe. Digitalisation is an excellent tool for overcoming some of the difficulties caused by geographical fragmentation and long distances. Indeed, making studies more accessible and flexible through digitalisation is specifically mentioned in the Government Programme of the Government of Åland.

In keeping with the UN Strategy for Sustainability Management, energy issues – particularly the transition to carbon-neutral energy supply and fossil-free transport – are an important focus area in the current Åland Government Programme (2019–2023). The Government of Åland intends, among other things, to draw up a road map for large-scale offshore wind farms while promoting fossil-free marine and land transport. The Province has a Climate Strategy whereby it aims to be completely fossil-free and carbon-neutral by 2051.

The Province of Åland has a well-established Development and Sustainability Agenda (bärkraft.ax), which is consistent with the sustainable development principles of the UN. There are seven strategic development targets on the Åland Agenda to be attained by 2030:

*Target 1:* Happy people whose inherent resources increase

*Target 2:* Everyone feels trust and has real possibilities to participate in society

*Target 3:* All water is of good quality

*Target 4:* Ecosystems in balance and biological diversity

*Target 5:* Attractive for residents, visitors and businesses

*Target 6:* Significantly higher proportion of energy from renewable sources, plus increased energy efficiency

*Target 7:* Sustainable and mindful patterns of consumption and production

The proposed reform for upskilling and continuous learning reform through digitalisation and investments in education and training support the transition to renewable energy sources and are in line with targets 1, 2, 5, 6 and 7 on the Development and Sustainability Agenda for Åland and with EU flagship areas 1, 5 and 7.

The Government Programme of the Government of Åland (2019) emphasises digitalisation and better availability of studies during the programme period. The training agreement signed by the Åland University of Applied Sciences with the Government of Åland (2021–2023) and the University's own strategy set multiform teaching and digital pedagogy as key targets for the programme period. Developing a new master programme for automation and renewable energy, and digitalising the University's control and management system along with participating in the national Digivisio 2030 project are included in the University's strategy. The reform will also address these needs and targets.

### **Targets**

Upskilling and lifelong learning will support long-term growth potential and renewal in working life, entrepreneurship, employment and society at large. Digitalisation will enable the creation of completely new services that make smart use of knowledge bases and bring together existing online services on a client-oriented basis and across administrative boundaries.

Targets up until the end of 2024:

- Multiform, student-oriented digital teaching will be included in all university studies from Bachelor's degree programmes to postgraduate studies. This development work will simplify and enable university-level studies for a broader group of students, independent of physical distance or life situations, and also allowing for combining work and study.
- The digital control and management system of the Åland University of Applied Sciences has been updated and enhanced, as a result of which it can be incorporated in or feasibly linked to national knowledge bases and other national digital continuous learning ecosystems (Digivisio 2030) so that students at the University will have equal study opportunities compared with other Finnish universities.
- Study modules have also been updated and revised because of the digitalisation reform. By the end of 2024, two new Bachelor's and Master's degree programmes will have been developed and piloted in the fields of digitalisation, automation and renewable energy. The new study modules also support RDI in the aforementioned fields and improve the potential for the green transition in Åland. They will also have a long-term employment impact.

These proposed reforms are expected to have long-term positive impacts that will continue to increase after the programme period, as student numbers and the use of digital resources and teaching will grow over time. Having a better and more diverse competence in and knowledge of digital tools and systems is also expected to have a positive impact on working life and growth in Åland, as employees become better equipped to deal with changes in working life.

### **Nature and scope of the reform**

The upskilling and continuous learning reform will foster long-term growth potential and a renewal of working life, entrepreneurship and society at large, besides having a positive employment impact in and near Åland. The services to be developed with the digitalisation of the control and management system of the Åland University of Applied Sciences and the interfaces to national digitalised services will be used by University staff and several other parties: students, alumni, people in working life, other education and training providers, residents of Åland and national authorities. The reform will link the services and students of the University to the general national digitalised education and training ecosystem. The reform will foster the upskilling of a couple of thousand students in Åland each year.

### **Implementation:**

The Åland University of Applied Sciences is the authority responsible for all parts of this reform. The University is publicly funded and directly subordinate to the Government of Åland, which will supervise the projects and collaborate on issues of university policy and legal points, besides providing an official link to the Ministry of Education and Culture on the mainland. The University works with other universities of applied sciences in Finland and with the CSC on educational development and the digital reform of continuous learning.

Implementation of the reform consists of three closely interlinked modules:

#### 1. *Digitalisation and modernisation of education and training*

Teaching at the University will be reformed so that digital teaching methods to support multiform teaching will be incorporated in all programmes, continuing education and also to Open University courses and other courses as applicable. The reform will facilitate flexible studies (full-time/part-time) for individual students (e.g. flexible exchange of courses with other universities and continuing education for those already in employment). Various continuing education courses may be offered to broader target groups, independent of their physical location. Increasing modern digital teaching will make it easier for residents in the archipelago to attend Open University courses, for example. The reform will require considerable



investments in introducing multiform teaching (further training for teachers, teaching support and technical support for digital teaching) to leverage digital teaching and its infrastructure.

2. *Development and updating of digital control and management systems*

The Åland University of Applied Sciences is participating in Digivisio 2030, the joint development project involving all Finnish academic universities and universities of applied sciences. The purpose of the project is to open up national learning and education databases to make them accessible to private individuals and to society at large. Another aim is to facilitate the development of digital multiform teaching and the renewal of universities' IT systems. By 2030, Finland will have an open and acknowledged learning ecosystem that will also support RDI and working life. Apart from actions in the joint Digivisio 2030 project, broad-based development of online administration systems is needed (study registers, data transfers to shared national information systems, other university administration systems, etc.) along with the design of digital teaching at the Åland University of Applied Sciences. The Åland University of Applied Sciences has considerable development needs that it must fulfill in order to offer its students the same services as universities in mainland Finland, because the University so far lacks usable systems for 'Haka' identification of students or for drawing on national study registers (Koski, Virta), and also because the University lacks the ability to make full use of the systems offered to applicants by the national Studyinfo service and other national systems and registers in respect of universities in mainland Finland.

3. *New study paths in digitalisation, automation and renewable energy as part of the digitalisation and modernisation of study modules*

As part of the reform, the Åland University of Applied Sciences is revising and updating its study offering and is creating new study paths in the fields of automation and renewable energy (Bachelor's and Master's). These programmes are rooted in digitalisation, AI and other ICT solutions. Thanks to these new programmes, the University can train engineers in emerging fields where training opportunities so far are few and far between. Successful introduction of training alternatives and development of RDI call for new infrastructure (e.g. VR/AR, AI and testing systems for solar energy, wind energy and geothermal energy). The investments will support digitalisation, robotics and AI use and a transition in Åland towards sustainable energy.

**Stakeholder input**

The target group principally comprises university students, both in degree programmes and through the Open University. The actions apply to everyone regardless of labour market status: employed persons, unemployed persons and persons outside the labour market. The aim is to create new degree programmes and to modernise existing ones through digitalisation and also, through helping working-age adults update their skills, to promote job retention or help persons find new employment swiftly through upskilling. This will also reduce the risk of unemployment. Persons in employment and persons outside the labour force currently only have limited opportunities for finding flexible and suitable training. Particular attention is being focused on new competence needs, which are arising due to the energy transition and in emerging sectors. All sectors of society are involved in cooperation (businesses, public sector, third sector) to ensure that training or parts of it can be targeted and improved so as to support current and future needs of working life in the best possible way. Cooperation is also pursued with other universities in digitalising and modernising training and in shaping new degree programmes.

The University's control and management system is being digitalised in close cooperation with the Government of Åland, the Digivisio 2030 project and the national authorities responsible for various study registers and databases.

**Expected complications**

Actions and development efforts may be complicated by legal obstacles arising from the autonomous status of Åland, delays to reforming the University Act of Åland, delays in deliveries of new procurements, and possibly difficulties in finding consultation services. A lack of time and inadequate technological know-how of teachers and other staff may also cause delays and even prevent some planned actions from being implemented.

**Reform target group**

The actions apply to everyone regardless of labour market status: employed persons, unemployed persons and persons outside the labour market. The aim is to create new degree programmes and to modernise existing ones through digitalisation and also, through helping working-age adults update their skills, to promote job retention or help persons find new employment swiftly through upskilling. This will also reduce the risk of unemployment. Persons in employment and persons outside the labour force currently only have limited opportunities for finding flexible and suitable training. Particular attention is being focused on new competence needs, which are arising due to the energy transition and in emerging sectors.

**Implementation timetable**

The proposed actions will be implemented between 2021 and 2024, with the emphasis on the first three years. From 2025, positive impacts are expected to be seen in the quality,

availability and flexibility of education and training, in employment and in student numbers, along with increasing growth in Åland due to competence in new sectors and a more highly skilled labour force. These impacts are expected to be permanent in the long term.

#### **INVESTMENTS:**

**INVESTMENT 1: Starts at universities will be increased to fuel the renewal of the national economy and to mitigate the negative impacts of the coronavirus crisis by improving access by young people to university studies. (P3C2I1)**

#### **Challenges**

The continued development of Finland's society and wellbeing requires upskilling and particularly a strengthening of cutting-edge expertise. The globalisation of the economy, scientific discoveries and technological advancements along with the transformation of work are accelerating international competition, where competence is all-important.

According to the National Forum for Skills Anticipation, an expert body in forecasting at the National Agency for Education, in respect of the competence and training needs identified up until 2035 more than half of all new employees will need to have university-level training. The importance of higher education will be evident particularly in newly emerging jobs, where 75% of all employees will need to have university-level training. Specialisation in high-expertise jobs in Finland is already apparent in our employment rate. Satisfying the employment needs identified in the forecasting data will require university degrees to be completed at a higher rate than at present.

Competence and labour needs in the future will be substantially affected by the transformation of work caused by digitalisation, robotics, automation, etc., which will bring content development needs to all occupations. The forecasting data indicate that competence needs will be greatest in the development of client-oriented services, in expertise in the principles of sustainable development, in information evaluation, in leveraging digital solutions and platforms, and in data and innovation expertise. New workers will be needed both as replacements for employees leaving the labour force and for the new jobs created.

In Finland, about 41% of the population aged 25 to 34 have a higher education degree or qualification. By international standards, this figure places Finland around the EU average and below the OECD average. In Finland, the percentage of people with a higher education degree or qualification has risen only slightly in 10 years.

Persons with a higher education degree or qualification generally place well on the labour market. A university education improves employment prospects. University graduates are also generally satisfied with the capabilities that their education gives them for working

life. In recent years, academic universities and universities of applied sciences have had slightly more than 52,000 (first-cycle) student places and about 163,000 applicants altogether. Each year, there are more than 120,000 actual first-time applicants. In other words, the number of people applying for higher education each year vastly outnumbers the number of starts available. This bottleneck hinders access to higher education.

Attaining the national target set for 2030 of at least half of all young adults completing a university degree will require the number of university degrees completed per year to be increased by 100,000 by 2030. This will require enormous expansion in higher education, a more rapid progression from secondary to higher education and a higher percentage of students entering higher education who actually complete a degree or qualification.

### **Targets**

The target of the investment is to raise the educational attainment of the population by increasing the number of persons completing a university degree. Increasing the number of university degrees will help the economy and society at large to revitalise and recover, as it will reinforce Finland's ability to foster new growth through high-expertise jobs. Increasing the number of people completing higher education requires increasing the number of starts at universities.

Increasing the number of starts at universities is also intended to equalise the economic impacts of the exceptional circumstances caused by the coronavirus pandemic by investing in expertise and in education for young people. The aim is for increasingly many applicants to be granted a study place at a university in the near future and to reduce the need for gap years.

### **Nature and scope of the investment**

This is an investment in human capital, as its purpose is to increase the number of people with higher education. The investment will support the Sustainable Growth Programme for Finland. Proposed to receive funding out of the EU RRF, this investment will fuel the renewal of the national economy and mitigate the negative impacts of the coronavirus crisis by improving access by young people to university studies.

The number of starts at universities has already been increased on national funding since 2020. Additional investments will help boost this trend.

### **Implementation:**

The Ministry of Education and Culture will agree with academic universities and universities of applied sciences on the measures that should be taken to add 600 new starts in 2021. Starts at universities will be increased in sectors with a shortage of skilled labour and in sectors consistent with the Sustainable Growth Programme for Finland.

These sectors include social welfare and health care services, education (where there are shortages of skilled labour) and technological and ICT disciplines essential for sustainable growth. Starts will be allocated to regions where there is the greatest demand for education and the greatest shortage of skilled labour.

Universities will fill these starts so that the additional new students will begin their studies no later than autumn 2022. The additional numbers will be verified on the basis of the number of study places accepted in the Studyinfo online service. The number of students accepting a study place will be compared to the highest number of students accepting a study place in the disciplines in question at the universities in question between 2017 and 2019.

The Ministry of Education and Culture will allocate the appropriations to academic universities and universities of applied sciences on the basis of the number of additional starts agreed upon and realised in 2022, to cover the costs of the additional students. Funding to universities will be EUR 6,000 per year for each student accepting a study place, for the duration of their studies. This imputed cost has previously been used for expansions of degree programmes on national public funding. The target hereby set is to add at least 600 starts at universities. The funding will be front-loaded, so that the universities will be able to make the necessary investments to guarantee a high level of quality in the education. The investment will cover the costs of tuition for the students for the recommended duration of their studies.

Finnish citizens, and citizens of other countries on certain conditions, are entitled to be awarded a study grant for studies leading to a higher education degree or qualification. The costs of social benefits for the additional students will be covered out of national public funding.

### **Expected complications**

The ability of universities to add starts in the key disciplines is a potential risk for the investment. The potential for expanding the volume of degree programmes also depends on the staff and infrastructure available at the institution (facilities, equipment). Whether the additional starts can be filled depends on the attractiveness of the discipline and of the degree programme.

### **Stakeholder input**

Starts will be allocated to disciplines supportive of sustainable growth and subject to application pressures on the basis of close cooperation with universities and the forecasting data available on future labour needs.

**Investment target group**

The target group principally comprises young people wishing to enter higher education; their potential for gaining a study place will be improved by increasing the numbers of students admitted by academic universities and universities of applied sciences.

**Compatibility with rules on State aid**

The investment does not involve any aid falling under EU rules on State aid.

**Timetable**

The starts will be agreed in 2021, and universities will fill those starts for degree programmes beginning in autumn 2022 at the latest.

**Open strategic independence and security matters**

The target of the reforms and investments is to ensure that a lack of competence will not form an obstacle to economic recovery in the European Union. Upskilling and reskilling are vital for the strategic independence of the EU.

**Trans-border and multinational projects**

The projects do not cross borders or involve multiple countries.

**Green dimension in the component area (P3C2)**

The investment and reform package in component area P3C2 is 1,4% supportive of the green transition.

Of the reform P3C2R1 ('Continuous learning reform'), at least 5% has to do with the intervention field *Contributing to green skills and jobs and the green economy* (01) and is 100% supportive of the green transition, because at least 5% of the education to be funded will be in programmes with green-economy relevance. This will be ensured with the selection criteria for the programmes to be funded.

**Digital dimension in the component area (P3C2)**

The investment and reform package in component P3C2 is 49% supportive of the digital transformation.

Of the reform P3C2R1 ('Continuous learning reform'), at least 15% has to do with the intervention field *Support for the development of digital skills* (108) and is 100% supportive of the digital transformation, because at least 15% of the education to be funded will be in

programmes relevant to digital skills. This will be ensured with the selection criteria for the programmes to be funded.

The reform P3C2R2 ('Continuous learning digitalisation programme') has to do with the intervention field *Government ICT solutions, e-services, applications* (011) and is 100% supportive of the digital transformation, because the reform is about developing a digital ecosystem and digital services for the education sector and for employment services.

The reform P2C2R3 ('Upskilling and continuous learning reform, digitalisation and modernisation of education, Åland') has to do with the intervention field *Support for the development of digital skills* (108) and is 100% supportive of the digital transformation. The reform will support updating of the skills of teachers and support staff in digital pedagogy and in the application and use of digital systems through further education. Also, the digital infrastructure of the Åland University of Applied Sciences will be improved and updated, digital content will be created for degree programmes and other courses, and the organisational capabilities of the University will be aided by developing control and registration systems and by ensuring their compatibility with the systems and knowledge bases used by other universities.

### Do No Significant Harm (P3C2)

The investment and reform package in component P3C2 complies with the criteria of the Do No Significant Harm (DNSH) principle. For a more detailed description, see Appendix 3.

### Costs to be covered out of RRF funding

EUR 150 million, of which

- Reform of continuous learning, EUR 44 million
  - Training, EUR 30 million
  - Forecasting, EUR 4 million
  - Guidance development, competence assessment and validation, EUR 10 million
- Increasing starts at universities, EUR 15 million
- Continuous learning digitalisation programme, EUR 46 million
  - Continuous learning digital service package, EUR 26 million
  - Enhancing digitalisation of higher education and flexible learning, EUR 20 million
- Upskilling and continuous learning reform, digitalisation and modernisation of education, Åland, EUR 2.437 million

## RDI, RESEARCH INFRASTRUCTURE AND PILOTING

### Description of component area:

**Policy area:** *Research and innovation*

**Targets:** *The reforms and investments in this component area will support upskilling, renewal and low-carbon trends of enterprises and society at large, more robust RDI cooperation and strengthening of research infrastructures and innovation environments so that society and the national economy will support the green transition, the business structure will diversify, services will improve and wellbeing will increase. Investments in RDI activities and expertise will help reinforce our long-term growth potential and resilience in accordance with the Recommendations issued in the European Semester.*

**Reforms and/or investments:**

**Investments:**

1. *RDI funding package supporting the green transition, EUR 192 million*
2. *Investments in RDI infrastructures supporting sustainable growth and digitalisation, EUR 75 million*

**Estimated costs:** *The overall costs of this component area are EUR 449 million, of which EUR 267 million is to be covered with RRF funding.*

### Principal challenges and targets

Finland's competitiveness and wellbeing are built on competence, research and innovations. Finland's rise from the emergency caused by the pandemic and success in global competition require the production of new knowledge, innovations that bring social benefits and added value, and a high level of competence. The timeframe for producing new knowledge is long. Thus, the investments that are vital for the future must be made in the immediate short term. Competence must be taken care of and constantly renewed. High-level competence is the base on which innovation activities can be built. These activities are ambitious as to their targets, utilise the strengths of regions, sectors and organisations, are internationally competitive and support the renewal of society. RDI intensity must be boosted, and more ambitious targets must be set for RDI operations.

Finland's RRP is intended to accelerate green transition solutions to facilitate significant reductions in emissions in Finland and elsewhere to support national targets for carbon neutrality and the circular economy. The green transition will require robust expertise and related investments and the design and delivery of key technologies for the low-carbon



circular economy and the green transition through research, partnerships and corporate investments. The aim is to make Finland a global leader in the fields of hydrogen and the circular economy, high added value bioproducts, zero-emission energy systems and other climate and environmental solutions; to improve energy efficiency; and to accelerate the transition to fossil-free transport and heating.

#### **a. Principal challenges**

Over the past ten years, Finland has fallen behind the leading RDI countries of the world in international comparisons, measured by R&D investments as a percentage of GDP. According to the EU Innovation Scoreboard, weaknesses in Finland's innovation system include the low percentage of growth enterprises and the relatively low levels of R&D investments made by enterprises themselves. RDI intensity must be boosted, and more ambitious targets must be set for RDI activities in order to ensure an adequate pace of renewal in business and in society at large. Public investments are needed to spur on private investments. In the Country Specific Recommendations for Finland in the European Semester, the Commission advised Finland to increase our RDI investments.

The national RDI roadmap adopted by the Government in spring 2020 is an important tool for this issue. Research potential must be ensured so that it will lay the groundwork for new, unanticipated growth industries and comprise sufficient diversity to maintain a broad-based understanding of a variety of phenomena.

Declining cooperation between RDI operators has been identified as one of the major challenges in the RDI system. Cooperation among public research organisations and between enterprises and public research organisations must be increased. For this purpose, a pilot for a new flexible partnership funding instrument was launched in spring 2020. It creates larger packages of national programme funding and builds stronger links between the supported activities and the sources of EU and other international funding.

#### **b. Targets**

The target in this component area is that shared use of research infrastructures will be boosted and R&D intensity will be raised in order to accelerate growth, also in the long term. Raising of the intensity, effectiveness and ambition level of RDI activities is a key objective, with particular focus on increasing RDI investments in the private sector. This target addresses the 2019 and 2020 Country Specific Recommendations of the European Semester.

The actions described here will support renewal among enterprises and in society at large, a low-carbon trend, digitalisation and the enhancing of RDI cooperation, research

infrastructures and innovation environments and making them more interoperable. The immediate actions to be taken will boost social and economic trends towards the green transition, diversification of the business structure, improved services and crisis readiness, and growth in wellbeing.

Finland aims to be carbon-neutral by the year 2035 and to halt biodiversity loss by 2030. In addition, Finland aims to be the world's first fossil-free welfare society and is committed to halving emissions from traffic by 2030. Climate leadership and the expertise and innovations this produces can allow Finland to reduce greenhouse gas emissions while creating new jobs, boosting the economy and exports, and improving the opportunities to increase our positive carbon handprint and biodiversity. The worldwide market for clean solutions is growing at an accelerating rate. There is global demand for Finnish expertise in these fields. The Green Deal published by the European Commission is a new EU growth strategy intended to convert the EU into a resource-efficient and competitive economy while responding to the global challenges of climate change and loss of biodiversity.

Preparation of sector-specific low-carbon roadmaps will enable low-carbon technology to be a significant competitive advantage for Finnish enterprises in the future. university education.

In accordance with the targets set, sustainable growth must be achieved by reducing the use of natural resources and by reorienting production and consumption towards products that are the least harmful to the environment and the climate. The Government Programme defines new sources of sustainable growth, such as energy and materials efficiency, carbon-neutrality, ecological investments, digitalisation, clean-tech, the circular economy and bioeconomy, and resource scarcity. The target in this component area is to support the green transition and digitalisation through research, innovation aid for enterprises and RDI cooperation.

The proposed investments and reforms will facilitate the green and digital transition by increasing expertise and by supporting the generating of new knowledge and boosting innovation efforts. Success with the green transition presupposes an ability to generate and apply new knowledge, technologies and innovations, and Finnish operators must commit to the change being sought. A significant percentage of the investments will go towards RDI aiming for a low-carbon economy, and adjustment to and coping with climate change. The carbon footprint of RDI activities will itself be reduced. The actions will boost the potential for universities, research institutions and enterprises to engage in high-quality research and innovation activities and will create an encouraging operating environment for research and innovation activities that will attract students, experts and investments nationally and internationally.

The investments and reforms proposed in this component area support European flagship areas. These actions will create potential for the introduction of clean technologies and the development of renewable energy sources, for improving energy efficiency and resource efficiency and for promoting clean technologies in traffic.

### c. National strategic circumstances

Prime Minister Marin's Government Programme states that the Government will work to ensure that Finland is carbon neutral by 2035 and carbon negative soon after that. The Government Programme further sets as a target that biodiversity loss will be halted by 2030.

In addition, Finland aims to be the world's first fossil-free welfare society and is committed to halving emissions from traffic by 2030. Climate leadership and the innovations this produces will allow Finland to create new jobs, boost the economy and exports, and improve opportunities to increase our positive carbon handprint. The Government roadmap includes sector-specific low-carbon roadmaps. The Academy of Finland and Business Finland will chart clusters and shortages of expertise in climate change, carbon-neutrality and biodiversity. Investments in research infrastructures and flexible partnerships will reinforce expertise that is crucial for carbon-neutrality. In accordance with the Government Programme, a strategic Circular Economy Programme for 2035 has been drawn up, and a national bioeconomy strategy is in preparation.

Prime Minister Marin's Government has set the target of increasing Finland's expenditure-to-GDP ratio for research and development from 2.9% (2019) to 4% by 2030. To achieve this, we need more ambitious RDI activities and investments from both the public and private sectors. It must be possible to step up and intensify public-private partnerships with new incentives for cooperation, such as a new partnership model. A national RDI roadmap was prepared in spring 2020 to deliver on the policies outlined in the Government Programme, bringing together the major development needs and reforms in RDI policy.

The research infrastructure committee of the Academy of Finland has prepared a Strategy for National Research Infrastructures in Finland for the period 2020–2030. The target here is to promote the quality, renewal and competitiveness of research, to boost the multiform effectiveness of research environments and to increase national and international cooperation. Development needs identified in the Strategy include sustainable development, corporate responsibility, and digitalisation and data. The roadmap of research infrastructures for the period 2021–2024 was updated on the basis of the strategy, including 29 high-level national infrastructures.

Growth Portfolio 2.0, produced in spring 2020, is a compilation of the views of experts and representatives of the business community concerning Finland's promising growth potential on the basis of global market demand, Finland's competitiveness advantages and societal importance. According to the Growth Portfolio, Finland's most promising growth opportunities have to do with the energy transition, information networks, exploitation of emerging technologies, the circular economy and bioeconomy, environmental technology, health technology and new forms of data economy.

### Description of reforms and investments in the component area

Investments in RDI are a necessity for attaining the targets set, as they increase expertise and foster renewal in enterprises and in society at large. A significant percentage of the investments will go towards RDI aiming for a low-carbon economy, and adjustment to and coping with climate change. These investments are 100% supportive of climate change targets. The research and innovation infrastructure investments also facilitate the green and digital transition. The targets in this component area have to do particularly with the green transition focus in the Sustainable Growth Programme for Finland, and its priorities will be considered in allocating investments in this component area.

#### INVESTMENTS:

#### INVESTMENT PACKAGE 1: RDI funding package supporting the green transition (P3C3I1–4)

##### Challenges

It must be possible to step up and intensify public–private partnerships with new incentives for cooperation, such as a new partnership model. Finland's success is driven by our efficiency in producing new knowledge and our long-term standing at the global forefront of designing, delivering and using emerging technologies. Sustaining this requires broader and more in-depth research expertise in key fields and in key technologies. Scientific knowledge is proven to foster civilisation and to broaden our world views, to generate wealth and wellbeing and to provide a sound basis for making decisions and for establishing practices.

Cooperation among RDI operators has decreased in recent years, as can be seen for example in the decline of business investments in R&D activities at universities and research institutions. Underlying this trend are the cuts and reallocations in public spending on R&D. There are also indications of a growth in R&D activities by Finnish companies abroad, largely involving the localisation of products and processes. The OECD evaluation of Finland's innovation policy (2017) recommended increasing funding for applied research and introducing a PPP model, among other things.

New ideas, knowledge and technologies are the most important sources of growth and productivity. Climate change is one of the most significant drivers steering global growth in the 2020s, alongside other sustainable development targets. The target of carbon neutrality set by the Government cannot be achieved unless we find ways to bring in new technologies and innovative solutions based on research. The most significant drivers of change in the coming decade are digitalisation and the data economy. Digitalisation will enable even shorter innovation cycles and rapid product testing on the market.

SMEs account for only a small percentage of Finland's exports. Increasing that percentage would improve the sustainability of Finland's national economy. Rapid growth enterprises will play a particularly important role in building growth for Finland. Their employment impact affects a sphere broader than the enterprises themselves, as there are knock-on effects in their business networks. For SMEs to participate in the green and digital transition requires them to acquire new capabilities that can be achieved through RDI activities.

### **Targets**

*The target of the investment package is to support the green transition with significant R&D funding. The investments will go towards RDI aiming for a low-carbon economy, and adjustment to and coping with climate change.*

*Business driver funding* supports partnerships and ecosystems of enterprises and other research organisations that stimulate competitiveness in the business world and boost the effectiveness of RDI activities. Partnerships to be funded out of Finland's RRP will be allocated to growth fields supportive of the green transition. Business driver funding has been previously targeted at: producing fibre-based products reducing carbon footprints for the consumer market; R&D of raw materials to reduce the use of crude oil; and introducing mobility solutions consistent with sustainable development to urban environments.

These actions will foster the emergence of new sectors, products, businesses and operating models and the leveraging of research findings from universities and research institutions to benefit enterprises. They will also facilitate attainment of the targets of the green transition in particular but also of those of the digital transformation. The partnerships will significantly boost other national RDI funding, enterprises' RDI investments and the exploitation of EU and other international funding. Flexible partnerships and ecosystems of enterprises, research organisations and other RDI operators will reinforce expertise-based competitiveness in Finnish business and improve productivity. The vision is that by the end of the 2020s Finland will have globally operating innovation clusters and ecosystems fostering business operations of international significance.

Partnerships will create larger packages of national programme funding and build stronger links between the supported activities and the sources of EU and other international funding. Partners will be expected to make long-term commitments to the targets and practicalities of the partnerships. As noted above, the partnerships will be focused on growth fields in keeping with the priorities of the RRP and will be selected through competitive tendering. The flexible partnership model will combine the wish of companies for radical renewal, the simultaneous use of public funding instruments for the development of ecosystems (research, development and growth) and new operating models for testing, piloting and scaling innovations.

Partnerships will increase cooperation between RDI operators, make RDI targets more ambitious, boost internationalisation and improve access to global value networks and ecosystems.

*Accelerating key industries of the future.* The funding package will support RDI in key industries and technologies contributing to the green transition. The target is to reinforce existing research clusters and to augment expertise in them and around them while rejuvenating business operations.

Technologies that promote the green transition and curb climate change are also highly conducive to the emergence of new business and will improve our crisis resistance and self-sufficiency. Finnish research expertise in these fields is at the cutting edge but very narrow in scope. In a well-functioning society, integrating emerging and disruptive technologies into the critical infrastructure of society and into new business requires collaboration between science, research and business sectors and the capability to apply new technologies innovatively. This package will cover science, research and business aspects, including societal approaches. Digital technologies that are of major significance for crisis resistance and self-sufficiency, such as new data analysis methods and safe data use environments, also efficiently promote green growth, help curb climate change and generate new business, and are also likely to foster major improvements in employment figures. Academic research lays the groundwork for Finland's success and for the renewal capacity of the private sector by generating new knowledge and by training professionals.

Investments in key industries and technological expertise and how to leverage and share it will improve the quality and effectiveness of partnerships and ecosystems. Partnerships and ecosystems of RDI operators will also foster the emergence and development of new industries, products and operating models. Piloting of the flexible partnership model funding instruments was begun in summer 2020 in accordance with the outline in the RDI roadmap. Investments funded out of the RRP will accelerate and reinforce the design and delivery of the partnership models. Some of the key technology projects

funded by Business Finland will be reoriented to support the RDI needs of business driver partnerships.

The investments will create potential for attaining the targets of the green transition in all industries and all areas of society. Boosting digitalisation is one means for achieving this. It will be ensured through application criteria and in the decision-making process that the projects to be funded will focus on actions conducive to climate targets as required in the RRF criteria. The RDI actions will contribute to the Government's overall target of carbon-neutrality and, for example, the implementation of the sector-specific low-carbon roadmaps and the fossil-free transport roadmap.

*Innovation aid for growth enterprises* is intended to increase RDI investments by SMEs and to improve their potential for embracing the green and digital transition. The aid to be focused on the green transition will be used to fund (sustainable growth) enterprises employing solutions that may lead to emission reductions in Finland and elsewhere, etc. The purpose of the funding is to accelerate the growth of enterprises that are already exporting and, on the other hand, to increase the number of exporting enterprises. The aid will be allocated to enterprises with the greatest growth potential, in the form of funding, advisory services, information and contacts on target markets. Selection criteria will be set to ensure that no projects promoting the use of fossil fuels will be funded. Enterprises within the Emissions Trading System (ETS) may only be funded if their projects significantly reduce greenhouse gas emissions. The actions will also foster research-based business by boosting the processing of research findings at universities and research institutions into commercial products contributing to the green transition.

#### **Nature and scope of the investment**

The investment package will consist of RDI funding instruments allocated through competitive tendering.

A total of EUR 192 million will be allocated in funding.

#### **Implementation:**

Selection criteria will be set for the application process to ensure that all projects to be funded will engage in RDI concerning the low-carbon economy and adapting to and coping with climate change. No projects promoting the use of fossil fuels will be funded. Enterprises within the Emissions Trading System (ETS) may only be funded if their projects significantly reduce greenhouse gas emissions.

*Business driver funding (P3C311)*

- Funding application rounds for partnerships and the defining of the funding instruments will be undertaken by Business Finland, assisted by the steering ministry.
- Business Finland will conduct the funding application round in 2021.
- The projects to be funded will be required to produce expertise relevant for business and for society at large; to energise the processing of research findings into concrete things responding to the needs of business and of society at large; to support the renewal of business and of society at large; to address global and societal challenges; to promote systemic changes; and to create potential for international business growth.
- The principal selection criteria will be:
  - project quality and effectiveness
  - project contributes to the green transition as per intervention field 022
  - no projects promoting the use of fossil fuels will be funded. Enterprises within the Emissions Trading System (ETS) may only be funded if their projects significantly reduce greenhouse gas emissions.

*Boosting key industries of the future (P3C312 and P3C313)*

- In order to boost key industries of the future, national R&D funding providers Business Finland and the Academy of Finland will launch a research programme portfolio. The Academy of Finland and Business Finland will be responsible for conducting the funding application rounds and for defining the funding instruments, each for their part and in close collaboration. These application rounds will be conducted according to the normal funding practices of the two agencies.
- The Academy of Finland will conduct two funding application rounds in 2021 and 2022. The principal selection criteria will be:
  - scientific quality and effectiveness
  - independence of scientific discipline
  - project contributes to the green transition as per intervention field 022
  - project complies with the DNSH principle; no projects promoting the use of fossil fuels will be funded. Enterprises within the Emissions Trading System (ETS) may only be funded if their projects significantly reduce greenhouse gas emissions.
- Business Finland will conduct the funding application round in 2021. The principal selection criteria will be:
  - project quality and effectiveness
  - project contributes to the green transition as per intervention field 022
  - project principally supports business driver projects
  - no projects promoting the use of fossil fuels will be funded. Enterprises within the Emissions Trading System (ETS) may only be funded if their projects significantly reduce greenhouse gas emissions.



*Innovation aid for growth enterprises (P3C3I4)*

- The enterprises to receive aid will be selected through an open and continuous application process. Additional funding intended to support business ideas and enterprises contributing to the green transition will be provided as part of Business Finland funding for growth enterprises to support the early stages of further processing an idea and to support exports to international markets.
- The principal selection criteria will be:
  - quality and effectiveness of the enterprise’s project plan
  - the plan contributes to the green transition as per intervention field 022
  - no projects promoting the use of fossil fuels will be funded. Enterprises within the Emissions Trading System (ETS) may only be funded if their projects significantly reduce greenhouse gas emissions.

**Investment target group**

Funding from the Academy of Finland is applied for by research organisations such as universities or research institutions.

The target group for Business Finland funding consists of private and public research organisations, enterprises and other public bodies such as the local authorities of major cities.

**State aid**

The Act on Discretionary Government Transfers (688/2001) and the general terms and conditions for Academy of Finland funding apply to the funding granted by the Academy of Finland. The Academy of Finland does not grant funding to support commercial operations.

In the funding allocated by Business Finland, current aid programmes compliant with the Group Block Exemption Regulation (GBER) and existing Business Finland funding services will be employed.

**Timetable**

The investments will be made through competitive tendering, as RDI funding. The projects will be selected in stages up until the end of 2023, and the last projects will conclude by the end of 2025.

There is a continuous submission and decision-making process for funding for growth enterprises (P2C3I4). The funding will be distributed evenly over a two-year period.

## **INVESTMENT PACKAGE 2: Investments in RDI infrastructures supporting sustainable growth and digitalisation (P3C3I5–P3C3I7)**

### **Challenges**

In accordance with the national RDI roadmap, efforts will be made to broaden and strengthen cutting-edge competence. Cooperation among universities, research institutions, enterprises and other RDI operators will be enhanced by bringing RDI activities together into competence clusters and innovation ecosystems. This target is supported by high-quality RDI infrastructures that raise awareness of the activities, attract experts and investments and promote networking.

Producing new knowledge, engaging in high-level RDI activities and scaling up innovations into industrial solutions require modern RDI environments. Updating and upgrading research environments require raising the level of automation and digitalisation and improved material flows. Updating and upgrading RDI infrastructures will respond to the needs of research, business and society at large by offering innovation platforms and by producing open data and data services for research, teaching, business and communities.

The target under the Strategy for National Research Infrastructures 2020–2030 is to promote the quality, renewal and competitiveness of research, to boost the multiform effectiveness of research environments and to increase national and international cooperation. Research infrastructure funding is multichannel funding, so it will be a challenge to secure a strong foundation for the long term for designing and delivering high-level research infrastructure services.

The roadmap of research infrastructures for the period 2021–2024 was prepared on the basis of the Strategy, including 29 high-level national infrastructures. These can produce multiform, effective knowledge for the needs of the scientific and university community and for the public and private sectors. The selected research infrastructures will provide significant added potential for RDI activities supporting the green and digital transition. The Academy of Finland awards about EUR 18.5 million annually to the building and improvement of national research infrastructures. Academic universities, universities of applied sciences and research institutions have access to local research infrastructures that play an important role in the research activities of their host organisations and in RDI cooperation among operators in the region. They also provide the platform for national and international research infrastructure cooperation.

Research organisations such as academic universities, universities of applied sciences and research institutions have access to local research infrastructures that play an important role in the research activities of their host organisations and in RDI cooperation among operators in the region. They also provide the platform for national and international

research infrastructure cooperation. Local research infrastructures should be up to date and consistent with the needs of research, teaching, business and other parties. Lack of funding in local research infrastructures was identified as a challenge in the Strategy for National Research Infrastructures. The Academy of Finland has not previously allocated research infrastructure funding to local research infrastructures.

In addition to the current research infrastructure funding of the Academy of Finland, Business Finland and some ministries have funded some research infrastructures on a non-recurring basis. The Ministry of Education and Culture and the Ministry of Economic Affairs and Employment will allocate EUR 48 million between 2019 and 2024 within the central government spending limits as Finland's contribution to the development of the EuroHPC supercomputer (LUMI). This supercomputer procurement will be hosted in Finland and will be funded out of the national funds of the members of the LUMI consortium (FI, SE, NO, DK, IS, EE, BE, CZ, PL, CH) and of the EuroHPC joint venture. The Ministry of Education and Culture allocated EUR 37 million for updating the national data management and computing infrastructure between 2017 and 2021. Also, national recovery funding has been used on a non-recurring basis to support the development of research infrastructures with the business sector, through novel project funding of the Academy of Finland at EUR 20 million and through funding provided by the Ministry of Economic Affairs and Employment for procurement of a quantum computer at EUR 20.7 million.

The research funding of the Academy of Finland and of Business Finland, awarded through competitive tendering, and the internal funding of universities and research institutions can cover only a limited percentage of the funding needs of national and local research infrastructures and experimentation environments in the near future.

### **Targets**

The RDI infrastructure scheme included in the RRP will help fund the updating of research infrastructures and of testing and experimentation environments (innovation infrastructures), with an emphasis on the targets of the green transition. Another target is to increase the interoperability of RDI infrastructures.

**Research infrastructure funding awarded through competitive tendering (P3C315 and P3C316)** Research infrastructures will be supported through two funding application rounds conducted by the Academy of Finland, one for national and one for local research infrastructures. The funding is intended for investment costs at the startup phase of the research infrastructures: equipment and system procurement, service design or service updates.

The funding is also intended for updating the research infrastructure application rounds of the Academy of Finland, in a discipline-neutral way in keeping with the targets of the

Strategy for National Research Infrastructures but with a focus on the green transition and digitalisation and with a view to reinforce research infrastructures consistent with the respective profiles of academic universities, universities of applied sciences and research institutions.

The investments will be used to facilitate openness and interoperability in the research infrastructures of various operators (academic universities, universities of applied sciences, research institutions, enterprises and other RDI operators). The funding is intended for supporting sector-specific and multiprofessional research infrastructures and environments such as computing and data infrastructures while enhancing participation in European cooperation (e.g. ESFRI and EuroHPC partnerships). Funding may be granted to research infrastructure projects supplementing the procurement of the EuroHPC LUMI supercomputer or quantum computers, where the research community will be the principal user of these infrastructures.

Non-recurring funding from the Academy of Finland will be allocated to updating local research infrastructures. Connections to the research strategy of the host organisation will be prioritised in project selection. Through competitive tendering, the funding can be awarded to the projects with the highest quality and effectiveness.

#### **Innovation infrastructure funding awarded through competitive tendering (P3C317)**

Funding awarded by Business Finland through competitive tendering will be used to develop testing and experimentation environments, which are needed for designing and testing solutions in actual user environments such as research infrastructures of local authorities, universities or other public bodies, or innovation environments jointly created by enterprises and other operators. The various research infrastructures of cities, municipalities and other public authorities enable solutions promoting carbon neutrality and digitalisation to be designed and tested in actual user environments.

The research and innovation infrastructure network also supports RDI activities in other areas funded out of the RRP.

#### **Nature and scope of the investment**

The investment package is made up of RDI funding instruments where funding is awarded through competitive tendering, and its purpose is to reinforce high-quality research and innovation environments by focusing on infrastructures that are important for the targets of the RRP. A total of EUR 75 million will be allocated in funding.

Funding from the RRF will be allocated to the best research and innovation infrastructures on the basis of national funding application rounds. Funding from European structural funds can also be allocated to the development of research and innovation infrastructures.

The structural funds (European Regional Development Fund, European Structural and Investment Funds), Recovery Assistance for Cohesion and the Territories of Europe (REACT-EU) and RRF funding form a mutually complementary high-impact funding framework. Coordination between the ERDF and the ESIFs is noted in Finland's Partnership Agreement 2021–2027. The Agreement also describes connections to other EU funding sources, including the RRF. When applying for funding from the EU regional or structural policy funds, applicants must declare any other funding applied for or awarded for the same purpose. National and regional legislation, instructions and coordination mechanisms ensure that the funds remain complementary and that no funding is duplicated. Horizon Europe funding may be used for enhancing European research infrastructure cooperation.

### **Implementation:**

The funding will be channelled through the competitive-tender funding instruments of the Academy of Finland and of Business Finland. Applicants from any field of science and research may apply for the funding. Projects will be selected on the basis of the quality and effectiveness of their RDI operations and according to how they promote the green transition and digitalisation. Selection criteria will be set to ensure that the projects comply with the 'Do No Significant Harm' principle and that, for example, no projects promoting the use of fossil fuels will be funded. Enterprises within the Emissions Trading System (ETS) may only be funded if their projects significantly reduce greenhouse gas emissions.

The Academy of Finland will conduct two funding application rounds, and Business Finland will conduct one.

Through competitive tendering, the funding can be awarded to the projects with the highest quality and effectiveness.

- The Academy of Finland will conduct a funding application round for national research infrastructures in 2021 (P3C3I6), which will also be used for supporting the upgrading of future funding application rounds, shifting focus to the green transition and digitalisation in keeping with the targets of the Strategy for National Research Infrastructures. The principal selection criteria will be:
  - the scientific significance and impact of the research infrastructure
  - the user group, data management and promotion of the green transition and digitalisation.
  - As part of the overall assessment, the assessment panel will be requested to return separate scores for the green transition and for digitalisation. At least EUR 8 million of the EUR 20 million total to be awarded will be allocated in accordance with the intervention field *Digital related R&I activities* (009bis).

- The Academy of Finland will conduct a non-recurring funding application round for local research infrastructures in 2022 (P3C315). The application round for local research infrastructures will be conducted similarly to that for national research infrastructures. The application requirements will be specified in the call for applications, drawing on experiences from the application round for national research infrastructures. Project quality and effectiveness will be the principal selection criteria.
- The assessment of applications submitted to the Academy of Finland will be specified in more detail in the Academy's call for applications. The research infrastructure committee of the Academy of Finland will decide which projects to fund, after consulting an assessment panel formed of outside adjudicators on their opinion of the applications.
- Business Finland will conduct one funding application round in 2022 (P3C317). This application round will be aimed at testing and experiment environments for innovations operated jointly by various operators such as local authorities in cities and municipalities, academic universities, universities of applied sciences, research institutions and enterprises. The targets of the green transition and digitalisation will be emphasised in the application round. The principal selection criteria will be:
  - project quality and effectiveness
  - the project focuses on promoting digitalisation in the business sector.

### **Investment target group**

Research infrastructure funding from the Academy of Finland is applied for by research organisations such as universities or research institutions.

The target group for Business Finland funding consists of private and public research organisations, enterprises and other public bodies such as the local authorities of major cities.

### **State aid**

All the research infrastructures and testing and experiment environments to be funded (innovation infrastructures) are consistent with the research infrastructures defined in the rules on State aid.

The Act on Discretionary Government Transfers (688/2001) and the general terms and conditions for Academy of Finland funding apply to the funding granted by the Academy of Finland. The Academy of Finland does not grant funding to support commercial operations.

In the funding allocated by Business Finland, current aid programmes compliant with the Group Block Exemption Regulation (GBER) and existing Business Finland funding services will be employed. Innovation infrastructures will be funded, depending on the project content, either out of the Business Finland aid programme for building and renewing research infrastructures (SA.58495) or the aid programme for innovation cluster operations and investments (SA.58496).

### **Timetable**

1. Funding for local research infrastructures awarded through competitive tendering (P3C315), preparation and launch of the Academy of Finland application round, Q2/2022; application assessment, project selection and funding decisions, Q4/2022. Projects launched, Q1/2023. Projects completed, latest Q4/2025.
2. Funding for national research infrastructures awarded through competitive tendering (P3C316), preparation and launch of the Academy of Finland application round, Q2/2021; application assessment, project selection and funding decisions, Q4/2021. Projects launched, Q1/2023. Projects completed, latest Q4/2025.
3. Innovation infrastructures (P3C317), preparation and launch of the Business Finland application rounds, Q2/2022; application assessment, project selection and funding decisions, Q4/2022. Projects completed, latest Q4/2025.

### **Open strategic independence and security matters**

The purpose of the investments is to boost expertise and competitiveness of enterprises and to generate new knowledge in strategically important industries in order to foster new business operations. The investments will thus enhance the strategic independence of the EU and boost its capability for recovery and its resilience.

### **Trans-border and multinational projects**

RDI projects in the component area will be selected through national competitive tendering. Funding in the component area will be used to support national RDI activities that can complement European research cooperation. The selected projects may link to European cooperation and thus promote trans-border cooperation. For example, research infrastructure projects have often established links to European research infrastructures.

## Green dimension in the component area

The investment and reform package in component area P3C3 is 72% supportive of the green transition.

Investment P3C311 falls under the intervention field *Research and innovation processes, technology transfer and cooperation between enterprises focusing on the low carbon economy, resilience and adaptation to climate change (022)* and is 100% supportive of the green transition. This will be ensured through the selection criteria given in the research and innovation funding application rounds. The enterprises to be funded out of these investments will be selected according to how they will reduce greenhouse gas emissions in their operations or how their products or services will help reduce greenhouse gas emissions.

Investment P3C312 falls under the intervention field *Research and innovation processes, technology transfer and cooperation between enterprises focusing on the low carbon economy, resilience and adaptation to climate change (022)* and is 100% supportive of the green transition. This will be ensured through the selection criteria given in the research funding application rounds and in the application assessment and decisions.

Investment P3C313 falls under the intervention field *Research and innovation processes, technology transfer and cooperation between enterprises focusing on the low carbon economy, resilience and adaptation to climate change (022)* and is 100% supportive of the green transition. This will be ensured through the selection criteria given in the research and innovation funding application rounds. The enterprises to be funded out of these investments will be selected according to how they will reduce greenhouse gas emissions in their operations or how their products or services will help reduce greenhouse gas emissions.

Investment P3C314 falls under the intervention field *Research and innovation processes, technology transfer and cooperation between enterprises focusing on the low carbon economy, resilience and adaptation to climate change (022)* and is 100% supportive of the green transition. This will be ensured through the selection criteria given in the research and innovation funding application rounds. The enterprises to be funded out of these investments will be selected according to how they will reduce greenhouse gas emissions in their operations or how their products or services will help reduce greenhouse gas emissions.

The investments in RDI infrastructures supporting sustainable growth and digitalisation (P3C315–P3C317) are also supportive of the green transition. Some of the infrastructures may directly address industries relevant to the green transition, or their operations may promote low-carbon trends. The research and innovation infrastructures will mainly have an indirect impact on attaining the climate and environmental targets of the EU.



### Digital dimension in the component area

The investment package in component area P3C3 will be at least 7% supportive of the digital transformation.

Investment P3C316 ('National research infrastructures') is related to the intervention field *Investment in digital-related R&I activities (including excellence research centres, industrial research, experimental development, feasibility studies, acquisition of fixed or intangible assets for digital related R&I activities)* (009bis). At least EUR 8 million out of the total investment of EUR 20 million will be allocated according to intervention field 009bis. This will be ensured by assessing applications separately from the perspective of how they promote digitalisation. The research infrastructure committee of the Academy of Finland will decide which projects to fund and ensure that the funding is directed with relevance to intervention field 009bis.

Investment P3C317 has to do with the intervention field *Support for Innovation clusters including between businesses, research organisations and public authorities and business networks primarily benefiting SMEs* (019). This will be ensured through the selection criteria given in the research funding application rounds and in the decisions.

Also, in the overall framework of RDI funding supporting the green transition, digitalisation is one of the means available for attaining the targets of the green transition.

### Do No Significant Harm

The investment and reform package in component P3C3 complies with the criteria of the Do No Significant Harm (DNSH) principle. For a more detailed description, see Appendix 3.

The Academy of Finland and Business Finland, which will select the projects and make the funding decisions, are responsible for ensuring that the DNSH principle is complied with in all the funded projects. To ensure this, the funding provider organisations will state as requirements in their respective calls for applications that the applicants must explain how their project will comply with the DNSH principle, and if necessary they will request applicants to provide supplementary information on this before making the funding decisions.

## Costs to be covered out of RRF funding

The investment package totals EUR 267 million.

- RDI funding supporting the green transition, EUR 192 million
  - Business driver projects, EUR 100 million
  - Accelerating key industries and boosting expertise, EUR 72 million
  - Supporting innovative growth enterprises, EUR 20 million
- Investments in RDI infrastructures supporting sustainable growth and digitalisation, EUR 75 million
  - national research infrastructures, EUR 20 million
  - local research infrastructures, EUR 30 million
  - corporate innovation infrastructures, EUR 25 million

## SECTORS SUFFERING FROM THE CORONAVIRUS CRISIS AND LEADERS OF INTERNATIONAL GROWTH

### Description of component area:

**Policy area:** *Industrial policy*

**Targets:** *Strengthen Finland's export opportunities in the global market and Finland's attractiveness as an environment where to invest, work and engage in RDI and entrepreneurial activities as well as tourism. Improve the international competitiveness and internationalisation capability of Finland's strongest industries and cutting-edge expertise by reinforcing sector-specific export promotion programmes and ecosystems facilitating the building of comprehensive offerings and business driver models. The choice of sectoral reform measures will be based on Finland's strengths and international market potential. The aim is to promote the integration of Finnish SMEs into Finnish and EU business consortia in order to create more competitive European value chains in the EU and third countries.*

*This component area is about facilitating the recovery and sustainable renewal of the creative sector. The cultural and creative industries are rooted in creative expertise and both create and commercialise intellectual capital. They thus promote innovations and economic reforms while generating added value for other sectors.*

*The national tourism strategy and the investment and reform package supporting the implementation of the entries on tourism included in Prime Minister Marin's Government Programme support the launch of international and domestic demand for tourism. In the longer term, measures taken to promote the sustainability and digitalisation of Finnish tourism will help Finland to develop into the most*

*sustainably growing tourist destination in the Nordic countries, which is also a vision in Finland's tourism strategy.*

**Reforms and/or investments:**

- *Executing international growth programmes in spearhead industries, including:*
  - *A programme to promote low-carbon approaches, the circular economy and the digital transformation in industry and to facilitate increased exports of industrial services, with specific reference to transitional and emerging technologies.*
  - *Creating an ecosystem for electric heavy transport, aiming to augment expertise and increase turnover on international markets.*
  - *Acquisition and conversion support*
  - *The purpose of the investment 'Health and wellbeing expertise and technology' is to reinforce the ecosystems of health and wellbeing services and technologies and to facilitate promotion of their exports as part of implementing the new roadmap in the Health Sector Growth Strategy for Research and Innovation Activities.*
  - *A water expertise growth and export programme for developing new high-tech clusters and innovation platforms and for facilitating the emergence of new technologies, methods, service concepts and solutions, along with piloting and internationalisation efforts.*
  
- *The purpose of the growth accelerator programme for small enterprises is to boost the internationalisation capabilities of small businesses at the national level in order to address changes in the operating environment caused by the coronavirus crisis.*
  
- *The purpose of aid for the cultural and creative industries is to promote the creative economy and to revitalise the cultural and creative industries and the events industry so as to support the renewal of businesses and of society at large and the progress and growth of digitalisation.*
  
- *The purpose of facilitating sustainable and digital growth in the tourism industry is to reinforce cooperation, capabilities and RDI intensity in the tourism industry to foster growth and renewal in the industry and in society at large.*

**Estimated costs:** EUR 94 million

## Principal challenges and targets

### a. Principal challenges

Exports account for 40% of Finland's GDP. Being an open economy dependent on foreign trade, Finland is particularly reliant on the operating capabilities of Finnish enterprises on the internal market of the EU and beyond, globally. Expanding and increasingly diverse export industries and success in international value networks will be essential for the success and viability of Finland in future. The majority of Finland's exports are goods, and large corporations continue to play a major role. The 100 largest export enterprises in Finland between them account for two thirds of Finland's exports. SMEs account for just 16% of exports; In order to recover from the coronavirus crisis, Finland needs to have considerably more innovative enterprises seeking growth through internationalisation, and considerably more foreign enterprises investing in Finland. Finland's exports and thereby Finland's national economy have suffered significant setbacks due to the global economic crisis caused by the coronavirus pandemic. Mobility restrictions and challenges brought about by changes in value chains have had an impact on the traditional export potential of Finnish enterprises. The focus in exports is increasingly shifting towards services, as new technologies allow services to be provided across national borders. The coronavirus crisis has accelerated creative destruction in the economy, but the danger is that in the long term it may also harm enterprises that are quite viable and willing to grow.

Mobility restrictions and challenges brought about by changes in global value chains due to the coronavirus pandemic have had an impact on the traditional export potential of Finnish enterprises. The focus in digital exports is increasingly shifting towards services, as new technologies allow services to be provided across national borders. Digitalisation is also imposing a challenge on public services; their regional and global availability must be improved.

Internationalisation requires a desire to grow and a willingness to take risks, which are qualities that many SMEs lack. The export efforts of Finnish SMEs are often complicated by the lack of funding for business development and commercialisation of innovations, especially the difficulty of tapping into international funding opportunities.

In almost all sectors in Finland, the major challenge for international growth is that the enterprises concerned are relatively small in the international context. In several industries, the products and services that enterprises have to offer only meet part of a client's needs, which leads to a need to develop comprehensive solutions or to integrate into broader value networks. Finland must diversify its industrial structure and be more actively engaged in the value chains of international trade in order to gain added value from globalisation. The pandemic and the rapid progress of digitalisation have exacerbated Finland's challenges in resolving major societal issues such as climate change or how to safeguard quality of life and wellbeing. We must achieve a competitive

advantage and improved productivity through new business models and better use of data.

The creative economy fosters innovations. The cultural and creative industries and the use of creative expertise in other sectors constitute what is known as the creative economy. The creative economy is a key factor in enterprises creating new value and in economic regeneration. Updated and upgraded entrepreneurship and new ways of organising business operations are at the core of the creative economy. Creativity and the ability to attract creative people have become an important factor in social development, innovation, and inter-regional competition in various sectors. The cultural and creative industries thus promote innovations and economic and societal reforms while generating added value for other sectors. Operating restrictions imposed because of the coronavirus pandemic have had a particularly profound impact on the events industry and on the income of operators in the cultural and creative industries. On the other hand, the pandemic has abundantly highlighted how important the cultural and creative industries are for the recovery capability and competitiveness of society at large.

In the years before the coronavirus crisis, the Finnish tourism ecosystem grew and became more international at a rapid rate. Between 2015 and 2018, overall demand for tourism services increased by about 5% per annum: foreign demand increased by 12% per annum on average, and domestic demand by 2% per annum. The evolution of Finland's tourism ecosystem is the result of determined efforts; now, the pandemic has posed a serious challenge for the future viability of this system.

Operators in the tourism industry need additional concrete tools to improve and assess the sustainability of their operations and also need support and expertise for adopting an informed approach to sustainable tourism. Climate change makes it vital to improve the environmental sustainability of travel. Actions taken to calculate carbon footprints in the tourism ecosystem and to reduce those footprints are investments in the future of the tourism industry. It is a challenge for digitalisation in the tourism industry that competence in this area in tourism enterprises is highly variable, and enterprises differ widely in the potential they have for investing in digitalisation. There are also challenges involved in finding and purchasing tourism services through digital channels.

Consumer values, needs and habits are changing with the pandemic, and these will reshape their expectations vis-à-vis tourism. In crisis situations such as in the current pandemic, it is the level of expertise in the tourism ecosystem that will determine how well it will cope. Finnish tourism enterprises differ widely in their capability to respond to the need to develop new operating models and tourism services as required by the current situation. There is no effective cooperation between tourism enterprises and RDI

operators to promote innovations in the sector, and therefore we need to invest in RDI activities in the tourism industry in particular.

## **b. Targets**

The long-term target is to achieve growth in Finland's exports and GDP. With investments, the conditions and ability of SMEs to operate in a global environment changed by the pandemic and to exploit market opportunities will improve. The number of export companies will increase and the export base will be strengthened, the competence and competitiveness of growth sectors will improve, and the value added to the economy and employment will grow. The aim is for Finland to become a global leader within its areas of strength, which will bring investments with high added value and international top experts to Finland and improve the competitiveness of Finnish companies in the global market. The value added to the economy will increase, in particular, from service exports. These reforms and investments will support the global success of strategic EU-level flagship areas. The actions will promote investments and investment-oriented fiscal policy for commercialising innovations, in keeping with the Country Specific Recommendations of the EU.

Promoting internationalisation in enterprises and their global competitiveness will boost growth and employment. The export potential and recovery capability of enterprises will improve through the digital transformation. Transitioning to a low-carbon and digital circular economy consistent with sustainable development will improve the international competitiveness of Finnish enterprises offering climate solutions and will create new jobs in Finland.

The long-term objective is to create more business-driven growth ecosystems in Finland that target the global growth market and aim at a turnover of billions of euros, and to support the development of excellence and the emergence of new innovative products and services, and to raise the national and international profile.

Promoting the internationalisation of Finnish companies, in particular SMEs – both in the EU's internal market and third countries – directly implements the Commission's SME Strategy (COM (2020) 103 final). Improving the internationalisation potential of enterprises is also a target in the new European Industrial Strategy. The measures are also in line with the Commission's 2020 country-specific recommendations on SME financing in Finland.

The international competitiveness and internationalisation capability of Finland's strongest industries and cutting-edge expertise will be improved by reinforcing sector-specific export promotion programmes and ecosystems facilitating the building of comprehensive offerings and business driver models. This will promote the integration

of Finnish SMEs into Finnish and EU business consortia in order to create more competitive European value chains in the EU and third countries. The aim is to increase the exports of European consortia outside the EU. The choice of sectoral reform measures will be based on Finland's strengths and international market potential. The projects that receive funding are mainly selected through competitive tendering.

Several sector-specific programmes will be launched to respond to the multiple challenges. Their purpose is to enhance the competitiveness of Finnish enterprises in business models for the circular economy, in global digital service markets, etc. The packages will be built on the foundation of the expertise created in Finland's RRP (RDI and financial investments). The investments will be particularly geared towards the design, delivery and coordination of joint ventures by export-oriented Finnish enterprises.

The actions are horizontally linked to the reforms and investments described in the focus areas of the Sustainable Growth Programme for Finland. Sector-specific programme packages will be developed to augment the overall offering and thereby to improve the internationalisation potential of enterprises in a given region, thus boosting their growth and employment.

The cultural and creative industries constitute a medium-sized industry in Finland, accounting for about 3.5% of the GDP and employing 100,000 – 130,000 persons. The Government Programme of Prime Minister Marin's Government states in respect of promoting the creative industries that new jobs will be created, their percentage of the GDP will grow and working conditions for employees in the sectors will improve. Leveraging the potential of the cultural and creative industries requires development of the creative sector and horizontal cooperation with the business world as a whole and with actors in society at large. The investments will encourage business operations with high added value, renewal of products and services and improved work productivity. The aim here is to contribute to the creation of 10,000 new jobs and to significantly increasing the percentage of the cultural and creative industries in the GDP from the present 3.5% by 2026.

Tourism investments will help strengthen cooperation in the Finnish tourism ecosystem, upskilling, improvement of business potential and revitalisation of the operating potential of enterprises in the tourism industry. The package will help revive an ecosystem that has suffered serious financial setbacks due to the coronavirus pandemic and will help strengthen the resilience of the industry in the ongoing structural change in the economy. The investment is intended to ensure that the service capacity and renewal capability of the tourism ecosystem will recover from the financial and social impacts of the coronavirus crisis and that faith in the future and in the employment prospects of the industry will return.

The tourism investment is related to the implementation of the Commission Communication: *Tourism and transport in 2020 and beyond*. The reform and investment package will also improve competence in the Finnish tourism ecosystem with actions that are in line with the tourism programme in the European Skills Pact. Because tourism is a human-oriented service industry that in addition to its contribution to the national economy has widespread impacts on local communities, it is vital to stress the importance not only of environmental sustainability (green skills) but also of economic, social and cultural sustainability.

In October 2020, the European Commission began the preparation of a new European Agenda for Tourism 2050. So far, the strategic themes identified as supporting the recovery and future of the European tourism ecosystem are: safe and seamless tourism experience; greener holidays, and; tourism powered by data. The themes adopted in the national reform package for Finland's tourism are consistent with these talking points.

Actions to ensure the availability of skilled labour, which is important for the tourism ecosystem as for other industries, are proposed elsewhere in Finland's RRP. Actions designed to foster employment, to create training opportunities and to attract skilled labour will also allow the needs of the tourism industry to be considered. The tourism industry will be able to leverage actions described in other pillars of the plan, for example for boosting digitalisation or energy efficiency, even if those actions are not sector-specific.

### c. National strategic circumstances

The reforms and investments put into practice specific parts of the Government Programme of Finland and its action plan, particularly in the strategic focus areas 'Globally influential Finland', 'Dynamic and thriving Finland', 'Carbon neutral Finland' and 'Finland that promotes competence, education, culture and innovation'. The reforms and investments will support cross-sectoral strategic implementation of the programme for exports and international growth, as outlined in the Government Programme.

The programme for exports and international growth included in the Government Programme is a coordination and management tool for improving existing functions, for launching new actions and for setting and monitoring shared, cross-sectoral targets. In a systematic and cross-sectoral approach, public services and funding will be improved in an encouraging and client-oriented way, seeking closer cooperation between public and private services. The outcomes and effectiveness of the programme will be achieved through the combined effect of several actions. Four principal themes were identified in the programme: demand-driven ecosystems; expansion of internationalisation services; provision of financing; and climate solutions.



The programme themes are based on and, in part, give effect to previously launched cross-sectoral strategies and strategic programmes under the Government Programme, such as the sustainable transport development programme, the Health Sector Growth Strategy and the creative economy roadmap. Also, low-carbon roadmaps have been prepared in various sectors.

In accordance with the policy entered in the Government Programme, the creative economy roadmap was drawn up in collaboration with operators in the creative industries in order to identify the process with which the targets of the Government Programme may be attained and growth measures implemented. The roadmap highlights key challenges and bottlenecks in the growth process; resolving these will enable the creative industries to generate growth for the national economy as a whole in the novel competitive situation brought on by the coronavirus pandemic.

The vision in Finland's Tourism Strategy 2019–2028 is that Finland will be the most sustainably growing tourist destination in the Nordic countries. In keeping with the principle of sustainable development, investments in tourism promotion should cause tourism demand to grow more quickly than the number of actual tourists. Before the pandemic, the key target was to almost double tourism exports over ten years (being EUR 5 billion in 2019 and with a target of EUR 8 billion in 2028). The strategy identifies four key priorities that will enable sustainable growth and renewal of the tourism sector: supporting activities that foster sustainable development, responding to digital change, improving accessibility to cater to the tourism sector's needs, and ensuring an operating environment that supports competitiveness.

The Government Programme of Prime Minister Marin's Government notes the importance of tourism for Finnish society. The Government Programme contains eight measures with direct relevance for the tourism industry and several entries indirectly related thereto, for example in respect of the platform economy, digital and road infrastructure improvements and reducing the repair deficit at nature sites. The measures aimed at the tourism industry mainly have to do with facilitating sustainable growth and supporting the launch of the programme to encourage entrepreneurship in the tourism industry, improving the potential for nature tourism and boosting culture tourism. The Government has also launched a programme titled Sustainable Tourism 2030 as part of implementing the policies previously decided.

In keeping with EU decisions, Finland has committed to significantly reducing carbon emissions over the next few decades. The Government Programme of Prime Minister Marin's Government also emphasises the importance of conforming to sustainable development. Finland aims to be carbon-neutral by the year 2035 and to halt biodiversity loss by 2030. Reinforcing ecological sustainability in the tourism industry will help attain

these targets. Sustainable tourism is also a component in Finland's Arctic policy in the Arctic Strategy published in 2016 and in its update to be published in spring 2021.

## Description of reforms and investments in the component area

### **INVESTMENT 1.1: Growth accelerator programme for small enterprises (P3C4I1)**

#### **Challenges**

Enterprises seeking growth through internationalisation are of vital importance for recovering from the coronavirus crisis and for future growth. In order to recover from the coronavirus crisis, Finland needs to have considerably more innovative SMEs seeking growth through internationalisation. We therefore need to achieve a significantly higher number of SMEs seeking growth through internationalisation. SMEs operating on the domestic market and having no potential for internationalisation are unable to embark on such a course without significantly revamping their business operations to facilitate such growth.

Increasing the number of enterprises seeking growth through internationalisation calls for additional investments particularly in fostering potential for growth and for internationalisation in small enterprises in particular, and in developing the service offering supporting these efforts.

#### **Targets**

The purpose of the growth accelerator programme for small enterprises is to boost the internationalisation capabilities of small businesses at the national level in order to address changes in the operating environment caused by the coronavirus crisis and to improve the capability of enterprises to embrace emerging business opportunities. Additional investments will boost the effectiveness of the programme significantly. The growth accelerator programme forms part of the exports and international growth programme included in the Government Programme.

Additional investments in the programme will promote the leveraging of digital technologies and practices in the business operations and internationalisation efforts of small enterprises in particular. Improving internationalisation capabilities will entail robust efforts in R&D as required for internationalisation, including adapting products for international markets. Additional investments will allow the programme to be expanded so as to facilitate the identification of business opportunities for small enterprises on global markets and facilitate an improvement of the capabilities for growth and for internationalisation in small enterprises nationwide.

**Implementation:**

Additional investments in the national growth accelerator programme run by the Centres for Economic Development, Transport and the Environment, allowing its actions to be expanded and reinforces nationwide. Projects to improve the internationalisation potential of small enterprises as envisioned in the programme will be funded out of business development aid awarded by Centres for Economic Development, Transport and the Environment. The Centres for Economic Development, Transport and the Environment will conduct national funding application rounds for the programme. The application notice will define the targets and funding criteria for the development projects to be funded, including the criteria imposed in the RRP, such as the requirement to comply with the DNSH principle and the targets of the green transition. The key application criteria for projects for improving the potential of microenterprises and small enterprises for growth and for internationalisation to be funded are that they must promote digitalisation, the green transition and related RDI activities. The projects will have to promote the design and delivery of new digital solutions (AI, big data, cyber security, etc.) in the business operations of enterprises. The green transition involves investigating the market potential of bio-based product innovations enhancing materials efficiency that are suitable for international markets. The aid will be awarded pursuant to the Act on State Aid for Business Development. Funding decisions will be made centrally by four Centres for Economic Development, Transport and the Environment with RR responsibility.

**Investment target group**

The programme is principally intended for microenterprises and small enterprises planning on internationalisation.

**Compatibility with rules on State aid**

The funding instrument is compatible with the legislation on State aid. The funding will be awarded as de minimis aid out of an existing funding instrument at Centres for Economic Development, Transport and the Environment (business development grants) and based on the given funding criteria. Aid will not be granted to projects that do not fulfil the criteria in the De Minimis Regulation. Aid will be granted for improving enterprises' capabilities for internationalisation, i.e. it does not constitute an export subsidy.

**Timetable**

Commitments 2022–2023. Payouts until 2026.

**Cost estimate**

EUR 10 million

National special funding amounting to EUR 3–4 million per year is available for the programme. It is also partly possible to support actions in this programme out of

Structural Fund programmes. However, additional investments will be needed to expand the programme actions and to boost resources nationwide in order to improve the effectiveness of the programme.

### **INVESTMENT 1.2: Key industries for international growth (P3C4I2)**

*A programme to promote low-carbon approaches, the circular economy and the digital transformation in industry and to facilitate increased exports of industrial services.*

Investments geared towards the green and digital transition are aimed at renewing Finland's business structure and, indirectly, at increasing our exports. RDI activities undertaken with RRF funding will generate new low-carbon circular economy solutions, as Finnish enterprises sell low-carbon or circular economy innovations abroad. The EU RRF offers a unique opportunity for low-carbon solutions. EU Member States are directing tens of billions of euros into investments in low-carbon technologies.

Investments made in the green and digital transition in other EU Member States can boost demand for solutions offered by Finnish industries.

Service exports are intangible exports of expertise and added value. A huge majority of the global economy consists of services. In modern societies, the ratio of intangible content to GNI is growing. Over the past two decades, the percentage of services in Finland's exports has doubled. Estimates show that one third of the gross value of Finland's exports now comes from service exports. According to the Research Institute of the Finnish Economy (ETLA), Finland's service exports grew by more than 50% between 2010 and 2017. Domestic added value is high in service exports, because no foreign raw materials are required. Being a technology-oriented country with a high educational attainment, Finland has every opportunity to capture a significant market share of the international trade in services.

#### *Electric heavy transport ecosystem and acquisition and conversion support*

According to the Government Programme of Prime Minister Marin's Government, domestic transport emissions will be halved by 2030. Greenhouse gas emissions in 2019 from Finnish domestic transport totalled approximately 11.1 million tonnes of carbon dioxide equivalent. Some 94% of emissions from transport in Finland were generated by road traffic. In road traffic about 54% of emissions came from private cars, about 41% from vans and lorries and the rest from buses, motorcycles, mopeds and other motor vehicles.

An essential part of reducing greenhouse gas emissions from road traffic is shifting to alternative, low-carbon fuels such as electricity, hydrogen, biofuels or biogas. Development of the market for alternative fuels is hindered by the higher purchase prices of the vehicles but also by the lack of recharging and refuelling points. The purpose of

the investment is to bring the energy efficiency benefits of new, low-carbon vehicles into road traffic by 1) developing an electric heavy transport ecosystem catering to the needs of electric heavy transport, and 2) supporting the acquisition of low-emission vehicles through acquisition and conversion support.

Combating climate change has emerged as a major challenge in transport and logistics worldwide. Attaining emission reduction targets requires new innovations in transport, and this is catalysing a global growth market for solutions and services aimed at reducing greenhouse gas emissions. There is robust interest and need on the market for new, more efficient operating models and solutions as a response to climate change. The solutions adopted must be based on business-driven innovation in order for them to be scalable and economically efficient. To accelerate these solutions, this investment will be used to allocate funding to setting up an ecosystem for electric heavy transport and to acquisition and conversion support.

#### *Health and wellbeing expertise and technology*

The health sector is one of the fastest growing industries in the world. Finland is excellently placed to be at the cutting edge of health and wellbeing technology, business and services. The health sector has significant growth potential on both domestic and international markets. For example, health technology is one of Finland's fastest-growing high-tech export industries. Health technology exports have grown by 5% per year, totalling EUR 2.4 billion in 2019.

The health sector is also acknowledged as a sector with growth potential in the Government Programme of Prime Minister Marin's Government. In accordance with the Government Programme, implementation of the Health Sector Growth Strategy for Research and Innovation completed in 2014 will continue during the current electoral term. In December 2020, a new roadmap for the health sector growth strategy for the period 2020–2023 was published, and investments will be allocated to its implementation.

Research, development and innovation (RDI) are highlighted as an activity underpinning the health sector in which a high standard of special expertise is required. Finland has made substantial investments in health-related research and has risen to the global cutting edge in health research in a number of sectors. Finland has a unique opportunity to evolve into a pioneer of personalised medicine and healthcare and a leading country in RDI of this field.

Digitalisation and new ways of leveraging data along with emerging technologies such as AI and their applications have particularly promising potential for the health and wellbeing sector.

Moreover, the global coronavirus pandemic has put health in the limelight. In these times, issues of health and security of supply are of great importance.

Finland already has strong expertise in these areas, also from the business and exports perspectives. New growth opportunities have opened up in the health sector, and Finnish companies are well placed to seize them.

Regulations and legislation in respect of health care systems and medical devices have been amended in recent years. In addition to the adoption of the EU *General Data Protection Regulation*, changes in legislation pertaining to health care solutions entered into force in spring 2017, in the form of the EU *Regulation on medical devices* and *Regulation on in vitro diagnostic medical devices*. These new European Regulations (2017/745 and 2017/746, respectively) address devices, supplies and software used in health care. The transition periods provided for will expire in May 2021 for medical devices and in May 2022 for in vitro diagnostic medical devices.

Enabling legislation will be developed as part of implementing the Health Sector Growth Strategy. The aim is that Government proposals for an overhaul of the Biobank Act and a bill for a Genome Act will be submitted to Parliament during 2021. These form part of a legislative package that also includes legislation on the secondary use of health and social data that entered into force in May 2019.

#### *Growth and export programme for water expertise*

The value of the global water industry has been estimated at EUR 400 to 500 billion annually, and with climate change the trend is upwards. Safe water production and cleaning and reuse of waste water is a field considered to be one of Finland's greatest business growth opportunities. In order to tap into this, non-recurring recovery funding will be allocated to the growth and export programme for water expertise.

Finland is a world leader in water services in both coverage and quality. Finland also has high-end expertise in water technology and system management. This provides an excellent foundation for internationalisation and exports. The value of Finland's water industry is estimated at EUR 4 billion, but with the potential to grow to an estimated EUR 6 billion by 2025.

This programme will revitalise and boost the operations of the water cluster and the closer integration of water service facilities into the international water industry, along with investments in innovative water industry solutions enabling the national and international delivery of comprehensive solutions and services.

**Challenges:**

Finland must diversify its industrial structure and be more actively engaged in the value chains of international trade in order to gain added value from exports and globalisation. Service exports are expected to become increasingly important in the future. With the coronavirus pandemic, improving operating potential and facilitating capacity for renewal in export industries will constitute a key channel for accelerating economic recovery and growth.

The Finnish enterprises in the target fields of this investment are relatively small in the context of international markets, and their products and services typically only address part of their clients' needs. It is thus important for Finnish enterprises to be able to provide a comprehensive joint offering, whether amongst themselves or by connecting to a suitable integrating body. Offering a comprehensive solution will bring a significant service element to the delivery.

According to the Country Specific Recommendations for Finland, we should focus our investments on the green and digital transition, specifically on building an efficient and durable infrastructure. In the transport sector, attaining emission reduction targets will require new, business-driven innovations, and this is catalysing a global growth market for solutions and services aimed at reducing greenhouse gas emissions. Finland's challenge for international success in transport is that we currently have a low level of investment in testing facilities and scaleable solutions in this sector. Investment in systematic improvement of the operating environment and export ecosystems in the sector are vital for promoting exports of pioneering Finnish solutions.

The health sector is heavily regulated, and changes in the regulation environment often complicate the design and delivery of new solutions. It is also important to gain references from the domestic market to support exports, and this has been identified as a challenge in the sector. Finland has made substantial investments in training, research and expertise in the health sector, but this has not been fully leveraged for boosting competitiveness, new business or exports.

In many of our export target countries, the water industry is controlled by central and local government, and clients therefore often wish to interact with government agencies and other public-sector bodies. Accordingly, the public sector must be more heavily involved in Finnish exports. Because enterprises supply services for water service facilities in Finland, it is important to involve those facilities in international export consortia in order to solidify the credibility of the comprehensive solution offered by any such consortium. The expertise of research institutions, universities and water service facilities is needed in export consortia; there is still much to be improved in public-private partnerships in the water industry. The water industry needs investments in domestic and international

projects that create new technologies, methods and service concepts and will provide references for export markets to establish a good competitive position from which to offer solutions to global challenges in water management.

**Targets:**

*A programme to promote low-carbon approaches, the circular economy and the digital transformation in industry and to facilitate increased exports of industrial services.*

Application rounds will be launched to promote low-carbon approaches, the circular economy and the digital transformation in industry and to facilitate increased exports of industrial services, with specific reference to transitional and emerging technologies. Their purpose is to enhance the competitiveness of Finnish enterprises in business models for the circular economy, in global digital service markets, business models and added-value services particularly in scalable digital services for the manufacturing industries. The programme will be built on the foundation of the expertise created in Finland's RRP (RDI and financial investments).

The investments will be particularly geared towards the design, delivery and coordination of joint ventures by export-oriented Finnish enterprises and will help Finnish enterprises identify relevant international networks. An 'integrator model' will be developed to support internationalisation of circular-economy solutions.

Electrification of industrial processes also represents new export opportunities for Finnish enterprises. The processing industry in Europe is facing the same emission reduction challenges that Finland aims to resolve using RRF funding. Best practices in Finnish industry can equally well be adopted elsewhere in the EU or indeed worldwide. There is a particular need for comprehensive offerings.

To be a pioneer in the circular economy, Finland must act with determination and consistency and provide adequate resources for foreign policy efforts such as country branding and export promotions. Pioneering the circular economy forms part of Finland's positive country brand. Finland has expertise and new developments supportive of the circular economy in several areas.

Promising innovations include: textiles made from recycled and wood-based fibres; battery mineral recycling technologies; Power-to-X solutions; and geopolymers replacing concrete made from industrial residues. In respect of digitalisation, Finland has potential for pioneering for example in the data economy in industry, facilitating high added value solutions such as predictive maintenance; intangible services for industry; and optimisation of resource use. There are also emerging opportunities in transitional and dual-use technologies, e.g. in cyber and space applications.



*Electric heavy transport ecosystem and acquisition and conversion support*

This investment will help jump-start an ecosystem for electric heavy transport.

The ecosystem will be for developing digitalisation-based solutions to reduce emissions from traffic. An ecosystem is a mutually complementary network of expert parties. While the operators in an ecosystem compete with each other and with other ecosystems, they also produce added value for each other and for their clients.

Some of the investment will be made in the form of acquisition and conversion support. The purpose of this aid is to speed up the proliferation of zero-emission and low-emission vehicles. The aid will be awarded for converting cars, vans and heavy vehicles to run on gas or ethanol. The aid is intended to help private individuals and enterprises convert old vehicles to run on an environmentally friendlier fuel. The aid will also be awarded as a subsidy for procurement of new gas-powered and electric lorries and electric cars. The purpose of subsidising the procurement of gas-powered lorries and electric cars is to increase the percentage of zero-emission and low-emission vehicles in the vehicle stock. Ethanol and biogas sold as transport fuels in Finland must comply with the sustainability criteria and greenhouse gas emission reduction criteria given in the *Renewable Energy Directive 2018/2001 (REDII)*.

The targets here complement the green transition pillar supporting the structural change in the national economy, particularly the actions in its component area 'Low-carbon solutions for communities and transport'.

*Health and wellbeing expertise and technology*

The purpose of the investment is to reinforce the ecosystems of health and wellbeing services and technologies and to facilitate promotion of their exports as part of implementing the new roadmap in the Health Sector Growth Strategy for Research and Innovation Activities. The best and most effective solutions developed in Finland will translate into internationally competitive service concepts. Finland's expertise and products are widely known on international markets.

*Growth and export programme for water expertise*

Partnerships in the water industry for the purpose of internationalisation and export business will be supported along with fostering regional clusters and innovation platforms for service providers, research institutions and other operators. National and European consortia offering comprehensive product packages and services will be assembled. These consortia will consist of internationally established enterprises, SMEs, research and educational institutions, water service facilities and other operators.

Individual operators, consortia and regional clusters will be brought together and networked into a national water industry cluster. The purpose of the water industry cluster will be to promote Sustainable Development Goal 6 (SDG 6, Water) nationally and internationally.

The design, piloting and internationalisation of existing and emerging technologies, methods, service concepts and solutions will be promoted by supporting reference projects to help in realising the full potential of our water industry. The investment is intended to generate significant growth in export projects and business operations in the Finnish water industry.

### **Implementation:**

*A programme to promote low-carbon approaches, the circular economy and the digital transformation in industry and to facilitate increased exports of industrial services.*

Business Finland will conduct 1 to 3 application rounds for projects promoting the circular economy, low-carbon solutions in industry and industrial service exports. The application notice will define the targets and funding criteria for the development projects to be funded, including the criteria imposed in the RRP, such as the requirement to comply with the DNSH principle and the targets of the green transition. The projects to be funded must envision significant development and renewal of low-carbon solutions, the circular economy or service business operations in enterprises. The funding will be awarded as *de minimis* aid or pursuant to the GBER (aid for research and development projects), and the funding criteria are based on the existing funding instruments of Business Finland and their conditions and criteria. The general terms and conditions of the funding determine which costs are acceptable and which are not. Project volume will mainly be between EUR 50,000 and 200,000, with a matched funding requirement of 25% to 65%, depending on the funding instrument, the nature of the project and the applicant. Funding may be awarded to both enterprises and research organisations. A significant percentage of the funding will be targeted at joint ventures intended to establish closer cooperation between enterprises. The application rounds will be intended for funding new or revised products and services and business model development projects, and also projects to boost the internationalisation capabilities of enterprises. The preliminary principal selection criteria are: innovation; impact on renewal of the enterprise; envisioned international turnover; expertise and ability to execute the project; and the project implementation plan.

Various studies will be conducted to consolidate the programme targets. A particular focus will be on comprehensive solutions with high added value that include service elements. The programme offers funding for Finnish parties in partnerships for the purpose of developing a joint offering. It is estimated that funding will be allocated to at least 25 enterprises, the average project budget being EUR 160,000.

Application rounds and targeted actions will be launched jointly with enterprises so as to respond to market opportunities and to aim to develop new solutions and joint offerings, thereby indirectly contributing to export growth in the medium term. Digital solutions and ICT enterprises play an important role in developing joint offerings.

*Electric heavy transport ecosystem and acquisition and conversion support*

An ecosystem for electric heavy transport will be launched, bringing together business expertise in the field in the interests of attaining national emission reduction targets and of creating new expertise for which there will be international demand.

This ecosystem will be a nationwide collaboration network to respond to development needs for various types of zero-emission and carbon-neutral heavy vehicles. Enterprises' innovation paths and end-user experiments will be accelerated. Focus will also be on digital solutions for electric vehicles in order to maximise cost-effectiveness and environmental performance.

The ecosystem is to be partly fuelled with public investments, with matching investments from the private sector. The following areas have been provisionally identified as the spearheads of the ecosystem:

- Needs-based charging systems;
- Electrification technologies for work machinery;
- Battery systems;
- Test bed use in system-level piloting.

Responsibility for awarding the acquisition and conversion support could be undertaken by the Ministry of Transport and Communications.

*Health and wellbeing expertise and technology*

Business Finland will conduct funding application rounds to promote the actions listed in the Health Sector Growth Strategy, which will reinforce ecosystems and export promotions in the health sector:

- Promoting the launching of national competence clusters, including setting up a new digital health and wellbeing centre of excellence.
- Developing the secondary utilisation of health and social data in a national network.
- Investing in international cooperation in data-intensive research and development.
- Developing test platform activities by investing in national coordination and international cooperation.

- Promoting the development of digital health security solutions for export markets across administrative boundaries.
- Continuing the development of an ecosystem focusing on technology-supported housing for older people. Investing in international cooperation and exports.
- Developing research-based and innovative methods for monitoring citizens' wellbeing and digital services for supporting it.
- Engaging in systematic cooperation to increase the recognisability of Finnish health sector expertise. Drawing on the market knowledge and services of the Team Finland network and promoting cooperation with strategic international partners.

Actions will be implemented through the RDI funding and programme activities of Business Finland. The preliminary principal selection criteria are: innovation; impact on renewal of the enterprise; envisioned international turnover; expertise and ability to execute the project; and the project implementation plan.

#### *Growth and export programme for water expertise*

The programme will be put into practice in cooperation among ministries, regional government, regional clusters, individual operators and professional organisations, with appropriate assignments and aid. The main focus of the programme is on concrete actions in respect of water resource management. A steering group with the aforementioned operators represented will be set up for the programme. The means for implementing the reform include:

- allocating funding mainly to reference and pilot projects,
- exploring the strengths, weaknesses and opportunities of existing partnership models,
- reinforcing needs-based aid provided by ministries and regional government for partnership activities,
- reinforcing national coordination in the water industry,
- supporting the activities of consortia, regional clusters and the national cluster and other partnership models.
- The investments will be implemented through themed aid application rounds.

#### **Investment target group**

The target group for the actions in the investments includes:

- Industrial enterprises, particularly SMEs. The principal aim is to support enterprises which have the basic capability for international growth and are competitive on international markets and which have business operations that are scaleable.

- Enterprises in the transport sector.
- The target group for acquisition and conversion support also includes enterprises in other sectors and private individuals.
- Ecosystems and enterprises in the health sector.
- Participants in the water services cluster: water industry enterprises, research and educational institutions, water service facilities and public bodies such as ELY Centres. The investment will be particularly geared towards facilitating the growth and internationalisation of SMEs, the internationalisation of research and educational institutions and international business development, and also the internationalisation and growth of business drivers.

### **Compatibility with rules on State aid**

*A programme to promote low-carbon approaches, the circular economy and the digital transformation in industry and to facilitate increased exports of industrial services.*

The rules on State aid will be complied with. The funding will be awarded as de minimis aid or pursuant to the GBER, and the funding criteria are based on the existing funding instruments of Business Finland and their conditions and criteria. The funding criteria and acceptable costs are given in the funding instructions of Business Finland. The aid will be awarded in respect of developing existing or new products and services and of improving the capabilities of an enterprise. Aid will not be granted to projects that do not fulfil the criteria in the rules on State aid. The application criteria and requirements will be given in the application notice.

#### *Electric heavy transport ecosystem and acquisition and conversion support*

The programme is compatible with the legislation on State aid. Launching the electric heavy transport ecosystem will be done in compliance with Section 7 ('Aid for research and development and innovation') of the GBER. Private sector applicants will be required to provide sufficient matched funding for each investment so as to not exceed the aid intensity thresholds given in the GBER.

Acquisition and conversion support may be awarded to private individuals or to enterprises; the rules on State aid only apply to the aid awarded to enterprises. It will be evaluated in preparing the Act on the acquisition and conversion support whether it should be awarded as de minimis aid or subject to notification to the Commission.

#### *Health and wellbeing expertise and technology*

The funding instruments are compatible with the legislation on State aid. The funding will be awarded as de minimis aid or based on the existing funding instruments of Business Finland and their conditions and criteria. Aid will not be granted to projects that do not fulfil the criteria in the rules on State aid.

*Growth and export programme for water expertise*

The programme is compatible with the legislation on State aid. The programme is about supporting enterprises and consortia in RDI-oriented pilot projects that will serve as references for international clients and promote public-private partnerships for improving the business capabilities of enterprises. The aid does not constitute export subsidies. In cases where the aid is awarded for commercial operations, the aid will be awarded as de minimis aid or pursuant to the provisions of the GBER. Detailed instructions on the rules on State aid to be applied and the related requirements will be given in connection with the actual application rounds, and aid will not be awarded to projects that do not meet the criteria given in the rules on State aid.

**Timetable**

*A programme to promote low-carbon approaches, the circular economy and the digital transformation in industry and to facilitate increased exports of industrial services.*

2021–2024. Payouts possibly up until 2025.

*Electric heavy transport ecosystem and acquisition and conversion support*

The actions will be carried out in 2022–2023.

*Health and wellbeing expertise and technology*

The measures specified in the plan will be carried out in 2021–2023. Payouts possibly up until 2025.

*Growth and export programme for water expertise*

Investments in reference and pilot projects will be allocated by the end of 2023 and paid out by the end of 2025. The national water service cluster (Water Cluster Finland) will have been set up and partnerships established by the end of 2023.

**INVESTMENT 3. Revitalisation aid for the cultural and creative industries (P3C4I3)**

This investment addresses revitalisation in the cultural and creative industries overall and in the events industry after the coronavirus pandemic, with the aim being to spread the effects across enterprises and actors so as to foster the use of digital applications and, more broadly, to facilitate revitalisation in enterprises and in society at large.

The investment will involve launching projects run by enterprises and other operators, through funding application rounds, where the cultural and creative industries and the events industry can design and pilot service, production and operating models suitable for new circumstances, enabling them to adapt their activities to the changing environment. Another aim is to strengthen international competitiveness.

The target group consists, directly and indirectly, of enterprises, organisations and professionals in the cultural and creative industries and indirectly of any and all enterprises and public and private parties that use or benefit from the products and services of enterprises in the cultural and creative industries.

The investment will also indirectly benefit a wide range of operators beyond the value network of the cultural and creative industries.

### **Challenges**

The pandemic and the rapid progress of digitalisation have exacerbated Finland's challenges in resolving major societal issues such as climate change or how to safeguard quality of life and wellbeing. We must achieve a competitive advantage and improved productivity through new business models and a more diverse business structure. By producing innovations and revising operating models, we can resolve societal challenges and promote revitalisation in the business world.

The coronavirus pandemic has abundantly highlighted how important the cultural and creative industries are for the recovery capability of society at large, for employment, for the regional economy and for international competitiveness. The operations of the cultural and creative industries and the creative economy form an important part of Europe's internal market vis-à-vis entrepreneurship and innovation. In the Country Specific Recommendations for Finland 2020, the Council notes on the national reform programme that investment remains below EU average for categories that most support productivity growth, notably investment in intellectual property.

The creative economy fosters innovations. The cultural and creative industries and the use of creative expertise in other sectors constitute what is known as the creative economy. The creative economy is a key factor in enterprises creating new value and in economic regeneration. Updated and upgraded entrepreneurship and new ways of organising business operations are at the core of the creative economy. Growth emerges from factors that improve productivity and reduce societal costs while increasing general wellbeing impacts. The importance of data is heightened in creating added value in a digital environment.

Creativity and the ability to attract creative people have become an important factor in social development, innovation, and inter-regional competition in various sectors. Creativity refers to the ability to combine imagination with existing knowledge and competence in order to develop new ideas, products, and services. Cultural competence is an important part of a creative economy. It promotes the use of cultural capital in mental and social development and in production. Understanding one's own and other people's cultures offers significant benefits, particularly in user- and client-based innovation.

The coronavirus pandemic has hit operators in the cultural and creative industries particularly hard, specifically those in the performing arts and in the events industry, due to restrictions on public gatherings. As soon as restrictions on gatherings and travel entered into force, their income potential disappeared. The hiatus in operations facilitated a rapid transition to digital services by operators who had the capability to do this. Most operators, however, did not have this capability. Rapid reorientation was complicated by the fact that many operators in the cultural and creative industries are small in size and low on resources, besides also lacking the knowledge and skills for digital development. Some operators may be challenged by a lack of experience in cross-sectoral cooperation.

The cultural and creative industries consist of enterprises, private entrepreneurs, self-employed persons, associations, foundations, cooperatives and public-sector bodies. For operations in this sector to be restored and achieve new growth, they must adapt to a rapidly changing operating environment and new ways of performing creative work, besides developing ecologically sustainable forms of production, services and other activities that will respond to the demand for digital services and the challenges of internationalisation.

Recovery from the pandemic represents significant opportunities for the cultural and creative industries in updating and upgrading their services and operating procedures and in enhancing their networks. The flexible production and operating structures typical for the cultural and creative industries, together with the digital transformation, will boost the effectiveness of recovery and revitalisation actions and facilitate the rapid leveraging of the growth and innovation potential of cultural products and services.

### **Targets**

The cultural and creative industries constitute a medium-sized industry in Finland, accounting for about 3.5% of the GDP and employing 100,000 – 130,000 persons. Operating restrictions imposed because of the coronavirus pandemic have had a particularly profound impact on the events industry and on the income of operators in the cultural and creative industries. The Government Programme of Prime Minister Marin's Government states in respect of promoting the creative industry that new jobs will be created, their percentage of the GDP will grow and working conditions for employees in the sectors will improve. A creative economy roadmap was prepared for this purpose.

Leveraging the potential of the cultural and creative industries requires development of the creative sector and horizontal cooperation with the business world as a whole and with actors in society at large. This investment will improve the capabilities of the industry to exploit the new business opportunities emerging with revitalisation while also fostering the development of innovations required for digitalisation.



The investment will encourage business operations with high added value, renewal of products and services and improved work productivity. The aim here is to contribute to the creation of 10,000 new jobs and to significantly increasing the percentage of the cultural and creative industries in the GDP from the present 3.5% by 2026. There are no specific indicators for the impacts of multiprofessional leveraging of creative work, but studies do show that creative work can increase added value and improve productivity. Evaluation and indicators will be developed as part of putting the creative economy roadmap into practice.

New digital procedures and the growth of digital services and contents will facilitate the recovery of the cultural and creative industries and increase revenue gained from creative work. In the events industry, the target is to encourage responsible execution and international attractiveness of event productions and to reinforce regional networks of cultural events. Strong, smoothly running networks will foster growth throughout the national economy and society at large.

Investing in development funding and pilot funding will facilitate revitalisation in enterprises in the cultural and creative industries and in the events industry and will also enable new forms of cooperation between the cultural and creative industries and enterprises in other sectors, by leveraging and applying funding models that have already been tried and tested. It has been established that a small, non-recurring funding input is an efficient and agile instrument for testing and further developing new ideas. This may result in business ideas for further development, for which innovation funding may be granted or in which private funding providers may invest.

Investments in projects (structural aid for enterprises, organisations and operations in the cultural and creative industries for developing services, production models and operating models) will support enterprises, organisations and other key operators in the cultural and creative industries to enable them to adapt to the impacts of the coronavirus pandemic and to design innovative services, production models and operating models for changing circumstances that are difficult to predict, with a view to revitalising the industry and improving its international competitiveness. The investment is intended to update and internationalise production, distribution and cooperation structures in the cultural and creative industries. It is not intended to provide a liquidity injection for the operators involved.

#### **Nature and scope of the investment**

The investment consists of development and pilot funding for enterprises and of grants awarded to enterprises, organisations and other operators in the cultural and creative industries (grant application procedure).

Development funding and pilot funding will facilitate revitalisation in the cultural and creative industries and in the events industry and will also enable new forms of cooperation between the cultural and creative industries and enterprises in other sectors, through funding for experiments and development and by leveraging and applying funding models that have already been tried and tested. New operating environment descriptions will also be produced, and the selection criteria for projects to be funded will possibly be revised. Business Finland will allocate EUR 10 million to the investment.

The grants for projects falling within structural aid will be allocated on the basis of national application rounds. A total of EUR 30 million will be allocated to these projects.

The structural funds (European Regional Development Fund, European Structural and Investment Funds), Recovery Assistance for Cohesion and the Territories of Europe (REACT-EU) and RRF funding form a mutually complementary high-impact funding framework. Coordination between the ERDF and the ESIFs is noted in Finland's Partnership Agreement 2021–2027. The Agreement also describes connections to other EU funding sources, including the RRF. When applying for funding from the EU regional or structural policy funds, applicants must declare any other funding applied for or awarded for the same purpose. National and regional legislation, instructions and coordination mechanisms (e.g. Finland's Partnership Agreement) ensure that the funds remain complementary and that no funding is duplicated. When applying for aid from the Ministry of Education and Culture, applicants must declare any other grants and aid received for the same purpose.

### **Implementation:**

The investment contributes to attainment of the targets of the creative economy roadmap. The roadmap defines the key renewal needs for creative work in the cultural and creative industries to leverage its potential for revitalising business and society at large and for improving productivity through creating value. The roadmap will be implemented through other means too. The investment will be implemented in the administrative branches of the Ministry of Education and Culture and the Ministry of Employment and the Economy and in close cooperation among various ministries, professional organisations and stakeholders. Funding may be granted by a ministry or other public authority to operators or consortia thereof in the cultural and creative industries. Funding allocation may also be delegated as allowed in the rules on State aid. Business grants are targeted at enterprises in the cultural and creative industries and in the events industry. The projects to be funded will involve enterprises in the industry, organisations (e.g. associations, foundations and cooperatives) and other operators.

Business Finland will conduct 2 to 5 application rounds for business grants and will take the action required to execute the investment. Projects will be selected on the basis of

selection criteria outlined for this specific purpose. Funding will be particularly allocated to projects whose purpose is to renew the digital operating environment of enterprises and to contribute to the green transition but also to projects involving outsourced services for commissioned studies on industry renewal. The indirect impacts of funding for development projects are expected to include upgrades, growth and internationalisation in enterprises in the cultural and creative industries and a general recovery in the industry. Promoting creative expertise in all enterprises will boost growth in added value and competitiveness.

Preliminary key criteria for development projects include: innovation; improvement and renewal of corporate practices; and emerging ecosystem impacts fostering growth and internationalisation among operators in the creative economy and in the events industry. The competence of enterprises and their capability to execute the project will also be evaluated, along with the project implementation plan. Scaleable creative content and services providing meaningful experiences for clients will undergo a transformation particularly because of the new opportunities and structural changes emerging during the pandemic. The selection criteria for project funding will support this trend. The selection criteria will significantly emphasise the promotion of digitalisation and compliance with the DNSH principle.

Experiences gained in the preparation of the Business Finland creative economy roadmap and previous programmes will be used in preparing the selection criteria. Project volume will mainly be between EUR 5,000 and 100,000, with a matched funding requirement of 20% to 65%, depending on the funding instrument, the nature of the project and the applicant. The funding will be awarded as de minimis aid or pursuant to the GBER (aid for research and development projects), and the funding criteria are based on the existing funding instruments of Business Finland and their conditions and criteria. The general terms and conditions of the funding determine which costs are acceptable and which are not.

In designing the 4 to 8 application rounds for structural aid, the Ministry of Education and Culture will consult operators in the cultural and creative industries for their expertise on the sectors in the industry and on relations between operator groups and sectors, and to gain an updated picture of the current situation and outlook. Projects will be selected on the basis of selection criteria outlined for this specific purpose. Project value will in most cases be EUR 0.1 to 2 million.

The selection criteria will significantly emphasise the promotion of digitalisation and compliance with the DNSH principle. In awarding structural aid, the principal criteria for the practical execution of projects are the professional skill and experience of the applicant and their partners and the organisational capabilities and readiness of the operators for going through with the project. The principal criteria for project content

include: verified development needs; innovation; ecosystem impacts; inclusion and its breadth; reaching new audiences; and designing and adopting digital knowledge bases, contents, tools and procedures. Other project criteria in awarding structural aid include the potential of the proposed services, production models and operating models to become structurally established; scalability; and supra-regional, national and international significance. Criteria may also include the consideration of intellectual property rights and related data in the generation and leveraging of added value in creative work.

Efforts will be made to alleviate the challenges of shifting operating practices and cultures and of making choices by comprehensive production of advance information and expert analyses; this may also be useful for designing the application rounds. The final selection criteria for structural aid will be prepared in cooperation with stakeholders and with their expert input. The projects to be funded must have the capacity to seek out and design genuinely novel solutions and operating models. It is thus not possible to determine all outcomes and impacts of the projects in advance. The projects will reinforce ecosystems in the cultural and creative industries by fostering cooperation within and between sectors therein, which in turn will improve their resilience. In terms of content, the projects will improve the capabilities of those sectors to adopt digitalisation, e.g. in the form of user data analysis, etc. Also, the projects may have the effect of improving the status of content providers in the value chain due to enhanced leveraging of data and increased use of agents and managers, which in the best cases can increase the percentage in the turnover generated by the content that is attributable to the content providers.

The in-depth experience of the Ministry of Education and Culture in resource management and its extensive networks will be drawn upon in the design, delivery and monitoring of the investment.

### **Investment target group**

The development and pilot funding investment will be aimed at renewal in the cultural and creative industries and revitalisation of enterprises in the events industry after the coronavirus pandemic so that the impacts will be widespread and encourage enterprises and operators to adopt digital solutions, thereby fostering renewal in enterprises and in society at large. The selection criteria will significantly emphasise the promotion of digitalisation.

The investment in projects supported through structural aid will be aimed at the renewal and revitalisation after the coronavirus pandemic of operators in the cultural and creative industries (enterprises, organisations, other operators). The funding will be allocated to the design and adoption of services, production methods and operating methods that will

promote the digital transformation in ecosystems of the cultural and creative industries. The selection criteria will include a requirement to make significant use of digitalisation.

### **State aid**

The funding instruments are compatible with the legislation on State aid. Insofar as the funding is meant for commercial operations and constitutes State aid as per Article 107 of the Treaty on the Functioning of the European Union, it will be awarded as de minimis aid or in accordance with the *General Block Exemption Regulation* (GBER) on the basis of existing funding instruments, whose selection criteria can be modified to apply to enterprises in the cultural and creative industries. The relevant provisions in the GBER may be Articles 17, 19, 25 and 27 and Section 11.

The funding from Business Finland to enterprises (EUR 10 million) will mostly be awarded as de minimis aid but may also be awarded in accordance with the GBER. The selection criteria will be based on existing Business Finland funding instruments, terms and criteria.

The Act on Discretionary Government Transfers (688/2001) will apply to the funding application rounds and to the awarding and administration of the aid. Some of the aid will be awarded for non-commercial activities, in which case the rules on State aid do not apply.

### **Timetable**

The investment will be implemented in 2021–2024. Payouts possibly up until 2026.

## **INVESTMENT 4. Sustainability and digitalisation growth in the tourism industry (P3C4I4)**

### **Challenges**

The evolution of Finland's tourism ecosystem is the result of determined efforts; now, the pandemic has posed a serious challenge for the future viability of this system. Consumer values, needs and habits are changing with the pandemic, and these will reshape their expectations vis-à-vis tourism. The pandemic has had the effect of heightening the importance of environmentally, economically, culturally and socially responsible practices and of digitalisation for consumers, while ambitions towards promoting sustainability and digitalisation have grown in the Finnish tourism industry.

Operators in the tourism ecosystem need support, commonly agreed operating models and tools and collaboration in order to acquire the competence, earnings logics, business activities and business management skills required in the changing operating environment. What will be essential for future success in tourism services will be focusing on responsibility (including measuring carbon emissions and acquiring knowledge on reducing them), publicising responsible actions as part of Finland's country branding,

enhancing the sales of tourism services in digital channels and investing in the generating and analysis of data supporting further development and management of the tourism business.

In crisis situations such as in the current pandemic, it is the level of innovation in the tourism ecosystem that will determine how well it will cope. However, there is great variance among tourism enterprises in RDI expertise and in competence for obtaining national and international innovation funding, and this competence is not being systematically improved through regional or national actions. Also, the current national funding facilities for corporate innovations are not a good fit for the needs of the tourism industry. There is no effective cooperation between tourism enterprises and RDI operators to promote innovations in the sector, and therefore we need to invest in RDI activities in the tourism industry in particular.

### **Targets**

The investment will put into practice the policy in the Government Programme of Prime Minister Marin's Government for promoting growth and internationalisation in the tourism industry and for implementing the measures for sustainable tourism and digitalisation outlined in Finland's Tourism Strategy. The investment will help the tourism industry adjust to the changes caused by the coronavirus pandemic, to the green transition and carbon neutrality and to the digital transformation. The investment will further address the need identified in Finland's Tourism Strategy to invest in research, innovation and forecasting to support the development of our tourism industry. RDI activities will be boosted to respond more effectively to the information needs of tourism enterprises and to facilitate the commercialisation of new ideas. Investments in RDI activities will improve the resilience of the industry to structural change in the economy and enable preparedness for potential future crises. The pandemic has caused the tourism industry severe financial and social challenges along with an uncertain future outlook. Long-term investments in the future, such as sustainable development and RDI investments, are difficult to make when enterprises are fighting for their very existence. This investment will augment the industry's capacity for revitalisation and competitiveness in the current challenging circumstances.

### **Implementation:**

The Visit Finland unit at Business Finland, governed by the Ministry of Economic Affairs and Employment, will be in charge of implementing the development actions under this investment. The Ministry of Economic Affairs and Employment will, as part of its official duties, participate in the devising of national indicators for sustainable tourism and will be responsible for incorporating these indicators, as applicable, into the targets of Finland's Tourism Strategy. The Ministry will involve the inter-ministerial working group on tourism, MiniMatka, in the devising of national indicators.

The development actions under the investment will offer the tourism industry concrete tools for boosting sustainability, for evaluating tourism trends and for enhancing sales of tourism services. Coaching programmes will be provided to assist the tourism industry in adopting sustainable practices, in management by information and in operating in a digital environment, specifically in enhancing sales of tourism services.

In addition to the development actions, the investment will include the execution of an RDI funding programme to boost RDI intensity in the tourism industry. Business Finland, which is governed by the Ministry of Economic Affairs and Employment, will be responsible for implementing the application rounds for RDI funding to foster cooperation among tourism enterprises, universities and research institutions. The funding will be allocated to research, experiment and development projects for improving business operations and for commercialising innovations in the tourism industry; the themes covered will include the green and digital transition, sustainable tourism, virtual tourism, tourism forecasting and consumer understanding. Funding awarded by Business Finland is subject to the rules on State aid. The funding will be awarded as de minimis aid or pursuant to the GBER, and the funding criteria are based on the existing funding instruments of Business Finland and their conditions and criteria. The criteria given in the RRP will be observed in the funding application rounds herein, particularly as regards the green and digital transition and in respect of DNSH assessment. Key criteria for project content may include: innovation; improving and renewing corporate practices; ecosystem impacts; and designing and adopting digital services, tools and practices in the industry. Although the programme is based on existing funding instruments, it is a completely new RDI programme tailored for the tourism industry. Efforts will be made to alleviate the challenges of shifting RDI practices and of boosting marketing potential by comprehensive production of advance information and expert analyses; this may also be useful for designing the application rounds.

Development actions adopted by Visit Finland will be mostly implemented as outsourced services. The use of outsourced services must be steered, monitored and coordinated to ensure that these actions are efficient and effective. Most of the investment steering can be done with the current human resources of Business Finland and Visit Finland, but robust new expertise is required for the implementation. This will be in the form of fixed-term additional human resources, not an increase in permanent officials.

To promote the continuity of actions aimed at reforming the industry, implementation of the investment will be firmly bound to actions already in progress and cooperation networks already established. The selected projects may link to international, particularly European cooperation and thus promote trans-border cooperation. The coronavirus pandemic has weakened the potential of the tourism industry to invest in the

development of sustainable tourism and digitalisation. It is therefore necessary to allocate development funding to nationally coordinated and implemented projects so that as many regions and enterprises as possible can participate in actions that contribute to overall progress in the industry.

### **Investment target group**

There are two principal target groups for this investment: Finnish tourism enterprises; and universities and research institutions engaged in RDI activities in the tourism industry. Regional tourism organisations and similar operators widely involved in promoting tourism over an extensive area support the work of tourism enterprises and will play a significant role in putting the actions described herein into practice at the regional level in tandem with enterprises. If any tourism enterprises, regional tourism organisations or RDI operators in the tourism industry should wish to participate in greater depth or breadth in the actions facilitated through the national funding, they may do so using funding from beyond the RRF (e.g. REACT-EU funding). External funding will be granted according to the terms and conditions of each particular funding instrument; there are no allocations earmarked for supporting RRF actions in the tourism industry.

Indirectly, the target group of the investment comprises Finnish and foreign tourists.

The key stakeholders in implementing the investment are universities, RDI operators, central government agencies and institutions (e.g. Statistics Finland, Finnish Heritage Agency, Metsähallitus), local authorities in cities and municipalities, and international stakeholders such as RDI operators and tourism enterprises (e.g. foreign airlines, online travel agencies and tour operators). Sectors closely connected to the tourism industry are also important in the implementation of RDI projects, such as health care, the cultural and creative industries and the digital sector.

### **Compatibility with rules on State aid**

The funding instruments used in RDI funding application rounds conducted by Business Finland are compatible with the rules on State aid. The funding will be awarded as de minimis aid or pursuant to the GBER, and the funding criteria are based on the existing funding instruments whose conditions and criteria will be adapted to the needs of the tourism industry.

### **Implementation timetable**

The investment actions will be carried out in 2021–2025.



### **Open strategic independence and security matters**

The purpose of targeted investments is to foster renewal in the business structure, which will in itself improve the resilience of the business sector and of the national economy as a whole. In particular, the aim is to improve the potential and competence of SMEs for coping with the changes in the operating environment caused by the pandemic. The competitiveness of enterprises offering low-carbon solutions will improve through broader overall solutions. Investments in digital transport infrastructure and in efficient integration of public transport and private services will improve the resilience and agility of the transport system. The package will boost employment for example by increasing the attractiveness of spearhead industries as employers.

Digital solutions produced by the cultural and creative industries will support renewal and adaptation by enterprises and organisations. New practices and forms of collaboration and new digital tools will improve the potential for the cultural and creative industries to recover, to regain revenue from artistic and creative work and to operate on European and global markets. The investment will improve the capabilities of the tourism industry in adopting sustainable practices, in management by information and in operating in a digital environment, specifically in enhancing sales of tourism services. The investment will also boost RDI intensity in the tourism industry. This will improve the resilience of the industry to structural change in the economy and enable preparedness for potential future crises.

There are no particular security issues involved in the proposed investments.

### **Trans-border and multinational projects**

Basically, these investments were not assumed to include trans-border projects. However, areas have been identified in several investments where the solution or operating model being devised could be leveraged in a European context, whether directly or through further development projects. For example, developing a carbon footprint calculator for tourism services has potential for synergy with similar efforts in other EU Member States. A major aim here is to promote the integration of Finnish SMEs into Finnish and EU business consortia in order to create more competitive European value chains in the EU and third countries.

### **Green dimension in the component area**

The investment and reform package in component area P3C4 is 4% supportive of the green transition.

Under investment P3C4I2 ('Key industries for international growth'), the section 'A programme to promote low-carbon approaches, the circular economy and the digital transformation in industry and to facilitate increased exports of industrial services' is related to the intervention field Research and innovation processes, technology transfer and cooperation between enterprises focusing on the low carbon economy, resilience and adaptation to climate change (022) and is 40% supportive of the green transition, because funding in this component area is specifically intended for supporting development projects in the circular economy and low-carbon business operations. The low-carbon and/or circular economy requirement will be specified in the application criteria. Also, judging by experiences from previous projects funded through Business Finland, the 40% support figure is quite justifiable.

Under investment P3C4I2 ('Key industries for international growth'), the section 'Growth and export programme for water expertise' is related to the intervention field *Water management and water resource conservation* (040) and is 40% supportive of the green transition, because the funding will be used to support growth and export packages in the water industry that promote sustainable development and are based on smart solutions and digitalisation and facilitate green growth in the water industry, including risk management and adjustment to climate change, promoting the circular economy through water management means and increasing cooperation between the water industry and other industries, improving resource and energy efficiency, and designing comprehensive water supply and resource management solutions.

The package will also enhance the improvement and ensuring of environmental, social and cultural sustainability in the tourism industry, particularly in tourism enterprises and at the regional level. The actions herein will generate potential for sustainable business operations in tourism enterprises and in sectors supporting the tourism industry. Moreover, national actions will be preferred in the implementation, which will help ensure that the actions taken have an equitable impact across the board.

### Digital dimension in the component area

The investment and reform package in component P3C4 is 32% supportive of the digital transformation.

Investment P3C4I1 'Growth accelerator programme' is related to the intervention field *SME business development and internationalisation, including productive investments* (015) and is 40% supportive of the digital transformation, because the funding will be used particularly to foster the leveraging of digital technologies and practices in the business operations and internationalisation efforts of small enterprises.

Under investment P3C4I2 'Key industries for international growth', the section 'Health and wellbeing expertise and technology' is related to the intervention field *SME business development and internationalisation, including productive investments* (015) and is 40% supportive of the digital transformation, because the projects to be funded will be about designing digital solutions and practices for the health care sector that can be scaled up for export. Progress in digitalisation in health care and user-oriented wellbeing solutions, the growing international market in this sector and digital knowledge bases represent a significant growth opportunity for Finland. Significant criteria promoting digitalisation will be included in the selection criteria for the aid.

Investment P3C4I3 'Revitalisation aid for the cultural and creative industries' is related to the intervention field *SME business development and internationalisation, including productive investments* (015) and is 40% supportive of the digital transformation, because creative expertise can promote the usability of digital services and solutions and thus help popularise their use. A substantial percentage of creative content is distributed and accessed through digital platforms, and creative expertise as a service often involves delivering digital concepts. Digitalisation will improve the potential for operators in the cultural and creative industries to compete on European and global markets. The selection criteria will significantly emphasise the promotion of digitalisation. Also, digitalisation has been prominent in development projects in the cultural and creative industries funded through Business Finland in the past, which is part of the reason why the digital transformation features heavily in the Business Finland contribution (EUR 10 million).

Investment P3C4I4 'Sustainability and digitalisation growth in the tourism industry' is related to the intervention field *SME business development and internationalisation, including productive investments* (015) and is 40% supportive of the digital transformation, because the actions will foster the adoption of digital practices in the monitoring of sustainability in the tourism industry, including the carbon footprint, management by information and enhancing sales of tourism services. By 'adoption of digital practices', we mean designing and adopting new digital tools, improving digitalisation expertise, devising digital platforms and opening up interfaces. Significant criteria promoting digitalisation will be included in the selection criteria for the aid for the majority of funding to be awarded out of the RDI programme. The projects to be funded are intended to foster the adoption of digital practices and technologies in the tourism industry, e.g. in developing sustainable tourism. Digitalisation will make the production-related processes and steering in tourism companies more effective, improve the quality of tourism services and Finland's visibility in the target markets, and increase business and cooperation which is transparent and based on the extensive use of data.

### **Do No Significant Harm**

The investment and reform package in component P3C2 complies with the criteria of the Do No Significant Harm (DNSH) principle. For a more detailed description, see Appendix 3.

### **Costs to be covered out of RRF funding**

The investment package totals EUR 94 million.

- Growth accelerator programme for small enterprises, EUR 10 million
- Key industries for international growth, EUR 24 million
- Revitalisation aid for the cultural and creative industries, EUR 40 million
- Sustainability and digitalisation growth in the tourism industry, EUR 20 million

## PILLAR 4: Access to health and social services will be improved and their cost-effectiveness enhanced.

### Description of component area:

**Policy area:** *Health*

**Targets:**

*The principal target in pillar 4 is to reduce the treatment, rehabilitation and service deficit in health and social services caused by the coronavirus pandemic, to permanently accelerate access to treatment nationwide by introducing new practices, and to promote achievement of the national health and social services reform.*

*Treatment, rehabilitation and service deficits will be reduced by reforming operating models and by introducing new digital services.*

*Access to treatment will be improved nationwide by introducing new operating procedures (also in mental health services).*

*This will contribute to the attainment of the targets of the health and social services reform. The target is to make services available to everyone and to reform them from the perspective of the individual and cost-effectively.*

**Reforms and investments:**

*Pillar 4 comprises one reform and five investments forming an integrated package.*

- **P4C1R1 Reform 1.** *Promoting compliance with the care guarantee as part of the preparation for the health and social services reform, and reducing the treatment, rehabilitation and service deficit in health and social services caused by the coronavirus pandemic. This will be addressed with five investments:*
- **P4C1I1 Investment 1.** *Promoting compliance with the care guarantee (including in mental health services) and reducing the treatment, rehabilitation and service deficit in health and social services caused by the coronavirus pandemic.*
- **P4C1I2 Investment 2.** *Promoting compliance with the care guarantee by reinforcing preventive measures and early identification of problems.*
- **P4C1I3 Investment 3.** *Strengthening the knowledge base and effectiveness-based guidance supporting the cost-effectiveness of health and social services (P4C1I3)*
- **P4C4I4 Investment 4.** *Introducing service-oriented digital innovations that will help achieve the care guarantee.*
- **P4C1I5 Investment 5.** *A client-oriented digital care information system in Åland.*

**Estimated costs:** *EUR 400 million, of which EUR 400 million to be funded out of the RRF.*

**Åland:** *An investment and reform package for the care information system in health care in Åland, totalling EUR 4.8 million.*

## Principal challenges and targets (P4C1)

### a. Principal challenges

As a result of the coronavirus pandemic and of restrictions imposed because of it, people were excluded from care, services, working life and earning a living. During the crisis, resources were reallocated to management of the coronavirus situation, which limited access to health and social services and to multiprofessional services supporting functional capacity. There is now a service deficit in all client groups and age groups. A service deficit leads to further decline in illnesses and social problems, as help is not available at a sufficiently early stage. The crisis has also further disadvantaged people who were already vulnerable, increasing their need for help and their risk of long-term social exclusion. It has already been noted in Finland that the service deficit in health and social services, growing unemployment, negative changes in lifestyle habits and intimate partner violence are threatening to cause long-term negative impacts and therefore costly investment needs in the near future.<sup>17</sup>

It is a general challenge for the functioning and improvement of health and social services in Finland that the service system is fragmented and that clients receive increasingly inequitable treatment. The fragmentation of the service system is reflected in the information systems used in health and social services and their potential to make use of digitalisation. There is a vast number of diverse information systems in use, and development efforts face a huge challenge in designing and delivering new digital services covering more than one organisation or one area. There are exceptions to this, however, such as the DigiFinland Oy and Omaolo services and statutory services such as Kanta Services.

The heterogeneity of the service system and of its digital solutions has been highlighted during the coronavirus pandemic: it has been notably difficult to develop the necessary nationwide digital solutions, such as coronavirus testing, appointment booking, contact tracing and decision-making on quarantine. The Koronavilkku mobile app supporting coronavirus contact tracing was deployed quite rapidly and broadly. Its benefits have

<sup>17</sup> Covid19-epidemian vaikutukset hyvinvointiin, palvelujärjestelmään ja kansantalouteen: Asiantuntija-arvio, syksy 2020, THL <http://urn.fi/URN:ISBN:978-952-343-578-0> (in Finnish).

not been as great as they could have been, however, because pursuing cooperation among various operators in designing shared operating models and modifying them as the pandemic situation dictated was very laborious. Also, some organisations developed solutions of their own to compete with nationwide applications.

## **b. Targets**

The principal target in pillar 4 is to reduce the treatment, rehabilitation and service deficit in health and social services caused by the coronavirus pandemic, to permanently accelerate access to treatment nationwide by introducing new practices, and to promote achievement of the national health and social services reform. Actions in this pillar will promote attainment of the basic-level care guarantee, reduce inequalities, investment in earlier identification of problems and more effective prevention, and improve the quality and cost-effectiveness of services. The aim is for the entire population to receive the health and social services that they need – equitably, easily, accessibly and through multiple channels. Another aim is to boost the adoption of new digital solutions and the expansion of solutions that have proven to be cost-effective, in inter-regional and nationwide cooperation as widely as possible, for example by leveraging the products and services of Kanta Services, DigiFinland Oy and IT enterprises.

Having a population with a high level of wellbeing and functional capacity is a necessity for positive employment trends, productivity and sustainable growth. Reliable safety nets and comprehensive social security foster confidence in the future. Adopting new operating models, innovations and technologies in health and social services increases wellbeing in the population while enhancing the efficiency of the service system and generating business opportunities and exports. Augmenting the knowledge base in respect of the timeliness and targeting of actions in various administrative branches will add to the effectiveness of wellbeing policies as part of the aftercare of the coronavirus crisis.

The actions in pillar 4 will help ensure the sufficiency of personnel in health and social services by improving working conditions and thereby improving wellbeing at work. The coronavirus pandemic has added substantially to the workload of personnel in health and social services, with a negative impact on how they cope at work. Their stress and workload will be alleviated by allocating additional resources to reducing the care and service deficit caused by the coronavirus pandemic and by revising work practices. The targets of pillar 4 are also contributed to by actions in pillar 3, for example by creating additional university starts in health and social services (P3C211: 'Starts at universities will be increased to fuel the renewal of the national economy and to mitigate the negative impacts of the coronavirus crisis by improving access by young people to university studies'). Pillar 3 is also intended to foster robustly proactive work ability leadership

rooted in the identification of human resources and risks and manifesting itself at the strategic level in the organisation. The target group comprises public-sector workplaces for example in health and social services. Pillar 3 also contains actions to foster growth in international cutting-edge sectors in Finland, including health and wellbeing expertise and technologies. This is one of the most rapidly growing RDI sectors in Finland, and RDI activities targeting health and social services can also contribute to the targets of pillar 4.

In addition to RRF funding, there are already national development initiatives to support personnel sufficiency in progress or starting. An example is the project for developing higher education in health and social services (SOTEKO project), where the target is to devise proposals for revising the degree structure and supplementary education in health and social services, for a national structure for continuous learning and for support for the structural reform of health and social services and the targets of the Social and Health Centre of the Future programme. Also, by decision of the Ministry of Education and Culture, the number of starts will be increased by over 3,900 at universities of applied sciences and by over 6,300 at academic universities between 2020 and 2022. Of the additional starts in 2021–2022, 57.3% at universities of applied sciences and 5.2% at academic universities will be in disciplines in the health and social services sector. The additional starts will be principally allocated to disciplines in sectors suffering from a labour shortage. In 2021–2022, 665 of the additional starts at universities of applied sciences will be in nursing.

Pillar 4 addresses the 2019 and 2020 Country Specific Recommendations, where Finland is advised to take the necessary action to combat the pandemic, to sustain the national economy and to foster the incipient recovery, to address the staff shortage in health care to improve the capacity of the health care system and (as of 2013) to improve the cost-efficiency of and equal access to health and social services.

### c. National strategic circumstances

Improving the level of health and social services is one of the four principal targets in health care and social welfare in the Government Programme of the Government of Finland that took office in spring 2019.<sup>18,19</sup> This will be implemented by (i) improving access to basic-level services (functional reform) and (ii) improving the service system (structural reform).

18 Government of Prime Minister Antti Rinne, 6 Jun to 10 Dec 2019, Government of Prime Minister Sanna Marin from 10 Dec 2019.

19 Government Programme of Prime Minister Marin's Government  
<http://urn.fi/URN:ISBN:978-952-287-811-3>



Firstly, a structural reform of the social welfare and health care system will be enacted (national health and social services reform);<sup>20</sup> the Government submitted a proposal for the relevant legislation to Parliament on 8 December 2020.<sup>21</sup> The new legislation is intended to enter into force on 1 July 2021, at which point the new, autonomous wellbeing services counties will come into existence. These will then be assuming statutory responsibility for regional health and social services as of 1 January 2023.

Secondly, a 7-day care guarantee as specified in the Government Programme will be enacted to improve access to basic-level health and social services. This means that the maximum waiting times for access to primary healthcare, as defined in the current legislation,<sup>22</sup> would be shortened from the current 3 months to 7 days. The maximum waiting times for access to oral health services would be shortened from the current six months to three months.

Thirdly, improving availability of services and access to treatment is one of the key targets of the structural reform (the national health and social services reform), which is why this will also be enforced through legislation. Preparation of the legislation specifying maximum waiting times is under way, and it is intended to enter into force in 2023. Fourthly, as per the Government Programme, a programme titled Social and Health Centre of the Future is currently under way, dovetailing with the design and delivery of the structural reform (the national health and social services reform). The purpose of this programme is to improve access to basic services and to boost public confidence in public health and social services even before the structural reform is implemented and before the legislation on access to care is enacted.

Funding from the Sustainable Growth Programme for Finland is intended to improve access to health and social services and to enhance their cost-effectiveness. Funding will be allocated regionally as government grants to projects promoting access to care and reducing the treatment, rehabilitation and service deficit acquired during the coronavirus pandemic (functional reform) and aiming at shaping a new service system (structural reform).

In summary, we may note that the actions in the Sustainable Growth Programme for Finland are linked in timing and in content to the national health and social services

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20 What is the health and social services reform? <https://soteuudistus.fi/en/what-is-the-health-and-social-services-reform->

21 Government proposal to Parliament for legislation on establishing counties and on reforming the organisation of health and social services as well as on issuing a notification referred to in Articles 12 and 13 of the European Charter of Local Self-Government (HE 241/2020 vp) <https://www.finlex.fi/fi/esitykset/he/2020/20200241.pdf> (in Finnish).

22 Health Care Act (1326/2010), chapter 6 <https://www.finlex.fi/fi/laki/ajantasa/2010/20101326> (in Finnish)

reforms. The legislation in respect of these reforms is to be enacted by Finland's Parliament. The actions in the Sustainable Growth Programme for Finland are designed so as to be executable even if changes were made to the Government proposals when debated in Parliament.

### **Health and social services reform**

The proposed reforms and investments will support implementation of the national health and social services reform. The key objectives of the health and social services reform are to reduce health and wellbeing inequalities, to secure equal and high-quality health and social services and rescue services for everyone, to improve the availability and accessibility of services, to secure the availability of skilled labour, to respond to the challenges posed by social changes and to curb the increase in costs.

Prime Minister Marin's Government submitted a proposal containing the relevant bill to Parliament on 8 December 2020, where it is pending as at the time of writing. The Government proposal (241/2020 vp) concerns the transfer of the responsibility for health and social services and for rescue services from local authorities to broader 'wellbeing services counties'.<sup>23</sup>

Local authorities are currently responsible for funding and providing health and social services for their residents; as at the beginning of 2020, there were 294 municipalities in mainland Finland. The reform thus represents a massive structural change in Finland's context, transferring responsibility for providing public health and social services from local government to 21 newly created wellbeing services counties. In Uusimaa, however, this responsibility will be centrally assigned to the City of Helsinki and, in specialist medical care, to the Helsinki and Uusimaa Hospital District (HUS). Responsibility for providing rescue services will also be reassigned to the new wellbeing services counties.

The wellbeing services counties will be public law entities that have autonomy in their areas. It is suggested in the Government proposal that the responsibility for providing both primary and specialist services in health care and social welfare be brought together under a single decision-making process, a single management system and a single budget in each wellbeing services county. With a single entity responsible for budgeting and delivery of services, service providers will have better opportunities for implementing major operating changes to their services. This will mean improved availability, quality, equality and cost-effectiveness in social welfare and health care services.

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<sup>23</sup> HE 241/2020 [https://www.eduskunta.fi/FI/vaski/KasittelytiedotValtiopaivaasia/Sivut/HE\\_241+2020.aspx](https://www.eduskunta.fi/FI/vaski/KasittelytiedotValtiopaivaasia/Sivut/HE_241+2020.aspx) (in Finnish).

As the number of organisers of health and social services will decrease dramatically, national steering of the service system will become simpler. This will be important for the steering of public services in general and for national control of these services in exceptional circumstances. Strengthening national control has been a common thread through the prolonged evolution of this reform, and nowhere has it proven to be more necessary and urgent than in the management of the coronavirus pandemic that erupted in spring 2020. In an integrated health and social services structure where the bodies responsible for organising the services are more robust and solvent than at present, service providers will have much better potential for preparing for exceptional circumstances and for maintaining such readiness.

The net costs of municipal health and social services in Finland in 2019 were about EUR 19.2 billion, showing an increase of 5.1% on the previous year. The estimate on the 2020 financial statements shows that the net costs of health and social services increased to about EUR 19.7 billion, with the municipality-specific net costs per resident varying between EUR 2,500 and EUR 6,700. It has been estimated that the costs of publicly funded health and social services in Finland will increase by about 19% in real terms by 2030. There are significant regional differences in this estimated increase, particularly because of demographic changes.

At 2022 prices, the annual net costs of the counties will total approximately EUR 20.6 billion. After this reform, the central government will be largely responsible for funding for the wellbeing services counties, and responsibility for funding and organising social welfare and health care services and rescue services will be removed from local authorities.

The objective of the health and social services reform is to curb the growth of costs in Finland's public finances. There are considerable pressures towards cost growth, mainly because the ageing of the population is increasing the demand for medical and other care services. The structural changes implemented with the reform and the related functional changes can, in the long term, help keep cost increases down. According to the impact assessment in the Government proposal, however, it is unlikely that any savings will be achieved during the 2020s, as the reform involves substantial non-recurring change expenditure. The incentives in the funding model for controlling growth of costs will not kick in fully until 2030.

According to the impact assessment in the Government proposal, the principal mechanisms for curbing cost growth in health and social services have to do with (i) reducing the need for expensive institutional services through preventive integrated services and less heavy outpatient-type services; (ii) improving productivity in basic-level services and improving access to services; (iii) improving the quality, effectiveness

and productivity of services through expertise clusters, closer connections in the service network and more precisely defined divisions of duties; and (iv) reducing resource needs in the service systems of the wellbeing services counties through digitalisation and online services. The assessment of the potential for improvement and savings in health and social services is based on calculations made during the previous electoral term which in turn were based on the cost impacts of best practices identified through comparative data, on research findings and, most particularly, on assumptions on the number of units for specialist medical care and the population base for each. Allocation of the savings potential was performed using a frame of reference identifying the actions taken (e.g. flexible use of resources) and the cost drivers for each action (e.g. patient contacts per resource). The cost savings for the various service packages (health care services, services for the disabled, services for the elderly, etc.) were assessed separately and then combined to produce the overall cost saving potential for health and social services. The assessment of how the proposed reform will curb cost growth may still be regarded as largely accurate.

The Government proposed that the legislation enter into force on 1 July 2021. The proposed wellbeing services counties will be established as soon as possible after the passing and approval of the relevant bills. The wellbeing services counties will be under interim administration until the term of office of elected county councils begins on 1 March 2022. The responsibility for organising healthcare, social welfare and rescue services and other services and duties to be stipulated separately will be transferred to the wellbeing services counties on 1 January 2023. Specific Acts will be enacted to provide for the actual content of the responsibility to organise health and social services in respect of the various duties involved. Finland's Parliament will decide on the content of the legislation and also on the timings referred to above.

### **Functional reform of health and social services**

The actions in the Sustainable Growth Programme for Finland will promote attainment of the targets associated with the aforementioned health and social services reform in the Government Programme.

The Sustainable Growth Programme for Finland also forms a continuum with the Social and Health Centre of the Future programme launched by Prime Minister Marin's Government, the purpose of which is to support regional design and delivery of a new kind of multiprofessional social and health centre concept and to implement reforms in the sector between 2020 and 2022. A total of EUR 70 million was awarded out of the Programme in summer 2020 for projects promoting the improvement and integration of regional basic health care and social welfare services. Government grants to be awarded out of the Programme in 2021 and 2022 will be decided separately. Also in summer 2020, EUR 120 million in government grants was awarded to regional projects contributing

to the health and social services structural reform in 2020–2021. These projects address the regional improvement and harmonisation of health and social services according to currently valid legislation.

The reforms and investments herein also support the targets of the strategic areas 'Fair, equal and inclusive Finland' and 'Finland that promotes competence, education, culture and innovation' in the Government Programme,<sup>24</sup> particularly the following:

- Revising the care guarantee in basic health care so that access to non-urgent care is ensured within one week (7 days) of the care need assessment. The care guarantee for oral health services would be shortened to 3 months. This legislative amendment is intended to enter into force in 2023.
- Revising the division of duties among and work practices of professionals in health and social services, and bringing social services onto a path to integration into the forthcoming social and health centres.
- Considering the variety of providers of health and social services and access to local services.
- Promoting the welfare economy by investing in actions to support wellbeing and health and to reduce the need for various services while improving prevention of endemic diseases and the effectiveness of their treatments, promoting mental health and encouraging cross-sectoral cooperation with a view to augmenting the wellbeing impact of culture by increasing cooperation between administrative branches.
- Ensuring improved use of knowledge bases, setting up qualitative registers and securing long-term resourcing for health care research, including nursing, and government grants for university-level health care research and social services research and development.
- Adopting digital and mobile services delivered by public-private partnerships with a strong input from universities and other RDI organisations and from enterprises in the field.

### Description of reforms and investments in the component area

The packages in this pillar have to do with reducing the treatment, rehabilitation and service deficit acquired during the coronavirus pandemic, accelerating access to care, actions to benefit disadvantaged persons and reinforcing preventive measures and low-threshold services with new, cost-efficient operating models and digital solutions.

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<sup>24</sup> Inclusive and competent Finland – socially, economically and ecologically sustainable society <https://valtioneuvosto.fi/marinin-hallitus/hallitusohjelma> (in Finnish).

Also, funding will be provided for improving the knowledge base and cost-effectiveness of health and social services by designing and adopting nationally consistent data schemes with technical specifications and technological solutions and services for common national and regional use. Pillar 4 comprises investments forming an integrated package.

**REFORM 1 Promoting compliance with the care guarantee as part of the preparation for the health and social services reform, and reducing the care, rehabilitation and service deficit in health and social services caused by the coronavirus pandemic (P4C1R1)**

**Challenges**

The fly in the ointment in Finnish health care is that the availability of basic health care is inadequate and waiting times are long relative to the need for care. Enacting the shortening of the care guarantee in basic health care as specified in the Government Programme of Prime Minister Marin's Government<sup>25</sup> has been complicated by the redirecting of resources to managing the coronavirus pandemic, which has caused a treatment deficit to build up in basic health care. This has prolonged waiting times and caused decline in the situation particularly of patients with mental health problems and chronic illnesses, many of them with multiple conditions. The number of appointments, treatment periods and procedures in specialist medical care has decreased significantly during the coronavirus pandemic, and as a result there is now a record number of patients queuing for specialist medical care.<sup>26</sup> Rehabilitation appointments and periods have also decreased significantly in number during the pandemic. The rehabilitation deficit manifests itself as declining functional capacity among many severely disabled, chronically ill and elderly persons. Declining functional capacity, in turn, translates into coping less well at work, in studies and in everyday chores, leading to an increased need for services and more involved treatments. The long-term impacts of Covid-19 also add to service needs.

In social services, the service deficit has grown due to services being discontinued and shut down during the pandemic. The crisis has also magnified social problems and increased the need for support in everyday life. In particular, the crisis has had an adverse impact on children, families, the elderly, mental health rehabilitees, intoxicant abuse rehabilitees and the disabled. Growing unemployment and related income problems have increased the need for social services among working-age adults. Taken together, all of the above have had the impact of significantly reducing the resilience of Finnish society and our capacity for weathering future crises.

<sup>25</sup> Revising the care guarantee in basic health care will mean enacting legislation requiring that access to non-urgent care is ensured within one week (7 days) of the care need assessment.

<sup>26</sup> *Hoitoonpääsy erikoissairanhoidossa 31.12.2020*. Tilastoraportti 1/2021, 29.5.2019. National Institute for Health and Welfare

Many multiprofessional services supporting wellbeing, health and functional capacity changed or became more difficult to provide with the advent of the coronavirus crisis. Shortages in low-threshold preventive services have a knock-on effect on the need for treatment and corrective services in health and social services, thereby further adding to the treatment and service deficit. It was significant for welfare and functional capacity that new, flexible ways of operating and of providing services were introduced in digital form in spring 2020. However, some of the population remained beyond the services and support available. The digitalisation and multiprofessional dimension in services supporting wellbeing, functional capacity and security needs to be accelerated so that more and more people can benefit from them.

Reducing the treatment and service deficit will require, in the short term, additional resources for example for personnel and for service outsourcing. In the long term, permanent changes to operating practices are needed. New operating and service models and accelerated access to treatment need support from a quicker and broader adoption of digital solutions such as client advisory services, booking, e-transactions and remote services, with national guidance on their deployment.

### **Targets**

The target is improving equal availability of and access to care by promoting compliance with the care guarantee as part of the preparation for the health and social services reform, and reducing the care, rehabilitation and service deficit in health and social services caused by the coronavirus pandemic. The content of this target is in line with the national health and social services reforms. The legislation in respect of these reforms is to be enacted by Finland's Parliament. The actions in the Sustainable Growth Programme for Finland are designed so as to be executable even if changes were made to the Government proposals when debated in Parliament.

1. Promoting compliance with the care guarantee (including in mental health services) and reducing the care, rehabilitation and service deficit in health and social services caused by the coronavirus pandemic.
2. Reinforcing preventive measures and early identification of problems.
3. Strengthening the knowledge base and effectiveness-based guidance supporting the cost-effectiveness of health and social services (P4C113)
4. Adopting digital solutions.

**Nature and scope of the reform**

The reform consists of five mutually complementary investments totalling EUR 400 million.

**Implementation:**

The actions in the Sustainable Growth Programme for Finland are linked in timing and in content to the national health and social services reforms. The legislation in respect of these reforms is to be enacted by Finland's Parliament. The actions in the Sustainable Growth Programme for Finland are designed so as to be executable even if changes were made to the Government proposals when debated in Parliament.

Funding from the Sustainable Growth Programme for Finland is intended to improve access to health and social services and to enhance their cost-effectiveness. Funding will be allocated regionally as government grants to projects promoting access to care and reducing the treatment, rehabilitation and service deficit acquired during the coronavirus pandemic (functional reform) and aiming at shaping a new service system (structural reform).

An application round for government grants for regional projects will be aimed at the bodies organising health and social services (the forthcoming wellbeing services counties) – 22 projects for 22 counties. The detailed targets and implementation of these projects are described separately for each investment. National development will also be carried out to support regional measures. Existing, tried and tested structures and operating models will be employed in the implementation of the projects. The first call for government discretionary grant applications will be published during the latter half of 2021. The projects are to target areas corresponding to the future wellbeing services counties. The government grants will be used to support regional operators during the preparations for the health and social care reform, specifically: to help reduce the treatment, rehabilitation and service deficit acquired during the coronavirus pandemic; to introduce operating models to accelerate access to treatment, services and rehabilitation; and to reinforce low-threshold multiprofessional services, preventive measures and early identification of problems. The next round of government grants will be awarded in 2023, at which time the new wellbeing services counties will be taking on the responsibility of organising health and social services. The government grants will contribute to strengthening the knowledge base and effectiveness-based guidance supporting the cost-effectiveness of health and social services, along with the adoption of digital innovations for services.

National steering of projects funded with government grants for easing access to treatment and services will be enhanced, with a view to ensuring that effective and cost-effective operating models will be adopted appropriately for the situation and needs in each particular region. The government grant package is in line with the



Act on Discretionary Government Transfers. A Decree of the Ministry of Social Affairs and Health will be issued in respect of the government grant package in 2021. The Decree will govern the target-setting and implementation of the projects and will provide for their monitoring and reporting. The Ministry of Social Affairs and Health will also prepare a detailed guideline for implementing the projects and will appoint a supervisor for government grant funded projects.

A set of criteria will be devised for evaluating project applications for government grants from wellbeing services counties, to gauge: 1. how clearly defined and realistic the project targets are and how they fit in with the targets of pillar 3; 2, how the project is to be implemented (distribution and adoption of best practices identified at the national level); 3. the cost estimate; 4. stakeholder collaboration and communications; and 5. the evaluation plan.

Government grant projects are to report regularly on their progress in the Government project window. An external evaluation will be commissioned for the government grant package in pillar 4.

The government grant projects in the supplementary application round under the Social and Health Centre of the Future programme and the government grant projects under the Sustainable Growth Programme for Finland will be for reinforcing national steering of projects intended to improve access to treatment. Funding recipients will be required to set ambitious targets for improving access to treatment, services and rehabilitation, and they must monitor attainment of these targets with nationally consistent indicators at regular intervals. They must also adopt cost-effective operating models and participate in regional and national development efforts. This will be ensured with a Decree of the Ministry of Social Affairs and Health and national steering, project monitoring, regular reporting and external evaluation of the government grant package.

### **Stakeholder input**

Regional government grant projects run by service providers will be required to work with local residents, clients, organisations and enterprises in the sector, and the project applications must include a plan for involving all of the above in the project design and delivery. A hearing will be held for project organisers before the funding application round.

### **Expected complications**

The coronavirus crisis is to some extent hindering the implementation of regional projects. There is a risk of ending up with projects overlapping in terms of content, timetable or funding in the national health and social services reform and in related government grant

projects. Another risk is that information management and digital solutions may end up being developed independently and detached from other development efforts. There may also be a shortage of skilled labour for the projects and for development efforts.

The solution is to synchronise the government grant projects under the Sustainable Growth Programme for Finland with the government grant projects in the health and social services reform in terms of content, timetable and funding.

Devising indicators for knowledge bases and cost-effectiveness is a long-term effort, and its outcomes will not be available for regional projects until near or after the end of the project period. However, developing a national knowledge base is vital for fulfilling the information needs that have emerged during the coronavirus crisis.

### **Reform target group**

The reform is aimed at organisers of health and social services, service providers, NGOs, organisations responsible for national knowledge bases, and private individuals using the services. The reform will also have an impact on personnel in the sector. Upgrading and digitalisation of services can ease personnel shortages, and new online services may also be an attractiveness factor for the sector.

### **Implementation timetable**

The projects will be carried out between 2021 and 2025.

### **State aid**

Government grants will be awarded to local authorities and joint municipal authorities for the development of health and social services for which they are responsible. After 2023, these government grants will be awarded to wellbeing services counties. This scheme concerns non-commercial activities that fall outside the EU rules on State aid. For a significant percentage of this package, the awarding of grants will be based on a Decree of the Ministry of Social Affairs and Health to be issued in 2021. The Decree will stipulate that the grants may not be used for any purpose in which they would constitute State aid as per the Treaty on the Functioning of the European Union. Funding recipients must comply with the Act on Public Procurement and Concession Contracts in procurements carried out with the aid funding.

## **INVESTMENT 1. Promoting compliance with the care guarantee (including in mental health services) and reducing the treatment, rehabilitation and service deficit in health and social services caused by the coronavirus pandemic (P4C111)**

### **Challenges**

The fly in the ointment in Finnish health care has long been that the availability of basic health care is inadequate and waiting times are long relative to the need for care.

A treatment deficit has accrued in basic health care due to resources being redirected to addressing the coronavirus pandemic. The number of non-urgent medical appointments in outpatient care at health centres dropped by nearly half in spring 2020, and the number of dental appointments dropped by more than half. This has prolonged waiting times and caused decline in the situation particularly of patients with chronic illnesses, many of them with multiple conditions. According to statistics updated on a monthly basis, the percentage of non-urgent appointments in medical care around New Year 2021 that took place within one week of the care needs assessment was about 60% for appointments with a physician and about 80% for appointments with a nurse.

The number of appointments, treatment periods and procedures in specialist medical care has decreased significantly during the coronavirus pandemic, and as a result there is now a record number of patients queuing for specialist medical care, an exceptional situation. At the end of August 2020, 12.9% of patients on the waiting list had been waiting for an appointment at a hospital district hospital for more than 6 months, i.e. beyond the care guarantee. The queue was reduced in autumn 2020 so that by December 2020 this figure was down to 5.4% (2019: 2.4%). If the pandemic is prolonged or becomes more severe again, this can easily worsen the situation once more. Access to rehabilitation has also declined due to the pandemic. The long-term impacts of Covid-19 also add to service needs.

In social services, the service deficit has grown due to services being discontinued and shut down during the pandemic. The crisis has also magnified social problems and increased the need for support in everyday life. Studies show that the coronavirus pandemic has eroded the wellbeing of people with mobility issues more than the wellbeing of the rest of the population. In particular, the crisis has had an adverse impact on children, families, the elderly, mental health rehabilitees, intoxicant abuse rehabilitees and the disabled. Growing unemployment and related income problems have increased the need for social services among working-age adults. Access to services was particularly poor for those who were already disadvantaged to begin with.

Reducing the treatment, rehabilitation and service deficit may require additional human resources in the short term. In the long term, however, permanent changes to operating practices are needed to increase availability. New operating and service models need support from a quicker and broader adoption of digital solutions such as client advisory services, booking, e-transactions and remote services.

A lot of development work has been done in the past to improve the availability of basic health care. Improving the availability of basic services now will require systematic improvement of operating models, leading to a permanent change in how things are run.

The key means (identified as effective best practices) to improve the availability of health and social services in the projects are these:

- improving the content of client and service advisory services and increasing the offering particularly at the beginning of customer relationships in order to ensure rapid access to treatment and services,
- identifying and segmenting clients (e.g. single visits vs. clients with complicated service needs) and designing services to meet the needs of client groups thus identified,
- introducing multiprofessional teamwork models to ensure comprehensive support and care,
- sufficiently broad service needs assessments and planning of services with the client and with the relevant networks,
- increasing walk-in appointments for non-urgent reasons ('open access' models),
- developing mobile and deployed services e.g. to serve the needs of people living in sparsely populated areas or to reach groups that social welfare and health care services may otherwise have difficulty reaching,
- adding channels for online appointments and information (self-care, chat services, remote appointments, remote consultations, etc.) in addition to and instead of face-to-face appointments.

The operating models described above and the digital solutions supporting them must be implemented as broadly as possible, in nationwide and regional cooperation, to ensure equal access in all regions. Because some regions have already experimented with some of the tried and tested operating models, it is important that other regions set their targets according to their respective circumstances and implement (distribute and deploy) those national best practices that are the best suited for their particular circumstances. A shift in operating models requires commitment by the management, involving clients and personnel in the development process, and measuring outcomes according to the principles of continuous improvement.

### **Targets**

- Streamlining treatment, rehabilitation and service processes by introducing new, more efficient and more client-oriented multidiscipline and multiprofessional operating models.
- Improving social welfare and health care services and the support provided so as to make them better available and accessible than at present and better adjusted to the needs of the most disadvantaged and vulnerable.

### **Nature and scope of the investment**

The investment involves a total of about EUR 230 million in funding for nationally steered regional projects.

### **Implementation**

A funding application round for government grants will be conducted for regional projects (22 regions) in the interests of attaining national targets. Regions will apply for government grants for projects responding to national targets and to the needs of the region's population. The Ministry of Social Affairs and Health is the competent authority and will make the decisions awarding the government grants. The national targets are:

- Reducing the care, rehabilitation and service deficit in health and social services caused by the coronavirus pandemic and promoting access to care in basic services.
- Introducing new and increasingly client-oriented operating models streamlining access to treatment and services in health and social services, and the availability of services and their capability to respond to the needs of the disadvantaged and vulnerable will be improved. The projects must also aim to reduce inequality by targeting actions at improving the wellbeing and functional capacity of people who have been rendered vulnerable by the coronavirus pandemic. There is no single operating model that would resolve all of the problems of access to treatment or of the treatment, service and rehabilitation deficit or that would be applicable 'as is' nationwide. There are several effective and cost-effective operating models, which must be applied resourcefully and as dictated by regional circumstances and needs. Differences in circumstances between regions must be considered when devising operating models. Approaches with the most experience and proof of effectiveness include the following:
  - segmentation (e.g. those needing a high volume of services over a long period of time vs. those needing limited services over a short period of time)
  - multiprofessional, multisectoral teamwork, and division of duties between professional groups
  - shared client plan (including a treatment, service and rehabilitation plan)
  - centralised client guidance and service coordination
  - streamlining service processes and eliminating bottlenecks
  - remote appointments, remote specialist consultations, remote rehabilitation and other digital tools
  - online transactions and self-care services

- walk-in or open access concepts (in outpatient care) where treatment or treatment planning can be begun immediately during the same visit, without a separate appointment; this model can be applied in both urgent and non-urgent cases.
- mobile and deployed services (e.g. oral health portable units, bringing a child care clinic into a daycare centre)
- better contacts with those now outside the service system, e.g. using outreach work methods
- ensuring transport and thereby access to treatment for disadvantaged and vulnerable people in areas where services cannot be reached using public transport

The project office of the Finnish Institute for Health and Welfare has compiled examples of the above operating models gathered from previous development efforts, including their costs and impacts achieved. The impacts and cost effects of the actions taken to improve access to treatment and services in the projects under the Social and Health Centre of the Future can be assessed in autumn 2021 by analysing and compiling the following data:

- The Finnish Institute for Health and Welfare will continue the work begun by the project office by assessing the impacts and cost effects of tried and tested operating models, scaled up to national coverage.
- The Finnish Institute for Health and Welfare will conduct the first monitoring and assessment round of attainment of the benefit targets of the regional projects in summer 2021.

It is required in the criteria for applying for government grants under the Sustainable Growth Programme for Finland (RRF) that applicants must describe in detail their targets for reducing waiting times and their plans for improving access to treatment and for reducing the treatment, service and rehabilitation deficits; this will be provided for by a Decree of the Ministry of Social Affairs and Health:

1. the project complies with the targets of the RRF programme
2. what are the numerical targets for improving access to treatment, by stages over the project period and consistently nationwide (T3, i.e. third available appointment time, and attainment of 7-day waiting time for an appointment with a physician or a nurse)
3. what are the targets for improvements in availability of social services and rehabilitation and for reduction in waiting times
4. how will target attainment be monitored at regular intervals (e.g. on a monthly basis, consistently nationwide)
5. which of the above operating models have already been adopted or are in the process of being adopted

6. which operating models are planned to be deployed by the time the legislation on the stricter care guarantee enters into force, and what resources will be allocated to this
7. fixed-term actions to reduce waiting times, complementing the development actions, and the resources and key actions allocated to this.

Government grant projects aimed at organisers of health and social services will be supported through development efforts of national operators to ensure cooperation and consistency between regional projects and to avoid duplication of efforts. Funding will also be allocated to national coordination and steering of the actions and to the development of information management and digital solutions.

Government grants may not be spent on actions that are central government transfer functions as per section 1 of the Act on Central Government Transfers to Local Government for Basic Public Services (1704/2009), unless these actions are directly connected to the experimentation and development work undertaken in the project or to the adoption of new operating models. When actions taken in projects on a fixed-term basis to reduce waiting times are directly connected to development work or to the adoption of new operating models, these actions may be funded with government grants.

### **Investment target group**

The specific targeting of actions will depend on the needs of the population in any given region. The coronavirus crisis has had a particularly severe impact on those who were already disadvantaged or vulnerable and who require multiprofessional support and help to cope with their everyday lives and to maintain their functional capacity. These include children, adolescents, the elderly, mental health rehabilitees, intoxicant abuse rehabilitees and the disabled. Growing unemployment and related income problems have increased the need for social services among working-age adults. There are also regional differences in how the crisis has affected various population groups.

### **State aid**

Government grants will be awarded to local authorities and joint municipal authorities for the development of health and social services for which they are responsible. After 2023, these government grants will be awarded to wellbeing services counties. This scheme concerns non-commercial activities that fall outside the EU rules on State aid. For a significant percentage of this package, the awarding of grants will be based on the Government Decree on Central Government Transfers to Health and Social Services Development Projects 2020–2023 (13/2020). The Decree specifically stipulates that the grants may not be used for any purpose in which they would constitute State aid as per the Treaty on the Functioning of the European Union. Funding recipients must comply

with the Act on Public Procurement and Concession Contracts in procurements carried out with the aid funding.

### **Timetable**

The projects will be carried out between 2021 and 2025.

## **INVESTMENT 2. Promoting compliance with the care guarantee by reinforcing preventive measures and early identification of problems (P4C1I2)**

### **Challenges**

Prevention and early identification of problems are efficient ways of promoting the general availability of services and of reducing the need for resource-intensive services. The need for preventive actions is also noted in the EU's Country Report.<sup>27</sup> It is noted in the Country Report that preventable mortality is slightly higher in Finland than the EU average. There are social inequalities as well as a gender gap in life expectancy in Finland. Also, almost 40% of deaths in Finland can be attributed to behavioural risk factors, including dietary risks, tobacco smoking, alcohol consumption and low levels of physical activity. These factors can be impacted through cost-effective, multiprofessional operating models.

The coronavirus crisis has had a negative impact on the perceived wellbeing, functional capacity and everyday safety of individuals. Social interactions have decreased due to restrictions, and many people feel that their loneliness has increased. Sleep difficulties have also been common. The vast majority of the changes that have occurred in respect of leisure exercise and nutrition are negative. The coronavirus epidemic has degraded the wellbeing of mobility-impaired people more than that of the general population; these differences can be seen in feelings of loneliness, sleep difficulties and financial circumstances. By contrast, more mental symptoms have been observed in groups such as students, the elderly and health care staff.

Disadvantaged or vulnerable people can find support from sources besides social welfare and health care services. There are various open-access multiprofessional services that are very important, e.g. NGOs providing support for everyday functions and reinforcing a sense of community alongside public services. These functions and services have increased in importance during the coronavirus crisis. Shortages in low-threshold preventive multiprofessional services supporting functional capacity have a knock-on effect on the need for health and social services, thereby further adding to the treatment and service deficit.

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27 [https://ec.europa.eu/health/sites/health/files/state/docs/2019\\_chp\\_fi\\_english.pdf](https://ec.europa.eu/health/sites/health/files/state/docs/2019_chp_fi_english.pdf)



### **Targets**

- Renewing and introducing multiprofessional operating models promoting social inclusion, health and wellbeing.

### **Nature and scope of the investment**

In this investment, a total of about EUR 30 million will be allocated to joint development projects between national operators and regions.

### **Implementation**

A funding application round for government grants will be held for regional projects (22 regions) in order to revitalise regional multiprofessional operating models promoting social inclusion, health and wellbeing, including prevention measures and early identification of problems. Projects funded with discretionary government grants must meet nationally defined criteria that for their part support the realisation of the objectives of the healthcare and social welfare reform as well as the objectives of the Sustainable Growth Programme for Finland. Regions will apply for government grants for projects responding to national targets and to the needs of the region's population. The Ministry of Social Affairs and Health is the competent authority and will make the decisions awarding the government grants.

A service concept for promoting health and wellbeing will be developed in the projects, consisting of a national framework and integrated regional services. The national framework will include items such as wellbeing examinations designed to analyse the health and wellbeing of individuals and related risks and resources.

This service will offer targeted, tried and tested suggestions for improving wellbeing and will incorporate new means of self-care (including methods for improving mental health) that individuals can use independently and whose use does not require them to be clients of social welfare and health care services. The service will refer clients to social welfare or health care services or to other help as necessary.

The national framework will integrate regional multiprofessional services for promoting social inclusion, wellbeing and health, with a view to making them easier to find and to improving their accessibility. The regional services will include regional service coordination and 'service trays' compiling regional cultural, sports and nature services. The development of these regional service trays will require parameters set at the national level for making services easier to find and defining shared criteria for the services to be included in the service concept.

Government grant projects will be supported through development efforts of national operators to ensure cooperation and consistency between regional projects and to avoid

duplication of efforts. Funding will also be allocated to national coordination and steering of the actions.

National steering of projects funded with government grants will be enhanced, with a view to ensuring that effective and cost-effective operating models will be adopted appropriately for the situation and needs in each particular region. Funding recipients will be required to set ambitious targets for improving access to services, and they must monitor attainment of these targets with nationally consistent indicators at regular intervals. They must also participate in regional and national development efforts.

Government grants may not be spent on actions that are central government transfer functions as per section 1 of the Act on Central Government Transfers to Local Government for Basic Public Services (1704/2009), unless these actions are directly connected to the experimentation and development work undertaken in the project or to the adoption of new operating models. When actions taken in projects on a fixed-term basis to reduce waiting times are directly connected to development work or to the adoption of new operating models, these actions may be funded with government grants.

#### **Investment target group**

The specific targeting of actions will depend on the needs of the population in any given region. The coronavirus crisis has had a particularly severe impact on those who were already disadvantaged or vulnerable and who require multiprofessional support and help to cope with their everyday lives and to maintain their functional capacity. These include children, adolescents, the elderly, mental health rehabilitees, intoxicant abuse rehabilitees and the disabled. Growing unemployment and related income problems have increased the need for social services among working-age adults. There are also regional differences in how the crisis has affected various population groups.

### **INVESTMENT 3. Strengthening the knowledge base and effectiveness-based guidance supporting the cost-effectiveness of health and social services (P4C113)**

#### **Challenges**

The current social welfare and health care knowledge base does not provide sufficient or systematic data on trends in the wellbeing, health and security of the population, nor on how services and forms of support are able to respond to individuals' needs. This has become particularly apparent during the coronavirus pandemic. Efficient and cost-effective targeting of services and support measures during the crisis and in its aftercare will require a better knowledge base and means for leveraging it. In order to combat inequalities, we will continue to need continuous, up-to-date monitoring in aftercare measures. There are great differences in the quality and cost-effectiveness of services between regions and between client groups, which speaks to problems in quality and cost-effectiveness and demonstrates social inequality.

Value-based steering<sup>28</sup> requires a solid knowledge base on the wellbeing and health of the population and related factors, and also requires research into the service system. The target is to steer operations so that limited resources can be used in ways that are the best possible solutions for the population as a whole. The Ministry of Social Affairs and Health will draw up a value-based steering roadmap during 2021, making use for example of a similar roadmap devised in the Netherlands.

The roadmap will include a vision on bringing the vision and targets of the plan into focus, on building a knowledge base for effectiveness, on the use of effectiveness data and on the promoting of usability and effectiveness through resource steering (e.g. funding models). Thanks to national steering and government grants, all the forthcoming wellbeing services counties will design and deliver value-based steering and management. The national KUVA indicators<sup>29</sup> will be improved to better meet the needs of monitoring effectiveness and cost-effectiveness. The KUVA indicators (more than 400 of them) were introduced in 2018 for monitoring the activities and finances of the forthcoming wellbeing services counties.

At the moment, the knowledge base on the wellbeing and health of the population, on needs for social welfare and basic health care services, on access to and use of services and on cost-effectiveness is inadequate; in some aspects, data are completely lacking, even though there are now monitoring means available, such as the KUVA indicators.

The knowledge base on the quality and cost-effectiveness of social welfare and health care services requires improvement. During the coronavirus pandemic, patient and client information systems have accumulated data on the pandemic and how it has been treated that national statistics and registers do not contain or cannot leverage. Research within the service system also cannot use these data because of the shortage of research funding. The coronavirus pandemic has highlighted shortcomings in information management and information collecting systems and processes in a situation where real-time, consistent data on wide-ranging phenomena are needed quickly. At the moment, a significant percentage of data collection in social services is based on manually conducted separate surveys and studies, partly conducted on a case-by-case basis and on separately provided funding. In order to combat inequalities, we will continue to need continuous, up-to-date monitoring in aftercare measures. We are lacking a monitoring

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28 Value-based steering (or, in this specific case, value-based healthcare) is a term referring to a steering or management system where cost-effectiveness (value) is identified as the (principal) indicator and target. Value-based steering is by definition a client-oriented concept, since the activities being steered are considered from the perspective of the clients (residents, service users).

29 KUVA indicators (Finnish Institute for Health and Welfare): <https://thl.fi/fi/web/sote-uudistus/sote-arviointi-ja-tietopohja/tietopohja/kuva-mittaristo> (in Finnish).

means that would describe the level of and trends in wellbeing in the short and long term and would support decision-making intended to prevent and reduce social inequality.

### **Targets**

- Taking the actions required for monitoring adherence to the care guarantee and rectifying the information needs identified during the coronavirus crisis.
- Boosting the leveraging of data on costs and cost-effectiveness in decision-making, planning, steering and service production in social welfare and health care.
- Reinforcing research within the service system aimed at improving quality and cost-effectiveness.
- Designing an evaluation mechanism for wellbeing impacts in the aftercare of the coronavirus crisis and working methods to support political decision-making.

### **Nature and scope of the investment**

In this investment, a total of about EUR 40 million will be allocated to joint development projects between national operators and regions.

### **Implementation**

Funding will be allocated to national operators to respond to information needs identified during the coronavirus crisis, to strengthen value-based steering, to improve the cost-effectiveness of services and to design an evaluation mechanism for wellbeing impacts.

Government research funding will be temporarily increased to boost coronavirus-related research within the service system. Government research funding is provided for in the Health Care Act and in the Social Welfare Act, and in Decrees of the Ministry of Social Affairs and Health. With this funding, client service employees in social welfare and health care can take short periods off from their normal duties to conduct research, drawing on data accumulated in the patient and client information systems in their respective organisations during the coronavirus pandemic concerning the pandemic and how it has been treated; national statistics and registers do not have such data or cannot use them.

## National development project:

- Funding will be allocated to ensure monitoring of the care guarantee, for rectifying information needs identified during the coronavirus pandemic and for refining quality data.
- An evaluation mechanism for wellbeing impacts in the aftercare of the coronavirus crisis and working methods to support political decision-making will be designed. Means for monitoring and steering the wellbeing of the population and the cost-effectiveness of services will be devised in order to support the evaluation of wellbeing impacts in multiprofessional actions. This includes improving current ex ante assessment practices and effectiveness monitoring for actions taken and, as necessary, designing and adopting new operating models. In the first instance, the system will be designed to support the processes of the Government. The aim is to expand the system to support the functions of the forthcoming wellbeing services counties and local decision-making processes.
- Data on costs and cost-effectiveness will be included in evidence-based operating models in social welfare and health care, e.g. devising new national evidence-based recommendations (particularly in social services), providing support for their adoption and updating existing recommendations, defining a service offering for social welfare and health care, and assessing models for promoting health and wellbeing. This action will be pursued through cooperation and integrated into existing structures and operators: Duodecim is responsible for authoring national Current Care guidelines in social welfare and health care.<sup>30</sup> Recommendations for the service offering in health care are given by the Council for Choices in Health Care in Finland (COHERE Finland).<sup>31</sup> The Finnish Institute for Health and Welfare has launched a systematic evaluation of multiprofessional operating models for promoting health and wellbeing.<sup>32</sup>
- Additionally, a funding application round for government grants aimed at organisers of health and social services (21 regions) will be conducted for the following regional measures:
  - regions are to revise their management-by-information practices by adopting consistent methods for social work and social reporting and designing the infrastructure required
  - professionals in health and social services will be trained in data entry skills in the interests of improving the quality of data for secondary use
  - support for coronavirus-related research within the regional service system will be provided with a non-recurring increase in government research funding.

30 <https://www.kaypahoito.fi/en/>

31 [https://palveluvalikoima.fi/en/frontpage?p\\_p\\_id=fi\\_yja\\_language\\_version\\_tool\\_web\\_portlet\\_LanguageVersionToolMissingNotificationPortlet&\\_fi\\_yja\\_language\\_version\\_tool\\_web\\_portlet\\_LanguageVersionToolMissingNotificationPortlet\\_missingLanguageVersion=1](https://palveluvalikoima.fi/en/frontpage?p_p_id=fi_yja_language_version_tool_web_portlet_LanguageVersionToolMissingNotificationPortlet&_fi_yja_language_version_tool_web_portlet_LanguageVersionToolMissingNotificationPortlet_missingLanguageVersion=1)

32 <https://thl.fi/fi/web/hyvinvoinnin-ja-terveyden-edistamisen-johtaminen/vaikuttavat-toimet/hyetoimintamallien-arviointi> (in Finnish).

This will be mainly implemented within the structures of the Toivo programme already in progress.<sup>33</sup> The Toivo programme run by the Ministry of Social Affairs and Health (a.k.a. the programme implementing management by information, steering and monitoring in health and social services) is for designing and improving capability for management by information in the forthcoming wellbeing services counties, upgrading the information production capability and knowledge base of national authorities, and devising national information management solutions. This will ensure that implementation will be rooted in a broader trend to improve management by information and the knowledge base, linking the programme to the preparation of the health and social services reform.

### **Investment target group**

The reform involves organisations responsible for national knowledge bases, organisers of services in social welfare and health care, and the digital services provider and developer DigiFinland Oy (currently 100% State-owned, subsequently to be jointly owned by the State and the wellbeing services counties).

### **State aid**

Government grants will be awarded to local authorities and joint municipal authorities for the development of health and social services for which they are responsible. This scheme concerns non-commercial activities that fall outside the EU rules on State aid. For a significant percentage of this package, the awarding of grants will be based on the Government Decree on Central Government Transfers to Health and Social Services Development Projects 2020–2023 (13/2020). The Decree specifically stipulates that the grants may not be used for any purpose in which they would constitute State aid as per the Treaty on the Functioning of the European Union. Funding recipients must comply with the Act on Public Procurement and Concession Contracts in procurements carried out with the aid funding.

Funding will also be allocated to certain national-level operators, such as administrative bodies and DigiFinland Oy. For these operators, funding will be provided through existing funding mechanisms and in compliance with the rules for competitive tendering.

### **Timetable**

The projects will be carried out between 2021 and 2025.

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<sup>33</sup> <https://soteuudistus.fi/en/toivo-programme>

#### **INVESTMENT 4. Introducing service-oriented digital innovations that will help achieve the care guarantee (P4C1I4)**

##### **Challenges**

Permanent changes to operating practices are needed to reduce the treatment, service and rehabilitation deficit and to increase availability in the long term. New operating and service models need support from a quicker and broader adoption of digital solutions such as client advisory services, booking, e-transactions and remote services.

It is a general challenge for the functioning and improvement of health and social services in Finland that the service system is fragmented and that this leads to regional inequality in the population. This is reflected in the potential of health and social services to make use of digitalisation. There is a vast number of diverse information systems in use, and development efforts face a huge challenge in designing and delivering new digital services covering more than one organisation or one area. There are exceptions to this, however, such as national statutory services and the Omaolo service provided by DigiFinland Oy.

The situation has been highlighted during the coronavirus pandemic: it has been notably difficult to develop the necessary nationwide digital solutions, such as coronavirus testing, appointment booking, contact tracing and decision-making on quarantine. The Koronavilkku mobile app supporting coronavirus contact tracing was deployed quite rapidly and broadly. Its benefits have not been as great as they could have been, however, because pursuing cooperation among various operators in designing shared operating models and modifying them as the pandemic situation dictated was very laborious. Also, some organisations developed solutions of their own to compete with nationwide applications.

##### **Targets**

The target is to introduce digital solutions for improving health and social services that will:

- increase resource efficiency in service production and improve the availability of services, e.g. by accelerating care needs assessments and referrals to treatment and by enabling more widespread use of remote diagnostics, monitoring and treatment
- support early identification of problems and increase the use of preventive services
- facilitate a broader offering of multiprofessional services and the sharing of specialist expertise among regions and among service organisers, and
- reinforce the role of the client and thereby contribute to an increase in service efficiency and effectiveness.

Development and procurement of new digital health and social services solutions may also provide support for IT enterprises and development organisations.

### **Nature and scope of the investment**

In this investment, a total of about EUR 100 million will be allocated to joint development projects between national operators and regions.

### **Implementation**

Joint development projects between national operators and regions will be launched for designing and adopting digital services for citizens, systems for professionals and management solutions. Regions will apply for government grants for projects responding to national targets and to the needs of the region's population. The Ministry of Social Affairs and Health is the competent authority and will make the decisions awarding the government grants.

The services for citizens will include:

- digital solutions for pre-service actions and for consulting services (service directories, symptom evaluations, self-care services, benefit calculators, etc.)
- self-care, health care at home and e-transactions (digital mental health services, aftercare for treatments and services, etc.)
- digital peer support services (digital solutions supporting preventive and low-threshold services, etc.)

The systems for professionals will include:

- client segmenting based on client data analysis, and segment-specific digital service models
- new guidance solutions (placement in long-term care, design and optimisation of home care, etc.)
- digital solutions facilitating multiprofessional work (remote consultations, team appointments, etc.)

The management solutions will include advanced solutions for management by information and for analytics in order to enable better steering and national monitoring of service packages and improving of the cost-effectiveness of the service system.

Disadvantaged and vulnerable persons will be considered in the design of digital services with a view to the availability and accessibility of services. Some services may be specifically targeted at special needs groups. Digital services may indirectly improve the status of disadvantaged and vulnerable persons in that extensive deployment of digital services may free up personnel capacity for services for groups requiring special support.



Government grant projects aimed at organisers of health and social services will be supported through development efforts of national operators to ensure consistency between regional projects and to avoid duplication of efforts. Funding will also be allocated to national coordination and steering of the actions and to the development of information management and digital solutions. To ensure efficient deployment, new digital solutions may be implemented through inter-regional development and procurement in connection with the health and social services reform. DigiFinland Oy may provide assistance with this. The legislation on public procurement must be complied with in both regional projects and nationwide cooperation.

It is difficult at this time to analyse the cost benefits of digital service development in any detail. However, it may be observed on a general level that cost benefit mechanisms have been identified and evaluated in previous similar development projects. An important point is that introducing various procedures for self-care, health care at home and e-transactions can free up capacity in the service system to a significant extent. This will allow personnel to allocate more of their time to contexts where face-to-face contact with clients is essential. Use of working time by personnel will become more efficient, and service processes will improve, and these will also translate into cost benefits. Better tools will require less time to be spent interacting with IT, and smoother service chains will improve the timely delivery of services to clients.

The extent to which the benefits of service digitalisation can be realised depends on how far it will be possible to realign operating practices. The important points are what changes can be effected in the grass-roots workplace culture and to what extent service structures can be reformed with the introduction of new digital services.

Basically, it must be possible to identify and describe at the planning stage in government grant projects how the proposed changes will facilitate the reorganisation of services and help to attain the aforementioned cost-effectiveness targets.

Government grants may not be spent on actions that are central government transfer functions as per section 1 of the Act on Central Government Transfers to Local Government for Basic Public Services (1704/2009), unless these actions are directly connected to the experimentation and development work undertaken in the project or to the adoption of new operating models. When actions taken in projects on a fixed-term basis to reduce waiting times are directly connected to development work or to the adoption of new operating models, these actions may be funded with government grants.

#### **Investment target group**

The investment is aimed at: organisations responsible for national digital services and knowledge bases in social welfare and health care; organisers of social welfare and health

care services; service providers; NGOs; and private individuals using the services. The investment will also have an impact on personnel. Digitalisation of services can ease personnel shortages, and new online services may also be an attractiveness factor for the sector.

### **State aid**

The actions taken may involve State aid to some extent in the procurement of digital solutions and tools. These activities are considered to fall under the *General Block Exemption Regulation* (GBER) (social welfare and health care). Public procurement units must comply with the Act on Public Procurement and Concession Contracts (1397/2016).

### **Timetable**

The projects will be carried out between 2021 and 2025.

## **INVESTMENT 5. A client-oriented digital care information system in Åland.**

### **Challenges**

Modern health care is becoming increasingly complicated in its care organisations, forms of treatment and specialisations. This complexity means that the care of any one patient will involve multiple professionals. The threat here is that the care process may become fragmented and the treatment measures uncoordinated; in the worst-case scenario, they may even work against each other. It is vital to make cooperation among medical personnel easier, so that they will have improved potential to provide seamless, integrated care.

One of the requirements for this is that medical personnel must have a coordinated care plan where all of the patient's active care data and plans for outpatient care, inpatient care, rehabilitation and basic health care services are compiled, regardless of which organisation or body is responsible for them.

Specialised, fragmented care may make it difficult for a patient and their family members to have input in the patient's care. What we need is client-oriented care, where medical personnel work together with the patient and their family members. This will allow them to consider the patient's needs, values and hopes in the care provided, and the patient will have greater potential for taking responsibility for their care and to assist in it.

Rapid digitalisation and the resulting increased availability of health data in digital form is improving the capability of both professionals and patients to make informed decisions. Information and decision-making support coordinated with the patient information system are needed to facilitate this. Systems like this analyse data to assist in decision-making. Making informed decisions will require professionals to adopt a systematic approach and to keep up with the latest information when making decisions.

### Target

The target of the project is to facilitate cooperation among medical professionals. Ålands hälso- och sjukvård (ÅHS) is the body responsible for public health care in Åland as provided for in province legislation (2011:114). ÅHS provides emergency medical services, basic health care and specialist medical care for the 30,000 residents of Åland. The ÅHS also liaises and cooperates with various health care operators in Finland and in Sweden. This combination of small scale and wide reach makes ÅHS an excellent European development and deployment platform for innovative solutions.

The project has the following component targets, approved by the project steering group:

- Designing informed client-oriented processes and work practices rooted in patients' needs, values and hopes.
- Designing work practices allowing patients and their family members to provide input and to be more actively involved in their care.
- Designing information and process structures to provide groundwork for patient documents and coordinated care plans.
- Designing a coordinated care plan that will integrate all care plans of an individual patient in the social welfare and health care system. This is a requirement for coordinated care.
- Improving the electronic transfer of health data so that data can be exchanged between patient information systems; the point of this is to improve prevention, performance, diagnoses, treatments and medications.
- Designing digital information systems to foster cooperation between care units and other organisations, both regionally and with health care systems in Finland and in Sweden.
- Designing and delivering means for informed decision-making and standards for monitoring of treatment outcomes.

### Scope and nature of the project

The project comprises the procurement of a new, modern care information system for health care in Åland. The care information system must be compatible with the needs of municipal social services and with private operators in Åland. ÅHS outsources about 10% of its operations from Sweden and Finland. Therefore, it must be possible to transfer clinical data back and forth between the ÅHS and contracted hospitals in both countries. The new digital system must be compatible with the corresponding system in mainland Finland. The funding will go towards a digital care information system in Åland. The procurement will include: definition of specifications; systematic documentation of treatment processes; medication prescriptions; support based on research findings by medical institutions; medical publications; treatments provided; time management reporting; quality and operations monitoring; and possibly other modules to be

determined when the procurement is planned. The cost estimate is based on two studies on the costs of similar systems, conducted in Finland and in Sweden in 2015 and 2019.

The estimated need for investments is EUR 4.8 million. The investment will increase operating costs by an estimated EUR 0.5 to 1.0 million per year,

### **Implementation**

ÅHS will be the procurement unit and will sign a licensing agreement providing the State-owned company Åda Ab with the option of purchasing licences for its owners (local authorities and the province).

ÅHS began to make the changes required for implementing the care information system more than two years ago. The purpose of the change is to describe the improved work practices and processes and to identify the data needs for the new patient information system.

Design and deployment will be undertaken with external support and in cooperation with clinical experts who are already well familiar with the operations. All professional groups in medical care and nursing will participate in a broad, comprehensive needs assessment. ÅHS will apply and enforce international standards and contribute to their further development, e.g. in cooperation with the Finnish Institute for Health and Welfare and Sweden's National Board of Health and Welfare (Socialstyrelsen).

The concepts and ideas that ÅHS has of the new patient-oriented patient information system, of information management and of process-based support are at the cutting edge of developments in the sector.

The new patient information system in Åland will have many features that can be scaled up. ÅHS covers numerous areas specialities in specialist medical care, albeit at a small scale, and is thus an excellent European development and deployment platform. The domain of ÅHS consists of sparsely populated islands, which means that mobile remote work tying together home nursing, hospitals and local authorities is an important part of everyday activities. The legislation of Åland allows data exchange within public health care in a way that is not allowed in Sweden, for example. According to the legislation, there must be a coordinated monitoring system for health care.

### **Stakeholders**

The investment will be targeted at public organisations responsible for health and social services and at service providers, organisations and the private individuals using these services. The system must be compatible with those of Finnish and Swedish operators.

Cooperation between Åland, Sweden and mainland Finland may lead to joint innovations in health care and in research.

#### **State aid**

The rules on State aid do not apply to this action. The project will be implemented pursuant to the Act on Public Procurement and Concession Contracts.

#### **Timetable**

The project will be implemented in 2020–2025.

### **Open strategic independence and security matters**

The new operating models, innovations and technologies in health and social services to be adopted with these investments will increase wellbeing in the population while enhancing the efficiency of the service system and generating business opportunities and exports. The investments will thus enhance the strategic independence of the EU and boost its capability for recovery and its resilience.

Data protection and privacy protection will be ensured by default in all digitalisation and information management development projects. Compliance with the GDPR is a fundamental requirement for all processing of personal data. There is a great deal of sector-specific regulation of social welfare and health care services in Finland, and projects will naturally be required to comply with this. It is particularly important to comply with the Act on the Electronic Processing of Client Data in Healthcare and Social Welfare and the core requirements based thereon as defined by the Finnish Institute for Health and Welfare. There are already procedures in place in this respect (e.g. demonstrating compliance of IT systems), and these will be used in the projects described here.

### **Trans-border and multinational projects**

No trans-border or multinational projects are involved in this pillar.

### **Green dimension in the component area**

An increase in the use of digital solutions such as remote services and guidance may indirectly promote the green transition by reducing unnecessary mobility by clients and personnel and by reducing consumption of energy and materials. The redirecting of services to remote services may be verified in social welfare and health care statistics as a percentage of remote appointments out of all appointments handled by physicians and nurses.

### Digital dimension in the component area

The proposed reforms and investments will promote digitalisation in social welfare and health care as part of a reform of operating practices. The investment package will facilitate the deployment of digitalisation in multiprofessional, low-threshold services, in preventive measures and in early identification of problems; the need to systematically leverage such functions was highlighted during the coronavirus crisis. At the same time, we must aim to reduce the risk of digital social exclusion.

The investments proposed under this pillar to support the introduction and efficient exploitation of digital solutions in health and social services parallel the European flagship area 'Modernise', whose aim is that the public administration should provide interoperable, customised and user-friendly digital public services.

### Do No Significant Harm

Actions in this component area will specifically facilitate the availability and digitalisation of social welfare and health care services. The projects to be funded are not estimated to have any direct adverse impacts in the six areas considered. Because projects will be selected through competitive tendering, it is not possible to make an advance detailed estimate of the potential impacts of the actions.

The Ministry of Social Affairs and Health will select the projects and decide on the funding and will stipulate in the application notices that applicants must analyse in their applications how their projects comply with the Do No Significant Harm principle.

The Ministry of Social Affairs and Health will inspect the analyses presented in the applications according to guidelines issued by the Commission. Project proposals that do not comply with this principle will not be funded.

### Milestones, targets, timetable

The reform will be implemented in two phases. The phasing is based on the timetable of the implementation of the health and social services reform and the preparation for setting up the wellbeing services counties.

P4C1R1 Reform 1 milestones:

- P4C1R1 Milestone 1: Government proposal for the health and social services reform passed by Parliament (Q2/2021)
- P4C1R1 Milestone 2: Wellbeing services counties established and ready to assume responsibility for organising social welfare, health care and rescue services (Q2/2023)

The investment targets are:

*P4C111 Investment 1:* New, more effective and client-oriented operating models

accelerating access to treatment and services have been adopted regionally (Q4/2025).

Indicator: Indicator: 80% of social and health centres can comply with the 7-day maximum waiting time for access to treatment in non-urgent cases.

*P4C112 Investment 2:* New multiprofessional operating models promoting social inclusion, health and wellbeing have been introduced regionally (Q4/2025)

Indicator: 80% of the population are using online services

*P4C113 Investment 3:* The care guarantee monitoring system has been adopted (Q4/2023)

Indicator: Real-time national care guarantee monitoring is performed at all health centres (100%)

*P4C114 Investment 4:* Digital innovations facilitating compliance with the care guarantee are in place (Q4/2025)

Indicator: 45% of all contacts are managed remotely by electronic means (phone, chat, remote services)

*Investment 5:* Patient information system in place (Q4/2025) Indicator: 80% of municipal social services and the majority of private operators are using the system.

The foundation for assessment in health and social services is formed by the KUVA indicators measuring cost-effectiveness in the sector. The KUVA indicators are a set of 540 coherent indicators devised by the Ministry of Social Affairs and Health and a wide range of experts. The indicators were completed in March 2019. The indicators are used in the authoring of annual social welfare and health care expert assessments of the Finnish Institute for Health and Welfare and for steering and management of the service system. The indicators will be modified according to changing needs.

### **Costs and funding**

It was estimated in autumn 2020 that the coronavirus pandemic has generated a treatment and service deficit in social welfare and health care valued at EUR 850 to 950 million. The majority of this is in health care. It is estimated that targeted funding can help eliminate a considerable percentage of this deficit when combined with other actions taken by local authorities and joint municipal authorities and with their matched funding. The purpose of the funding is to achieve changes in operating models and new solutions (including digitalisation) to accelerate access to treatment. Early identification of problems and provision of low-threshold services will reduce the need for resource-intensive and

more expensive services. In this way, the proposed actions can curb the growth of public spending and improve the functioning of social welfare and health care services in the long term. The Ministry will reassess the treatment and service deficit in spring 2021.

The government grants to be awarded to organisers of social welfare and health care services are to cover their acceptable costs in full. Funding will also be allocated to national actions and to the development of information management and digital solutions so as to cover their costs in full. With the health and social services reform, service funding will change so that the central government will fund them fully; it will not be feasible to require regional operators to provide matched funding for the year 2022 only.

Most of the funding will be awarded as government grants; there is a well-established system for their granting, payouts and monitoring. The competent authority is the Ministry of Social Affairs and Health, assisted by the Regional State Administrative Agencies. Government grants can basically be earmarked in more detail than general budget appropriations, because applicants must justify the costs that they are seeking to cover. Because the payouts and spending are monitored, the costs are transparent. Government grants are awarded through a process that is administratively slower and more complicated than budget funding, due to the application procedure and decision-making involved.

However, over several electoral terms the competent authority has developed procedures for processing and accepting funding applications within a reasonable amount of time. The administrative burden is thus reasonable vis-à-vis the outcomes to be achieved.

Implementing the plan will cause additional costs over a fixed period because of the need to hire additional personnel. Applicants must justify these additional costs, which will vary by region and by year. The personnel costs will be incurred through fixed-term expert appointments to ensure that the reforms and investments will go through as planned. In Finland's decentralised system of government, local authorities and joint municipal authorities need added resources in the form of government grants to hire project personnel. This will be implemented over 21 geographical areas (referred to in the health and social services reform as 'wellbeing services counties'). Fixed-term additional personnel will also be needed for national steering of the projects.

The personnel to be hired for a fixed term for the 21 regional projects will plan the deployment of the actions together with the permanent personnel and will support the changeover through training and other means, along with ensuring that investments proceed at a nationally uniform rate and monitoring and evaluating the change. In



investments 1 and 2, it is possible to employ fixed-term personnel and service vouchers for reducing the treatment and service deficits.

Personnel hired for regional development efforts will be supported through development efforts of national operators to ensure consistency between regional projects and to avoid duplication of efforts. Fixed-term personnel will also be allocated to national coordination and steering of the actions and to the development of information management and digital solutions (Ministry of Social Affairs and Health, Finnish Institute for Health and Welfare, DigiFinland Oy).

No funding will be sought from other EU programmes for this component area.

#### **Investment 1, detailed assessment**

This investment will involve allocating about EUR 230 million in government grants to promote adherence to the care guarantee and to reduce the treatment, rehabilitation and service deficit. In previous application rounds for government grants conducted by the Ministry of Social Affairs and Health, typical project packages have had a budget of EUR 3.0 to 5.0 million, depending on the size and population of the region. In the funding application round for the 'Social and Health Centre of the Future' development projects in 2020, EUR 70 million in government grants was awarded to 23 regions (about EUR 3.05 million per project).

The proposed funding application round for the present investment will concern a period of three years (2021–2023), meaning that the total amount available per annum is EUR 30 to 100 million. It is assumed that regional budgets will be somewhat larger than in the previous example when applications are submitted and that the average grant per project will be EUR 4–7 million. Because the regions differ widely in population, service needs and geographical area, it is difficult to estimate an average budget and grant. Earlier development projects are not entirely compatible with RRF projects, because they differ in their targets, implementation, timetable and, hence, budgets.

#### **Investment 2, detailed assessment**

This investment will involve allocation about EUR 30 million to promoting adherence to the care guarantee by reinforcing preventive measures and early identification of problems. In previous application rounds for government grants conducted by the Ministry of Social Affairs and Health, typical project packages have had a budget of EUR 3.0 to 5.0 million.

The proposed funding application round under this investment will concern the period 2021–2023. The budget of an average regional project under this investment is expected

to be EUR 2.0 to 3.0 million. The projects must be coordinated with other actions funded out of this pillar so as to create a coherent entity in terms of functions and funding.

#### **Investment 4, detailed assessment**

The regional portion of the funding will be linked to the government grant application rounds under investments 1 and 2. Applicants will be required to explain how their projects will promote the digitalisation of services in cooperation with national operators.

In the central government budgets for 2019 and 2020, the appropriation for information management in social welfare and health care was EUR 57 million per year on average. The annual ICT expenditure in social welfare and health care services in local government is estimated at EUR 700 million. The investment will mainly be implemented over a three-year period (2022–2024), the annual allocation being EUR 30 to 35 million.

#### **Justifications for the loan request (if needed)**

No loan funding is sought from the European Union for this component area.

1 Including COFOG (Classification of the Functions of Government).

#### **Personnel costs**

The personnel costs in pillar 4 will be incurred through fixed-term expert appointments to ensure that the reforms and investments will go through as planned. In Finland's decentralised system of government, local authorities and joint municipal authorities need added human resources in the form of government grants to hire project personnel. This will be implemented in 21 geographical areas (the forthcoming 'wellbeing services counties').

The personnel to be hired for a fixed term for the 21 regional projects in the investment will plan the deployment of the actions together with the permanent personnel and will support the changeover through training and other means, along with ensuring that investments proceed at a nationally uniform rate and monitoring and evaluating the change. It will be possible to employ fixed-term personnel, service outsourcing and service vouchers for temporary measures for reducing the treatment and service deficits.

Personnel hired for regional development efforts will be supported through development efforts of national operators to ensure consistency between regional projects and to avoid duplication of efforts. Fixed-term personnel will also be allocated to national coordination and steering of the actions and to the development of information management and digital solutions (Ministry of Social Affairs and Health, Finnish Institute for Health and Welfare, DigiFinland Oy)

## III Implementation of the plan and supplementary funding

The Sustainable Growth Programme for Finland will be funded by the EU's one-off recovery instrument (Next Generation EU). The recovery scheme is divided into seven programmes, of which the Recovery and Resilience Facility (RRF) is by far the largest. Each Member State must present a national Recovery and Resilience Plan (RRP) in order to receive RRF funding. Finland's Recovery and Resilience Plan will form part of the Sustainable Growth Programme for Finland.

### Request for advance payment

Finland will file a request for advance payment to finance its Recovery and Resilience Plan under the EU Recovery and Resilience Facility. Advance payment is requested for 13% of the final amount due to Finland based on the Commission's Autumn Forecast.

### How have the other relevant plans, such as national energy and climate plans, been taken into account in the RRP?

#### Pillar 1:

The foreseen pillar 1 investments and reforms specifically support the implementation of the EU Green Deal and its various component parts and strategies. Additionally, the projects included in this pillar support the following EU programmes and strategies:

- EU Strategy on Energy System Integration
- EU Hydrogen Strategy
- A New Industrial Strategy for Europe (COM(2020) 102 final)
- A New Circular Economy Action Plan (COM(2020) 98 final)
- A Hydrogen Strategy for a Climate-Neutral Europe (COM(2020) 301 final)
- EU Batteries Regulation (COM(2020) 798/3 2020/353)
- An SME Strategy for a Sustainable and Digital Europe (COM(2020) 103 final)
- EU Renovation Wave (COM(2020) 662 final)

At the national level, the pillar provides cross-cutting support for the implementation of national climate and energy plans, such as the National Energy and Climate Plan (NECP), the Medium-Term Climate Change Policy Plan, and the National Energy and Climate Strategy. Additionally, the individual component areas offer extensive support for purposes such as the implementation of the Long-term Repair Construction Strategy; the fossil-free transport roadmap; the strategic programme to promote a circular economy; and the sector-specific low-carbon roadmaps; as well as the National Waste Plan; the Finnish Bioeconomy Strategy; the National Forest Strategy; and the programme for export promotion and internationalisation.

## Pillar 2:

Several national plans have been considered as part of the pillar 2 proposals for the Sustainable Growth Programme.

With regard to the **digital infrastructure**, Finland aims to be a world leader in communications networks, as outlined in the *digital infrastructure strategy* announced by the Ministry of Transport and Communications in 2018. The recovery funds will contribute to the *national broadband aid programme* for which a sum of EUR 5 million has already been earmarked in the national budget. The target of the broadband programme is to improve the quality and availability of communications services in Finland by means of state aid in order to offer equal opportunities for digitalisation. In the context of the Digirail project, the target is to promote digitalisation in the transport sector to support the attainment of emission-reduction targets. To reach these targets, decisions on further measures will be made in 2021. The ways and means for reaching the emission-reduction targets are presented in the *fossil-free transport roadmap*. Additionally, the draft for the first *12-year national transport system plan* recognises the need for implementing the body of projects foreseen in the Digirail study. The plan seeks to guarantee access to all parts of Finland, expand the freedom of choice in sustainable modes of transport and improve transport efficiency in terms of the national economy.

**Accelerating the data economy and digitalisation:** As stated in the Government Programme, *a strategy and an action plan will be prepared for opening up and utilising public sector data* with due regard to the impact of data protection regulations and any legislative needs. The Government Programme foresees further steps to develop the Residential and Commercial Property Information System and the introduction of a positive credit register. The first of these two projects will support the attainment of target 3.1.1 “to build a carbon neutral society and improve the quality of construction” and, together with the introduction of a positive credit register, contribute towards reducing over-indebtedness as stated in the Government Programme. *The strategy and action plan to combat the grey economy*

*and financial crime for 2020–2023* includes target 4.2 stating that “The obstacles to sharing information in the national prevention of money laundering and terrorist financing and the need to share information on these offences will be examined.”

The reform to ensure and implement efficient supervision in the prevention of money laundering will respond to the target established in the action plan.

### **Pillar 3:**

Pillar 3 provides a direct connection between the Sustainable Growth Programme and Sanna Marin’s Government Programme. The “upskilling and continuous learning” scheme is closely linked to the policies outlined in the Government Programme designed to improve educational standards and skills at all levels of education, narrow the differences in learning outcomes, increase quality in education and to reform continuous learning. The Government Programme also states that digitalisation will be included as an overriding theme at all levels of education. The Government Programme goes on to say that the higher education system will be further expanded as a platform for learners and continuous learning. The idea is that all students irrespective of status – degree students, lifelong learners and those without a study place – can pursue studies flexibly, selecting courses from all Finnish higher education institutions regardless of organisational boundaries and geographical location.

Additionally, the Government Programme declares that the Government is committed to looking for solutions to increase the overall level of education, reduce the backlog of applicants and address the lack of skilled workers across regions by significantly increasing student intakes in higher education. The scheme is also linked to the reform to continuous learning and related policies being addressed by Parliament, the “WORK2030 – Development programme for work and wellbeing at work” as well as the 2030 vision for higher education and its roadmap.

By allocating resources to increase the level of investments and implement reforms in order to improve the employment rate, it will be possible to contribute to the attainment of the targets set out in the Government Programme (section 3.5: Finland built on trust and labour market equality). The measures listed in the Government Programme include improved employment services; the reform to unemployment benefits and services for the unemployed; support for the employment of young people; and the facilitation of the employment of persons with partial work ability. A need to increase work-based immigration is recognised as an important part of the efforts to improve the employment

rate. More specifically, the target is to encourage the immigration of qualified workers and cut down the average processing times of work or study-based residence permits to one month as soon as possible. The measures were defined in more detail at the Government budget sessions in the autumn of 2020 and spring of 2021. Additionally, the Government decided at the 2020 autumn budget session to create a fast track for specialists and start-up entrepreneurs and their family members during 2021. The reform and investment project to digitalise the immigration infrastructure will help achieve the targets set out in the Government Programme as part of the Talent Boost action programme. By Government decision, a new intermediate labour market operator, 'Välittäjä Oy', modelled on the Swedish Samhall concept, will be established in Finland.

Investments in RDI activities are linked to the roadmap for national research, development and innovation, which provides a comprehensive overview of the reforms and development efforts needed in the RDI policy. The measures foreseen in the Recovery and Resilience Plan will reinforce the skills and expertise required for green transition and carbon neutrality, facilitate the generation of new knowledge, promote innovation and thus accelerate the implementation of the RDI roadmap. At the same time, the research infrastructure section reflects the policies in support of the green transition outlined in the Strategy for National Research Infrastructures in Finland 2020–2030. Additionally, the pillar 3 investments will contribute to the programme for export promotion and internationalisation; the Creative Industries Roadmap; the Growth Programme for Sustainable Transports; and the Health Sector Growth Strategy.

#### Pillar 4:

The proposed pillar 4 reforms and investments will support the national health and social services reform, which will shift the responsibility for organising services from municipalities to larger wellbeing services counties.<sup>34</sup> The foreseen measures will help achieve the targets related to this structural reform as defined in the Government Programme: to secure equal and high-quality health, social and rescue services for all residents of Finland; improve the availability and accessibility of services; reduce health and wellbeing inequalities; secure the availability of skilled labour; and curb the increase in public spending in the mid-term.

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34 HE 241/2020 [https://www.eduskunta.fi/FI/vaski/KasittelytiedotValtiopaivaasia/Sivut/HE\\_241+2020.aspx](https://www.eduskunta.fi/FI/vaski/KasittelytiedotValtiopaivaasia/Sivut/HE_241+2020.aspx) (in Finnish).

Additionally, the reforms and investments will contribute to the attainment of the national targets established in the key strategies of the Government Programme under the headings “Fair, equal and inclusive Finland” and “Finland that promotes competence, education, culture and innovation”.<sup>35</sup>

- The division of duties and ways of working among social and healthcare professionals will be reviewed and social services will be more closely integrated into the operations of social and health centres.
- Compliance with the health care guarantee in primary health care will be improved by ensuring that access to non-urgent care is provided within one week (7 days) as of the assessment of the need for care.
- Due consideration will be given to the diversity of the providers of social and healthcare services and access to local services.
- Welfare economics will be promoted by taking measures that will support health and wellbeing, reduce the need for the various services, improve performance in preventing the most common diseases in Finland and the effectiveness of treatment, promote mental health as well as encourage inter-administrative action in order to intensify the wellbeing impacts of cultural activities by increasing cooperation between administrative branches.
- Steps will be taken to ensure more efficient use of information resources, create registers for quality monitoring purposes and guarantee long-term resources for healthcare research (including nursing and the government appropriations for university-level health research) as well as research and development in the social services sector.

## Will other EU-level supplementary funding be utilised?

The Sustainable Growth Programme for Finland (RRF funding) and the complementary nature and synergy between regional and structural policy funds stem, on the one hand, from their contents and, on the other, from the level of implementation and scale. The funding available from the structural funds (EU regional and structural policy funds), the EU cohesion policy instrument ReactEU and the RRF funding create a mutually complementary source of funding. Provisions on co-ordination between the EU regional and structural policy funds are set out in Finland’s Partnership Agreement. Additionally, it provides a description of the links to other EU financing vehicles, including the RRF. Applicants for funding from the EU regional and structural policy funds are required to

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35 Inclusive and competent Finland – a socially, economically and ecologically sustainable society <https://valtioneuvosto.fi/en/marin/government-programme>

disclose other financing applied or received for the same purpose. National and regional regulations, instructions and coordination mechanisms ensure that the funds will be complementary and double-funding is avoided.

## Pillar 1

Finland will make use of TEN-E/CEF funding to finance a cross-border electricity transmission project (Sweden). Any RRF-financed investments in energy infrastructure will improve the operation of the electricity system and promote electrification in Finland; however, RRF funding will not be directly used to finance the cross-border link. Where possible, Finland will make use of the financing available from the Horizon Europe and Innovation Fund to develop and deploy new energy technology. Energy projects may also be funded through the JTF.

## Pillar 2

The *Digital Europe Programme (DEP)* includes several new technology areas topical for Finland. At the same time, the EU is making substantial investments in development platforms through programmes such as the *Digital Europe* and *Horizon Europe*.

While broadband connections are funded out of the EU Agricultural Fund for Rural Development, the grants focus mostly on 'village network projects'. Hence, the EAFRD does not provide funding for the national broadband aid programme. Applications for funding for Digirail sections forming part of the Trans-European Transport Network (TEN-T) can be filed with the Connecting Europe Facility (CEF).

## Pillar 3:

One of Finland's nationwide themes during the EU structural fund programme period 2021–2027 is continuous learning. National ESF activities reinforce the capabilities of education providers, universities and other operators engaged in continuous learning to adjust their actions accordingly. The project will focus on upgrading the structures and *modi operandi* of education providers. No funding will be used for providing actual training. At the time of writing, no information is available as to the amount of funding that may be allocated for this purpose.

With RDI projects, efforts will be made to improve capabilities to apply for funding under the EU Competitive Programmes, such as Horizon Europe. During the EU structural



fund programme period 2021–2027, funding may be secured for upgrading research infrastructures in areas for which such funding is available.

Of the development projects related to the investments in the digital infrastructure of immigration, the system development efforts for the automation of ex-post controls and the inter-administrative induction to immigration processes are potentially eligible for funding from the EU Asylum and Migration Fund (AMF).

Another major national theme during the EU structural fund programme period 2021–2027 is innovation capacity in creative industries and culture. ERDF funding will be used for improving the capabilities for more efficient harnessing of RDI skills in the cultural and creative industries sector through joint RDI efforts and by facilitating the adoption of advanced technologies. At the time of writing, no information is available as to the amount of funding that may be allocated to ESF and ERDF activities. Also, the plan is to support innovation in cultural fields and creative industries through REACT as part of RDI activities and the efforts to improve digital skills and capacity for change. In relation to RRF measures, the REACT-EU actions highlight regional and local aspects and offer the opportunity to tailor projects more accurately in response to needs.

#### **Pillar 4:**

At this point, it is not foreseeable that the proposed pillar 4 reforms and investments could be co-financed with other EU funding.

## **Preparation and implementation of the Sustainable Growth Programme**

The Sustainable Growth Programme for Finland has been prepared by a coordination group appointed by Prime Minister Marin and the group secretariat since autumn 2020. The group, headed by the Ministry of Finance, included representatives from all ministries. As of January 2021, the preparations have been overseen by a ministerial working group under the direction of the Ministry of Finance. Additionally, a draft plan was reviewed in the course of the preparations by the Ministerial Committee on Economic Policy during the spring of 2021.

Close attention in the preparations was paid to the general and detailed criteria issued by the ministerial working group. A number of experts representing a variety of fields were also consulted in the course of the work.

Finland's preliminary Recovery and Resilience Plan was submitted to the European Commission on 15 March. Regular talks on the contents of the plan have been held with the Commission in the course of further processing. The plan needs to be approved in order to receive funding from the EU. The national plans are reviewed by the Commission and adopted by the Council of the European Union. When submitting the plan to the Commission, Member States may, at the same time, request a 13% advance on the funding allocation. The rest of the payments will depend on the progress made with the plans when it is demonstrated that the targets have been attained according to plan. If necessary, the plan will be revised at a later date when Finland's maximum grant is updated.

The implementation of the investments and reforms will be overseen and their effectiveness monitored by the ministerial working group and the coordination working group. Additionally, specific agencies and ministries have been designated to monitor implementation and progress and provided with clear guidelines in accordance with the eligibility criteria. Government oversight will ensure that the appropriations are used effectively in accordance with the targets set by Parliament and the Government. The roles of each authority in the implementation of the investment and reform packages are defined in Appendix 1 to this plan. Effectiveness will be monitored by means of indicators specifically defined for the investments and reforms in the course of implementation. The support provided by researchers and other specialists can also be drawn upon in monitoring effectiveness.

The appropriations for the investment projects foreseen in the Sustainable Growth Programme for Finland will be included in the 2021 supplementary budget and incorporated technically into the General Government Fiscal Plan for 2022–2025 and, where possible, included in the actual budget proposals as of 2022. Budget preparation will be governed by the plan to be submitted to the Commission as well as by the guidelines issued by the ministerial working party and the Ministerial Committee on Economic Policy. A further precondition for the use of the appropriations and the decisions to grant aid is that the Council decision on the system of own resources of the European Union (EU, Euratom) 2020/2053 has taken effect.

In implementing the investments, the Government will follow the standard budget procedures. Payments by the EU to the State of Finland will be based on the progress made with the national plans and the attainment of the targets set in these plans, and will be recognised as revenue in the 2021–2024 budgets. If the investment and reform projects fail to meet the targets or EU funding is not received for some other reason, the projects will be financed nationally, which will increase the national debt burden. It is therefore extremely important to ensure that investment and reform projects meet the criteria set out in the preparatory documentation and that the targets are achieved.

## Administration, oversight and review of the Sustainable Growth Programme

At the political level, the implementation of the Sustainable Growth Programme for Finland will be controlled and monitored by a ministerial working group. The application of the funds received under the Recovery and Resilience Facility will be governed by the State Budget Act (423/1988), the State Budget Decree (1242/1992) and the applicable State aid regulations. This will guarantee that EU funds are protected by the same internal controls as national funds. To ensure the effectiveness and control of the national budgetary system, all central functions related to programme coordination, management, control and audit will be centralised in the Ministry of Finance. The extensive powers required for these new and temporary duties must be defined in a specific piece of legislation on the implementation of the programme. A shared IT system will be set up for the programme to ensure a proper audit trail of RRF-compliant data on measures and beneficiaries. Additionally, steps will be taken to ensure that the authorities responsible for monitoring and auditing the programme, including the EU bodies carrying out audits, have all the necessary information at their disposal with due regard, *inter alia*, to the provisions on the technical interfaces of data resources, viewing links, confidentiality, processing, disclosure and access rights to information.

For the national organisation of the Member States' duties under the RRF Regulation, a legislative drafting project will be launched, led by the Ministry of Finance in collaboration with the implementing ministries, to prepare a government proposal for supplementary regulation with the aim of ensuring the effective application of the EU Regulation and full access to the financing due to Finland.

Insofar as the implementing measures related to the Finnish Sustainable Growth Programme are not governed by specific legal provisions, action will be taken in accordance with the provisions specific to individual administrative branches based on the division of responsibilities between the ministries as provided in the Government Act (175/2003) and the Government Rules of Procedure (262/2003). The regulatory needs relate to the definition of the roles and the division of duties between the authorities participating in implementation and the deployment of the IT system (including ownership and file controller, appropriate chain of custody and an adequate retention period of documents). At the same time, the necessary adjustments due to the special conditions associated with the use of RRF funds as well as the audit and access rights of EU bodies will be reviewed.

In order to meet the requirements of the RRF Regulation, the Ministry of Finland will, together with the implementing ministries, commence the preparation of the specifications for the information system and its procurement. The system will be based on the existing digital processes and platforms. An estimate of the costs and the human

resources required in terms of person-years will be determined when the Government proposal is prepared.

The authorities responsible for coordinating the RRP, submitting payment requests to the Commission, managing and monitoring the implementation of the RRP and auditing are defined below. One authority may attend to several duties. Operationally, the audit function is independent of the other authorities responsible for the administration, oversight and implementation of the programme.

All key programme-related functions will be concentrated in the Ministry of Finance, which will be responsible not only for general coordination, oversight and audits but also for preparing the payment requests to the Commission and verifying the accuracy of the information contained in the requests and the accompanying management declaration. Responsibility for granting aid and any related corrective action or recovery rests with the ministries in their respective administrative branches. The ministries and granting authorities will report on the actions taken and the progress made to the Ministry of Finance using the shared IT system.

To ensure harmonised implementation, the Ministry of Finance will issue instructions to the authorities responsible for administering the funds. Additionally, the Ministry of Finance will carry out audit visits primarily to the authorities granting aid in order to ensure that the programme is being implemented in accordance with the applicable rules and the Ministry of Finance's instructions. The Ministry of Finance includes a separate audit unit which is operationally independent from the other duties related to the management and oversight of the programme. The audit unit will carry out random checks on projects and systems audits on the granting authorities and use the findings to draw up an audit summary to accompany the payment request.

Responsibility for any corrective action related to detected failures or errors rests with the granting authority while enforcement will be overseen by the Minister of Finance's coordination function. Provisions on aid-related corrective actions, including recovery, are set out in national legislation on the granting of aid (see Appendix 1).

### **Coordination**

Responsibility for coordination rests with the Ministry of Finance. Accordingly, the programme coordinator will coordinate the monitoring and implementation of the plan in its entirety as well as liaison with the Commission. The coordinator will monitor the progress of the programme in collaboration with the other authorities involved in its implementation and report on the progress of the plan in accordance with the specific milestones and indicators agreed upon with the Commission. Additionally, the

coordinator will be responsible for reporting the foreseen and actual expenditure to the Commission.

The act on the implementation of the RRP will authorise the Ministry of Finance to direct the authorities responsible for the management, control and implementation of the RRP, to issue orders on the use of funds and reporting as well as to carry out visits to audit the authorities, projects and measures. When doing so, the Ministry of Finance will work hand in hand with other authorities, drawing upon the best practices of the EU Structural Fund programmes, where possible.

The Ministry of Finance's coordination function will adopt control measures to ensure that the programme funds are used in accordance with the applicable legislation and that the ministries and granting authorities take effective and efficient measures, specifically to avoid conflicts of interest, prevent fraud and corruption as well as avoid double-funding. The control measures will be carried out in accordance with an annual plan based on a risk assessment. The risk assessment will take into account the amount of funding managed by the individual ministries and granting authorities, the number and extent of the measures as well as the experiences gained from the implementation of other programmes, such as those of the EU Structural Funds. The audit visits are designed to achieve maximum coverage. Another target of the control measures is to verify the accuracy of the follow-up data and the implementation of the corrective actions taken to address any flaws detected. All control records will be stored in the shared IT system.

The coordination function will be located in the Ministry of Finance, together with the unit responsible for compiling payment requests and the technical secretariat, with due regard to the segregation of duties.

**Estimate of the resources required:** 3–5 person-years during 2021–2026

#### **Technical secretariat**

RRP coordination and the management and monitoring of the plan will be supported by a technical secretariat attached to the Ministry of Finance. Provisions on the establishment and duties of the secretariat will be set out in the act on the implementation of the RRP. The secretariat will serve as a liaison between the nine ministries responsible for the implementation and oversight of the plan at the national level. The chair of the secretariat will be appointed by the Government and the secretary-general by the Ministry of Economic Affairs and Employment. Additionally, the secretariat will support the authority responsible for coordination in monitoring the implementation of the RRP. The secretariat will assist the ministries and agencies responsible for the management and control of the measures in applying EU legislation on the implementation of the RRP, reporting on the attainment of the targets and indicators defined for the measures, and with other matters

related to monitoring, control, avoidance of conflicts of interest as well as the prevention of fraud, corruption and double-funding. The secretariat will issue guidelines to the granting authorities on collecting information on any irregularities detected in audits and on reporting cases of suspected fraud to OLAF.

The secretariat will assist the Ministry of Finance and assume responsibility for the IT system required for implementing and monitoring the RRP. The secretariat will instruct and assist the granting authorities in the use of the shared IT system and ensure that the details of the system are duly reported to the Commission, OLAF, the Court of Auditors and EPPO. The secretariat will work in collaboration with the Commission to acquire the data needed for its data mining and risk scoring tool. Also, the secretariat will support the dissemination of good practices between other Union programmes and facilities and RRP implementation.

The technical secretariat will be located in the Ministry of Finance, together with the units responsible for coordination and compiling payment requests, or in an agency subordinated to the Ministry of Finance, with due regard to the segregation of duties.

**Estimate of the resources required:** 5–8 person-years during 2021–2026

### **Payment requests**

The Ministry of Finance is required to compile the payment requests to be filed with the Commission and to verify the accuracy of the data contained in the requests based on the information provided by other authorities. Provisions on the Ministry of Finance's duties related to the compilation of the payment requests will be set out in the act on the implementation of the RRP. The management declaration, which is to accompany the payment requests will be based on the information provided by the granting authorities responsible for programme control and on the findings of the checks and audits undertaken by the Minister of Finance. The individual ministries involved will prepare the necessary management declarations in their respective administrative branches for submission to the Ministry of Finance. The management declarations to be filed with the Commission will be issued by the Ministry of Finance in its capacity as the authority responsible for compiling payments requests.

It is a precondition for the issuance of this declaration that the ministries responsible for administration and oversight have, for their part, issued their respective management declarations verifying compliance with the EU legislation, national legislation and the guidelines issued by the Ministry of Finance. The ministries will require an equivalent management declaration from all the granting authorities within their respective administrative branches.

Provisions on the guidance and control of State financial management and internal controls are set out in chapter 4 of the State Budget Act and chapter 9 of the State Budget Decree. According to section 24b of the State Budget Act, Government agencies must see to appropriate arrangements for internal control in their own activities and in activities for which they are responsible. The arrangements for internal control are determined by the management of each agency, which is also responsible for ensuring that these arrangements are appropriate and adequate.

Under section 69 of the State Budget Decree, the agency management must ensure that the proper procedure is followed by government agencies in terms of the scope and content of their finances and operations and related risks (internal control) in order to ensure: 1) the legality and results of the finances and operations of government agencies; 2) the security of the funds and assets managed by government agencies; and 3) a true and fair view of the finances and operations of government agencies required for each government agency's management and external steering. Said procedures must also cover the management of the assets controlled or brokered by the agency or institution as well as the functions and duties delegated by the agency or institution to other agencies and institutions, entities or private individuals or for which the agency or institution is otherwise responsible.

According to section 70 of the State Budget Decree, if there is due cause in view of the internal control procedures required under sections 69 and 69a, the management of a government agency shall arrange for internal auditing. The purpose of internal auditing is to ascertain for the management that the internal control system in place is adequate and sufficient, and to carry out the audits ordered by the management. Provisions on the duty of the accounting office to prepare the statement of assessment and management declaration on behalf of the internal control function are set out in section 65.

Payment requests are to be drawn up twice a year and accompanied by the management declaration issued by the management of the authority compiling the payment request as well as a summary of the audits carried out. The management declaration is to verify that the funds have been used for the intended purpose; that the information provided in connection with the payment request is complete, accurate and reliable; and that the control systems in place provide sufficient assurance that the funds have been managed in compliance with all the applicable rules and, in particular, in compliance with the regulations concerning the avoidance of conflicts of interest, prevention of fraud, corruption and double-funding as well as other rules pertaining to EU programmes and the principle of prudent funds management. The summary of the audits carried out will be prepared by an independent audit function under the auspices of the Ministry of Finance, and the summary will provide details of the audits, including any flaws detected and corrective actions taken.

Payment requests will be based on the monitoring and attainment of the milestones and targets. Reporting on the targets and the accuracy of the reported information will be monitored by means of supervisory action and audits undertaken by the Ministry of Finance.

The function responsible for compiling the payment request will be located in the Ministry of Finance, together with the unit responsible for coordination and the technical secretariat, with due regard to the segregation of duties.

**Estimate of the resources required:** 1–3 person-years during 2021–2026

### **Control**

The Government financial controller's function of the Ministry of Finance will be responsible for performing programme audits, presenting comments on the audits and preparing a summary of the audits performed. While the financial controller's function is part of the Ministry of Finance, its independent decision-making powers are recognised in section 24h of the State Budget Act. Assigning the audit duties to the Government financial controller's function is a way of ensuring that the control function is duly segregated and enjoys an independent position relative to the other programme-related duties of the Ministry of Finance.

The act on the implementation of the RRP will provide a more detailed description of the duties of the Government financial controller's function, for instance with regard to project audits.

Operationally, the controller's function is independent of the other authorities responsible for programme implementation and it is tasked to carry out duly documented audits of both the control system and the projects and measures in order to obtain a comprehensive idea of the performance of the control system based on the audit findings. Project audits may relate both to expenditure and the monitoring of the milestones and indicators. Project audits will be based on random selection and system audits on risk assessments as foreseen in the audit strategy and plan. For each payment request submitted to the Commission, the controller's function will prepare a summary of the audits performed, including any flaws detected and corrective actions taken.

The audit strategy prepared by the controller's function will define the method of random selection to be applied to project audits as well as the minimum number of audits. As long as the number of projects and measures remains open, the audit strategy can be revised while the programme is being implemented. Systems audits targeting granting authorities will be carried out on the basis of risks assessments. The strategy will define the criteria for assessing risk levels with due regard to the amount of funding, number and size of the



projects and measures while harnessing the experiences gained from other programmes and the control and audit visits made by other authorities. Based on the strategy, the controller function will prepare an annual audit plan which will determine how the audits of the projects, measures and granting authorities are to be carried out. The control function uses its findings to prepare a semi-annual summary to accompany the payment request to be filed with the Commission. The audit records will be stored in the shared IT system.

According to section 24f of the State Budget Act, the Government financial controller's function is also responsible for the audit and control of the use of EU structural funds, which makes it possible to harness the experiences gained from these activities for the purpose of assessing the risks to which the administrative and control system is exposed. Information available on other programmes can also be used for monitoring potential double-financing.

Aside from the Government financial controller's function, the National Audit Office (NAO) subordinated to Parliament also carries out audits of the implementation of the State budget that may target State accounting offices as well as EU funds expended in Finland, including RRP implementation. The National Audit Office performs audits independently reporting to Parliament. Provisions on the position and audit rights of the National Audit Office and the performance of audits are set out in chapter 1 of the Act on the National Audit Office (676/2000). Responsibility for the implementation of any observations and recommendations made in connection with NAO audits related to the programme or the responsible authorities rests with the authorities concerned. The Ministry of Finance will give due consideration to the NAO recommendations in the implementation of the programme and make use of the information received from the NAO for risk assessment purposes.

**Estimate of the resources required:** 2–3 person-years during 2021–2026.

#### **Administration and supervision**

Implementation and supervision will be carried out by the ministries in their respective administrative branches (Ministry of Economic Affairs and Employment, Ministry of Education and Culture, Ministry of Social Affairs and Health, Ministry of the Environment, Ministry of Transport and Communications, Ministry of Agriculture and Forestry, Ministry for Foreign Affairs, Ministry of the Interior, Ministry of Finance). The ministries and granting authorities are responsible for RRP-related measures as provided in the Act on Discretionary Government Transfers (688/2001) or special legislation. A more detailed description of the applicable special legislation in respect of each measure is provided below. [Appendix 1 includes a description of the areas and measures falling within the purview of the administrative branches of the individual ministries.]

Section 1 of the Act on Discretionary Government Transfers defines the scope of application of the Act. It sets out the grounds and procedures for granting discretionary Government transfers. Discretionary Government transfer means funding granted in the form of aid for an activity or project. The Act applies to discretionary Government transfers granted from appropriations in the State budget or from extra-budgetary State funds. Said Act also applies when authorisation is granted in the State budget to make agreements on or commit to discretionary Government transfers.

The Act on Discretionary Government Transfers is of a general nature. If any provisions set out in other legislation diverge from this Act, such other provisions shall be complied with instead (section 3). As defined in the Act on Discretionary Government Transfers, 'State aid authority' means the authority having statutory duties which include matters pertaining to a particular discretionary Government transfer (section 4).

Upon entry into force of the act on the implementation of the RRP, the Ministry of Finance will have the right to exercise control over the authorities responsible for implementation, administration and oversight as well as pay visits to audit the authorities, projects and other measures. When doing so, the Ministry of Finance will work hand in hand with other authorities.

The ministries and other granting authorities will be responsible for the attainment of the targets set for the RRP; proper management of funds; effective and efficient administrative and control procedures; and the proper documentation of the actions taken in the course of the work related to the above, including the actions required in response to the audit findings, in accordance with the EU legislation, national legislation and the instructions and guidelines issued by the Ministry of Finance. The activities will be based on the qualitative and quantitative data content of the IT systems to be selected for this purpose.

To prevent double-funding, steps will be taken to ensure efficient inter-authority coordination at all stages of the process. The Government will ensure when aid is awarded and disbursed, and subsequently through control and supervision, that no overlapping funding is granted under the RRF or from other sources of funding towards the same costs.

Provisions on the prevention of conflicts of interest are set out in the Administrative Procedure Act (434/2003) and its sections 27–30 on disqualification and grounds for disqualification. State aid authorities are governed by this Act when discharging duties related to public administration. Additionally, State aid authorities are subject to criminal liability when making decisions on the granting and suspension of aid and audits. Provisions on offences while in office are set out in Chapter 40 of the Criminal Code which specifies, *inter alia*, sanctions for the acceptance of bribes and abuse of public office.

The ministries, in their respective administrative branches, and the granting authorities will assume responsibility for the duties related to the application, granting, disbursement, monitoring, control, recovery and other follow-up measures as well as the necessary recovery actions and other subsequent measures insofar they relate to the investments and reforms. The authorities will see to it that the necessary information on the actions and beneficiaries is readily available in the IT systems. The authorities administering aid and grants are responsible for monitoring and reporting on the progress made in attaining the targets set for the RRP, ensuring proper management of funds, putting in place effective and efficient administrative and control procedures, as well as for the proper documentation of the actions taken in the course of the work related to the foregoing, including the actions required in response to audit findings.

The granting authorities will, in compliance with national legislation, ensure that grants are used in accordance with the conditions for aid as provided in the EU and national legislation. The granting authorities will be responsible for the direction of the projects and measures in terms of content and putting in place safeguards designed to prevent, detect and correct errors on a targeted basis while controlling eligibility for aid, including the progress made in attaining the specified milestones and targets. In the event of any misconduct, recovery measures and, if necessary, other (legal) action will be undertaken.

Provisions on the State aid authorities' duty of supervision are set out in section 15 of the Act on Discretionary Government Transfers. State aid authorities must ensure appropriate and sufficient supervision of discretionary Government transfers by obtaining information on the use and monitoring of the transfers as well as other information and by performing audits as appropriate. According to section 16 of the Act, State aid authorities have the right to audit the finances and operations of discretionary Government transfer recipients as may be required for the payment of transfers and supervision of their use. Recipients of the discretionary government transfers must provide the auditing official and the auditor with all the information and reports, documents, records and other materials required for the audit and give other assistance for this purpose free of charge (section 17).

Chapter 5 of the Act on Discretionary Government Transfers addresses the repayment and clawback of transfers. The recipient of a discretionary government grant must repay without delay any grant or part thereof it has received through error, in excess or manifestly without cause (section 20). State aid authorities must issue a decision ordering the discontinuation of the payment of a discretionary Government transfer and the clawback of a transfer already paid, if the recipient of the transfer has: 1) failed to repay a transfer or part thereof which under section 20 must be repaid; 2) used the transfer for a purpose essentially different from the purpose for which it was granted; 3) provided the State aid authority with false or misleading information about circumstances essential to the granting, amount or terms of the transfer, or withheld such information; or 4)

otherwise essentially violated the provisions concerning the use or terms of transfers included in the transfer decision in a manner comparable to paragraphs 1–3 (section 21).

Section 5 of chapter 29 (Offences against public finances) of the Criminal Code (39/1889) sets out provisions on subsidy fraud. A person who (1) provides an authority deciding on subsidy false information that is conducive to essentially affecting the granting of a subsidy or the amount or conditions thereof, or conceals essentially relevant information, or (2) neglects to provide information on a change in circumstances that is conducive to essentially affecting the granting of a subsidy or the amount or conditions thereof, and a duty for the provision of such information has been expressly provided in connection with the decision to grant the subsidy or otherwise, and in this way obtains or attempts to obtain personal financial benefit or financial benefit for another, shall be sentenced for subsidy fraud to a fine or to imprisonment for a maximum term of two years.

Section 7 in the same chapter addresses the misuse of subsidies. Under said provision, a person who, in violation of the conditions or regulations given in the decision granting a subsidy, uses the subsidy in a manner that is essentially contrary to its intended purposes, shall be sentenced for subsidy misuse to a fine or to imprisonment for a maximum term of two years.

Any misconduct and suspicions of fraud will be reported to the appropriate supervisory authorities and OLAF. Each authority is to follow the secretariat's instructions in applying detailed procedures, including administrative and supervisory procedures, by documenting all the work carried out in the discharge of administrative and supervisory duties.

**Estimate of the resources required:** the ministries and other granting authorities will be responsible for administrative and supervisory duties in their respective administrative branches within their budgetary appropriations.

#### **Description of the IT system**

To ensure clear and smooth administration, supervision and reporting of the RRP implementation, it is necessary to have in place a standardised and efficient IT system. For the purpose of developing such a system, a specific project will be established, initially to identify information needs and original sources of information and to define specifications for the compilation system/platform. At the same time, steps will be taken to determine how the existing systems and data sources of the various operators can be harnessed to create the overall system. The specifications for the IT system will be defined in greater detail when the working group to be appointed for the further preparation of the RRP-related monitoring, supervisory and audit arrangements commences its work.

The final system will draw upon the existing systems and consist of several IT systems which will make use of the original data sources. The starting point for system development is EU requirements and the needs to monitor and direct the projects. The solution will call for IT system integration and assurance of compatibility. At the same time, efforts will be made to ensure the possibility of verifying and checking the information from several sources and systems. The system to be built/selected will assemble all this information.

Hence, the agencies' existing systems will be used for case management, project management, implementation and cost monitoring as well as other necessary purposes. The EU and national requirements will be met by assembling the information and documents available in these systems and storing them on a separate platform/system.

The IT system (data platform) must provide the following functionalities:

- Project monitoring – progress made in the project, status reports, targets, milestones, absorption rate of funding, risks
- Funding – total budget, funding decisions, individual funding decisions, recovery action etc., transparent audit trail up to end-user
- Case management – all decisions, instructions and agreements related to programme implementation
- Supervisory and audit information, including infractions
- Reporting tool – to enable comprehensive and smooth data gathering for reporting purposes
- Access management and logging – information on access rights, file updates and viewing

Access management will be organised on a centralised basis according to the roles of the parties responsible for administration and supervision.

#### **RRP-related follow-up, supervision and audit arrangements – further preparations**

An inter-ministry working group will be appointed for further preparations for RRP-related follow-up, supervision and audits.

The working group will be tasked to identify the need for legislation necessary for the implementation of Finland's Recovery and Resilience Plan in order to define the duties and powers of the authorities with regard to the implementation of the plan and financial management, supervision and audits.

To ensure clear and smooth administration, supervision and reporting, it is necessary to have in place a standardised and efficient IT system. The working group will also

determine how the existing IT systems can be harnessed for monitoring, management, supervision and audit purposes and submit a proposal for an integrated IT system. Additionally, the working group will initiate the preparation of guidelines for standardised operation models.

### **Timetable for preparations**

Working group appointed Q2/2021

IT system in operation 2021/Q4

Legislation in place Q4/2021

The authorities responsible for the coordination, administration, supervision and audit of RRP implementation will commence operations in Q4 of 2021.

## **Consultations**

In the course of the preparations, the coordination group, which is led by the Ministry of Finance and in which each ministry is represented, has consulted the business sector, labour market organisations and other stakeholders. For example, it organised a regional tour of hearings and a growth forum and held a number of consultations in priority areas and cities.

Additionally, the ministries have received a large number of written statements and other proposals both from private individuals and organisations.

The minister-led regional tour explored the views of local operators as to the purposes for which the EU recovery funds should be used. A large number of operators from a wide variety of sectors were invited to these hearings, representing regional councils, cities, local government, labour market organisations, business and industry, NGOs and educational institutions.

In February–April 2021, Finland’s Ministerial Working Group on Sustainable Growth held three events for stakeholders to contribute input on the preparation of the Sustainable Growth Programme for Finland, its targets and preliminary content and heard the stakeholders’ views on the programme. Aside from the stakeholder events, a number of researchers were consulted on matters such as the effectiveness of the programme and the measurement of programme performance.

## Communications on the Sustainable Growth Programme

The target of programme-related communications is to provide clear and transport information on the content and preparations of the Sustainable Growth Programme for Finland. More specifically, the target is to give detailed information on the projects and investments and their foreseen effectiveness. The Ministry of Finance will release communications whenever there are any new developments.

The most important target group for communications are the participants: regional councils, municipalities, business and industry, hospital districts, the parties preparing the social and healthcare reforms, universities, research institutes, political parties, Members of Parliament as well as other ministries and authorities. The second most important target group is the media and the third the citizens.

The Ministry of Finance has set up a communication network in which all the ministries are represented. Several ministries have already disseminated information on the programme using their own channels, for example by posting ministers' blogs on websites. The other ministries will gradually assume a bigger role as the preparations proceed.

The Ministry of Finance has held preliminary talks on cooperation in communications with the European Commission Representation in Finland. As a minimum, the ministry and the Representation intend offer mutual assistance with communications and possibly organise joint events. The plans are to be defined in more detail at a later date.

The Ministry of Finance is handling the communications as part of its regular duties without having specifically allocated any funds for this purpose.

In terms of content, the communications focus on the reforms and investments foreseen in the Sustainable Growth Programme for Finland and their effectiveness. Communications have been structured around the four pillars of the programme to formulate the plans in more tangible terms for citizens and businesses.

As the preparations proceed, the focus in communications will increasingly shift to implementation: distribution of funding in terms of time; actions required from Finland in order to qualify for funding; and practical instructions for those applying for project funding. The Ministry of Finance has held several stakeholder events on the Sustainable Growth Programme for Finland. Communications have supported stakeholder consultations by advertising the events in advance on several channels. Other ministries have informed interested parties of the funding by holding stakeholder events and releasing communications.

When the Ministry of Finance publishes the final Recovery and Resilience Plan, the communications department will single out two projects as examples of which at least one will have a direct impact on people's lives. The examples will illustrate the effectiveness of the projects and the progress made in tangible terms. Potential candidates for such projects are the phasing out of fossil oil heating of buildings and the funding made available to the Academy of Finland.

All communications will make it clear that most of the programme funding is received under the EU Recovery and Resilience Facility. On its website, the Ministry of Finance provides information on the EU Recovery and Resilience Facility and Finland's role in it.

The Government Communication Department has designed the visual appearance for the Sustainable Growth Programme for Finland. It helps identify the programme as one of the major reforms undertaken by the Government and harmonise communications by the individual ministries. The visual material features the Union symbol complete with the text "Funded by the European Union – NextGenerationEU". The Ministry of Finance has instructed all ministries to use the symbol and text in their publicity.

The key channel of communications is the Ministry of Finance website. Accordingly, the Ministry has posted communications on its website on topics such as the progress of the preparations; updates to the final amount of funding due to Finland; the Government proposal for the decision on the use of matched funding; the preliminary Recovery and Resilience Plan; and the processing of the recovery instrument at EU meetings. The same communications are also posted on the Government website. To ensure easy access to key information, the Ministry of Finance has created a special section on its website for the Sustainable Growth Programme for Finland. The Ministry will update the site and add information as progress is made with the preparations.

While the most important social media channel is Twitter, the Ministry also maintains an active presence on LinkedIn, Facebook and Instagram.

The Prime Minister's Office published the preliminary recovery and resilience plan on Valto, the Institutional Repository for the Government, on 15 March. Once finished, the final Recovery and Resilience Plan will be posted on the same site. Hence, the publication can be found at a single address to which all ministries can provide links.

The Ministry of Finance monitors communications visibility using web analytics, social media platform analytics, the Social Bakers service and media monitoring tools. The theme has attracted a lot of attention: At times, the communications and social media content on this theme have been among the most widely read postings. Public debate has been active in the conventional media as well as on social media. The Ministry of



Finance held media conferences on the Sustainable Growth Programme for Finland on 15 February and 15 March. The next media event is scheduled for May 2021 once the final Recovery and Resilience Plan is finished. Additionally, Minister of Finance Matti Vanhanen usually gives brief phone interviews for the media on the discussions conducted at EU conferences. Ministry officials regularly give interviews on the topic and have background conversations with reporters.

Also, communications within the workplace community are of extreme importance because of the large number of officials from several ministries participating in the preparations. The Ministry of Finance releases news on recent developments and short updates on the progress of preparations on the shared ministry intranet on a regular basis.

Communications on the announcement of the final Recovery and Resilience Plan:

- Ministry of Finance press conference (to be streamed to the public)
- Social media releases on ministry channels: Twitter, Facebook, Instagram and LinkedIn
- Ministry of Finance's press release
- Press releases, blogs and newsletters from other ministries
- Update to the Ministry of Finance's website
- Recovery and Resilience Plan (Institutional Repository for the Government, Valto)
- News posted on the Government's shared intranet
- Interviews with ministers and officials

## IV Total impacts

### How the programme will reinforce financial and social sustainability

This chapter 4 provides a brief overview of macroeconomic prospects and social conditions and a description of the macroeconomic and social impacts of the plan in the short, medium and long term. Finland's progress in implementing the Country Specific Recommendations of the European Semester is reported in Finland's National Reform Programme (Appendix 5), and the links between the Recommendations and the measures foreseen in the Sustainable Growth Programme are reported in Chapter 1.

### Macroeconomic prospects

The macroeconomic prospects are based on the independent spring 2021 forecast prepared by the Ministry of Finance Economics Department, in which the impacts of the Recovery and Resilience Plan on Finland and the European Union are taken into account. The forecast is based on the assumption that the COVID-19 incidence rate will fall to a low level by summer 2021 as a result of restrictions, vaccinations and seasonal variations. A stable pandemic situation will make it possible to relax and lift restrictions as planned by the Government.<sup>36</sup>

Finland's gross domestic product is expected to grow by 2.6% in 2021. The economy will not fully recover from the COVID-19 pandemic until the end of 2021 as the substantial increase in new cases in spring 2021 will continue to create uncertainty in the economy. At home, demand for services will remain weak. Exports and industrial production are suffering from the continued pandemic and will not attain growth until the pandemic is felt to be under control. GDP is expected to grow by 2.5% in 2022 and 1.5% in 2023. Accelerating growth towards the end of 2021 will also boost economic growth in 2022.

Measured by the national consumer price index, an inflation rate of 1.4% is forecast for 2021. The rise in oil prices will cause energy prices to increase substantially during the

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<sup>36</sup> Government plan for lifting the restrictions imposed due to COVID-19, 9 April 2021 <http://urn.fi/URN:ISBN:978-952-383-896-3> (in Finnish).

year. Service prices will continue to rise gradually. The baseline inflation will also remain positive. Weak demand and general uncertainty will also keep inflation in check during the first half of 2021. When the economy bounces back, we will see a moderate rise in consumer prices. Pay increases will, in particular, be transmitted to the price of services and subsequently to consumer prices. In 2022 and 2023, inflation will accelerate slightly to 1.5% and 1.7%, respectively.

The rate of nominal wage increases slowed down from 2.1% in 2019 to 1.8% in 2020. In many sectors, the wages specified in collective agreements will increase in the first half of 2021. For the current year, a number of private and public sector agreements foresee pay increases exceeding the 2020 level by 0.5%. Most likely, revived economic activity and improved employment will increase wage drift as of 2021. Consequently, the rate of increase in nominal earnings will be 2.7% in 2021. The forecast assumes that the increase in earnings for 2022 and 2023 will be linked to the predicted slower growth in productivity. Hence, the increases specified in collective agreements will not be higher than in 2021, which means that nominal earnings will increase by 2.5% in 2022 and 2023.

Employment decreased clearly in 2020. The four-year growth in employment came to an end, and the employment rate fell by one percentage point, to 71.6%. Demand for labour continued to fall in early 2021 with no clear signs of a turn for the better. The new restrictions introduced following an increase in the number of new COVID-19 cases will mainly impact the demand for and supply of services and reverse the positive trend in employment. Once the epidemic is brought under control, economic recovery will increase demand for labour and employment may even improve quickly. Because of the decline during the first few months of the year, employment is only expected to grow by 0.1% in 2021. As the size of the working-age population shrinks, the employment rate will reach 71.7%. Economic recovery will gain momentum in 2022 and 2023, particularly in the service sectors. The number of those employed is expected to increase by slightly over 1% in 2022. Economic growth will slow down in 2023 as the level of economic activity decreases. The number of employed persons will not exceed the 2019 level until 2023 when the employment rate will reach just over 73%.

The percentage of workers in the population did not really fall in 2020, because the size of the working-age population has been declining for an extended period of time along with the number of those employed. This, together with improved employment, will increase the percentage of workers in the coming years.

The fall in employment last year led to a rapid rise in unemployment. According to Statistics Finland, there were 29,000 more people unemployed in 2020 than in the previous year, and the unemployment rate increased to 7.8%. No decrease in unemployment is expected in 2021, as the economy will not fully recover until the

second half of the year, and the recovery of the labour-intensive service sectors, in particular, will not gain full momentum until 2022. The biggest fall in unemployment will take place in 2022 and 2023 when the economy recovers from the pandemic and the restrictions are lifted. In 2023, the unemployment rate will fall below 7%, which is slightly more than the structural unemployment rate in Finland estimated using the method prepared jointly by the EU Commission and the Member States.

Finland's general government deficit reached substantial proportions last year due to the COVID-19 pandemic. General government finances were weakened by the economic downturn and the support measures prompted by the epidemic. While the economy will recover in the current year, the general government deficit will persist at a high level. As in the past, the discretionary fiscal policy pursued by the Government will support growth in 2021. Economic growth over the next few years will reinforce general government finances, but the deficit will remain higher than in the pre-crisis period. In public finances, there is a structural imbalance between revenue and expenditure.

Public debt increased during 2020. The debt ratio exceeded the level prevailing before the crisis by almost 10 percentage points. Over the next few years, the growth rate of the debt ratio will slow down, but it will nevertheless continue to increase to 75% by the mid-2020s. The public debt ratio is likely to remain at a level that is substantially higher than before the crisis.

The contributions under the Recovery and Resilience Facility (RRF) are included in the projection for general government finances. The increases in expenditure are neutral in respect of the general government budgetary position, as the forecast assumes that the revenue will match expenditure. Most of the measures target the period 2021–2023.

The central government has borne most of the expenses of the support measures prompted by the coronavirus epidemic. It has given financial support to municipalities and social security funds to alleviate the adverse impacts of the pandemic. Consequently, the central government ran the highest deficit of all the sub-sectors of public finances. The active fiscal policy pursued by the Government stimulated the economy last year and will continue to maintain economic activity this year as well. While the central government deficit will shrink slightly as a result of economic growth, it will nevertheless remain substantial.

The local government sector showed a surplus last year. This was mostly due to the massive support measures taken by the Government and partly to the savings made. Next year, the local government deficit will increase again. The structure of the public sector will undergo a change in 2023 when responsibility for the organisation of social and healthcare as well as rescue services is assumed by the wellbeing services counties.

This will ease the structural spending pressures facing municipalities as a result of the ageing population. The wellbeing services counties will commence operations with a slight deficit, which is due to massive investments.

The surplus of employment pension institutions shrank substantially in 2020 because of the temporary cut in employment pension contributions and the fall in premium income and return on assets. While the surplus will improve, it will remain modest in the next few years as pension expenditure continues to increase and the extremely low interest rates slow down revenue growth.

Other social security funds showed a deficit last year. Their financial position was undermined by lay-offs, rising unemployment and the temporary extensions to unemployment security. In 2021, the situation will be alleviated by the foreseen fall in the number of those laid off and the increase in unemployment insurance contributions. Later in the forecast period unemployment will also decrease, which will strengthen the other social security funds.

The most important risks affecting general government finances are still related to overall economic developments. Any new waves of the pandemic and potentially reinstated lockdown measures may retard economic recovery and weaken general government finances as a result of sluggish economic growth and potential new support programmes.

Contingent liabilities and, in particular, the marked increase in guarantees pose a risk to general government finances. Another factor increasing exposure is that the guarantees are concentrated in certain sectors and enterprises. Moreover, guarantee authorisations have also been increased in 2020 as part of the financial support provided for enterprises. If the guarantees are triggered on a large scale, it will increase public expenditure and further raise the debt ratio.

The risks in the forecast hinge on the question of whether the pandemic can be brought under control in the third quarter of 2021. In this context, control means that Finland is able to return to the new normal without the epidemic or the measures to mitigate it significantly restricting everyday life or business activities. Economic growth may fall short of the projections if autumn 2021 brings a new surge in infections in Finland or important export markets. Growing hospital admissions will lead to substantially more severe restrictions, which will further retard economic growth. A prolonged epidemic in Finland will have a particularly strong impact on private consumption and demand for services. Similarly, if the pandemic continues elsewhere in the world, it will jeopardise the operation of the global market and have an adverse effect on the Finnish export industry through production chains. In the absence of international demand, enterprises will find themselves in deeper trouble. The economy may be assumed to recover quickly even if

the pandemic persisted longer than expected. The uncertain prospects of the investment environment could postpone investments or stop them completely. A situation in which the Recovery and Resilience Facility will encourage more private investments than expected can be seen as a positive risk for such investments.

## Social conditions

An overview of the social conditions in Finland is formed on the basis of the scoreboard indicators of European pillar of Social Rights. The figures are based on Eurostats statistics.<sup>37</sup> Measured by the education, skills and lifelong learning indicators, Finland ranks above the average among the EU27 countries. In 2019, early school leavers accounted for 7.3% of the 18-to-24 age group. The target stated in the Government Programme is that all students acquire an upper secondary qualification after completing their comprehensive school education. To this end, the age limit for compulsory education was raised to 18. Additionally, student guidance and student welfare services will be improved while reinforcing the capacity of comprehensive schools to provide the capabilities required to complete upper secondary education.

In 2019, those with a university degree accounted for 47.3% of the 30-to-34 age group. The target established in the Government Programme is that a minimum of 50% of those aged 25 to 34 will have completed a university degree by 2030. The admission procedures of higher education institutions have been updated to encourage students that have completed upper secondary education to go on to pursue university studies by placing greater emphasis on school-leaving certificates in the selection process, etc. The Government has already decided to increase the number of starts at universities by more than 10,000 during 2020–2022. Participation in education by the adult population is at a high level in Finland. In 2019, 29% of all people aged 25 to 64 had taken part in some form of education or training during the four-week period preceding the survey, the EU27 average being 10.8%. The percentage of those participating in training in Finland increased relative to 2010 (23%).

However, skills and involvement tend to accumulate in select groups, and hundreds of thousands have gaps in basic skills. People with a university education and in a good labour market situation take part in adult education far more frequently than people with low-paying jobs and limited basic education. Differences in attendance in adult education have not really decreased, despite a range of measures to improve the situation. Although

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<sup>37</sup> <https://ec.europa.eu/eurostat/web/european-pillar-of-social-rights/indicators/social-scoreboard-indicators>

the structure of duties between individual sectors will continue to diverge in the future, the trend is that low-skilled jobs will decrease and professional and managerial positions will increase in number.

In Finland, the level of gender equality in the labour market is relatively high compared to the average in Europe. While the gender equality gap is fairly narrow in Finland, there is room for improvement in gender pay disparity. When differences in pay are examined without regard to gender distribution in terms of sector, occupation or position, Finland falls below the euro area and EU27 average. In the summer of 2020, the European Committee of Social Rights said in its statement that Finland should take measures to ensure that the gender pay gap is narrowed within a reasonable period of time. However, as far 2020 is concerned, the situation may be assumed to have worsened, because the COVID-19 pandemic has had adverse impacts on women's employment in particular.

A comparison of the EU27 countries shows that income inequalities are low in Finland. In 2019, the disposal income of the highest paid quintile was only 3.69 times higher than that of the lowest paid quintile (EU27 average 4.99). Over the past ten years, differences between said income brackets have not increased significantly, and the annual variation has been modest.

The number of the poor and socially excluded is low in Finland both in relative and absolute terms. In 2019, slightly over 800,000 people, or 15.6% of the entire population, were at a risk of poverty or social exclusion. A total of 2.4% suffer from serious material deprivation while 2.4% of lessees and 0.3% of home owners are affected by a serious housing deprivation. In Finland, low-income people are usually young adults and those over 65. Moreover, low incomes are more common among single-person than other households, and those most exposed to the risk of poverty among the working population are single parents. No significant changes have taken place in the number of low-paid people in the past few years, which has remained more or less unchanged year-on-year.

In 2019, 8.2% of young people aged 15 to 24 were neither in employment or education or training in Finland, the EU27 average being 10.1%. Although a majority of Finnish young people are doing well, there are major differences in health and wellbeing between age groups, and some of these differences have been growing in recent years.

According to the scoreboard indicator related to the workforce and labour market, Finland ranks close to or higher than the EU27 average. Finland's EU-level employment rate target is 78% in the 20–64 age group. The 2019 employment rate was 77.2%. In 2020, the average unemployment rate increased to 7.8%, whereas in 2019 it was 6.7%, the same as the EU27 average. The long-term unemployed accounted for 1.2% of the workforce, less than

the EU27 average (2.8%). Youth unemployment stood at 17.2% in 2019, slightly above the EU27 average (15%). When the labour market dynamics is compared to the EU27 average, there are more employed people in Finland who have held their jobs for less than two years and fewer people with jobs that have lasted longer.

The main reasons for decreased employment in 2020 were the COVID-19 pandemic and the measures taken to control it. In particular, the negative effects were felt in specific sectors, such as the travel and catering sector as well as certain sectors of industry. A significant percentage of the increase in the number of the unemployed was due to lay-offs. Long-term unemployment increased too. Unemployment increased most among under-55s. The number of vacancies remained lower than the year before.

In terms of income indicators, Finland fares slightly better than the EU27 average. From 2008 to 2019, disposable incomes measured by consumption unit grew in Finland at a slightly faster rate than the EU27 average. In 2019, the three-year average purchase-power adjusted net income of a single-person household in full-time employment was a little over EUR 25,000 per year, whereas the EU27 average was about EUR 22,400 and euro area average EUR 24,500. At the same time, the real change in the three-year average net income was only 0.74% compared to the EU27 average of 1.75%. Since 2010, the percentage of the working population at a risk of poverty has fallen to only 2.9% in 2019, the lowest figure for all EU27 countries.

According to the scoreboard indicators, income transfers clearly reduced poverty in 2019. As a result of income transfers (excl. pensions), the at-risk-of-poverty rate could be almost halved (to approx. 54%), the second highest figure for all EU27 countries. The average reduction of the at-risk-of-poverty rate in the EU27 countries due to income transfers is about one third (32.3%). In Finland, income transfers reduce the poverty risk more now than in 2010, a sign of positive development. In Finland, social security expenditure increased from 22.6% of GDP to 24% in 2019, more than in any other EU27 country. Healthcare expenditure was equal to the EU27 average, or 7.1% of GDP (EU27: 7.0%), and education expenditure above the average at 5.6% (EU27: 4.7%). The pension compensation rate was slightly below the EU27 average at 0.52 (EU27: 0.57) but has been increasing slightly since 2010.

In Finland, 38.2% of children under 3 are in day care, while the EU average is 35.3%.

Measured by healthcare indicators, Finland has been less successful. A total of 4.7% of the Finnish population reported having unfulfilled medical needs in 2019, a relatively high figure compared to the EU27 average of 1.7%. Similarly, in 2019, people in Finland had fewer years of healthy life after turning 65 than people in the EU27 countries on average, the figure being 9.3 for Finnish men (EU27: 10.2) and 9.6 for Finnish women (EU27: 10.4).



As far digital skills are concerned, 76% of Finland's population aged 15–74 possessed at least basic-level digital skills, the second highest percentage in all the EU27 countries and clearly higher than the EU27 average of 56%.

## Macroeconomic impacts of the plan

The macroeconomic impacts of the plan are analysed by means of the fiscal multiplier. It gives the ratio of GDP growth to the growth of general government expenditure (in euros). If the multiplier is higher than 1, GDP in euro terms is growing more rapidly than general government spending. If so, fiscal policy also has an expansionary effect on demand in the private sector. If the multiplier is less than 1, GDP grows at a slower rate than public spending. The increase in public expenditure is not necessarily transmitted to total output, because the increased expenditure may replace demand in the private sector, while some of the increased spending may lead to a growing import of goods and services instead of increased domestic demand.

In international research literature, the fiscal multiplier usually varies between 0.6 and 1 (when calculated cumulatively), but recent studies suggest that the multipliers might be slightly higher when nominal interest rates are close to zero.<sup>38</sup> According to empirical analyses based on Finnish data, the average fiscal multiplier is assumed to be about 1, while the variation range extends from less than 0 to over 2, depending on the circumstances and the method employed.<sup>39</sup> At any rate, there is significant uncertainty about the magnitude of the multiplier. Scientific literature offers no clear consensus on whether the value of the multiplier changes significantly, say, in response to the business cycle or public expenditure sub-items (consumption, investments).<sup>40</sup>

The Ministry of Finance has also produced estimates<sup>41</sup> of the fiscal multiplier over different time frames using the figures for Finland. Irrespective of the simulation method, in the short-term, the fiscal multiplier used in the review is close to 1 but decreases over time. Below, we will present an assessment of the impacts of the Sustainable Growth Programme on total output in Finland when the fiscal multiplier, determined cumulatively, is 1.

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38 Ramey (2019), Amendola (2020).

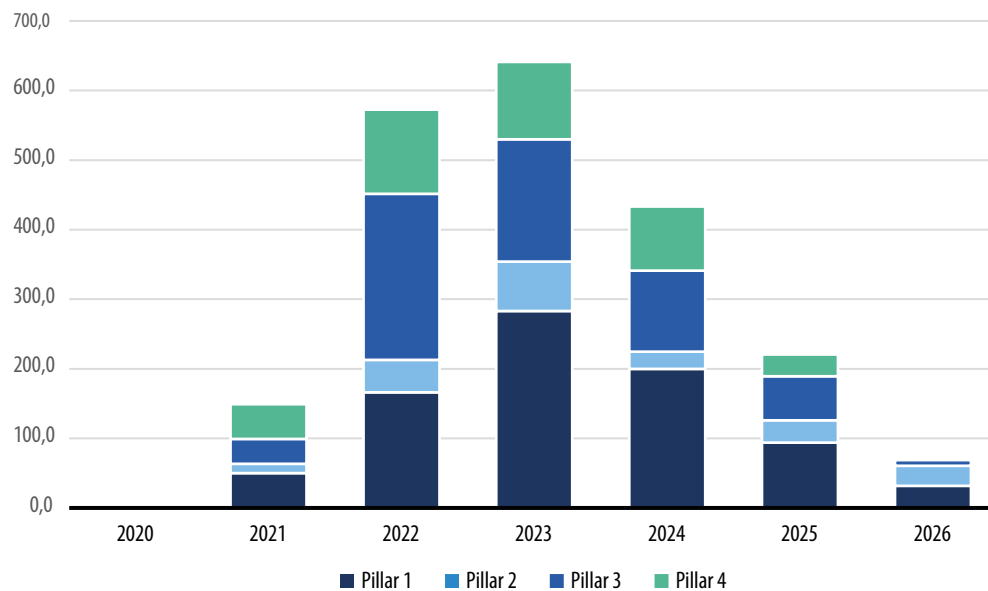
39 Keränen and Kuusi (2016), Lehmus (2014), Mentula (2019), Viren (2017), Virkola (2014).

40 cf. Auerbach and Gorodnichenko (2012), Ramey (2019), Boehm (2020).

41 Ministry of Finance, Economic Survey, Autumn 2019, box. Available at: <http://urn.fi/URN:ISBN:978-952-367-032-7>

According to the calculations based on the Commission's autumn 2020 forecast, Finland is expected to receive about EUR 2.09 billion in grants under the RRF between 2021 and 2026. This is 0.84% of Finland's 2021 GDP at current prices, as projected by the Ministry of Finance in its April forecast. With the cumulative multiplier of 1, GDP can be predicted to grow cumulatively by 0.8% as a result of the domestic measures funded under the Recovery and Resilience Facility between 2021 and 2026.

**Figure 1:** Cost distribution on which the impact assessment is based.



As the preparation of the Sustainable Growth Programme has proceeded, it has been possible to define the foreseen cost profile more accurately (Figure 1).<sup>42</sup> According to current estimates, the grants will reach their peak in 2023. When the fiscal multiplier 1 is applied to direct domestic impacts at the end of 2023, GDP will be 0.2% higher than in the absence of the Recovery and Resilience Facility. As far as the annual changes in GDP are concerned, GDP will in 2021 grow about 0.1% faster than without the RRF, and in 2022 growth will be 0.2% faster. In 2023, the annual change in GDP will not depart from the rate projected in the spring review. Improved economic growth will also increase demand for resources, which will accelerate inflation. However, the increase in the inflation rate

<sup>42</sup> The impacts presented in Finland's preliminary Recovery and Resilience Plan of 15 March 2021 are based on then-current estimates of the distribution of costs under the programme.

remains very low in the scenario. Similarly, general government finances will be weakened by 0.1 percentage point by the end of 2023 if the impacts of the RRF were disregarded.

During 2024–2025 when the grants diminish, GDP growth will also level off compared to a situation without the RRF. However, this estimate does not take into account the changes in the growth potential arising from potential structural changes. As with all projections, the longer the time span, the greater the uncertainty. The macroeconomic impacts of the Recovery and Resilience Facility are shown in Table 1. The Ministry of Finance’s spring 2021 projection also takes into account indirect impacts generated by foreign trade (see Appendix 4).

**Table 1:** Short-term macroeconomic impacts of the Recovery and Resilience Facility.

<b>Ministry of Finance forecast, spring 2021</b>	<b>2020</b>	<b>2021**</b>	<b>2022**</b>	<b>2023**</b>
GDP at market price, change in volume (%)	-2,8	2,6	2,5	1,5
Consumer price index, change (%)	0,3	1,4	1,5	1,7
Unemployment rate (%)	7,8	7,8	7,2	6,9
Employment rate (%)	71,6	71,7	72,6	73,2
<b>Projection, RRF’s domestic impacts</b>	<b>2020</b>	<b>2021**</b>	<b>2022**</b>	<b>2023**</b>
GDP at market price, change in volume (%)	-2,8	2,4	2,4	1,5
Consumer price index, change (%)	0,3	1,4	1,5	1,7
Unemployment rate (%)	7,8	7,8	7,3	7,0
Employment rate (%)	71,6	71,6	72,5	73,1
<b>Projection, no RRF</b>	<b>2020</b>	<b>2021**</b>	<b>2022**</b>	<b>2023**</b>
GDP at market price, change in volume (%)	-2,8	2,4	2,2	1,5
Consumer price index, change (%)	0,3	1,4	1,5	1,7
Unemployment rate (%)	7,8	7,8	7,3	7,0
Employment rate (%)	71,6	71,6	72,5	73,0

The employment effects of the Recovery and Resilience Facility can be assessed by using employment elasticity relative to GDP, which normally varies between 0.4–0.5 depending on the method of estimation and period involved.<sup>43</sup> Assuming an employment elasticity of 0.5 relative to GDP, employment in 2022 can be estimated to increase by just under 0.1% more than in the absence of the RRF. In 2022 and 2023, the employment rate will be slightly more than 0.1% higher than in the baseline scenario, which translates into 3,000 employed persons. It should be pointed out that the above assessment of employment impacts does not include the permanent employment effects of structural reforms (e.g. the Nordic labour market model) foreseen in the programme.

Possibly, the projects eligible for financial support will be carried out and their economic impacts materialise with a short delay. However, the assessment of cumulative impacts remains unaffected even if they were put off, say, by one year. If the stimulation policy is followed by adaptive measures in central government finances, meaning tax increases and/or cuts in public spending, they will, in turn, have a negative impact on GDP and employment. These effects have not been taken into account in the projection.

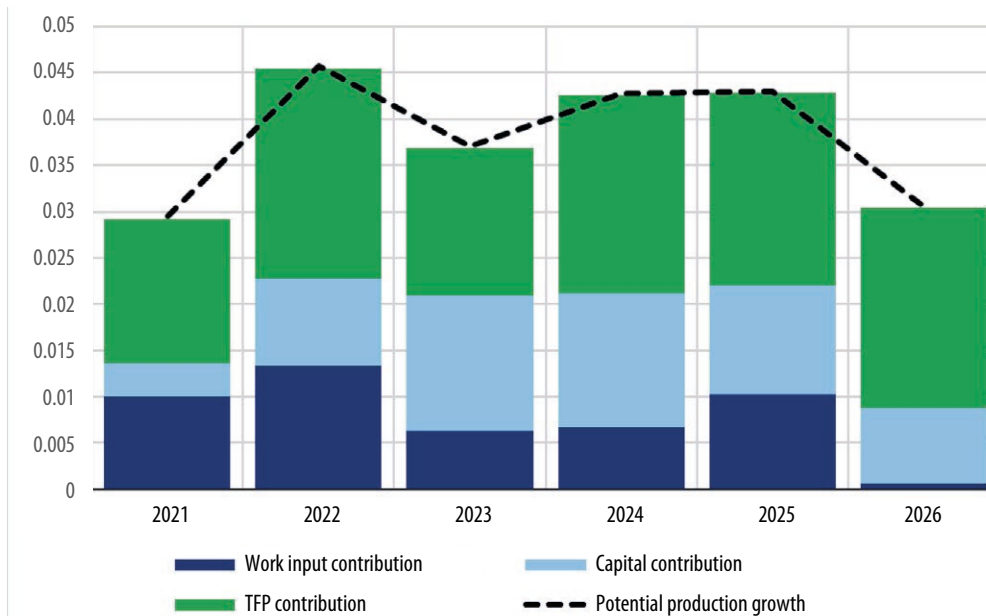
## Impacts on growth potential

The Recovery and Resilience Facility can improve growth potential in the medium term. A preliminary estimate suggests that the RRF could increase the average annual growth rate in potential output by less than 0.1% from 2021 to 2026. Most of the impact on growth will be felt during 2021–2022, after which it will diminish. As a result of the growth package, potential output will in 2026 be 0.3% higher than in the absence of the Recovery and Resilience Facility. Temporarily, growth in potential output will accelerate slightly with increased investments and improved total factor productivity. Also, work contribution will increase temporarily. The impacts on growth potential are estimated exclusively on the basis of the direct domestic effects of the RRF.

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43 Cf. 'Reaalitalouden ennusteprosessi ja -menetelmät valtiovarainministeriössä' (Real economy forecasting process and methods in the Ministry of Finance), p. 52 Ministry of Finance 2020. <https://vm.fi/menetelmakuvaukset>.

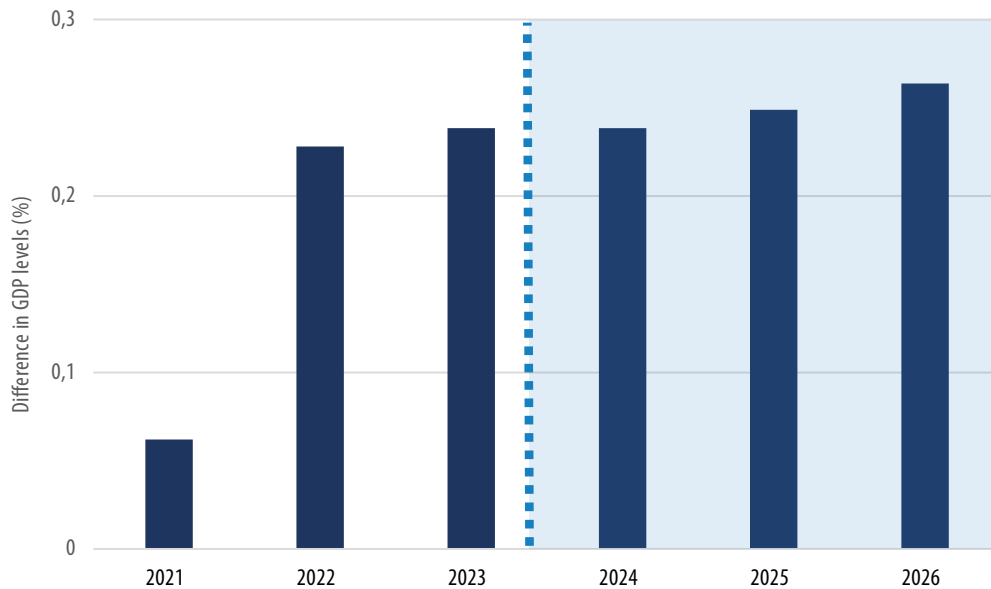
**Figure 2:** Difference in growth contributions to potential output between the baseline projection and the projection inclusive of the RRF's direct domestic impact; axis unit: percentage point.



In its assessments of potential output, the Ministry of Finance uses the production function method developed jointly by the European Commission and EU Member States, in which potential output growth is divided into projections of potential labour input, capital and total factor productivity.<sup>44</sup> The estimate of potential output involves a degree of uncertainty; for example, structural reforms, if successful, may have a positive impact on growth potential.

The short-term (t+2) and medium-term (t+5) domestic impacts on GDP are shown in Figure 3. The short-term calculations are presented above. In the medium term, it is assumed both in the baseline and RRF projection that the output gap will be closed by 2026.

<sup>44</sup> Havik et al. (2014).

**Figure 3:** Impact of the Recovery and Resilience Facility on GDP during 2021–2026.

Aside from the short- and medium-term impacts of the recovery package, the primary target is to achieve long-term structural reforms and reinforce growth potential. The package offers support for public investments and structural reforms, which is allocated, *inter alia*, along the lines suggested by the country-specific recommendations issued during the European Semester. The long-term impacts will depend on a successful selection of the investments and reforms and efficient implementation. Scientific literature<sup>45</sup> suggests that successful structural reforms do impact growth potential while policy measures in support of the reforms can improve their effectiveness.

Many of the set of measures foreseen in the plan may improve growth potential. Pillar 1 projects encourage new low-carbon solutions in the economy that may facilitate the emergence of new growing fields of activity and ecosystems, thereby creating opportunities for economic growth. For example, pillar 1 component area 3 sets the concrete target of improving productivity growth in the construction sector. The reforms and investments aiming for environmental sustainability and nature-based solutions included in component area 5 may promote future growth through improved competitiveness, etc.

45 Cf. Bordon et al. (2016).

Pillar 2 digital transition seeks to generate growth through improved productivity both in the public and private sector. The infrastructure development foreseen in component area 1 will promote competitiveness while the Digirail project offers prospects for long-term growth. In component area 2, reforms and investments will raise productivity through the development of digital business, etc. The projects may also have a lasting impact on employment.

Pillar 3 supports the Government's efforts to improve the employment rate. In component area 1, employment and labour market reforms and investments will help match supply and demand for labour and so improve enterprises' capacity for innovation, increase productivity and growth and contribute to a high level of employment. With regard to the implementation of the active employment policy, a systematic change and reshaping of services based on the Nordic labour market model are a central part of the measures to underpin employment as part of the Government's employment services reform. The reform to the jobseekers' service process by increasing support for job-seeking and the additional obligations introduced as a precondition for eligibility for unemployment security will increase the supply of labour. The service model is expected to increase employment by 9,500–10,000 jobs. Another aspect of component area 1 is that the unemployed with partial work ability offer major potential for increasing the employment rate, while the measures to improve the employability of young people represent an investment in the future. Productivity can be increased and the preconditions for economic growth improved by reducing absences due to illness and disability pensions, as these measures will help prolong work careers and preserve job opportunities for ageing employees.

Component area 2 foresees upskilling and continuous learning, which can increase human capital, improve employment and promote renewal. The continuous learning reform will make education and training respond to labour market demands more accurately, improve flexibility within the service system and its ability to react to changes as well as contribute to the availability of skilled labour. Another target is to facilitate recovery from the COVID-19 crisis by responding to the new and changing skills needs of the labour market to prevent a skills shortage or outdated skills from impeding overall recovery in society. The impacts will be generated by the following component factors: new opportunities for skills development improve individuals' capabilities to respond to changes in working life and help prevent new periods of unemployment;<sup>46</sup> skills-related problems due to the mismatch of supply and demand for labour will ease up, and

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46 The Finnish National Agency for Education projected in 2020 that the production and services reform and the innovation rate will affect the demand for labour considerably by 2035. In the absence of flexible educational opportunities, there is a risk that a percentage of those currently employed will face an uncertain or intermittent work career because work will require new skills and capabilities.

enterprises' opportunities for increasing revenue will expand;<sup>47</sup> worker productivity will improve;<sup>48</sup> and upskilling will improve employment opportunities for those outside the labour market.<sup>49</sup>

The pillar 3 component area 3 plan to invest in R&D activities will boost growth not only in the short term but in the long term in particular. New emerging jobs will require a high level of skills. Skills and innovation ecosystems and leader enterprises and, in particular, the new ecosystems emerging around them, offer substantial growth potential. R&D activities have an indirect positive effect on employment as business competitiveness improves, RDI services expand and as new emerging expertise is utilised, applied and upgraded in society and the economy.

Pillar 3 component area 4 offers overall concepts related to low-carbon solutions and the circular economy. Improved competitiveness will create new jobs in service exports and low-carbon sectors. The health sector is one of the fastest growing industries in the world. The COVID-19 pandemic has also intensified demand for and adoption of innovative solutions and services in this sector. At the same time, increased internationalisation contributes to the creation of new employment opportunities. The investments will improve the ability to identify and make use of the growth opportunities available to SMEs.

The pillar 4 measures will reinforce the resilience of the economy and society by improving access to social and healthcare services by the entire population and all population groups. The measures will prevent social exclusion in the long term, which will also help reinforce social resilience and growth potential. The digitalisation projects supporting the development of social and healthcare services may give a boost to product development among ICT enterprises and thereby improve productivity.

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47 According to the employer interviews data gathered by Statistics Finland, 45% of the employers looking for permanent employees in 2019 were unable to fill all their vacancies; 70% of the employers with recruiting problems reported the lack of the basic training required for the trade as the underlying reason for the situation. In 2018, 50% reported some other reason for the problems with recruitment (Peltonen 2019). According to a European Commission report (2019), more than one in five enterprises reported problems with availability bottlenecks due to skills shortage.

48 A report released by the Working Group on Sustainable Growth (Ministry of Economic Affairs and Employment 2021) found that the availability of skilled labour constitutes a major impediment to growth.

49 According to Statistics Finland, 1,421,000 people, or over 34% of those aged 15–74, were outside the labour force in December 2020. The European Commission's country report on Finland (2020) found that one of the reasons for remaining outside the labour market was a low educational attainment, particularly among those under 50. The employment rate of immigrant women was clearly below that of Finnish women in general, the difference being almost 20 percentage points.



### *Long-term impacts on growth*

A key target of the Sustainable Growth Programme is to reinforce the long-term output potential of the economy. Aside from structural reforms, public investments are expected to boost long-term growth through an expansion of the capital base and improved productivity.

Empirical studies show that domestic public investments may have a positive impact on long-term economic growth. However, the impact of public investments on output depends on the business cycle and monetary policy adjustments. According to Auerbach and Gorodnichenko (2012), in a recession, the fiscal multiplier related to public investments is about 2 over a five-year timeframe, whereas in an upswing it is less than 1. Abiad et al. (2016) discovered that the medium-term average multiplier for public investments in advanced economies is about 1.4. In fact, the multiplier for public investments may be even higher than this (about 3.0) when there is free capacity in the economy and the monetary policy is expansionary. By contrast, when the output gap is positive, the effect of public investments on total output is low. According to Boehm (2020), the multiplier for public investments is close to zero in both the short and the medium term, whereas the multiplier for public expenditure is higher.

Model simulation similarly lends support to the idea that public investments underpin output potential. According to the IMF (2014), a permanent 1% increase in public spending relative to GDP raises total output by 2.5% over a period of 10 years compared to the baseline projection. A study on Germany by Elekdag et al. (2020) argues that a two-year 1% increase in public investments relative to GDP boosts total output by 1% relative to the baseline curve in two years, while output increases by 0.7% more in eight years.

In the model simulation, the impact on total output depends essentially on the output elasticities of public capital (Aschauer, 1989). Estimates of the output elasticities of public capital vary considerably from study to study and type of capital. Bom and Lithgart (2014) used a meta-analysis to suggest that infrastructure, such as roads, railways, airports and public services, as well as regional public capital, had a higher multiplier than other public capital. Scientific literature offers little evidence that green investments will differ from other public investments to any significant

degree. Popp et al. (2020) noted that the employment effects of the green investments related to the American Recovery and Reinvestment Act (ARRA) in the United States in 2009 were similar to the effects achieved with the other investments under the act. In contrast, the short-term employment effects remained modest.

Aside from the investments to be made domestically, increased public spending at the EU level may support economic growth in the long term through spill-over effects. According to studies, however, the impacts of public investments on other countries depend on the monetary policy approach. When the monetary policy responds to business cycles normally, public investments raise the interest rates in the euro area because of inflation, which reduces domestic demand on the one hand and decreases exports to outside the euro area on the other because of the appreciation of the currency. By contrast, when the monetary policy is expansionary, the spill-over effects may be substantial (In't Veld, 2016). According to Elekdag et al. (2020), in Germany, a temporary one-percentage-point increase in public investments for two years can increase GDP in other euro area countries by 0.2–0.3% in the medium term when the monetary policy applies the zero-interest limit.

De Jong et al. (2017) studied the impact of public investments on economic growth in the euro area. An empirical estimate says that the average output elasticity (multiplier) of long-term public investments (25 years) is a little shy of 2.0 in the euro area (weighted average slightly below 1.0). In other words, a temporary one-euro increase in public investments grows GDP by about two euros (approx. 1.0). However, the multipliers vary considerably in terms of time and countries. The long-term (100 years) change in GDP determined for Finland as a result of a single public investment shock equal in size to standard deviation is slightly over 0.5 for the sample period 1960–2013 and less than -0.25 for the sample period 1960–2007. Finland's estimated multipliers are lower than those of most euro area countries. Espinoza et al. (2020) also discuss the crowding-in or crowding-out phenomenon in terms of the involvement of private enterprises, especially in the long term.

The multipliers for public investments estimated in the study varied from -0.1 to 1.4.

Based on the foregoing empirical studies, the multiplier for public investments in Finland could settle around 0.0 to 2.0 in the long term. About half of the planned expenditure will consist of public consumption and the rest of investments. This means that the Recovery and Resilience Facility could boost GDP by 0.0% to 0.8% in the long term. It should be pointed out that spending is expected to accelerate the growth of potential output only temporarily and that Finland's contribution to the Recovery and Resilience Facility (approx. EUR 6.6. billion) will fall due for payment during 2028–2058. Both factors will dilute the effect of the Recovery and Resilience Facility on Finland's GDP in the long term and suggest that the impact will be closer to the lower end of the range.

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The overall impacts of the plan in the short, medium and long term based on the foregoing analysis are presented in Table 2.

**Table 2:** Effects of the entire plan on key variables.

	Short term (2 years)	Medium term (5 years)	Long-term (20 years)
GDP	0,2 %	0,3 %	0,0-0,8 %
Employment	0,1 %	0,1 %	0,0-0,4 %
Budget balance (% points)	0,1 %	0,1 %	-*

\*The impact on fiscal sustainability is discussed in the following sub-section.

## Impact on fiscal sustainability in the long term

There is a long-term imbalance (sustainability gap) between general government revenue and expenditure. According to the latest Economic Survey published by the Ministry of Finance in December 2021, the sustainability gap is nearly 4% relative to GDP, or some EUR 8 billion at 2025 prices. The ageing of the population has already increased pension expenditure over the past ten years and is creating major pressures on the long-term sustainability of Finland's general government finances. In particular, the increase in the number of old people will mean higher medical and care expenditure that cannot be met at the current overall tax rate in the future. At the same time, the working-age population, which is financing Finland's public services and social security through taxes, is shrinking.

The measures foreseen in the Sustainable Growth Programme for Finland will support fiscal sustainability in two ways. On the one hand, they will reinforce favourable conditions for economic growth and thereby expand the revenue base of central government finances, and on the other, they will reduce the burden on public finances caused by unemployment. While the planned actions may boost economic growth and employment, their impact on the long-term fiscal sustainability is modest. The foreseen impacts of the programme on economic development and public finances in the short and medium term will not substantially reduce the sustainability gap. Hence, it is necessary to strengthen public finances in other ways to be able to absorb the pressures caused by the ageing population.

Moreover, the effects of the Sustainable Growth Programme for Finland on fiscal sustainability will also depend on the long-term effects of investments and stimulus measures on the preconditions for sustainable economic growth and employment. The recovery measures in support of short-term economic growth will also improve the economy's output potential in the long term. By limiting the increase and prolongation of unemployment, it is possible to prevent the recession from burdening public finances indefinitely. Investments in education, in turn, may improve productivity, support employment growth and prevent social exclusion.

It is highly unlikely that the investments now being planned will lead to such a substantial increase in productivity and employment that fiscal sustainability will be essentially improved. However, the structural reforms to improve the employment rate included in the programme (such as the Nordic labour market model) may well contribute to fiscal sustainability to some degree. Sensitivity analyses of the sustainability calculations suggest that a permanent increase of, say, 1 percentage point in the employment rate (35,000 additional employed persons) during 2025–2070 will reduce the sustainability gap by 0.3 percentage points relative to GDP.

The Sustainable Growth Programme for Finland also foresees increased work-based and study-based immigration. More work-based immigration will increase the number of the working-age population and the employed, thereby improving the dependency ratio and fiscal sustainability. Additionally, as said measures will create structures and operating models necessary for the reform to continuous learning and lead to investments in digital services, it is safe to say that they will have lasting effects.

The Sustainable Growth Programme for Finland also seeks to support the implementation of the national health and social services reform. The measures foreseen in the programme will improve the cost-effectiveness of health and social services in order to better respond to client needs in the social welfare and health care sector. At the same time, the measures will seek to curb the increase in health and social services expenditure in the long term, because the ageing population will create major cost pressures for this sector.

## Social impacts of the plan

The reforms and investments included in the Recovery and Resilience Plan seek to further reinforce the high standard of Finland's social conditions demonstrated by several indicators as well as strengthen social resilience.

Many of the pillar 1 measures will improve employment in the short and long term. Overall, the measures will be carried out with due regard to the implementation of the

European pillar of Social Rights. For example, the project to phase out the use of fossil fuel in heating buildings, one of the pillar 1 component area 3 projects, can reduce housing costs, thereby easing the financial status of low-income households in particular.

The pillar 2 measures seek, above all, to address employment and so promote social resilience on a broad front. For instance, the outcome of the cyber security research foreseen in component area 3 will be scalable, and its employment impact will range from a few dozen to hundreds of person-years.

Pillar 3 component area 1 will improve employment and the matching of supply and demand for labour, prolong work careers and boost competitiveness. The target in improving employment is to make full use of the workforce potential with a special emphasis on young people and those with partial work ability. The measures will specifically target those groups whose employment prospects have been adversely affected by the pandemic. The measures will support the implementation of the updated European pillar of Social Rights by promoting equal opportunities, providing active support for employment, promoting the social engagement of the disabled and improving youth employment, etc.

The upskilling and continuous learning reform included in component area 2 of pillar 3 will contribute to the attainment of the Chapter I targets of the European Social Rights pillar related to equal opportunities and access to the labour market concerning, in particular, education, training and lifelong learning, achievement of equal opportunities and active support for employment. Measured by the scoreboard indicators, Finland's investments in education, adult skills and participation are of a high standard. However, the percentage of people with higher education has risen modestly over the past 10 years. New emerging jobs will require advanced skills, and more so in Finland than in other OECD countries, according to the OECD. The potential employment impacts of the reform can be estimated to some extent with regard to preventive measures and employment among those outside the labour market, the target of the reform being to create over 10,000 new jobs. Of the social scoreboard indicators, the reform to improve skills and develop continuous learning will contribute to adult participation in learning because the participation rate will grow when new opportunities are offered for participation along with work or family duties and when engagement by under-represented groups is encouraged. Additionally, the percentage of those with higher education in the 30–34 age group will rise and the percentage of those not in employment and training in the 15–24 age group will decline. The gender gap in employment may fall when the efforts to harness the skills of immigrant women and thereby improve employment start bearing fruit. Training will also improve digital skills.

The reforms and investments proposed under pillar 4 will reinforce social resilience and contribute to performance in terms of the social scoreboard indicators by improving access to social and healthcare services in all population groups and preventing social exclusion in the long term. The pillar 4 measures will support the restructuring of social and healthcare services by shifting the responsibility for organising the services from municipalities to larger wellbeing services counties. The foreseen measures will help achieve the targets related to this structural reform as defined in the Government Programme: to secure equal and high-quality health, social and rescue services for all those living in Finland; improve the availability and accessibility of services; and to reduce health and wellbeing inequalities.

By these measures, it will be possible to meet unfulfilled needs for medical care. They can also improve the coverage of long-term care needs and reduce preventable mortality, the new indicators in the updated social scoreboard. The measures will also help curb social expenditure in the medium term. To speed up access to care, the Sustainable Growth Programme will focus on adopting new digital operational models and services. The pandemic caused by the COVID-19 virus has imposed an additional burden on social welfare and health care services. As a result, there are unfulfilled needs among the population for hospital care, rehabilitation and social services that the system has been unable to respond to. This treatment, rehabilitation and service deficit will be addressed by means of a one-off project using programme funding.

### ***Impacts on gender equality and equity***

The Finnish 'Equality Act'<sup>50</sup> of 1986 aims to prevent gender-based discrimination, promote equality between the genders, and so improve the status of women, particularly in working life. Under the Act, all employees must receive the same pay for the same work. Additionally, the Act forbids discrimination based on gender identity or gender expression. Aside from national legislation, gender equality is promoted in Finland by the actions of several authorities. The Ministry of Social Affairs and Health includes a Department for Work and Gender Equality, which is responsible for the preparation of equality legislation. Additionally, there is an independent and impartial Ombudsman for Equality that monitors compliance with the Equality Act.

<sup>50</sup> Act on Equality between Women and Men (609/1986).

The Finnish Government is strongly committed to promoting pay equality in society. The tools to achieve equal pay include the gender equality plans required from workplaces, schemes to develop compensation plans and efforts to promote women's careers. During 2020–2023, pay inequalities will be reduced by an extensive set of actions foreseen in the Government Programme that will include legislative measures as well as broad-based research and development projects to be implemented by the Ministry of Social Affairs and Health to promote gender equality. The measures included in the Sustainable Growth Programme for Finland are recognised as having both direct and indirect impacts on gender equality and non-discrimination. A more detailed description of the ancillary measures is provided in the following sections.

The pillar 3 measures designed to improve the employment rate and skill levels to accelerate sustainable growth will have equality-enhancing effects. In certain age groups in Finland, the educational attainment is extremely low, which increases the risk of social exclusion. For example, in 2019 there were 103,166 people aged 20–29 who had only completed basic education, accounting for 15% of the age group. Men accounted for 18% and women for 13% of those with only basic education in this group. According to regulations, public employment services must promote non-discrimination and gender equality in the labour market. In February 2021, the employment rate was 69.8% for men and 70.3% for women (Labour Force Survey of Statistics Finland). According to the data available from the customer service registers of the Environment and Employment and Economic Development Offices, 190,600 (58%) of the unemployed job-seekers were men and 108,400 (42%) were women at that point of time. Unemployment tends to become prolonged for people with poor or little education, skills gaps or other limitations hampering employment, such as an injury or illness. The target of the Nordic labour market model to be implemented under pillar 3 is to provide more intensive support for employability and upskilling, which will specifically have positive equality impacts.

The 'Ohjaamo' network is designed to create a safe and approachable environment for young people to encourage them to look for solutions to potential challenges. Since the launch of this model in 2015, a small majority of the clients have been young men. In 2020, 51% were men and 49% were women. Men are over-represented both among the unemployed and those with a low educational attainment. Ohjaamo activities are advertised and marketed through several channels in order to reach a wide range of youth groups.



The promotion of employment through the actions included in the Work Ability Programme will affect those in a vulnerable situation in the labour market, more precisely those with partial work ability, the disabled and people with mental health issues. As a result, the services designed to support work ability and employment and the quality of these services will improve along with improved availability and access. Equality will be reflected in improved equality performance in the labour market. With regard to the services supporting work ability and employment, equality also means improved regional equality in the provision of the services. Follow-up and monitoring studies will pay close attention to the gender and non-discrimination impacts of the measures.

Among the working-age population, mental health issues are the main reason for extended absence from work and retirement on disability pensions in Finland. Three out of five of those retiring on a disability pension are women. The increase in sickness allowances for mental health reasons has been uncommonly sharp among young people and women in early middle age. Actions to support mental health undertaken by workplaces and occupational healthcare services may alleviate gender inequality and reduce disability pensions and absence due to illness especially among women. Psycho-social burden is experienced more frequently by women than men. Tight timetables and psychological pressures at work have become more common, particularly among working women. Mental health support and access to preventive programmes at the workplaces may help reduce the psychological burden perceived by women and the differences in wellbeing at work between men and women while at the same time contributing to coping at work. Strengthening mental health skills in the workplace will also have a positive impact on the coping of people with mental health issues. As a result, workplaces will be able to adjust duties to capacity and so support employees' work ability. With improved mental health skills, the stigma associated with the problems will fade, which will help those with partial work ability cope and encourage employees to express their need for support more readily.

The pillar 3 project to promote upskilling and continuous learning will also have positive effects in terms of gender equality. At present, women are taking an increasingly active part in continuous learning, particularly in degree programmes. Of all new students admitted to universities of applied sciences in 2020, 54% were women, while the corresponding figure

for academic universities was 59%. However, just like the labour market, the fields of education are divided along gender lines. Men dominate in information processing, data communications and technology. By contrast, women are a majority in health care and wellness sectors, humanities and education. The purpose of the continuous learning reform is to develop skills services so as to allocate education and guidance resources to groups that are under-represented in a given field. By providing shorter and more flexible training programmes that allow participation while working, it could be possible to increase men's participation in lifelong learning and thereby contribute to gender equality. Numbers of starts will be increased in fields that suffer from skills shortages and support the Sustainable Growth Programme, such as the female-dominated social and healthcare sector and education and male-dominated technology and ICT.

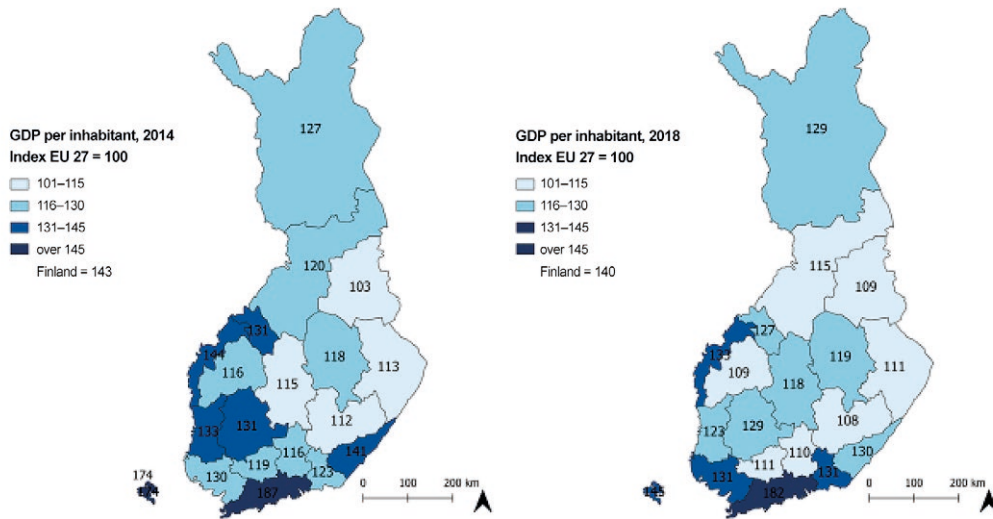
The pillar 4 project to improve access to social and healthcare services and enhance their cost-effectiveness particularly to respond to the needs of those in the weakest position will contribute to gender equality. In Finland, inequality between sexes is reflected e.g. in life expectancy, which is lower among men in the lower socio-economic segment. Hence, improved access to services and intensified preventive measures including their better evidence-based targeting can promote gender equality.

## Social and regional coherence

The impacts of the Sustainable Growth Programme for Finland can also be analysed in terms of the indicators for regional and social cohesion. Section 2 and the tables attached to the programme provides a more detailed description of the cohesion impacts of the Recovery and Resilience Plan. Below, we will give an overview of the current situation in Finland in terms of the indicators for regional cohesion followed by a brief summary of the programme impacts.

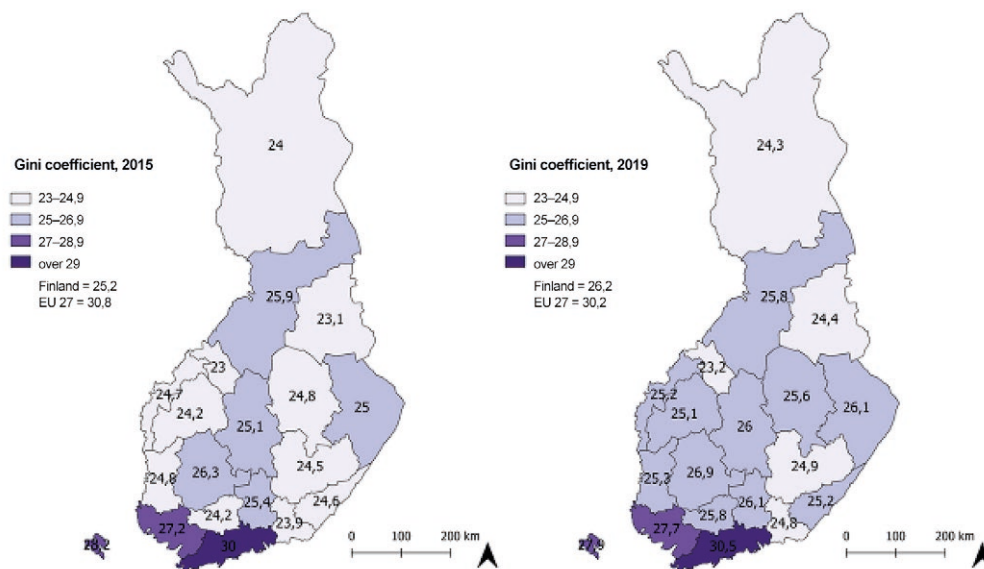
During 2014–2018, Finland's GDP (unadjusted for purchasing power parity) was, on average, some 40% higher than the EU27 average (Figure 4). GDP per inhabitant was in 2014–2018 higher than the EU27 average in all regions of Finland, but the ranking order of the regions has partly changed since. In 2018, the highest GDP per inhabitant, EUR 55,100, was achieved in the Uusimaa Region and the lowest, EUR 32,700, in South Savo.

**Figure 4:** Finland's GDP by region in 2014 and 2018.



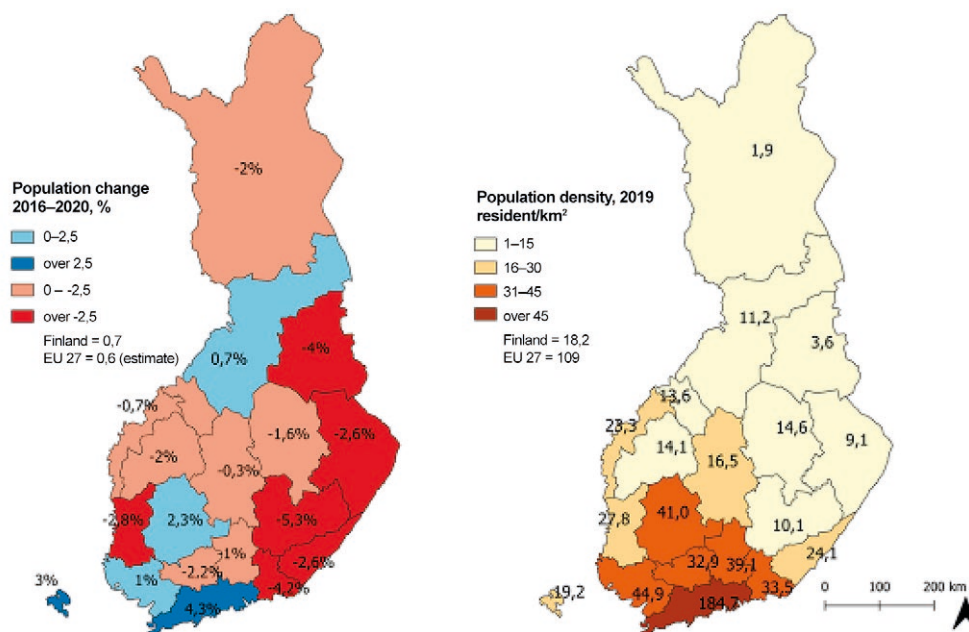
Income disparity is not as great in Finland as in the EU on average. During 2015–2019, the average Gini coefficient for Finland was 25.5, clearly lower than the EU27 average (30.5). Throughout the period under review, income disparity was highest in the Uusimaa region and lowest in Central Ostrobothnia. In the EU, income disparity decreased during 2015–2019, whereas in Finland it has been growing slightly in nearly all regions.

**Figure 5:** Regional Gini coefficient in 2015 and 2019.



Of Finland's 19 regions, only five showed a population gain from 2016 to 2020 (Figure 6). Uusimaa is the most populated of Finland's regions. People are very much concentrated in and around the largest cities. While the natural population gain has been negative for the past five years, the total size of the population has grown due to migration gain. In 2019, the average population density in Finland was 18.2 inhabitants per km<sup>2</sup>, far below the EU average of 109 inhabitants per km<sup>2</sup> (Figure 6). Population density varies strongly in Finland from one region to another. No major changes have taken place in population density during 2015–2019.

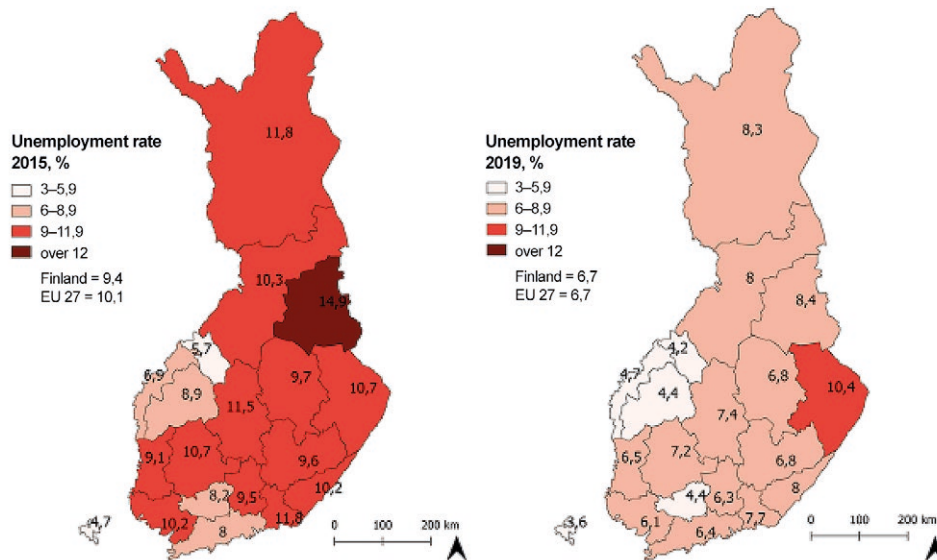
**Figure 6:** Population change between 2016 and 2020 (left panel) and population density in 2019 (right panel)



The percentage of those with higher education has increased in Finland during 2015–2019 at the same rate of three percentage points as in the EU27 countries. In Finland, those with higher education account for 46% of the population, a much higher figure than the EU average of 32%. Most of Finland's population with higher education lives in Uusimaa, particularly the Helsinki region. The educational attainment is the highest in university cities. Although those with the highest education mostly settled in these areas, their percentage is growing in all regions.

From 2015 to 2019, the employment rate increased slightly more in Finland than in the EU27 countries. According to a workforce survey, Finland's 2019 employment rate was 73%, while the EU 27 average was 68%. Within Finland, the employment rates were the highest in the Åland Islands (81%), Central Ostrobothnia (75%) and Uusimaa (74%), and the lowest in Kainuu, North Karelia and South Karelia (64% in all). From 2015 to 2019, the employment rate increased in all regions (except the Åland Islands). In Finland, regional differences in the employment rate narrowed during 2015–2019. The employment rate is higher for men than for women, and it also grew faster for men than women from 2015 to 2019. The biggest differences in men's and women's employment rates are found in Central Ostrobothnia. In two regions, South Karelia ja Kainuu, the employment rate was higher for women than for men. From 2015 to 2020, the employment rate of women fell in six regions and that of men fell in four regions. The employment rate in the age group 15–24 was 43% in 2019. The situation was the best in Ostrobothnia, Central Ostrobothnia and the Åland Islands. Youth employment was the lowest in South Savo and Lapland. Over the past few years, the youth employment rate has declined in more regions. Regional differences in youth employment have remained unchanged in recent years.

From 2015 to 2019, unemployment decreased in the EU27 countries by 3.7 percentage points and in Finland by 2.7. In 2019, Finland's unemployment rate was the same as the EU average (6.7%). Unemployment decreased the most in Kainuu, South Ostrobothnia and Kymenlaakso. Regional differences in unemployment have not decreased significantly. In 2020, the downward trend in the unemployment rate levelled off in all regions except the Åland Islands and Kainuu. The unemployment rate has not reached the pre-pandemic level since the spring of 2020. In 2020, the unemployment rate was the highest in North Karelia and the lowest in the Åland Islands. The gender difference in unemployment is relatively small in Finland. The unemployment rate was 7.5% for women and 8% for men. Since 2015, women's unemployment had declined slightly less than men's. Regional differences in the unemployment rates of men and women have not decreased.

**Figure 7:** Regional unemployment rates in 2015 and 2019, %

The percentage of NEET youth was 7% in Finland and 10% in the EU27 countries (2019). Since 2015, the number of NEET youth declined in Finland by 2% and in the EU27 countries by about 1%.

By using the 15 key social scoreboard indicators of the European pillar of Social Rights, it is possible to compare the performance of EU countries and regions to the EU average on a scale of 1 to 5. Finland ranks above the average in nearly all indicators except the fulfilment of health care needs, where it ranks just below the EU average. Finland has remained in the same class on the scale since the current time series started in 2005. However, it is inadvisable to use the scoreboard to measure regional development in Finland because for some indicators, there is no nationwide data and for NUTS2 statistical regions, data is only available for six of the indicators. Uusimaa ranks in the highest category according to all these indicators except for unemployment, in which it falls into the second highest category. Southern Finland falls in the highest or second highest category except for the unemployment rate in which it represents the medium level. The indicator values for Northern and Eastern Finland are spread across the three highest categories. No data is available for Western Finland.

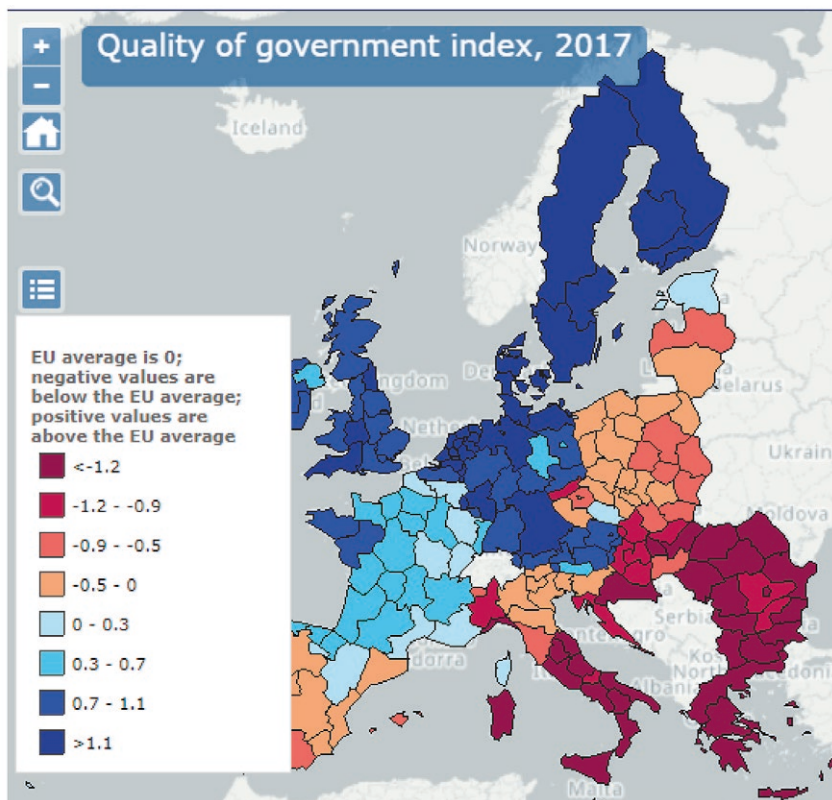
EQI is the EU quality of government index.<sup>51</sup> It measures impartiality, the quality of public service delivery and the extent of corruption. The quality of government in Finland is

<sup>51</sup> [https://ec.europa.eu/regional\\_policy/en/information/maps/quality\\_of\\_governance/#1](https://ec.europa.eu/regional_policy/en/information/maps/quality_of_governance/#1)



higher than the EU average, and during 2010–2017, Finland’s EQI ranking on the three-level scale has been 1, indicating that the quality of government has remained steady. According to the latest quality of government index released in 2017 (Figure 8), the Åland Islands achieved a score of 2.32, Helsinki-Uusimaa 1.33, Northern and Eastern Finland 1.44, Southern Finland 1.49 and Western Finland 1.41. The respective rankings among the 202 European regions were 1st, 3rd, 4th, 7th and 15th.

**Figure 8:** Quality of government index for EU countries in 2017



It is clear that the Recovery and Resilience Plan cannot achieve any major impacts on population developments. Hence, the measures foreseen in the plan are unlikely to have an impact on population growth or density. Moreover, measured by several indicators, such as GDP and the Gini coefficient, Finland ranks above the EU27 average, which means that an EU-level solution will most likely help other countries to close the gap with Finland. Measured by the above indicators for output, income, population, education, employment, unemployment and government, the estimated impacts on Finland’s internal cohesion will be minor. However, many of the measures are helpful in preventing regional differences from growing.

The tables accompanying the programme provide a more detailed description of the impacts of the Recovery and Resilience Plan components on regional and social cohesion. The pillar 1 investments are expected to be spread evenly throughout Finland. The investment in the project to phase out fossil fuel heating foreseen in pillar 1 component area 3 will support more equal implementation across regions. The long-term targets of phasing out oil heating by 2030 and reducing carbon dioxide emissions from buildings by 90% from 2020 to 2050 involve challenges, of which the most important is the large initial investment required to achieve them. Obstacles to the realisation of the investment include the potentially low value of buildings, which may vary substantially from region to region, relative to the size of the investment; the uncertainties associated with the future value and use of buildings; low household income; or the advanced age of the residents. The resources to be made available under the pillar 1 component area 4 project to develop the public electricity charging and gas refuelling infrastructure will be sorely needed in areas where these services will not be developed on a commercial basis. Regional coverage will be taken into account in granting aid for a public infrastructure by awarding extra points in the competitive bidding process to a project that will be located in an area lacking a public charging point or gas refuelling station.

The high-speed communications to be promoted under pillar 2 component area 1 can contribute, *inter alia*, to the management of the citizens' daily business, working in multiple locations, and the provision of facilities necessary for business operations and the activities of various organisations. Nationwide ultra-speed communications will make it possible to attend to matters, work, study and manage virtual social relations independent of location. Component area 2 foresees investments in the acceleration of the data economy and digitalisation, which may be expected to benefit Finnish enterprises across the board while offering a basis for creating digital tools in support of business. Moreover, the investments to be made under the cutting-edge technology programme will benefit Finnish enterprises through the environments and related service networks to be located in the regions. The Virtual Finland project will offer business benefits to enterprises by providing digital tools for cooperation. On the whole, the investments will promote social and regional cohesion.

The pillar 3 component area 1 project to improve employment and the efficiency of the labour market will alleviate the negative economic and social impacts of the crisis and contribute to regional and local cohesion. The service system will be reinforced to eliminate regional differences in the provision of services. Although there are major regional differences in wellbeing and employment in Finland, it is important to seek to prevent these inequalities and differences from growing. The upskilling foreseen under component area 2 will improve the employment prospects of under-represented groups and make it possible for employees working in sectors undergoing structural changes to move on to new duties, thereby revitalising the local economy. Component area 3 (RDI



activities) will improve growth prospects for the whole of Finland. In particular, special attention in investing in local research infrastructures will be paid to the priorities of the organisations and the regional strategic choices. With regard to component area 4, the low-carbon concepts designed to promote SMEs will contribute to regional vitality because these enterprises are found all over Finland. The efforts to develop the ecosystem for heavy-duty electric transport as well as conversion and purchase subsidies will also benefit sparsely populated areas. A number of health sector ecosystems have emerged across Finland, particularly in university cities.

The investments to improve access to social and healthcare services and their cost effectiveness will be spread evenly throughout Finland. The measures will also improve the availability of online services, which will contribute to greater equality between regions.

## Estimate of progress in the absence of the funding available under the Recovery and Resilience Plan

In 2019, central government spending totalled EUR 127.9 billion, or 53.2% of GDP. The following comparison only addresses gross fixed capital formation, i.e., investments included in the System of National Accounts. From 2017 to 2019, the average central government investments amounted to EUR 4.1 billion, or 1.7% of GDP, whereas investments by public entities reached EUR 9.9 billion, or 4.2% of GDP.

The 2020–2025 baseline level is based in the 2021 spring forecast prepared by the Ministry of Finance Department of Economics and a medium-term estimate of central government investments. Since no medium-term estimate and budget spending limits have yet been prepared for 2026, it was assumed that investments will increase at the same rate as GDP. The division of baseline investments into COFOG classes was carried out on the basis of the 2019 classification. Most of the costs to be financed with funds received under the Recovery and Resilience Facility will not be recognised as central government investments but as current expenditure or investment aid. The analysis can be determined in more detail at a later date to match the expense items with corresponding RRF project expenditure. At this point, the analysis is carried out in relation to SNA investments, which may exaggerate the effects. The expenditure only includes financing from the RRF without any other potential public or private funding available for the projects.

RRF-related expenditure will reach about EUR 2.1 billion during 2021–2026, an annual average of EUR 0.3 billion. With the RRF, central government expenditure will grow by about 5.8% from what it would be without the RRF. The table lists the expenditure items

according to presumed budget allocations. Public investments will increase or at least be maintained at the current level during the programme period. At this point, most of the expenditure is expected to be incurred during 2021–2025. In terms of functions, money will be expended on the promotion of business and industry, in which support will be provided for various carbon-neutral concepts and employment-enhancing services. Additionally, resources will be allocated to addressing the healthcare backlog caused by the COVID-19 pandemic and upgrading social and healthcare services.

The additional expenditure under the RRF is divided into the following 4 pillars:

- Pillar 1: A green transition will support structural adjustment of the economy and underpin a carbon-neutral welfare society (total EUR 845 million)
- Pillar 2: Digitalisation and a digital economy will strengthen productivity and make services available to all (total EUR 234 million)
- Pillar 3: Raising the employment rate and skill levels will accelerate sustainable growth (total EUR 638 million)
- Pillar 4: Access to health and social services will be improved and their cost-effectiveness enhanced (total EUR 405 million)

**Table 3:** Commission table 4b. Baseline investments – main COFOG classes.

<b>Growth-enhancing expenditure affected by funding received under the RRF; benchmark years 2017–2019 and expenditure 2020–2026 (EUR million)</b>												
	2017	2018	2019	Benchmark level 2017–2019 average	2020	2021	2022	2023	2024	2025	2026	Planned 2020–2026 average
General public services	1150	1198	1356	<b>1235</b>	1337	1376	1410	1368	1377	1497	1535	<b>1414</b>
Defence	484	404	483	<b>457</b>	487	501	504	481	490	537	556	<b>508</b>
Public order and security	50	44	70	<b>55</b>	58	68	65	62	60	65	66	<b>64</b>
Promotion of business and industry	1448	1530	1367	<b>1448</b>	1542	1624	1874	1884	1807	1857	1814	<b>1772</b>
Environmental protection	30	30	20	<b>27</b>	28	36	63	77	55	42	40	<b>49</b>
Housing and communities	6	7	4	<b>6</b>	6	36	36	16	6	7	7	<b>16</b>
Health	38	34	21	<b>31</b>	33	59	95	88	79	52	38	<b>63</b>
Free time, culture and religion	208	231	200	<b>213</b>	227	238	252	237	233	251	259	<b>242</b>
Education and training	610	586	559	<b>585</b>	623	651	697	652	648	691	711	<b>668</b>
Social security	6	5	6	<b>6</b>	6	34	80	75	55	22	7	<b>40</b>
Growth-enhancing expenditure affected by RRF grants (a)	4030	4069	4086	<b>4062</b>	4348	4623	5077	4941	4811	5022	5034	<b>4918</b>
Growth-enhancing expenditure funded by RRF grants (b)					0	154	588	633	423	219	69	<b>347</b>
<b>Growth-enhancing expenditure excluding expenditure funded by RRF grants (a-b)</b>	<b>4030</b>	<b>4069</b>	<b>4086</b>	<b>4062</b>	<b>4348</b>	<b>4470</b>	<b>4489</b>	<b>4308</b>	<b>4387</b>	<b>4804</b>	<b>4965,02</b>	<b>4570</b>
GDP at current prices (c)	226301	233696	240261	<b>233419</b>	237467	247804	258302	267072	275626	284167	293812	<b>271130</b>
<b>Growth-enhancing expenditure excluding expenditure funded by RRF grants, GDP ratio (a-b)/c</b>	<b>0,02</b>	<b>0,02</b>	<b>0,02</b>	<b>0,0174</b>	<b>0,02</b>	<b>0,02</b>	<b>0,02</b>	<b>0,02</b>	<b>0,02</b>	<b>0,02</b>	<b>0,02</b>	<b>0,02</b>

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## Appendix 1 List of actions in the RRP and of the coordinating ministries and authorities in their administrative branches

Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
1	C1R1	Energy system transition – Significant reduction of energy use of coal by 2026	Ministry of Economic Affairs and Employment		Act Prohibiting the Use of Coal for Energy (406/2019)
1	C1R2	Energy system transition – Comprehensive reform of energy taxation	Ministry of Economic Affairs and Employment		
1	C1I1	Energy system transition – Energy infrastructure investments	Ministry of Economic Affairs and Employment	Ministry of Economic Affairs and Employment, Business Finland	Act on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017) Government Decree on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017) Government Decree on Research, Development and Innovation Operations (1444/2014) Act on Discretionary Government Transfers (688/2001) General Block Exemption Regulation (EU No 651/2014)

Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
1	C112	Energy system transition – Investments in emerging energy technology	Ministry of Economic Affairs and Employment	Ministry of Economic Affairs and Employment, Business Finland	Act on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017)  Government Decree on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017)  Government Decree on Research, Development and Innovation Operations (1444/2014)  Act on Discretionary Government Transfers (688/2001)  General Block Exemption Regulation (EU No 651/2014)
1	C113	Energy system transition – Renewable energy investment in Åland:	Government of Åland	Government of Åland	Åland Act (1988:50) on loans, interest subsidies and grants from the Government of Åland and on the guarantee. Applicable EU legislation (GBER)
1	C2R1	Industry renewal and investments supporting the green and digital transition – Reform of the Climate Change Act and low carbon renewal of industries	Ministry of Economic Affairs and Employment		

Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
1	C2R2	Industry renewal and investments supporting the green and digital transition – Strategic promotion of the circular economy and reform of the Waste Act	Ministry of Economic Affairs and Employment		
1	C2I1	Industry renewal and investments supporting the green and digital transition – Clean hydrogen and CCS/CCU in industry	Ministry of Economic Affairs and Employment	Ministry of Economic Affairs and Employment, Business Finland	Act on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017)  Government Decree on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017)  Government Decree on Research, Development and Innovation Operations (1444/2014)  Decree on the Ministry of Economic Affairs and Employment (1024/2007) Act on Discretionary Government Transfers (688/2001)  General Block Exemption Regulation (EU No 651/2014)  Government Decree on General Terms of Granting Energy Aid (1098/2017)  IPCEI communication 2014/C 188/02



Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
1	C2I2	Industry renewal and investments supporting the green and digital transition – Direct electrification of industry processes to reduce carbon consumption	Ministry of Economic Affairs and Employment	Ministry of Economic Affairs and Employment, Business Finland	Act on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017)  Government Decree on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017)  Government Decree on Research, Development and Innovation Operations (1444/2014)  Decree on the Ministry of Economic Affairs and Employment (1024/2007) Act on Discretionary Government Transfers (688/2001)  General Block Exemption Regulation (EU No 651/2014)  Government Decree on General Terms of Granting Energy Aid (1098/2017)

Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
1	C2I3	Industry renewal and investments supporting the green and digital transition – Investments promoting reuse and recycling of key materials and industrial residues	Ministry of Economic Affairs and Employment	Business Finland	Act on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017)  Government Decree on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017)  Decree on Research, Development and Innovation Operations (1444/2014)  Act on Discretionary Government Transfers (688/2001)  General Block Exemption Regulation (EU No 651/2014)  Decree on subsidy to promote circular economy and sustainable green growth (1197/2020)
1	C3R1	Reducing the climate and environmental impacts of the building stock –Legislation governing construction will be developed to mandate low-carbon construction and a digital knowledge base.	Ministry of the Environment		Land Use and Building Act (132/1999)

Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
1	C3R2	Reducing the climate and environmental impacts of the building stock – Action plan to phase out fossil-based oil heating.	Ministry of the Environment		
1	C3I1	Reducing the climate and environmental impacts of the building stock – Aid for converting building heating systems from fossil-based oil heating to energy-efficient heating	Ministry of Economic Affairs and Employment (administration and supervision), Ministry of the Environment (administration and supervision)	Centres for Economic Development, Transport and the Environment, Housing Finance and Development Centre of Finland	Act on the Housing Finance and Development Centre of Finland (71/2007) Government Decree on the Housing Finance and Development Centre of Finland (285/2007) Act on the Centres for Economic Development, Transport and the Environment (897/2009) Government Decree on the Centres for Economic Development, Transport and the Environment (1373/2018) Act on Discretionary Government Transfers (688/2001) Decree on the aid system (forthcoming)

Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
1	C3I2	Reducing the climate and environmental impacts of the building stock – Low-carbon built-up environment programme	Ministry of Economic Affairs and Employment (administration and supervision), Ministry of the Environment (administration and supervision)	Business Finland, Ministry of the Environment	Government Decree on the Ministry of the Environment (1286/2015) Act on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017) Government Decree on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017) Government Decree on Research, Development and Innovation Operations (1444/2014) Act on Discretionary Government Transfers (688/2001) General Block Exemption Regulation (EU No 651/2014)
1	C4R1	Low-carbon solutions in communities and transport – Roadmap to fossil-free transport	Ministry of Transport and Communications		
1	C4R2	Low-carbon solutions in communities and transport – Tax reform for sustainable transport	Ministry of Finance		

Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
1	C411	Low-carbon solutions in communities and transport – Public distribution and refuelling infrastructures for transport electricity, biogas and new forms of motive power	Ministry of Economic Affairs and Employment (administration and supervision)	Energy Authority	Act on the Energy Authority (870/2013) Government Decree on infrastructure support for electric vehicles and the use of biogas as transport fuel 2018–2021 (498/2018) Act on Discretionary Government Transfers (688/2001)
1	C412	Low-carbon solutions in communities and transport – Private recharging infrastructures	Ministry of the Environment (administration and supervision)	Housing Finance and Development Centre of Finland (ARA)	Act on the Housing Finance and Development Centre of Finland (71/2007) Government Decree on the Housing Finance and Development Centre of Finland (285/2007) Act on Discretionary Government Transfers (688/2001)
1	C5R1	Environmental sustainability and nature-based solutions – Nature conservation legislation reform	Ministry of the Environment		
1	C5R2	Environmental sustainability and nature-based solutions – Strategic promotion of the circular economy	Ministry of the Environment		

Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
1	C5I1	Environmental sustainability and nature-based solutions – Gypsum treatment of fields and nutrient recycling	Ministry of the Environment	Southwest Finland Centre for Economic Development, Transport and the Environment (gypsum treatment of fields)  Ministry of the Environment (nutrient recycling)	Gypsum treatment of fields: Act on the Organisation of River Basin Management and the Marine Strategy (1299/2004)  Government Decree on aid for gypsum treatment of agricultural land in 2020–2025 (510/2020)  Agricultural Block Exemption Regulation (2014/702/EU)  Government Decree on the Centres for Economic Development, Transport and the Environment (1373/2018)  Nutrient recycling: Act on Discretionary Government Transfers (688/2001)  Government Decree on State aid to be granted for projects on nutrient recycling and energy efficiency in waste water management in 2020–2026 (657/2020)  General Block Exemption Regulation (EU No 651/2014)  De Minimis Regulation (2013/1407/EU)
1	C5I2	Environmental sustainability and nature-based solutions – Climate-sustainable actions in the land use sector	Ministry of Agriculture and Forestry	Ministry of Agriculture and Forestry	Act on Discretionary Government Transfers (688/2001)

Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
2	C111	Digital infrastructure – Digirail project	Ministry of Transport and Communications	-	
2	C112	Digital infrastructure – Improving the quality and availability of telecommunications networks	Ministry of Transport and Communications (broadband aid) Ministry of Agriculture and Forestry (national broadband agency)	Transport and Communications Agency	Act on Broadband Construction Aid (1262/2020)
2	C2R1	Accelerating the data economy and digitalisation – Corporate digital economy – RTE programme	Ministry of Economic Affairs and Employment, Ministry of Finance		
2	C2R2	Accelerating the data economy and digitalisation – Virtual Finland	Ministry for Foreign Affairs		
2	C2R3	Accelerating the data economy and digitalisation – Accelerator programme for spearhead technologies	Ministry of Economic Affairs and Employment		
2	C2R4	Accelerating the data economy and digitalisation – Improving the Residential and Commercial Property Information System	Ministry of Agriculture and Forestry	The reform does not involve discretionary government transfers or State aid.	

Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
2	C2R5	Accelerating the data economy and digitalisation – Enhancing the effectiveness and transparency of RRP-based reforms and investments by improving information systems, administration, oversight and inspections	Ministry of Finance		
2	C2I1	Accelerating the data economy and digitalisation – Real time economy (RTE) ecosystem design and delivery	Ministry of Economic Affairs and Employment, Ministry of Finance		
2	C2I2	Accelerating the data economy and digitalisation – Enabling data sharing; seamless management and distribution of corporate data, and financial reporting to the authorities	Ministry of Economic Affairs and Employment, Ministry of Finance		
2	C2I3	Accelerating the data economy and digitalisation – Business e-documents	Ministry of Economic Affairs and Employment, Ministry of Finance		



Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
2	C214	Accelerating the data economy and digitalisation – Microelectronics value chain	Ministry of Economic Affairs and Employment	Business Finland	Act on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017)  Government Decree on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017)  Government Decree on Research, Development and Innovation Operations (1444/2014)  Act on Discretionary Government Transfers (688/2001)  General Block Exemption Regulation (EU No 651/2014) IPCEI Communication 2014/C 188/02
2	C215	Accelerating the data economy and digitalisation – 6G, AI and quantum computing development facilities (P2C215)	Ministry of Economic Affairs and Employment	Business Finland	Act on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017)  Government Decree on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017)  Government Decree on Research, Development and Innovation Operations (1444/2014)  Act on Discretionary Government Transfers (688/2001)  General Block Exemption Regulation (EU No 651/2014)

Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
2	C3R1	Digital security – Effective prevention of money laundering	Ministry of Finance	The reform does not involve discretionary government transfers or State aid.	
2	C3R2	Digital security – Cyber Security Development Programme	Ministry of Transport and Communications		
2	C3I2	Digital security – Cyber security exercises	Ministry of Transport and Communications		
2	C3I3	Digital security – Civilian competence in cyber security – European cyber security training and action plan	Ministry of Transport and Communications		
3	C1R1	Employment and labour market – Nordic labour market services model	Ministry of Economic Affairs and Employment	Ministry of Economic Affairs and Employment; Centres for Economic Development, Transport and the Environment; Employment and Economic Development Offices; KEHA Centre	Act on the Centres for Economic Development, Transport and the Environment (897/2009)

Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
3	C1R2	Employment and labour market – Eliminating the right to additional days to unemployment benefit (the 'unemployment path to retirement')	Ministry of Social Affairs and Health		
3	C1R3	Employment and labour market – Streamlining work-based and study-based immigration and easing international recruitment	Ministry of Economic Affairs and Employment	The reform does not involve any State aid. The reform is about improving Finland's public administration and legislation.	
3	C1R4	Employment and labour market – Enhancing multiprofessional services for young people	Ministry of Economic Affairs and Employment	Ministry of Economic Affairs and Employment, KEHA Centre	Act on Discretionary Government Transfers
3	C1R5	Employment and labour market – Launching a new intermediate labour market operator offering employment and services for persons with partial work ability	Ministry of Economic Affairs and Employment	The investment includes State aid, and the reform here involves enacting an Act providing for the new operator. The Act will define the responsible authority.	New Act in respect of the operator as part of the reform.  2012/21/EC: Commission Decision of 20 December 2011 on the application of Article 106(2) of the Treaty on the Functioning of the European Union to State aid in the form of public service compensation granted to certain undertakings entrusted with the operation of services of general economic interest.

Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
3	C111	Employment and labour market – World-class digital infrastructure to support migration of skilled labour	The Ministry of Economic Affairs and Employment will be responsible for administration and reporting of the investment package. Steering will be undertaken by that Ministry and by the Ministry for Foreign Affairs, the Ministry of the Interior and, as applicable, the Ministry of Education and Culture. The Ministry for Foreign Affairs, the Ministry of the Interior and the Ministry of Education and Culture will oversee spending under their respective budget items in the project, based on jointly agreed allocations.	The investment does not involve any State aid. The investment concerns the improvement of the digital infrastructure of Finland's public administration.	N/A
3	C112	Employment and labour market – Extension of the work ability programme and IPS model	Ministry of Social Affairs and Health	Ministry of Social Affairs and Health	Act on Discretionary Government Transfers Government Decree on Central Government Transfers to Health and Social Services Development Projects 2020–2023 (to be updated to comply with RRF requirements)
3	C113	Employment and labour market – Mental health and work ability as prerequisites for employment and productivity	Ministry of Social Affairs and Health	Ministry of Social Affairs and Health	Act on Discretionary Government Transfers Government Decree on Central Government Transfers to Health and Social Services Development Projects 2020–2023 (to be updated to comply with RRF requirements, or a corresponding Decree to be issued in respect of this particular action)

Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
3	C2R1	Upskilling and continuous learning reform – Continuous learning reform	<p>Ministry of Education and Culture</p> <p>Ministry of Economic Affairs and Employment</p> <p>(The Ministries have agreed on how to share responsibility for implementation, but all portions will be undertaken in cooperation; the Ministries will jointly manage the continuous learning and employment service centre.)</p>	<p>Continuous learning and employment service centre</p> <p>KEHA Centre</p> <p>Ministry of Economic Affairs and Employment</p>	<p>Act on Discretionary Government Transfers</p> <p>Act on the continuous learning and employment service centre (XX/2021)</p> <p>Act on the Centres for Economic Development, Transport and the Environment (897/2009)</p>
3	C2R2	Upskilling and continuous learning reform – Continuous learning digitalisation programme	<p>Ministry of Education and Culture</p> <p>Ministry of Economic Affairs and Employment</p> <p>(The Ministries will jointly deliver and steer the continuous learning digitalisation programme, while the Ministry of Education and Culture will be responsible for the delivery and steering of the component package of digitalisation and flexible learning in higher education.)</p>	<p>Ministry of Economic Affairs and Employment, Ministry of Education and Culture</p>	<p>Act on Discretionary Government Transfers</p>

Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
3	C2R3	Upskilling and continuous learning reform – Upskilling and continuous learning reform, digitalisation and modernisation of education, Åland			
3	C2I1	Upskilling and continuous learning reform – Adding starts at universities	Ministry of Education and Culture	Ministry of Education and Culture	Act on Discretionary Government Transfers, Universities Act (558/2009) and Universities of Applied Sciences Act (932/2014)
3	C3I1	Research infrastructure and piloting – RDI funding package supporting the green transition – Business driver funding	Ministry of Economic Affairs and Employment	Business Finland	Act on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017) Government Decree on Research, Development and Innovation Operations (1444/2014)
3	C3I2	Research infrastructure and piloting – RDI funding package supporting the green transition – Accelerating key industries of the future (Academy of Finland)	Ministry of Education and Culture	Academy of Finland	Act on the Academy of Finland (922/2009)
3	C3I3	Research infrastructure and piloting – RDI funding package supporting the green transition – Accelerating key industries of the future.	Ministry of Economic Affairs and Employment	Business Finland	Act on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017) Government Decree on Research, Development and Innovation Operations (1444/2014)

Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
3	C314	Research infrastructure and piloting – RDI funding package supporting the green transition – Innovation aid for growth enterprises	Ministry of Economic Affairs and Employment	Business Finland	Act on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017) Government Decree on Research, Development and Innovation Operations (1444/2014)
3	C315	Research infrastructure and piloting – Investments in RDI infrastructures supporting sustainable growth and digitalisation – Competitive funding for research infrastructures (national research infrastructures)	Ministry of Education and Culture	Academy of Finland	Act on the Academy of Finland (922/2009)
3	C316	Research infrastructure and piloting – Investments in RDI infrastructures supporting sustainable growth and digitalisation – Competitive funding for research infrastructures (local research infrastructures)	Ministry of Education and Culture	Academy of Finland	Act on the Academy of Finland (922/2009)

Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
3	C317	Research infrastructure and piloting – Investments in RDI infrastructures supporting sustainable growth and digitalisation – Competitive funding for innovation infrastructures	Ministry of Economic Affairs and Employment	Business Finland	Act on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017)  Government Decree on Research, Development and Innovation Operations (1444/2014)
3	C411	Sectors suffering from the coronavirus crisis and leaders of international growth – Growth accelerator programme for small enterprises	Ministry of Economic Affairs and Employment	Centres for Economic Development, Transport and the Environment with RR duties (Häme, Central Finland, South Savo and North Ostrobothnia)	Act on the Centres for Economic Development, Transport and the Environment (897/2009)  Government Decree on the Centres for Economic Development, Transport and the Environment (1373/2018)  Act on discretionary government grants to develop business operations (9/2014)  Government Decree on discretionary government grants to develop business operations (716/2014)



Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
3	C4I2	Sectors suffering from the coronavirus crisis and leaders of international growth – Key industries for international growth	<p>Ministry of Economic Affairs and Employment: A programme to promote low-carbon approaches, the circular economy and the digital transformation in industry and to facilitate increased exports of industrial services; and the 'Health and wellbeing expertise and technology' programme</p> <p>Ministry of Agriculture and Forestry: Growth and export programme for water expertise</p> <p>Ministry of Transport and Communications: Electric heavy transport ecosystem and acquisition and conversion support</p>	<p>Business Finland: A programme to promote low-carbon approaches, the circular economy and the digital transformation in industry and to facilitate increased exports of industrial services; and the 'Health and wellbeing expertise and technology' programme</p> <p>Centre for Economic Development, Transport and the Environment for South Savo: Growth and export programme for water expertise</p> <p>Transport and Communications Agency: Electric heavy transport ecosystem and acquisition and conversion support</p>	<p>Act on the Centres for Economic Development, Transport and the Environment (897/2009)</p> <p>Government Decree on the Centres for Economic Development, Transport and the Environment (1373/2018)</p> <p>Government Decree amending the Government Decree on the Centres for Economic Development, Transport and the Environment (601/2020)</p> <p>Act on the Transport and Communications Agency (935/2018)</p> <p>Act on Discretionary Government Transfers (688/2001)</p> <p>Act on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017)</p> <p>Government Decree on Research, Development and Innovation Operations (1444/2014)</p>

Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
3	C413	Sectors suffering from the coronavirus crisis and leaders of international growth – Revitalisation aid for the cultural and creative industries	Ministry of Economic Affairs and Employment: Aid for pilot projects to enterprises in the cultural and creative industries and in the events industry  Ministry of Education and Culture: Structural aid for enterprises and corporations in the cultural and creative industries (innovative service, production and operating models)	Business Finland: Aid for pilot projects to enterprises in the cultural and creative industries and in the events industry  Ministry of Education and Culture: Structural aid for enterprises and corporations in the cultural and creative industries (innovative service, production and operating models)	Act on Discretionary Government Transfers (688/2001)  Act on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017)  Government Decree on Research, Development and Innovation Operations (1444/2014)
3	C414	Sectors suffering from the coronavirus crisis and leaders of international growth – Sustainability and digitalisation growth in the tourism industry	Ministry of Economic Affairs and Employment	Business Finland	Act on Innovation Funding Agency Business Finland and a Limited Liability Company Called Business Finland (1146/2017)  Act on Discretionary Government Transfers (688/2001)  Government Decree on Research, Development and Innovation Operations (1444/2014)

Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
4	C1R1	Improving access to health and social services and enhancing cost-effectiveness – Promoting compliance with the care guarantee as part of the preparation for the health and social services reform, and reducing the care, rehabilitation and service deficit in health and social services	Ministry of Social Affairs and Health	Ministry of Social Affairs and Health	Act on Discretionary Government Transfers
4	C1I1	Improving access to health and social services and enhancing cost-effectiveness – Promoting compliance with the care guarantee (including in mental health services) and reducing the care, rehabilitation and service deficit in health and social services	Ministry of Social Affairs and Health	Ministry of Social Affairs and Health	Act on Discretionary Government Transfers

Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
4	C112	Improving access to health and social services and enhancing cost-effectiveness – Promoting compliance with the care guarantee by reinforcing preventive measures and early identification of problems	Ministry of Social Affairs and Health	Ministry of Social Affairs and Health	Act on Discretionary Government Transfers
4	C113	Improving access to health and social services and enhancing cost-effectiveness – Strengthening the knowledge base and effectiveness-based guidance supporting the cost-effectiveness of health and social services	Ministry of Social Affairs and Health	Ministry of Social Affairs and Health	Act on Discretionary Government Transfers
4	C114	Improving access to health and social services and enhancing cost-effectiveness – Introducing service-oriented digital innovations that will help achieve the care guarantee.	Ministry of Social Affairs and Health	Ministry of Social Affairs and Health	Act on Discretionary Government Transfers

Pillar	Number of action	Component area — action	Coordinating ministry (if multiple, description of division of administrative and supervisory duties)	State aid authority (N/A for reforms without an aid element)	Legislation applicable to authorities' actions
4	C115	Improving access to health and social services and enhancing cost-effectiveness – Client-oriented digital care information system in Åland	Government of Åland, Department for Social Affairs and Environment	Government of Åland, Department for Social Affairs and Environment	Åland Act (2011:114) on medical and health care

## Appendix 2 Milestones and targets

### PILLAR 1: The green transition will support structural adjustment of the economy and underpin a carbon-neutral welfare society

#### P1C1

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P1C1R1	1 – Energy system transition – Significant reduction of energy use of coal by 2026	Target	Significant reductions in progress. Significant reduction of energy use of coal, by about 40% to 80% from 2019 levels by 2026 (estimate)		Number	60	36	Q2	2026
P1C1R2	1 – Energy system transition – Comprehensive reform of energy taxation	Milestone	Act on Excise Duty on Electricity and Certain Fuels	Published in the Statute Book of Finland. Entry into force 1 Jan 2021				Q2	2021
P1C1I1	1 – Energy system transition – Energy infrastructure investments	Milestone	First funding application notice published, for project type 033	First funding application notice published on the Ministry website. Application notice includes investment description, DNSH criteria and climate markings as per Appendix IV.				Q4	2021

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator		Timetable		
					Unit	Baseline	Target	Quarter	Year
P1C111	1 – Energy system transition – Energy infrastructure investments	Milestone	Funding application rounds completed and funding decisions made	All funding decisions signed				Q4	2023
P1C111	1 – Energy system transition – Energy infrastructure investments	Milestone	All selected projects completed	Final reports on completed projects				Q2	2026
P1C112	1 – Energy system transition – Investments in emerging energy technology	Milestone	First funding application notice published, for project types 028, 029, 030bis, 032, 033 and 034bis	First funding application notice published on the Ministry website. Application notice includes investment description, DNSH criteria and climate markings as per Appendix IV.				Q4	2021
P1C112	1 – Energy system transition – Investments in emerging energy technology	Milestone	Funding application rounds completed and funding decisions made	All funding decisions signed				Q4	2023
P1C112	1 – Energy system transition – Investments in emerging energy technology	Milestone	All selected projects completed	Final reports on completed projects				Q2	2026

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator		Timetable		
					Unit	Baseline	Target	Quarter	Year
P1C113	1 – Energy system transition – Renewable energy investment in Åland	Milestone	First funding application notice published, for project types 028 or 029	First funding application notice published on the website of the Government of Åland. One or more application rounds. Application notice includes investment description, DNSH criteria and climate markings as per Appendix IV.				Q4	2021
P1C113	1 – Energy system transition – Renewable energy investment in Åland	Milestone	All selected projects completed	Final reports on completed projects				Q2	2026



## P1C2

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator		Timetable		
					Unit	Baseline	Target	Quarter	Year
P1C2R1	2 – Industry renewal and invest-ments supporting the green and digital transition – Reform of the Climate Change Act and low carbon renewal of industries	Milestone	Entry into force of the revised Climate Change Act in order for the carbon neutrality target to be attained by 2035	Parliament has enacted the Act, and it has been published in the Statute Book of Finland.				Q2	2022
P1C2R1	2 – Industry renewal and invest-ments supporting the green and digital transition – Reform of the Climate Change Act and low carbon renewal of industries	Milestone	Updated Climate and Energy Strategy, Medium-term Climate Plan and sector-specific low-carbon roadmaps.	Strategy, Plan and roadmaps pub-lished on the websites of the Ministry of Economic Affairs and Employment and of the Ministry of the Environ-ment.				Q4	2025
P1C2I1	2 – Industry renewal and invest-ments supporting the green and digital transition – Clean hydrogen and CCS/CCU in industry	Milestone	First notice for the pre-notification application round for IPCEI Hydrogen and first notice for application round for national low-emission hydrogen production and use and CCR/CCU pub-lished.	Notices on first application rounds according to the policy targets and criteria given in the investment package published on the Business Finland website.				Q4	2021

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P1C211	2 – Industry renewal and investments supporting the green and digital transition – Clean hydrogen and CCS/CCU in industry	Milestone	Funding application rounds completed and funding decisions made	All funding decisions signed				Q4	2023
P1C211	2 – Industry renewal and investments supporting the green and digital transition – Clean hydrogen and CCS/CCU in industry	Milestone	All selected projects completed	Final reports on results of selected projects completed				Q2	2026
P1C212	2 – Industry renewal and investments supporting the green and digital transition – Direct electrification of industry processes to reduce carbon consumption	Milestone	First funding application round notice for direct electrification of industry processes to reduce carbon dioxide emissions and for carbon reduction in industry published.	Notices on first application round according to the policy targets and criteria given in the investment package published on the Business Finland website.				Q4	2021
P1C212	2 – Industry renewal and investments supporting the green and digital transition – Direct electrification of industry processes to reduce carbon consumption	Milestone	Funding application rounds completed and funding decisions made	All funding decisions signed				Q4	2023

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P1C2I2	2 – Industry renewal and investments supporting the green and digital transition – Direct electrification of industry processes to reduce carbon consumption	Milestone	All selected projects completed	Final reports on results of selected projects completed				Q2	2026
P1C2R2	2 – Industry renewal and investments supporting the green and digital transition – Strategic promotion of the circular economy and reform of the Waste Act	Milestone	Stagewise implementation of the principal processes in the revised Waste Act.	Implementation completed.				Q4	2024
P1C2R2	2 – Industry renewal and investments supporting the green and digital transition – Strategic promotion of the circular economy and reform of the Waste Act	Milestone	Government Resolution on executing the Circular Economy Programme adopted.	Formal decision (YM/2021/17) published on the Government website.				Q2	2021
P1C2R2	2 – Industry renewal and investments supporting the green and digital transition – Strategic promotion of the circular economy and reform of the Waste Act	Milestone	National agreement on a low-carbon circular economy signed with key operators.	Framework for the low-carbon circular economy agreement drawn up and signed by key operators.				Q2	2023

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P1C2I3	2 – Industry renewal and investments supporting the green and digital transition – Investments promoting key materials and industrial residues, reuse and recycling	Milestone	First funding application notice published for investment projects that promote reuse of waste materials and residues.	First application round with policy targets and criteria from this investment package published on the Business Finland website.				Q4	2021
P1C2I3	2 – Industry renewal and investments supporting the green and digital transition – Investments promoting key materials and industrial residues, reuse and recycling	Milestone	Funding application rounds completed and funding decisions made	All funding decisions signed				Q4	2023
P1C2I3	2 – Industry renewal and investments supporting the green and digital transition – Investments promoting key materials and industrial residues, reuse and recycling	Milestone	All selected projects completed	Final reports on results of selected projects completed				Q2	2026

## P1C3

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P1C3R1	3 – Reducing the climate and environmental impacts of the building stock – Legislation governing construction will be developed to mandate low-carbon construction and a digital knowledge base.	Milestone	Reform of land use and building legislation to govern low-carbon construction	Parliament passes Government Proposal for reforming the Land Use and Building Act.				Q2	2023
P1C3R2	3 – Reducing the climate and environmental impacts of the building stock – Action plan to phase out fossil-based oil heating	Milestone	Fossil-based oil heating phase out action plan approved	Programme published				Q4	2021
P1C3R2	3 – Reducing the climate and environmental impacts of the building stock – Action plan to phase out fossil-based oil heating	Milestone	Fossil-based oil heating phase out action plan interim review	Decrease in low-rise residences with separate oil heating, %				Q4	2025

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P1C311	3 – Reducing the climate and environmental impacts of the building stock – Aid for converting building heating systems from fossil-based oil heating to energy-efficient heating	Milestone	Aid system details defined by Government Decree for low-rise housing enters into force.	Decree enters into force.				Q4	2021
P1C311	3 – Reducing the climate and environmental impacts of the building stock – Aid for converting building heating systems from fossil-based oil heating to energy-efficient heating	Milestone	Details of the aid system determined and are in force for other buildings.	Criteria for granting aid in the system are in force.		0		Q2	2022
P1C311	3 – Reducing the climate and environmental impacts of the building stock – Aid for converting building heating systems from fossil-based oil heating to energy-efficient heating	Target	At least 50% of the aid decisions have been made.	Aid decisions, no. of buildings.	Number	0	7,300	Q4	2022

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator		Timetable		
					Unit	Baseline	Target	Quarter	Year
P1C311	3 – Reducing the climate and environmental impacts of the building stock – Aid for converting building heating systems from fossil-based oil heating to energy-efficient heating	Target	100% of the aid decisions have been made.		Number		14,600	Q4	2023
P1C312	3 – Reducing the climate and environmental impacts of the building stock – Low-carbon built-up environment programme	Milestone	Low-carbon built-up environment programme aid application round launched.	Programme aid application round published.				Q4	2021
P1C312	3 – Reducing the climate and environmental impacts of the building stock – Low-carbon built-up environment programme	Target	All allocation decisions made.		% (Percentage)	0	90	Q2	2024
P1C312	3 – Reducing the climate and environmental impacts of the building stock – Low-carbon built-up environment programme	Milestone	All projects awarded aid and all procurements made have been completed.	Final reports on completed projects				Q2	2026

## P1C4

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P1C4R1	4 – Low-carbon solutions in communities and transport – Roadmap to fossil-free transport	Milestone	Government Resolution to reduce greenhouse gas emissions from domestic transport.	Government resolution adopted on 6 May 2021.				Q2	2021
P1C4R1	4 – Low-carbon solutions in communities and transport – Roadmap to fossil-free transport	Milestone	Additional impact assessments on the emission-reducing potential of raising the target level for transport services, remote work and the distribution obligation, and impact assessments on forthcoming EU legislation.	Additional impact assessments completed and published in autumn 2021.				Q2	2022
P1C4R2	4 – Low-carbon solutions in communities and transport – Tax reform for sustainable transport	Milestone	Forthcoming actions and policy review based on the report of the working group investigating transport taxation reform.	Political decisions required by the report to be made at the government budget session in autumn 2021.				Q4	2021
P1C4I1	4 – Low-carbon solutions in communities and transport – Public distribution and refuelling infrastructures for transport electricity, biogas and new forms of motive power	Target	% of aid awarded.		% (Percentage)	0	70	Q2	2023



Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator		Timetable		
					Unit	Baseline	Target	Quarter	Year
P1C411	4 – Low-carbon solutions in communities and transport – Public distribution and refuelling infrastructures for transport electricity, biogas and new forms of motive power	Target	Number of high-power chargers		Number	0	376	Q2	2024
P1C411	4 – Low-carbon solutions in communities and transport – Public distribution and refuelling infrastructures for transport electricity, biogas and new forms of motive power	Target	Recharging point for public transport (buses)		Number	0	417	Q2	2024
P1C411	4 – Low-carbon solutions in communities and transport – Public distribution and refuelling infrastructures for transport electricity, biogas and new forms of motive power	Target	CBG stations		Number	0	25	Q2	2024

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator		Timetable		
					Unit	Baseline	Target	Quarter	Year
P1C4I1	4 – Low-carbon solutions in communities and transport – Public distribution and refuelling infrastructures for transport electricity, biogas and new forms of motive power	Target	LBG stations		Number	0	14	Q2	2024
P1C4I2	4 – Low-carbon solutions in communities and transport – Private recharging infrastructure	Target	40% of aid awarded.		% (Percentage)	0	40	Q2	2022
P1C4I2	4 – Low-carbon solutions in communities and transport – Private recharging infrastructure	Target	90% of aid awarded.		% (Percentage)	40	90	Q2	2023
P1C4I2	4 – Low-carbon solutions in communities and transport – Private recharging infrastructure	Target	Number of privately funded recharging points		Number	0	28,000	Q2	2024

## P1C5

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P1C5R1	5 – Environmental sustainability and nature-based solutions – Nature conservation legislation reform	Milestone	Nature Conservation Act and Decree	Parliament to pass the Government Proposal revising the Nature Conservation Act				Q1	2023
P1C5I1	5 – Environmental sustainability and nature-based solutions – Gypsum treatment of fields and nutrient recycling	Milestone	Gypsum procurement, transport and spreading services	Gypsum procurement, transport and spreading services agreements				Q4	2022
P1C5I1	5 – Environmental sustainability and nature-based solutions – Gypsum treatment of fields and nutrient recycling	Target	Fields treated with gypsum (area in hectares)		Number	0	50,000	Q4	2025
P1C5I1	5 – Environmental sustainability and nature-based solutions – Gypsum treatment of fields and nutrient recycling	Milestone	Nutrient recycling and recovery project selection	Funding application rounds completed, all funding decisions signed				Q4	2023

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P1C511	5 – Environmental sustainability and nature-based solutions – Gypsum treatment of fields and nutrient recycling	Target	Supported sites with enhanced nutrient recycling or recovery	Final reports with results on the sites published	Number	0	7	Q4	2025
P1C512	5 – Environmental sustainability and nature-based solutions – Climate-sustainable actions in the land use sector	Milestone	Smart forestry projects selected for funding	All funding decisions made and signed				Q4	2023
P1C512	5 – Environmental sustainability and nature-based solutions – Climate-sustainable actions in the land use sector	Target	All projects completed	Final reports of selected projects with results	Number	0	7	Q4	2025

## PILLAR 2: Digitalisation and the data economy will strengthen productivity and make services available to all

### P2C1

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator		Timetable		
					Unit	Baseline	Target	Quarter	Year
P2C111	1 – Digital infrastructure – Improving the quality and availability of telecommunications networks (Ministry of Transport and Communications)	Milestone	Legislation for the aid programme passed. Principally, legislation for the aid programme will remain unchanged, but potential GBER amendments are to be assessed. Aid will only be allocated to areas where sufficient commercial services are not available and/or where there are no concrete investment plans to build networks capable of offering such connections. In this way, the aid will not distort competition.	The legislation has been enacted, and it has been published in the Statute Book of Finland.				Q2	2022

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P2C1I1	1 – Digital infrastructure – Improving the quality and availability of telecommunications networks (Ministry of Transport and Communications)	Target	At least 10,000 potential new subscribers are within reach of high-speed (100/100 Mbit/s) broadband.		Number	0	10,000	Q2	2024
P2C1I1	1 – Digital infrastructure – Improving the quality and availability of telecommunications networks (Ministry of Transport and Communications)	Target	At least 25,000 potential new subscribers are within reach of high-speed (100/100 Mbit/s) broadband.		Number	10,000	25,000	Q2	2026
P2C1R1	1 – Digital infrastructure – Digirail project	Milestone	Successful tests completed in a test lab on equipment emulating a European Rail Traffic Management System (ERTMS).	Successful tests completed in a test lab with the following results: the technical specification is finished enough that it can be tested in a realistic context and on actual rolling stock.  Testing performed as a simulation of the forthcoming test track section (Kouvola–Kotka–Hamina) (ERTMS testing).				Q4	2022

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P2C1R1	1 – Digital infrastructure – Digirail project	Milestone	Successful tests in realistic conditions completed on the test track.	Successful tests completed on the test track set up for the purpose using a radio-based European Rail Traffic Management System (ERTMS), in realistic conditions and on actual rolling stock. The results obtained on the test track will enable transition to the next phase, where the technical specifications are finalised enough for commissioning the pilot track section that will subsequently remain in commercial use.				Q4	2024
P2C1R1	1 – Digital infrastructure – Digirail project	Milestone	Commercial pilot track section ready for testing	Commercial pilot track section completed and ready for testing. On the pilot track section, the new system will be the only system used.				Q2	2026

## P2C2

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator		Timetable		
					Unit	Baseline	Target	Quarter	Year
P2C2R1	Corporate digital economy – RTE programme (Ministry of Economic Affairs and Employment, Ministry of Finance)	Milestone	Exchange of digital economic data	Corporate financial data as defined in the project (e-receipts, e-invoices, procurement messages and financial statements) can be transferred in structured form to those bodies entitled to access them on the basis of legislation or of the consent of the enterprise in question.				Q4	2024
P2C2I1	Corporate digital economy – RTE programme (Ministry of Economic Affairs and Employment, Ministry of Finance)	Milestone	Ecosystem design and delivery	The minimum operational version of the corporate digital ecosystem is completed.				Q4	2022
P2C2I2	Corporate digital economy – RTE programme (Ministry of Economic Affairs and Employment, Ministry of Finance)	Milestone	Enabling data sharing	Interoperable interfaces enabling the sharing of financial data defined, documented and published.				Q4	2023



Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator		Timetable		
					Unit	Baseline	Target	Quarter	Year
P2C2I3	Corporate digital economy – RTE programme (Ministry of Economic Affairs and Employment, Ministry of Finance)	Milestone	Business e-documents	Adoption of business e-documents compliant with the project definitions (e-receipt, e-invoice and e-procurement messages) has been facilitated by publishing the information content of the documents, and the adoption of those documents has begun in the ecosystem.				Q4	2023
P2C2I4	Microelectronics value chain	Milestone	Project selection	At least two projects supporting the development of the microelectronics value chain have been selected	At least two projects have been selected, and the funding decisions made. The selections are based on an open application round with criteria consistent with the policy target and as given in the milestone description.			Q4	2022
P2C2I4	Microelectronics value chain	Milestone	Project implementation	All projects selected for funding have been completed.	All projects completed and verified as completed by their final reports.			Q4	2025

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator		Timetable		
					Unit	Baseline	Target	Quarter	Year
P2C215	6G, AI and quantum computing development facilities	Milestone	Project selection	All projects for developing 6G, AI and quantum computing were selected in an open application round	All projects have been selected, and the funding decisions made. Selections were made in an open application round with criteria consistent with the policy target and as given in the milestone description.			Q4	2022
P2C215	6G, AI and quantum computing development facilities	Milestone	Project implementation	All selected projects completed.	All projects completed and verified as completed by their final reports.			Q4	2025

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator		Timetable		
					Unit	Baseline	Target	Quarter	Year
P2C2R3	2 – Accelerating the data economy and digitalisation – Virtual Finland (Ministry of Finance, Ministry for Foreign Affairs, Ministry of Economic Affairs and Employment, etc.)	Milestone	Virtual Finland shared platform and services	1) Production version of shared platform completed. 2) First and second service integrated into the platform. Both services integrated so that they are operational and available to clients.  After the RRF period, the operating model and platform will be further improved on the continuous development principle, and other services will be added for enterprises and private individuals.				Q4	2025
P2C2R4	Improving the Residential and Commercial Property Information System	Milestone	Legislation for expanding the coverage of the Residential and Commercial Property Information System is enacted.	Parliament enacts the amendments re-quired to legislation for expanding the coverage of the Residential and Commercial Property Information System. The legislation is published in the Statute Book of Finland.				Q2	2023

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator		Timetable		
					Unit	Baseline	Target	Quarter	Year
P2C2R4	Improving the Residential and Commercial Property Information System	Milestone	Expanding the Residential and Commercial Property Information System to include administrative data from housing companies technically completed.	Common procedures for accessibility of administrative data from housing companies defined in a project run by the Ministry of Agriculture and Forestry and by the National Land Survey, and the System provides a channel for sharing the data.				Q2	2026
P2C2R5	Enhancing the effectiveness and transparency of RRP-based reforms and investments by improving information systems, administration, oversight and inspections	Milestone	Setting up a working group for oversight, administration and inspection of RRP implementation	Setting up a working group for oversight, administration and inspection of RRP implementation				Q2	2021
P2C2R5	Enhancing the effectiveness and transparency of RRP-based reforms and investments by improving information systems, administration, oversight and inspections	Milestone	Legislation providing for implementation of the RRP	Legislation providing for implementation of the RRP enacted by Parliament				Q4	2021

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator		Timetable		
					Unit	Baseline	Target	Quarter	Year
P2C2R5	Enhancing the effectiveness and transparency of RRP-based reforms and investments by improving information systems, administration, oversight and inspections	Milestone	Authorities responsible for coordination, administration, oversight and inspections of the RRP, and information system.	The authorities responsible for coordination, administration, oversight and inspections of the RRP have begun operations and the information system is on stream.				Q2	2021

## P2C3

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator		Timetable		
					Unit	Baseline	Target	Quarter	Year
P2C3R1	– Digital security – Ensuring effective supervision and enforcement against money laundering (Ministry of Finance)	Target	Improving automatic availability of data for preventing money laundering		Number	0	3	Q2	2026
P2C3R1	– Digital security – Ensuring effective supervision and enforcement against money laundering (Ministry of Finance)	Target	Increasing the rate of automation in data processing and exchange between authorities		% (Percentage)	0	25	Q2	2026
P2C3R1	– Digital security – Ensuring effective supervision and enforcement against money laundering (Ministry of Finance)	Milestone	Entry into force of legislative amendments required for the investments (e.g. Trade Register Act, Act on the Bank and Payment Accounts Control System).	Legislation published in the Official Journal after enactment by Parliament.				Q4	2025
P2C3R1	– Digital security – Ensuring effective supervision and enforcement against money laundering (Ministry of Finance)	Milestone	Successful implementation of investments in the national AML digitalisation project, and systems taken into use.	Project coordinators for the investments report to the steering group on the successful implementation of investments and on taking systems into use.				Q4	2025

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator		Timetable	
					Unit	Baseline Target	Quarter	Year
P2C311	Cyber security research investments	Milestone	Training platform and content available in multiple languages	Specifications for cyber knowledge and skills required and for how they are to be taught; digital platform created on this basis in the first phase of the project. Shared training content requirements for the platform conform to the two milestones in the research plan, and the platform is widely available to educational institutions in the Member States in August 2024.			Q4	2024
P2C312	Cyber security exercises	Milestone	Cyber security exercises held, and exercise environment improved.	Three technical and functional exercises held in 2021, and the technical and functional exercise environment improved with the help of the steering group to respond to future needs. Four exercises per year held between 2022 and 2025 for a total of 19 exercises involving about 2,000 trainees from the public administration.			Q4	2025

## PILLAR 3: Raising the employment rate and upskilling to accelerate sustainable growth

### P1C1

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P3C1R1	1 – Employment and labour market – Nordic labour market services model	Milestone	Implementation of the Nordic labour market services model begins with the jobseeker service process.	The Act on Public Employment and Business Services providing for the Nordic labour market services model enters into force, and the relevant legislation is published in the Statute Book of Finland.				Q2	2022
P3C1R1	1 – Employment and labour market – Nordic labour market services model	Target	Number of various types of jobseeker discussions increases, as per the principles of the Nordic labour market services model.		Number	1 million interviews in 2019	1.5 to 2 million in 2022	Q4	2022
P3C1R2	1 – Employment and labour market – Eliminating the right to additional days of unemployment benefit	Milestone	Entry into force of legislation providing for gradual elimination of the right to additional days of unemployment benefit	Entry into force of legislation providing for gradual elimination of the right to additional days of unemployment (Government Proposal for an Act amending the Unemployment Security Act), published in the Official Journal				Q2	2023



Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P3C1R3	1 – Employment and labour market – Streamlining work-based and study-based immigration and easing international recruitment	Milestone	Entry into force of amendments to immigration legislation	Amendments to chapter 5 of the Aliens Act (301/2004) published in the Official Journal.				Q2	2023
P3C111	1 – Employment and labour market –World-class digital infrastructure to support migration of skilled labour	Milestone	Reduction in average number of days needed to process fast-tracked residence permit applications for specialists and growth entrepreneurs	Reduction in average number of days needed to process fast-tracked residence permit applications for specialists and growth entrepreneurs.  Average processing time for fast-tracked permit applications down to 14 days.	Number	47	14	Q2	2022
		Target	Average number of days needed to process work-based and study-based residence permit applications reduced.		Number	82	30	Q4	2024

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P3C1R4	1 – Employment and labour market –Enhancing multiprofessional services for young people	Target	An increased percentage of Ohjaamo guidance points provide integrated social welfare and health care services or expertise in education and training.		%	33	60	Q4	2024
P3C1R5	1 – Employment and labour market – Reinforcing the capacity for persons with partial work ability to find employment, through a new intermediate labour market operator offering employment relationships and services facilitating entry into the open labour market	Milestone	Act providing for the new, State-owned incorporated intermediate labour market operator entered into force.	Act entered into force				Q2	2022

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P3C1R5	1 – Employment and labour market – Rein-forcing the capacity for persons with partial work ability to find employment, through a new intermediate labour market operator offering employment relationships and services facilitating entry into the open labour market	Target	New intermediate labour market operator (State-owned company) has started operations and has hired persons with partial work ability in employment relationships.	Number of persons employed	Number	0	400	Q4	2023
P3C1I2	1 – Employment and labour market – Extension of the work ability programme and IPS model	Target	Work ability programme and IPS model extended to 11 new areas.		Number	0	11	Q4	2024
P3C1I3	1 – Employment and labour market –Mental health and work ability as prerequisites for employment and productivity	Target	At least 1,000 workplaces or occupational health care units participating in programme actions (training, coaching, other development efforts).		Number	0	1,000	Q4	2024

## P3C2

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P3C2R1	2 – Upskilling and continuous learning reform – Continuous learning reform	Milestone	Entry into force of Act on the continuous learning and employment service centre	Entry into force of Act on the continuous learning and employment service centre, published in the Statute Book of Finland, as per the date given in the Act.				Q4	2021
P3C2R1	2 – Upskilling and continuous learning reform – Continuous learning reform	Milestone	Medium-term forecasting model improves forecasting of labour and skills needs	Medium-term forecasting model in use				Q4	2023
P3C2R1	2 – Upskilling and continuous learning reform – Continuous learning reform	Milestone	Application rounds or invitation to tender announced for education and training to improve digital skills and green skills.	Announcement of application round or invitation to tender				Q4	2022
P3C2R1	2 – Upskilling and continuous learning reform – Continuous learning reform	Target	At least 7,800 persons have entered training created for addressing changes in working life or the green and digital transition.		Number	0	7,800	Q2	2024

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P3C2R1	2 – Upskilling and continuous learning reform – Continuous learning reform	Target	At least 300 professionals in guidance services have attended continuing education on digital skills, language and culture awareness, the green transition and promoting gender equality.		Number	0	300	Q4	2024
P3C2R2	9 – Upskilling and continuous learning reform – Continuous learning digitalisation programme	Milestone	Target architecture for digital services in continuous learning created in joint effort by the Ministry of Education and Culture, the Ministry of Economic Affairs and Employment and the Digivisio 2030 project.	Target architecture taken into use				Q4	2021
P3C2R2	9 – Upskilling and continuous learning reform – Continuous learning digitalisation programme	Target	At least 80% of the service prototypes specified in the target architecture completed.		% (Percentage)	0	80	Q2	2023
P3C2R2	9 – Upskilling and continuous learning reform – Continuous learning digitalisation programme	Target	At least 80% of the service prototypes specified in the target architecture completed and available to various client groups.		% (Percentage)	0	80	Q4	2024

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P3C2I1	2 – Upskilling and continuous learning reform – Raising the educational attainment by adding starts in higher education	Target	Universities have increased their admissions in disciplines which support the Sustainable Growth Programme for Finland and in which there are labour shortages.		Number		600	Q4	2022
P3C2R3	2 – Upskilling and continuous learning reform – Digitalisation and modernisation of education and training	Target	Percentage of modernised courses increased to 70% (of all university courses), including comprehensive digital content (at least 25% of any given course given as distance learning, or at least 30% of the course material of any given course is in digital multimedia form) in degree programmes and Open University courses at the Åland University of Applied Sciences	Number of modernised courses in degree programmes and the Open University	% (Percentage)	10	70	Q4	2024

## P3C3

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P3C315	3 – Research infrastructure and piloting – Investments in RDI infrastructures supporting sustainable growth and digitalisation – Competitive funding for research infrastructures (local research infrastructures, Academy of Finland)	Milestone	Launching application round for local research infrastructures	Application round announced, and the notice includes the application and selection criteria to ensure that the projects funded will comply with the targets and requirements of the RRF plan as explained in the description.				Q2	2022
P3C315	3 – Research infrastructure and piloting – Investments in RDI infrastructures supporting sustainable growth and digitalisation (local research infrastructures, Academy of Finland)	Target	Number of funding decisions for local research infrastructure projects, all funding decisions made.		Number	0	12	Q4	2022

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P3C315	3 – Research infrastructure and piloting – Investments in RDI infrastructures supporting sustainable growth and digitalisation – Competitive funding for research infrastructures (local research infrastructures, Academy of Finland)	Target	Percentage of projects completed		% (Percentage)	0	90	Q4	2025
P3C316	3 – Research infrastructure and piloting – Investments in RDI infrastructures supporting sustainable growth and digitalisation – Competitive funding for research infrastructures (national research infrastructures, Academy of Finland)	Milestone	Launching application round for national research infrastructures	Application round announced, and the notice includes the application and selection criteria to ensure that the projects funded will comply with the targets and requirements of the RRF plan as explained in the description.				Q2	2021



Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P3C316	3 – Research infrastructure and piloting – Investments in RDI infrastructures supporting sustainable growth and digitalisation – Competitive funding for research infrastructures (national research infrastructures, Academy of Finland)	Target	Number of funding decisions for national research infrastructure projects, all funding decisions made.		Number	0	6	Q2	2022
P3C316	3 – Research infrastructure and piloting – Investments in RDI infrastructures supporting sustainable growth and digitalisation – Competitive funding for research infrastructures (national research infrastructures, Academy of Finland)	Target	Percentage of projects completed		% (Percentage)	0	90	Q4	2025

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P3C317	3 – Research infrastructure and piloting – Investments in RDI infrastructures supporting sustainable growth and digitalisation – Competitive funding for innovation infrastructures (Business Finland)	Milestone	Launching application round for innovation infrastructures	Application round announced, and the notice includes the application and selection criteria to ensure that the projects funded will comply with the targets and requirements of the RRF plan as explained in the description.				Q2	2022
P3C317	3 – Research infrastructure and piloting – Investments in RDI infrastructures supporting sustainable growth and digitalisation – Competitive funding for innovation infrastructures (Business Finland)	Target	Number of funding decisions for innovation research infrastructure projects, all funding decisions made.		Number	0	4	Q2	2022
P3C317	3 – Research infrastructure and piloting – Investments in RDI infrastructures supporting sustainable growth and digitalisation – Competitive funding for innovation infrastructures (Business Finland)	Target	Percentage of innovation infrastructure projects completed		% (Percentage)	0	100	Q4	2025

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P3C311	3 – Research infrastructure and piloting – RDI funding package supporting the green transition – Business driver funding	Milestone	Launching the business driver project application round	Application round open 2021, project selection Q4/2021. Potential applicants activated for the application round. Application round announced, and the notice includes the application and selection criteria to ensure that the projects funded will comply with the targets and requirements of the RRF plan.				Q2	2022
P3C311	3 – Research infrastructure and piloting – RDI funding package supporting the green transition – Business driver funding	Target	Number of funding decisions for business driver projects, all funding decisions made.		Number	0	5	Q2	2023
P3C311	3 – Research infrastructure and piloting – RDI funding package supporting the green transition – Business driver funding	Target	Percentage of business driver projects completed		% (Percentage)	0	100	Q4	2025

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P3C3I2	3 – Research infrastructure and piloting – RDI funding package supporting the green transition – Accelerating key industries and boosting expertise (Academy of Finland)	Milestone	First application round announced for research funding from the Academy of Finland to boost expertise in key industries.	First application round announced in autumn 2021. Application round announced, and the notice includes the application and selection criteria to ensure that the projects funded will comply with the requirements of the RRF plan, as explained in the milestone description.				Q4	2021
P3C3I2	3 – Research infrastructure and piloting – RDI funding package supporting the green transition – Accelerating key industries and boosting expertise (Academy of Finland)	Target	Number of funding decisions for key industries projects by the Academy of Finland, all funding decisions made		Number	0	25	Q2	2023
P3C3I2	3 – Research infrastructure and piloting – RDI funding package supporting the green transition – Accelerating key industries and boosting expertise (Academy of Finland)	Target	Percentage of completed key industries projects funded by the Academy of Finland		% (Percentage)	0	90	Q4	2025

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P3C3I3	3 – Research infrastructure and piloting – RDI funding package supporting the green transition – Accelerating key industries and boosting expertise (Business Finland)	Milestone	Business Finland application round announced for RDI accelerating key industries and boosting expertise.	Application round announced in 2021. Application round announced, and the notice includes the application and selection criteria to ensure that the projects funded will comply with the requirements of the RRF plan, as explained in the milestone description.				Q2	2022
P3C3I3	3 – Research infrastructure and piloting – RDI funding package supporting the green transition – Accelerating key industries and boosting expertise (Business Finland)	Target	Number of funding decisions for key industries RDI projects by Business Finland, all funding decisions made		Number	0	10	Q2	2023
P3C3I3	3 – Research infrastructure and piloting – RDI funding package supporting the green transition – Accelerating key industries and boosting expertise (Business Finland)	Target	Percentage of completed key industries RDI projects funded by Business Finland		% (Percentage)	0	90	Q4	2025

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P3C314	3 – Research infrastructure and piloting – RDI funding package supporting the green transition – Supporting innovative growth enterprises	Target	Number of funding decisions for growth enterprises, all funding decisions made		Number	0	25	Q2	2023
P3C314	3 – Research infrastructure and piloting – RDI funding package supporting the green transition – Supporting innovative growth enterprises	Target	Percentage of growth enterprise projects completed		% (Percentage)	0	90	Q4	2025

## P3C4

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator		Timetable		
					Unit	Baseline	Target	Quarter	Year
P3C411	1 – Sectors suffering from the coronavirus crisis and leaders of international growth – Growth accelerator programme	Milestone	Application round announced for aid to improve internationalisation capability of enterprises	Application round notice published. These describe the targets and criteria specific to each application round, as explained in more detail in the target description.				Q2	2022
P3C411	1 – Sectors suffering from the coronavirus crisis and leaders of international growth – Growth accelerator programme	Target	Internationalisation capability improvements in at least 240 enterprises supported with aid out of the programme		Number	0	240	Q4	2023
P3C412	1 – Sectors suffering from the coronavirus crisis and leaders of international growth – Key industries for international growth	Milestone	First three funding application rounds announced	Application round notice published. These describe the targets and criteria specific to each application round, as explained in more detail in the target description.		0	3	Q2	2022
P3C412	1 – Sectors suffering from the coronavirus crisis and leaders of international growth – Key industries for international growth	Target	100% of funding decisions made.		% (Percentage)	0	100	Q4	2023

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P3C4I2	1 – Sectors suffering from the coronavirus crisis and leaders of international growth – Key industries for international growth	Target	At least 70 enterprises and research organisations provided with aid		Number	0	70	Q4	2025
P3C4I3	1 – Sectors suffering from the coronavirus crisis and leaders of international growth – Revitalisation aid for the cultural and creative industries	Milestone	First application round for development aid and first application round for pilot aid open.	Application round notice published. These describe the targets and criteria specific to each application round, as explained in more detail in the target description. Criteria for digitalisation applicable to projects in all application rounds will ensure that investments will significantly contribute to the digital transition in the cultural and creative industries. Criteria to ensure compliance with the DNSH principle employed in all application rounds.	Number	0	2	Q4	2021



Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P3C4I3	1 – Sectors suffering from the coronavirus crisis and leaders of international growth – Revitalisation aid for the cultural and creative industries	Target	At least 145 projects provided with aid		Number	0	145	Q4	2023
P3C4I3	1 – Sectors suffering from the coronavirus crisis and leaders of international growth – Revitalisation aid for the cultural and creative industries	Target	Percentage of completed and reported projects out of the total of projects provided with aid		% (Percentage)	0	80	Q4	2025
P3C4I4	1 – Sectors suffering from the coronavirus crisis and leaders of international growth – Sustainability and digitalisation growth in the tourism industry	Milestone	First application round announced for RDI funding for the tourism industry.	Application round notice				Q2	2022
P3C4I4	1 – Sectors suffering from the coronavirus crisis and leaders of international growth – Sustainability and digitalisation growth in the tourism industry	Target	Number of operators (enterprises and RDI operators) in the tourism industry provided with funding		Number	0	35	Q2	2023

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator			Timetable	
					Unit	Baseline	Target	Quarter	Year
P3C414	1 – Sectors suffering from the coronavirus crisis and leaders of international growth – Sustainability and digitalisation growth in the tourism industry	Milestone	Coaching package for management by information for tourism enterprises and regions launched.	Description of the coaching package and the workbook 'Management by information in tourism' are available.				Q2	2023
P3C414	1 – Sectors suffering from the coronavirus crisis and leaders of international growth – Sustainability and digitalisation growth in the tourism industry	Target	Percentage of enterprises and regions in the Sustainable Travel Finland programme committed to using the carbon footprint calculator		% (Percentage)	0	45	Q4	2024

## PILLAR 4: Access to health and social services will be improved and their cost-effectiveness enhanced.

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator		Timetable		
					Unit	Baseline	Target	Quarter	Year
P4C1R1	Improving access to health and social services and enhancing cost-effectiveness – Promoting compliance with the care guarantee as part of the preparation for the health and social services reform, and reducing the care, rehabilitation and service deficit in health and social services caused by the coronavirus pandemic	Milestone	Government proposal for the national health and social services reform	Government proposal for the national health and social services reform approved				Q2	2021
P4C1R1	Access to health and social services improved and their cost-effectiveness enhanced – Promoting compliance with the care guarantee as part of the preparation for the health and social services reform, and reducing the care, rehabilitation and service deficit in health and social services caused by the coronavirus pandemic	Milestone	Preparation organisation for the national health and social services reform	Preparation organisation for the national health and social services reform appointed and working				Q2	2021

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator		Timetable		
					Unit	Baseline	Target	Quarter	Year
P4C1R1	Access to health and social services improved and their cost-effectiveness enhanced – Promoting compliance with the care guarantee as part of the preparation for the health and social services reform, and reducing the care, rehabilitation and service deficit in health and social services caused by the coronavirus pandemic	Milestone	Wellbeing services counties established and ready to assume responsibility for organising social welfare, health care and rescue services	Wellbeing services counties established and ready to implement the national health and social services reform. This readiness consists of four components: 1) management, 2) administration, 3) finances and 4) services.				Q2	2023
P4C1I1	Improving access to health and social services and enhancing cost-effectiveness – Promoting compliance with the care guarantee (including in mental health services) and reducing the treatment, rehabilitation and service deficit in health and social services caused by the coronavirus pandemic.	Target	Percentage of non-urgent care appointments achieved under the 7-day care guarantee.	80% of social and health centres can comply with the 7-day maximum waiting time for access to treatment in non-urgent cases.	% (Percentage)	58	80	Q4	2025

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator		Timetable		
					Unit	Baseline	Target	Quarter	Year
P4C112	Improving access to health and social services and enhancing cost-effectiveness – Promoting compliance with the care guarantee by reinforcing preventive measures and early identification of problems	Target	Percentage of the population using e-services	80% of the population uses e-services	% (Percentage)	70	80	Q4	2025
P4C113	Access to health and social services improved and their cost-effectiveness enhanced –Strengthening and reforming social welfare and health care services knowledge base and effectiveness-based guidance supporting the cost-effectiveness of health and social services	Target	Real-time national care guarantee monitoring	Real-time national care guarantee monitoring is performed at all health centres (100%)	% (Percentage)	90	100	Q4	2025
P4C114	Improving access to health and social services and enhancing cost-effectiveness – Introducing service-oriented digital innovations that will help achieve the care guarantee.	Target	Percentage of all social welfare and health care contacts that are managed remotely by electronic means (phone, chat, remote services)	45% of all contacts are managed remotely by electronic means (phone, chat, remote services)	% (Percentage)	30	45	Q4	2025
P4C115	1 – Improving access to health and social services and enhancing cost-effectiveness – Client-oriented digital care information system in Åland	Target	Care information system delivered		Number	0	1	Q4	2025

Code	Which reform or investment the target concerns	Milestone / target	Milestone / target description	Qualitative indicator	Qualitative indicator		Timetable		
					Unit	Baseline	Target	Quarter	Year
P4C115	1 – Improving access to health and social services and enhancing cost-effectiveness – Client-oriented digital care information system in Åland	Target	Percentage of municipal social and health services and / or private care enterprises who have adopted the health information system		Percentage	0	80	Q4	2025

## Appendix 3 Compliance with the ‘Do No Significant Harm’ principle (DNSH tables)

### Pillar 1

#### ENERGY SYSTEM TRANSITION

##### Reform 1: Significant reduction of energy use of coal

Part 1	Yes	No	Justification if ‘No’ has been selected
Climate change mitigation;		X	Reducing the energy use of coal will reduce greenhouse gas emissions. Reducing the energy use of coal will be driven by promoting renewable energy and energy efficiency. The aim is not to replace coal with other fossil fuels.
Climate change adaptation;		X	Reducing the energy use of coal will have no impact on climate change adaptation.
Sustainable use and protection of water and marine resources;		X	Reducing the energy use of coal will reduce transports of coal by sea.
The circular economy;		X	Reducing the energy use of coal will have no impact on the circular economy.
Pollution prevention and control to air, water or land;		X	Reducing the energy use of coal will reduce risks of environmental contamination, particularly by reducing sulphur dioxide emissions.
Protection and restoration of biodiversity and ecosystems.	X		

## PART 2

Questions	No	Substantive justification
Protection and restoration of biodiversity and ecosystems	X	<p>Phasing out coal will increase the need for energy investments to compensate for the loss in energy production. Investments 1 and 2, particularly as related to heat and power generation, will replace coal directly or indirectly in multiple contexts.</p> <p>Reducing the energy use of coal will also lead to alternative solutions not supported with RRF funding, such as land-based wind power and heat production using wood biomass.</p> <p>Wind power and wood bioenergy production will be delivered so as to cause no significant harm to the protection and restoration of biodiversity and ecosystems. This will be ensured in the planning and permit processes.</p> <p>Finnish power and heating plants that burn wood biomass use fuels that are in compliance with the Renewable Energy Directive (REDII), such as fuels from industrial sources. This operating model will facilitate sustainable activities causing no significant harm.</p>

**Reform 2: Energy taxation reform to consider technological advancements**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	<p>Energy taxation will be reformed so as to favour electrification in particular and to make it less economic to use fossil fuels. The energy taxation reform will lead to a reduction in emissions from energy production.</p> <p>Energy taxation reforms will discourage the use of fossil fuels.</p>
Climate change adaptation;		X	The energy taxation reform will allow new solutions to be introduced to help adapt to climate change.
Sustainable use and protection of water and marine resources;		X	The energy taxation reform will make it less economic to use fossil fuels, which in turn will reduce the risks for waterways.



Part 1	Yes	No	Justification if 'No' has been selected
The circular economy;		X	The energy taxation reform will encourage surplus heat recovery, thus contributing to the circular economy in the energy sector.
Pollution prevention and control to air, water or land;		X	The energy taxation reform will make it less economic to use fossil fuels, which in turn will reduce the risks for environmental contamination.
Protection and restoration of biodiversity and ecosystems.	X		

## Part 2

Questions	No	Substantive justification
Protection and restoration of biodiversity and ecosystems	X	<p>Reducing the use of fossil fuels and promoting electrification will increase the need for energy investments in order to respond to demand on a changing market. Investments 1 and 2 are in many ways geared to the impacts of the energy taxation reform.</p> <p>Raising the tax on fossil fuels will increase the use of solutions based on wood biomass and electrification. Alternative solutions for heat and power production will be explored that will not be supported with RRF funding, such as land-based wind power and heat production using wood biomass.</p> <p>Wind power and wood bioenergy production will be delivered so as to cause no significant harm to the protection and restoration of biodiversity and ecosystems. This will be ensured in the planning and permit processes.</p> <p>Finnish power and heating plants that burn wood biomass use fuels that are in compliance with the Renewable Energy Directive (REDII), such as fuels from industrial sources. This operating model allows for sustainable operations doing no significant harm.</p>

**Investment 1: Energy infrastructure**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The projects are related to the intervention field Smart Energy Systems (including smart grids and ICT systems) and related storage (033) and possibly to High-efficiency co-generation, district heating and cooling (034 bis). Both fields have a 100% climate impact. Only projects concerning electricity transmission, low-emission district heating transmission and low-carbon gases are being planned. There are no projects concerning fossil fuel production, transfer or use, or waste combustion. In district heating projects, life cycle emissions amount to 100 gCO <sub>2</sub> eq/kWh, or they concern surplus heat. The projects to be funded have to do with renewable district heating and with the transfer of surplus heat to district heating networks. These requirements will be considered in the project funding decisions.
Climate change adaptation;		X	The operations will have a negligible impact on climate change adaptation. The National Climate Change Adaptation Plan implementing the EU Adaptation Strategy will be considered in project planning as necessary. (Government Resolution 20 November 2014)
Sustainable use and protection of water and marine resources;		X	The projects will have an insignificant foreseeable impact on surface water and groundwater, taking into account both direct and indirect effects across the life cycle.
The circular economy;		X	The projects will have an insignificant foreseeable impact on surface water and groundwater, taking into account both direct and indirect effects across the life cycle. Projects will be required, if necessary, to produce a waste management plan specifying requirements for materials recycling.
Pollution prevention and control to air, water or land;		X	The activities will have an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Protection and restoration of biodiversity and ecosystems.	X		

## Part 2

Questions	No	Substantive justification
Protection and restoration of biodiversity and ecosystems	X	<p>Environmental impact assessments are performed for the projects when required by law, pursuant to the Act on Environmental Impact Assessments. If a project is likely to cause a significant detriment to natural values in an area protected under the Natura 2000 network, then environmental impacts must be assessed pursuant to the Nature Conservation Act instead. No project may have a significant adverse impact on the natural values due to which the area was originally designated, proposed or included in the Natura 2000 network.</p> <p>An environmental permit must be sought for any activities involving the risk of environmental contamination.</p> <p>Environmental permits will only be granted to projects that are fully in compliance with the Environmental Protection Act and the Waste Act. Within the restrictions specified in the permit, the activities must not, of themselves or in combination with other functions in the impact area, cause environmental contamination or a risk thereof, or contamination of the soil, groundwater or sea, or adverse impacts on special natural circumstances. The best available technology (BAT) must be used in activities undertaken under an environmental permit.</p> <p>The requirements of the Nature Conservation Act will also be considered when processing environmental permit applications.</p>

**Investment 2: Deployment of new energy technology****DNSH**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	<p>The projects have to do with renewable energy and use of surplus heat and are related to the intervention fields Renewable energy: wind (028), Renewable energy: solar (029), Biomass with high GHG savings (030bis), Other renewable energy sources (including geothermal energy) (032), Smart Energy Systems (including smart grids and ICT systems) and related storage (033) and High-efficiency co-generation, district heating and cooling (034bis). All fields have a 100% climate impact. The projects do not involve fossil-based energy or waste combustion.</p> <p>In district heating projects, life cycle emissions amount to 100 gCO<sub>2</sub>e/kWh, or they concern surplus heat. Transport biofuel production will reduce emissions by at least 65%, based on the calculation methods given in the Renewable Energy Directive (REDII).</p> <p>These requirements will be considered in the project funding decisions.</p>
Climate change adaptation;		X	<p>The operations will have a negligible impact on climate change adaptation. The National Climate Change Adaptation Plan implementing the EU Adaptation Strategy will be considered in project planning as necessary. (Government Resolution 20 November 2014)</p>
Sustainable use and protection of water and marine resources;	X		
The circular economy;	X		
Pollution prevention and control to air, water or land;	X		
Protection and restoration of biodiversity and ecosystems.	X		

## Part 2

Questions	No	Substantive justification
Sustainable use and protection of water and marine resources;	X	<p>The intervention fields particularly related with the sustainable use and protection of water and marine resources are Renewable energy: wind (028) for offshore wind power and Other renewable energy sources (including geothermal energy) (032) for geothermal heat production. Offshore wind power may affect marine ecosystems, and geothermal installations may affect groundwater. The Water Framework Directive will be considered in respect of both, in the interests of protecting water and marine resources.</p> <p>Environmental impact assessments are performed for the projects when required by law, pursuant to the Act on Environmental Impact Assessments. If a project is likely to cause a significant detriment to natural values in an area protected under the Natura 2000 network, then environmental impacts must be assessed pursuant to the Nature Conservation Act instead. No project may have a significant adverse impact on the natural values due to which the area was originally designated, proposed or included in the Natura 2000 network.</p> <p>An environmental permit must be sought for any activities involving the risk of environmental contamination. Environmental permits will only be granted to projects that are fully in compliance with the Environmental Protection Act and the Waste Act. Within the restrictions specified in the permit, the activities must not, of themselves or in combination with other functions in the impact area, cause environmental contamination or a risk thereof, or contamination of the soil, groundwater or sea, or adverse impacts on special natural circumstances. The best available technology (BAT) must be used in activities undertaken under an environmental permit.</p> <p>The requirements of the Nature Conservation Act will also be considered when processing environmental permit applications.</p> <p>The placement of offshore wind farms must comply with the goals of the maritime management action plan and maritime management plans based on the Marine Strategy Framework Directive. Relevant EU and national legislation will be considered in the placement, including the national Land Use and Building Act and Nature Conservation Act; the Habitats Directive and Birds Directive (migration routes, nesting); Natura sites and related regulation; and the maritime spatial plan. Offshore wind farms must be granted a water permit pursuant to the Water Act, taking into account adverse impacts on marine ecosystems (e.g. fish) and the changes in hydrological conditions. Offshore wind farms must be placed as allowed by local planning, which will consider aesthetic disruption such as glare and noise pursuant for example to the Adjoining Properties Act. The impacts of offshore wind farms on waterways and seas are greatest during construction.</p> <p>In geothermal energy projects, potential adverse impacts on surface waters and groundwater will be considered in the placement and implementation of the projects. Pathways for runoff water will be considered in the projects. A permit as per the Water Act is needed in groundwater recharge areas and groundwater protection zones. A water permit must not be granted if the project is likely to damage the environment or water resources or their function. The permit consideration must also examine the water management plan as required in the Water Framework Directive.</p>

## Part 2

Questions	No	Substantive justification
The circular economy	X	<p>Transitioning to the circular economy is particularly related to the intervention fields Renewable energy: wind (028) and Biomass with high GHG savings (030bis).</p> <p>The national waste plan intended to promote the reuse of biodegradable material will be considered in the projects. By-products, scraps and waste with no other recovery potential will be used for biogas production. Transport biofuels will be produced using raw materials consistent with REDII that result in substantial emission reductions, such as industrial waste.</p> <p>The durability and recyclability of the structures will be considered as far as possible in the building of offshore wind farms. The recyclability of wind turbine blades will be facilitated through a national investigation project.</p> <p>Waste management legislation and producer responsibility will foster component recycling and thereby contribute to the circular economy. For example, batteries and solar power plant components will be recycled under the producer responsibility system.</p>
Pollution prevention and control to air, water or land	X	<p>Pollution prevention and control is particularly related to the intervention field Biomass with high GHG savings (030bis). Pollution prevention and control is related to several types of energy investment as required in legislation.</p> <p>An environmental permit must be sought for any activities involving the risk of environmental contamination. Environmental permits will only be granted to projects that are fully in compliance with the Environmental Protection Act and the Waste Act. Within the restrictions specified in the permit, the activities must not, of themselves or in combination with other functions in the impact area, cause environmental contamination or a risk thereof, or contamination of the soil, groundwater or sea, or adverse impacts on special natural circumstances. The best available technology (BAT) must be used in activities undertaken under an environmental permit.</p> <p>Installations covered by the Directive must also take into account BREF documents.</p>

## Part 2

Questions	No	Substantive justification
Protection and restoration of biodiversity and ecosystems	X	<p>Protection and restoration of biodiversity and ecosystems is related to the placement of energy projects in general and, regarding the use of biomass in particular, the intervention field <i>Biomass with high GHG savings</i> (030bis).</p> <p>Environmental impact assessments are performed for the projects when required by law, pursuant to the Act on Environmental Impact Assessments. If a project is likely to cause a significant detriment to natural values in an area protected under the Natura 2000 network, then environmental impacts must be assessed pursuant to the Nature Conservation Act instead. No project may have a significant adverse impact on the natural values due to which the area was originally designated, proposed or included in the Natura 2000 network.</p> <p>An environmental permit must be sought for any activities involving the risk of environmental contamination. Environmental permits will only be granted to projects that are fully in compliance with the Environmental Protection Act and the Waste Act. Within the restrictions specified in the permit, the activities must not, of themselves or in combination with other functions in the impact area, cause environmental contamination or a risk thereof, or contamination of the soil, groundwater or sea, or adverse impacts on special natural circumstances. The best available technology (BAT) must be used in activities undertaken under an environmental permit.</p> <p>The requirements of the Nature Conservation Act will also be considered when processing environmental permit applications.</p> <p>The raw materials used in transport biofuel production projects will facilitate emission reductions of at least 65%, in accordance with the REDII Directive.</p>

## INDUSTRY RENEWAL AND INVESTMENTS SUPPORTING THE GREEN AND DIGITAL TRANSITION

### Reform 1: Reform of the Climate Change Act and low carbon renewal of industries

#### DNSH

Target	Yes	No	Justification if 'No' has been selected
Climate change mitigation		X	The purpose with the reform of the Climate Change Act is, in accordance with the current Government Programme, to ensure attainment of the Carbon Neutral Finland 2035 target. This reform thus contributes to climate change mitigation.  Falling under this reform, the Climate and Energy Strategy, the Medium-term Climate Change Policy Plan and the sector-specific low-carbon roadmaps similarly contribute to climate change mitigation.
Climate change adaptation		X	The Climate Change Act requires the regular drafting of a plan for climate change adaptation and thus is supportive of this target.
Sustainable use and protection of water and marine resources		X	The reform will have an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
The circular economy		X	The reform is partly supportive of the circular economy, since reduction of greenhouse gas emissions supports the aims of the circular economy.
Pollution prevention and control to air, water or land		X	The reform will have an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Protection and restoration of biodiversity and ecosystems.		X	The reform will have an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.



**Reform 2: Strategic promotion of the circular economy and reform of the Waste Act****DNSH**

<b>Target</b>	<b>Yes</b>	<b>No</b>	<b>Justification if 'No' has been selected</b>
Climate change mitigation		X	<p>The reform will not have a significant impact on the objective of climate change mitigation.</p> <p>The vision in the Strategic Programme to Promote a Circular Economy is Finland in 2035, with the carbon-neutral circular economy forming the foundation of a successful national economy. The reduction of greenhouse gas emissions is thus closely linked to the promotion of the circular economy.</p> <p>The revised Waste Act and the added provisions in it on the separate collection of biowaste and packaging waste have the potential to achieve climate benefits, compared with the current situation. According to the impact assessment included in the draft proposal, the projected reduction in carbon dioxide emissions nationwide can be between 25,000 and 62,000 t CO<sub>2</sub>eq/year, depending on the implementation. The environmental impact assessment demonstrated that "all the evaluated alternatives for expanding the separate collection of biowaste and packaging waste will produce a favourable impact in respect of climate change and the depletion of fossil-based natural resources, compared with the present".</p>
Climate change adaptation		X	The reform will have an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Sustainable use and protection of water and marine resources		X	The reform will have an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
The circular economy		X	Strategic promotion of the circular economy and reform of the Waste Act will make a strong contribution to the circular economy.
Pollution prevention and control to air, water or land		X	The reform will have an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Protection and restoration of biodiversity and ecosystems.		X	The reform will have an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.

**Investment 1: Clean hydrogen and CCS/CCU in industry****DNSH Part 1**

Target	Yes	No	Justification if 'No' has been selected
Climate change mitigation		X	This action contributes to the intervention field 032 in the RRF legislation, being 100% supportive of the climate objective. The action encourages the scaling up of hydrogen production using clean energy and its utilisation and of carbon dioxide capture and use/storage, so this action contributes directly to the attainment of the goal of curbing climate change.
Climate change adaptation		X	The activities will have an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. No case-specific ex-ante assessment can be made, because the scope of the investments and their geographical location are not known.  The investments will be selected competitively through funding application rounds.  The investments will be required to comply with the National Climate Change Adaptation Plan implementing the EU Climate Change Strategy (Government Resolution 20 November 2014).
Sustainable use and protection of water and marine resources	X		
The circular economy		X	The hydrogen projects will have an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The CCS/CCU projects support the transition to the circular economy by facilitating material flow recycling and reuse at the molecular level.
Pollution prevention and control to air, water or land	X		
Protection and restoration of biodiversity and ecosystems.	X		

## DNSH Part 2

Questions	No	Substantive justification
Sustainable use and protection of water and marine resources	X	<p>The volume of water needed for electrolysis in hydrogen production is not significant relative to the quantities of water available in Finland. However, environmental and water permits will be applied for in respect of the investments if needed, to ensure that adverse impacts on waterways are avoided, considering the water management and marine environmental management plans.</p> <p>The CCU projects will have an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The CCS projects will comply with the EU <i>Directive on the geological storage of carbon dioxide</i>, which has been implemented nationally with the Act on Carbon Dioxide Capture and Storage.</p> <p>Environmental impact assessments are performed for the projects when required by law, pursuant to the Act on Environmental Impact Assessments.</p>
Pollution prevention and control to air, water or land	X	<p>An environmental permit must be sought for any activities involving the risk of environmental contamination. Environmental permits will only be granted to projects that are fully in compliance with the Environmental Protection Act and the Waste Act.</p> <p>Within the restrictions specified in the permit, the activities must not, of themselves or in combination with other functions in the impact area, cause environmental contamination or a risk thereof, or contamination of the soil, groundwater or sea, or adverse impacts on special natural circumstances. The best available technology (BAT) must be used in activities undertaken under an environmental permit. Installations covered by the Directive must also take into account BREF documents.</p> <p>The CCS projects will comply with the EU <i>Directive on the geological storage of carbon dioxide</i>, which has been implemented nationally with the Act on Carbon Dioxide Capture and Storage. The types of CCS project for which an environmental impact assessment is mandated are recognised in the act on the Environmental Impact Assessment Procedure (Annex 1, paragraph 8). The CCU projects will have an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.</p>

## DNSH Part 2

Questions	No	Substantive justification
Protection and restoration of biodiversity and ecosystems	X	<p>The requirements of the Nature Conservation Act will also be considered when processing environmental permit applications.</p> <p>Environmental impact assessments are performed for the projects when required by law, pursuant to the Act on Environmental Impact Assessments.</p> <p>If a project is likely to cause a significant detriment to natural values in an area protected under the Natura 2000 network, then environmental impacts must be assessed pursuant to the Nature Conservation Act instead. No project may have a significant adverse impact on the natural values due to which the area was originally designated, proposed or included in the Natura 2000 network.</p>

### Investment 2: Direct electrification of industry processes to reduce carbon consumption

## DNSH Part 1

Target	Yes	No	Justification if 'No' has been selected
Climate change mitigation		X	<p>This action contributes to the intervention field 024ter in the RRF legislation, being 100% supportive of the climate objective. The requirement is that the funded investments must reduce direct and indirect greenhouse gas emissions at the sites in question by an average of at least 30% compared to the conventional trend.</p> <p>Process electrification will reduce carbon dioxide emissions into the atmosphere, because about 85% of Finland's electricity production is emission-free.</p>
Climate change adaptation		X	<p>The activities will have an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. No case-specific ex-ante assessment can be made, because the scope of the investments and their geographical location are not known. The investments will be selected competitively through funding application rounds.</p> <p>The investments will be required to comply with the National Climate Change Adaptation Plan implementing the EU Climate Change Strategy (Government Resolution 2014).</p>

## DNSH Part 1

Target	Yes	No	Justification if 'No' has been selected
Sustainable use and protection of water and marine resources		X	The CCU projects will have an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. Process electrification will not significantly increase water consumption. However, extensive process electrification will require an increase in electricity production that will not directly or indirectly cause adverse impacts on water resources.
The circular economy		X	The activities will have an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Pollution prevention and control to air, water or land	X		
Protection and restoration of biodiversity and ecosystems.	X		

## DNSH Part 2

Target	No	Substantive justification
Pollution prevention and control to air, water or land	X	<p>Industrial process electrification will not cause significant harm or a threat thereof in terms of environmental contamination. Replacing fossil fuels in industrial processes, electrification will significantly reduce the risk of emissions into the air and discharges into the soil and water.</p> <p>Solutions for low-carbon industrial processes that do not involve electrification may require closer scrutiny. An environmental permit must be sought for any activities involving the risk of environmental contamination. Environmental permits will only be granted to projects that are fully in compliance with the Environmental Protection Act and the Waste Act. Within the restrictions specified in the permit, the activities must not, of themselves or in combination with other functions in the impact area, cause environmental contamination or a risk thereof, or contamination of the soil, groundwater or sea, or adverse impacts on special natural circumstances. The best available technology (BAT) must be used in activities undertaken under an environmental permit. Installations covered by the Directive must also take into account BREF documents.</p>
Protection and restoration of biodiversity and ecosystems.	X	<p>The requirements of the Nature Conservation Act will also be considered when processing environmental permit applications.</p> <p>Environmental impact assessments are performed for the projects when required by law, pursuant to the Act on Environmental Impact Assessments.</p> <p>In any projects involving biofuels, sustainable fuels as per the REDII Directive will be used, such as industrial residues. This operating model will facilitate sustainable activities causing no significant harm.</p>

### Investment 3: Investments promoting reuse and recycling of key materials and industrial residues

#### DNSH Part 1

Target	Yes	No	Justification if 'No' has been selected
Climate change mitigation		X	<p>This action contributes to the intervention field 045bis in the RRF legislation, being 100% supportive of the climate objective. The requirement is that, as a result of the investment, more than 50% of the waste or residue concerned is leveraged as recycled raw material.</p> <p>The action thus directly supports attainment of the goal to mitigate climate change.</p>
Climate change adaptation		X	<p>The investments will have an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. No case-specific ex-ante assessment can be made, because the scope of the investments and their geographical location are not known. The investments will be selected competitively through funding application rounds.</p> <p>The investments will be required to comply with the National Climate Change Adaptation Plan implementing the EU Climate Change Strategy (Government Resolution 2014).</p>
Sustainable use and protection of water and marine resources	X		
The circular economy		X	<p>This action contributes to the intervention field 045bis in the RRF legislation, being 100% supportive of the climate objective. The requirement is that, as a result of the investment, more than 50% of the waste or residue concerned is leveraged as recycled raw material.</p> <p>The action directly contributes to the targets of the circular economy and for example to the Strategic Programme to Promote a Circular Economy and the National Waste Plan.</p>

## DNSH Part 1

Target	Yes	No	Justification if 'No' has been selected
Pollution prevention and control to air, water or land	X		
Protection and restoration of biodiversity and ecosystems.	X		

## DNSH Part 2

Questions	No	Substantive justification
Sustainable use and protection of water and marine resources	X	<p>Many reuse and recycling processes use large quantities of water. Environmental and water permits will be applied for in respect of the investments if needed, to ensure that adverse impacts on waterways are avoided, considering the water management and marine environmental management plans. Environmental impact assessments are performed for the projects when required by law, pursuant to the Act on Environmental Impact Assessments.</p> <p>There is no significant potential detriment to water resources here, because Finland has highly abundant water resources.</p>
Pollution prevention and control to air, water or land	X	<p>An environmental permit must be sought for any activities involving the risk of environmental contamination. Environmental permits will only be granted to projects that are fully in compliance with the Environmental Protection Act and the Waste Act. Within the restrictions specified in the permit, the activities must not, of themselves or in combination with other functions in the impact area, cause environmental contamination or a risk thereof, or contamination of the soil, groundwater or sea, or adverse impacts on special natural circumstances. The best available technology (BAT) must be used in activities undertaken under an environmental permit. Installations covered by the Directive must also take into account BREF documents.</p>



## DNSH Part 2

Questions	No	Substantive justification
Protection and restoration of biodiversity and ecosystems.	X	<p>The requirements of the Nature Conservation Act will also be considered when processing any environmental permit applications.</p> <p>Environmental impact assessments are performed for the projects when required by law, pursuant to the Act on Environmental Impact Assessments.</p> <p>If a project is likely to cause a significant detriment to natural values in an area protected under the Natura 2000 network, then environmental impacts must be assessed pursuant to the Nature Conservation Act instead. No project may have a significant adverse impact on the natural values due to which the area was originally designated, proposed or included in the Natura 2000 network.</p>

## REDUCING THE CLIMATE AND ENVIRONMENTAL IMPACTS OF THE BUILDING STOCK

### Reform 1: Reform of the Land Use and Building Act, steering for low-carbon construction

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	<p>The purpose of the reform is to reduce greenhouse gas emissions across the life cycle of a building.</p> <p>Components of the reform: 1) Legislation will be amended to require a climate assessment for almost all new construction projects and for extensive renovation projects.</p> <p>The climate assessment must include an estimation of the building's carbon footprint across its life cycle and of its carbon handprint. The climate assessment will be based on a national assessment method and emissions database. 2) Threshold values to be set for the carbon footprint of a building across its life cycle (low-rise housing is excluded from this steering)</p>
Climate change adaptation;		X	The reform will have no impact or will have an insignificant impact.
Sustainable use and protection of water and marine resources;		X	The reform will have no impact or will have an insignificant impact.

Part 1	Yes	No	Justification if 'No' has been selected
The circular economy;		X	The reform will support the transition to the circular economy particularly in respect of construction materials, because the reform favours the use of recycled materials and reusable building parts, flexible spatial arrangements and structures in new construction, and use of demolition waste.
Pollution prevention and control to air, water or land;		X	The reform will have no impact or will have an insignificant impact.
Protection and restoration of biodiversity and ecosystems.		X	The reform will have no impact or will have an insignificant impact.

### Reform 2: Action plan to phase out fossil-based oil heating.

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The purpose of the reform is to reduce greenhouse gas emissions across the life cycle of a building. The action plan is an overview exploration, and decisions on individual actions and their details will be made separately later.
Climate change adaptation;		X	The reform will have no impact or will have an insignificant impact.
Sustainable use and protection of water and marine resources;		X	Decommissioning and removing oil tanks will reduce the risk of soil and groundwater contamination.
The circular economy;		X	The reform will have an insignificant impact. It facilitates the use of existing building stock by extending the useful life of buildings. The party that makes waste must recycle that waste, according to valid legislation and rules.

Part 1	Yes	No	Justification if 'No' has been selected
Pollution prevention and control to air, water or land;		X	Phasing out oil will reduce the risk of soil and groundwater contamination. Oil tanks must be removed and appropriately treated. Reduces emissions of fine particles.
Protection and restoration of biodiversity and ecosystems.		X	No significant impact. The action concerns the existing building stock and will not require new land to be appropriated for construction.

### Investment 1: Aid for converting building heating systems from fossil-based oil heating to energy-efficient heating

#### DNSH

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	Phasing out oil heating belongs under intervention field 025bis or 024ter in the green transition and fulfils the requirement therein, because it will improve greenhouse gas efficiency by more than 30% (equivalent to a substantial 30% to 60% improvement in greenhouse gas emissions). It is estimated that this investment will reduce emissions in the non-emissions-trading sector by about 98 kt of CO <sub>2</sub> /year. Aid will not be awarded to projects replacing oil heating with a building-specific heating system running on a fossil fuel.  Replacing the heating system reduces the energy consumption of a building.
Climate change adaptation;		X	The reform will have no impact or will have an insignificant impact.
Sustainable use and protection of water and marine resources;		X	Decommissioning and removing oil tanks will reduce the risk of soil and groundwater contamination.
The circular economy;		X	It facilitates the use of existing building stock by extending the useful life of buildings. The party that makes waste must recycle that waste, according to valid legislation and rules.

## DNSH

Part 1	Yes	No	Justification if 'No' has been selected
Pollution prevention and control to air, water or land;		X	Phasing out oil will reduce the risk of soil and groundwater contamination. Oil tanks must be removed and appropriately treated. Phasing out oil heating will reduce emissions of fine particles. It is possible within the aid system to replace oil heating with wood-burning heating, in which case a lower level of aid will be awarded. So far, only about 2% of the applications received have concerned such replacements. We estimate that this is not significant, especially since the point is in any case to phase out oil heating.
Protection and restoration of biodiversity and ecosystems.		X	No significant impact. The action concerns the existing building stock and will not require new land to be appropriated for construction.  It is possible within the aid system to replace oil heating with wood-burning heating, in which case a lower level of aid will be awarded. So far, only about 2% of the applications received have concerned such replacements. We estimate that this is not significant, especially since the point is in any case to phase out oil heating.

**Investment 2: Low-carbon built-up environment programme (Climate KIRADIGI)**

## DNSH

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The aid programme is geared towards climate change mitigation through low-carbon solutions and contributes to intervention fields 022 and 027, being 100% supportive of the green transition. It is stated in the criteria for the programme that the projects must comply with the requirements for those intervention fields and also with the DNSH principle; applicants must present justifications for how they do so.

## DNSH

Part 1	Yes	No	Justification if 'No' has been selected
Climate change adaptation;		X	The actions in the aid programme promote climate change mitigation and adaptation.
Sustainable use and protection of water and marine resources;		X	Adverse impacts are an exclusion criterion in the application round. Project applications must demonstrate that the projects will not have adverse impacts. An indirect positive impact on the sustainable use and protection of water and marine resources is expected due to new production practices, materials efficiency and circular economy solutions.
The circular economy;		X	Adverse impacts are an exclusion criterion in the application round. Project applications must demonstrate that the projects will not have adverse impacts.  Facilitates use of the existing building stock and provides a knowledge base supporting the circular economy. Where waste is generated, however, the waste holder shall primarily prepare the waste for reuse or, secondarily, recycle it.  Use of demolition waste will be developed and encouraged in the Land Use and Building Act reform.
Pollution prevention and control to air, water or land;		X	Adverse impacts are an exclusion criterion in the application round. Project applications must demonstrate that the projects will not have adverse impacts.  An improved knowledge base will facilitate improved status data and monitoring. Low-carbon and circular economy solutions will have an impact on the use of virgin materials and thus potentially curb environmental contamination.
Protection and restoration of biodiversity and ecosystems.		X	Adverse impacts are an exclusion criterion in the application round. Project applications must demonstrate that the projects will not have adverse impacts.

## LOW-CARBON SOLUTIONS IN COMMUNITIES AND TRANSPORT

### Reform 1: Roadmap for fossil-free transport, which is a Government Resolution on the reduction of greenhouse gas emissions from domestic transport

#### DNSH

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The purpose of the fossil-free transport roadmap is to achieve a significant reduction in greenhouse gas emissions (1.65 Mt) by 2030. The reform will thus have a significant impact on the objective of climate change mitigation.
Climate change adaptation;		X	This package will facilitate emission reductions and will thus not have a negative impact on adaptation, or at the very worst an insignificant foreseeable impact on the environmental objective if we consider both direct and indirect impacts across the life cycle.
Sustainable use and protection of water and marine resources;		X	The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
The circular economy;		X	The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Pollution prevention and control to air, water or land;		X	The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Protection and restoration of biodiversity and ecosystems.		X	The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.

**Reform 2: Tax reform for sustainable transport****DNSH**

<b>Part 1</b>	<b>Yes</b>	<b>No</b>	<b>Justification if 'No' has been selected</b>
Climate change mitigation;		X	According to the Government Programme, the purpose of the reform is to reduce emissions.
Climate change adaptation;		X	The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Sustainable use and protection of water and marine resources;		X	The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
The circular economy;		X	The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Pollution prevention and control to air, water or land;		X	The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Protection and restoration of biodiversity and ecosystems.		X	The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.

## Investment 1: Public recharging and refuelling infrastructure for electric and gas-powered vehicles

### DNSH

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	Action is 100% supportive of the green transition (intervention field 077). The investments will be made in compliance with Directive (EU) 2018/2001. The action will partly promote transport electrification and reduce emissions through a transition from fossil fuels to electric, biogas or other motive power. (Procurement and conversion aid is not funded out of this investment; it is listed under Pillar 3.)
Climate change adaptation;		X	The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Sustainable use and protection of water and marine resources;		X	The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
The circular economy;		X	The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Pollution prevention and control to air, water or land;		X	The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Protection and restoration of biodiversity and ecosystems.		X	The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.



**Investment 2: Private recharging infrastructure****DNSH**

<b>Part 1</b>	<b>Yes</b>	<b>No</b>	<b>Justification if 'No' has been selected</b>
Climate change mitigation;		X	Action is 100% supportive of the green transition (intervention field 077). The action is intended to increase the use of electric vehicles. The action will reduce greenhouse gas emissions from transport, as fossil fuel use will be partly replaced by electricity.
Climate change adaptation;		X	The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Sustainable use and protection of water and marine resources;		X	The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
The circular economy;		X	The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Pollution prevention and control to air, water or land;		X	The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Protection and restoration of biodiversity and ecosystems.		X	The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.

## ENVIRONMENTAL SUSTAINABILITY AND NATURE-BASED SOLUTIONS

### Reform 1: Nature conservation legislation reform

#### DNSH

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The Nature Conservation Act reform supports this environmental objective, one purpose being to examine the role of the Nature Conservation Act in climate change mitigation and adaptation.
Climate change adaptation;		X	The reform supports this environmental objective. Nature conservation planning, establishing nature reserves, improving habitat protection and allocating nature conservation subsidies can help enhance climate change adaptation.
Sustainable use and protection of water and marine resources;		X	The reform is supportive of this environmental objective through improving the status of species and habitats dependent on water. Certain aquatic habitats have been proposed for inclusion as protected habitat types in the Nature Conservation Act.
The circular economy;		X	The reform will have an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts.
Pollution prevention and control to air, water or land;		X	The reform will have an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts.
Protection and restoration of biodiversity and ecosystems.		X	The reform is fully supportive of the environmental objective. The Act will be updated in order to protect species and habitats even better than before and ensure the important services nature has to offer (ecosystem services). The target here is to enhance restoration efforts and to develop new ways for protecting and managing habitat types and species habitats.

**Reform 1: Strategic promotion of the circular economy**

See reform 2 in component area 2 insofar as it concerns strategically promoting the circular economy.

**Investment 1: Gypsum treatment of fields and nutrient recycling**

DNSH

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	<p>Action is 100% supportive of the green transition.</p> <p>The investment will reduce greenhouse gas emissions and support climate change mitigation by:</p> <p>replacing production, manufacture and use of other fertiliser products; avoiding emissions from the manufacture, transport and use of same by recovering nutrient nitrogen; thus reducing emissions of nitrous oxide, as biomass is used to generate renewable energy to replace fossil-based energy production by producing organic soil improvement substances that function as carbon sinks.</p> <p>While nutrient recovery technologies may increase energy consumption, on the whole this action will reduce climate emissions (climate neutral).</p> <p>The production, logistics and spreading of gypsum (a by-product of phosphoric acid production) account for 0.6% of the annual greenhouse gas emissions from cereal crop cultivation, but gypsum treatment improves the soil structure and increases the capacity of the field to bind carbon.</p>
Climate change adaptation;		X	<p>The investment will boost climate change adaptation especially by improving the capacity of arable land to adapt to changing water supply situations.</p> <p>Gypsum treatment improves nutrient and carbon retention in the soil.</p> <p>Organic fertiliser products will improve soil structure and curb runoff.</p>

## DNSH

Part 1	Yes	No	Justification if 'No' has been selected
Sustainable use and protection of water and marine resources;		X	<p>100% supportive of the target. The investment will improve the state of our waterways and of the Baltic sea and will help attain the environmental objectives in water resources and marine management.</p> <p>The risk of harmful substances entering waterways will be reduced as safer, recycled nutrients are developed and introduced.</p> <p>The impact of gypsum on waterways has been studied for 10 years, and its use has been determined to be an efficient and safe means of water protection.</p>
The circular economy;		X	<p>100% supportive of the target. The investment will facilitate the transition to the circular economy by increasing the recycling of nutrients and of gypsum, an industrial by-product.</p>
Pollution prevention and control to air, water or land;	X		
Protection and restoration of biodiversity and ecosystems.		X	<p>Eutrophication is the greatest threat to biodiversity in the Baltic Sea. The investment will boost biodiversity in aquatic habitats by reducing nutrient discharges into water.</p> <p>The impact of gypsum on aquatic environments has been studied for 10 years, and no adverse impacts on any species have been found.</p> <p>Organic recycled fertilisers improve the condition and biodiversity of the soil.</p>

## DNSH Part 2

Questions	No	Substantive justification
Pollution prevention and control to air, water or land	No	<p>The investment will prevent discharges of harmful substances and environmental contamination, for example through the adoption of advanced processing methods for slurry.</p> <p>In the big picture, the risks of harmful substances will decrease, but there may be harmful substances in waste water and in some biomasses whose risks will be addressed by processing them into harmless substances or by using them for applicable purposes.</p> <p>The risk of harmful substances entering waterways and the soil (including arable land) will be reduced as safer, recycled fertiliser products compliant with the requirements of current legislation are developed and introduced.</p> <p>Emissions from transport and possible combustion are estimated as insignificant. It will be ensured in the permit process that the projects that recycle nutrients have only a low impact.</p> <p>Gypsum treatment may increase sulphate levels in water. Research has shown that these level changes are minute and of short duration and have shown no adverse impacts on aquatic fauna.</p> <p>The gypsum used is compliant with the legislation on fertilisers, and the sites suitable for gypsum treatment are delimited in detail. The impact of gypsum treatment on waterways is monitored through continuous measurements and sampling. If any adverse impacts were to be found, gypsum spreading could be immediately suspended in that area.</p>

**Investment 2: Climate-sustainable actions in the land use sector****DNSH**

<b>Part 1</b>	<b>Yes</b>	<b>No</b>	<b>Justification if 'No' has been selected</b>
Climate change mitigation;		X	<p>The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.</p> <p>The projects to be funded will be required to comply with the DNSH principle.</p> <p>The investment will reduce greenhouse gas emissions and contribute to climate change mitigation by developing new methods, technologies or knowledge to boost forest growth, etc.</p> <p>Forests provide Finland's most significant carbon sink. In the past decade, the carbon sink in Finland's forests has equalled 30% to 50% of Finland's total greenhouse gas emissions. The capacity of forests to function as carbon sinks can be conserved and reinforced through appropriate and timely forest management and revitalisation. Climate change is increasing the risk of forest damage by improving the conditions for pests and fungi to multiply and thrive.</p> <p>None of the actions selected will cause deforestation.</p>
Climate change adaptation;		X	<p>The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.</p> <p>The projects to be funded will be required to comply with the DNSH principle.</p> <p>The investment will contribute to climate change adaptation by developing new methods, technologies or knowledge to improve the selection of appropriate tree species for various locations and to augment the mix of trees, etc. This investment is not aimed at the reforestation of peatlands.</p>

## DNSH

Part 1	Yes	No	Justification if 'No' has been selected
Sustainable use and protection of water and marine resources;		X	<p>The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.</p> <p>The projects to be funded will be required to comply with the DNSH principle.</p> <p>The investment will improve the state of our waterways and of the Baltic Sea by developing new methods, technologies or knowledge to help minimise the load on waterways.</p> <p>The investment will not cause any harm to the sustainable use and protection of water and marine resources, because the funding is intended for developing new methods, technologies or knowledge to improve forest management practices, reducing their environmental impacts on land and water ecosystems.</p>
The circular economy;		X	<p>The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.</p> <p>The projects to be funded will be required to comply with the DNSH principle.</p>
Pollution prevention and control to air, water or land;		X	<p>The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.</p> <p>The projects to be funded will be required to comply with the DNSH principle.</p>

## DNSH

Part 1	Yes	No	Justification if 'No' has been selected
Protection and restoration of biodiversity and ecosystems.		X	<p>The action will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.</p> <p>The projects to be funded will be required to comply with the DNSH principle.</p> <p>The investment will improve consideration of biodiversity by developing new methods, technologies or knowledge that will help in conservation efforts in respect of endangered species, etc.</p> <p>Decisions regarding the species of trees to be grown, forest management and forest revitalisation will be made on the basis of the habitat type, soil nutrients and ecological adaptation. The Forest Act requires that only indigenous tree species are used for revitalising forests. The choice is generally between Scots pine (<i>Pinus sylvestris</i>), spruce (<i>Picea abies</i>) and birch (<i>Betula pendula</i>). Spruce and birch are good for nutrient-rich locations, while Scots pine is good for nutrient-poor locations.</p> <p>Managing forest biodiversity is an essential part of sustainable forest management. The Ministry of Agriculture and Forestry is responsible for actions taken in forests suitable for wood production. In addition to legislation and financial incentives, there are several means of information guidance and advisory services available. One of the aims of the Forest Act is to secure biodiversity. Another important piece of legislation is the Temporary Act on the Financing of Sustainable Forestry, which provides for financial incentives to safeguard biodiversity in commercial forests.</p>



## Pillar 2

### DNSH Digirail

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	<p>In the final report of the Digirail study, it is noted that from the ecological sustainability perspective Digirail will offer tools for augmenting sustainable mobility and for climate change mitigation through facilitating more efficient use of rail network capacity and improving the accessibility of various regions by increasing the number of train services. A better and more punctual provision of train services will support the transition to sustainable modes of transport and reduce transport emissions.</p> <p>A modern, radio-based system will also require fewer trackside devices, which translates into lower material impacts and less maintenance. Continuously operating rail traffic management can make operations more energy-efficient.</p>
Climate change adaptation;		X	<p>The project is not considered to have a significant impact on climate change adaptation, considering the direct and indirect impacts of the project across its life cycle.</p> <p>The purpose of the project is to increase the percentage of rail transport in all transport and to reduce emissions on the whole.</p> <p>Implementing the Digirail project will not produce a significant carbon footprint, because the project will not involve any railway construction or land construction; the building work to be done largely concerns technology and software. Any minor physical construction required will be undertaken in compliance with environmental legislation, and surplus materials will be disposed of in a controlled manner. Procurements will be handled with attention to material processing, based on Finland's environmental permit legislation and possibly on an environmental impact assessment to be conducted in the project.</p> <p>The benefits of the Digirail project, e.g. in increasing capacity relative to the carbon footprint, are significant in relation to comparable benefits that may be achieved in the future through building new railway lines or additional tracks. The actions in the Digirail project concern existing railway lines; no new lines will be built in this project.</p>

Part 1	Yes	No	Justification if 'No' has been selected
Sustainable use and protection of water and marine resources;		X	<p>The Digirail project is a system project. It is estimated that it will not have any impacts on the foreseeable sustainable use and protection of water and marine resources, considering direct and indirect impacts across its life cycle.</p> <p>The project will not involve any railway construction or land construction; the building work to be done largely concerns technology and software. Any minor physical construction required will be undertaken in compliance with environmental legislation.</p> <p>The benefits of the Digirail project, e.g. in increasing capacity relative to the carbon footprint, are significant in relation to comparable benefits that may be achieved in the future through building new railway lines or additional tracks. The actions in the Digirail project concern existing railway lines; no new lines will be built in this project.</p>
The circular economy;		X	<p>The project is not expected to have any direct or indirect impacts on the circular economy across its life cycle.</p> <p>The project will not involve any railway construction or land construction; the building work to be done largely concerns technology and software. Any minor physical construction required will be undertaken in compliance with environmental legislation, and surplus materials will be disposed of in a controlled manner. Procurements will be handled with attention to material processing, based on Finland's environmental permit legislation and possibly on an environmental impact assessment to be conducted in the project.</p> <p>The Digirail project will have a considerably smaller construction carbon footprint than 'traditional' safety equipment installation projects, because no signals with steel structures will be built, and the amount of copper cabling required will be remarkably small (because of the absence of signals). Most of the cabling will be fibre optic. Any minor physical construction required will be undertaken in compliance with environmental legislation, and surplus materials will be disposed of in a controlled manner. Procurements will be handled with attention to material processing, based on Finland's environmental permit legislation and possibly on an environmental impact assessment to be conducted in the project.</p>

Part 1	Yes	No	Justification if 'No' has been selected
Pollution prevention and control to air, water or land;		X	<p>The Digirail project is a system project. The project is not expected to have any direct or indirect impacts on pollution prevention and control to air, water or land across its life cycle.</p> <p>The project will increase the percentage of rail transport in the overall volume of mobility.</p> <p>The purpose of the Digirail project is to increase the use of rail transport in relative terms, in both passenger and goods transport, which will result in significant positive climate impacts.</p>
Protection and restoration of biodiversity and ecosystems.		X	<p>The Digirail project is a system project. It is not estimated to have any significant impacts for the protection and restoration of biodiversity and ecosystems, considering direct and indirect impacts across its life cycle.</p> <p>All work in the Digirail project will be done in existing railway track areas. Any minor physical construction required will be undertaken in compliance with environmental legislation</p>

**Digital infrastructure – Improving the quality and availability of telecommunications networks (Ministry of Transport and Communications)**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	It is generally assumed that an increase in data transmission volumes will lead to an increase in the energy consumption of telecommunications networks, although this will be at least in part compensated for with improvements in energy efficiency in the various devices in those networks. The ICT industry can also contribute to the reduction of greenhouse gas emissions in other sectors. <sup>52</sup>
Climate change adaptation;	X		
Sustainable use and protection of water and marine resources;	X		
The circular economy;	X		
Pollution prevention and control to air, water or land;		X	No actions causing direct or indirect significant adverse impacts can be identified.
Protection and restoration of biodiversity and ecosystems.	X		

52 *ICT-alan ilmasto- ja ympäristöstrategiaa valmistelevan työryhmän väliraportti* [Interim report of the working group preparing a climate and environmental strategy for the ICT sector in Finland]. <http://urn.fi/URN:ISBN:978-952-243-586-6>

Part 2	No	Substantive justification
Climate change adaptation;	X	<p>The action will have no adverse impacts on climate change adaptation from the perspective of telecommunications infrastructure. Underground cabling will improve network durability compared to conventional overhead copper cables or the radio links used in mobile phone networks.</p> <p>Having telecommunications networks with improved coverage will make it easier for society at large to adapt to climate changes, for example with the introduction of new services such as weather information and real-time infrastructure information (e.g. condition of the road network and current disruptions).</p> <p>High-speed telecommunications networks improving the potential for remote work will allow for less mobility in situations where extreme weather phenomena impose barriers or constitute a hazard for physical mobility.</p>
Sustainable use and protection of water and marine resources	X	<p>Apart from exceptional individual cases (e.g. a trunk line in an archipelago), there will be no construction in inland waterways, so the action will not have any impact on surface water in inland areas. In most cases, links to islands can be built using bridges, as the majority of existing bridges already have cable trays that can accommodate all cables, including telecommunications cables.</p> <p>The Environmental Protection Act (86/2000) prohibits contamination of groundwater. Therefore, in telecommunications network construction projects as in all construction projects in groundwater basins, there must be plans and protective measures to prevent groundwater contamination. A separate permit for construction is required in such areas.</p> <p>Further information on groundwater basins and whether there are separate protection plans in place is available from municipal environmental protection authorities or from the relevant Centre for Economic Development, Transport and the Environment.</p> <p>A protection plan will include recommendations for how operators in the area can ensure that the groundwater source is not compromised in quality or quantity.</p> <p>No networks will be built in marine areas in the outer archipelagos, so the action will have no impact on marine environments.</p>

Part 2	No	Substantive justification
The circular economy	X	<p>Typically more than 90%, and in every case at least 75%, of active and passive components in the fixed telecommunications network (e.g. cablings and related elements such as casings) are recycled in Finland. In mobile phone networks, the percentage of active and passive base station components (e.g. cablings and related elements such as casings) that are recycled is almost as large as for landline networks.<sup>53</sup> The Waste Act (646/2011) stipulates that an order of priority (waste hierarchy) must be observed in all operations.</p> <p>Modern telecommunications networks are built using the newest technology. New technologies such as optical fibre and 5G are more energy-efficient than earlier ones. Also, fibre-optic networks have fewer active devices than conventional networks using copper cabling.</p> <p>Available capacity in the existing physical network will be leveraged in telecommunications network construction as far as possible (shared use of conduits, cable troughs and masts), along with shared construction; this will allow environmental impacts to be minimised.</p>
Protection and restoration of biodiversity and ecosystems.	X	<p>Telecommunications networks are principally built in areas where other infrastructure already exists (roads, power lines, civil engineering). Therefore, the negative impacts of this construction on biodiversity and ecosystems will be insignificant.</p> <p>Available capacity in the existing physical network will be leveraged in telecommunications network construction as far as possible (shared use of conduits, cable troughs and masts), along with shared construction; this will allow environmental impacts to be minimised.</p> <p>The provisions of the Nature Conservation Act (1096/1996) must be complied with in construction. One of the purposes of this Act is to safeguard biodiversity. The Nature Conservation Act implements the Birds Directive and the Habitats Directive, etc.</p>

<sup>53</sup> Survey of telecommunications enterprises by Traficom, May 2020.

**Corporate digital economy – RTE programme**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	Documentation on paper no longer needed.
Climate change adaptation;		X	The investment will reduce emissions and support climate change mitigation.
Sustainable use and protection of water and marine resources;		X	The RTE programme is a system project and will cause no negative impacts under this heading. Digitalisation facilitates the disuse of documentation on paper.
The circular economy;		X	No significant volume of waste will be generated. Data will support green procurements.
Pollution prevention and control to air, water or land;		X	Actions to support this can be facilitated with data.
Protection and restoration of biodiversity and ecosystems.		X	The activities supported through this action will have an insignificant foreseeable impact on this environmental objective, taking into account both direct and primary indirect impacts across the life cycle.

**Virtual Finland (P2C2R3)**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Climate change adaptation;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Sustainable use and protection of water and marine resources;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.

Part 1	Yes	No	Justification if 'No' has been selected
The circular economy;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Pollution prevention and control to air, water or land;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Protection and restoration of biodiversity and ecosystems.		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.



### **DNSH assessment, Accelerator programme for spearhead technologies Investment P2C2I4 (Microelectronics value chain)**

Finland is implementing actions to promote digitalisation and data policy as part of the general climate policy measures aiming for Finland to achieve carbon neutrality by 2035. The purpose of the national Climate and Environmental Strategy for the ICT Sector is to promote ecologically sustainable digitalisation and support the achievement of climate and environmental objectives. The Strategy presents recommendations for measures related to a climate- and environment-friendly ICT infrastructure and data economy, sustainable material flows and a circular economy, expanding the knowledge base and developing the measurement framework, enhancing consumer awareness and expertise, and utilising emerging technologies and responding to challenges.

In investment P2C2I4, compliance with the 'Do No Significant Harm' principle is a non-negotiable criterion for awarding aid.

<b>Part 1</b>	<b>Yes</b>	<b>No</b>	<b>Justification if 'No' has been selected</b>
Climate change mitigation;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Climate change adaptation;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Sustainable use and protection of water and marine resources;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
The circular economy;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Pollution prevention and control to air, water or land;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Protection and restoration of biodiversity and ecosystems.		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.

**Investment P2C2I5 (6G, AI and quantum computing development facilities)**

Finland is implementing actions to promote digitalisation and data policy as part of the general climate policy measures aiming for Finland to achieve carbon neutrality by 2035. The purpose of the national Climate and Environmental Strategy for the ICT Sector is to promote ecologically sustainable digitalisation and support the achievement of climate and environmental objectives. The Strategy presents recommendations for measures related to a climate- and environment-friendly ICT infrastructure and data economy, sustainable material flows and a circular economy, expanding the knowledge base and developing the measurement framework, enhancing consumer awareness and expertise, and utilising emerging technologies and responding to challenges.

In investment P2C2I5, compliance with the 'Do No Significant Harm' principle is a non-negotiable criterion for awarding aid.

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Climate change adaptation;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Sustainable use and protection of water and marine resources;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
The circular economy;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Pollution prevention and control to air, water or land;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.

Part 1	Yes	No	Justification if 'No' has been selected
Protection and restoration of biodiversity and ecosystems.		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.

**Enhancing the effectiveness and transparency of RRP-based reforms and investments by improving information systems, administration, oversight and inspections**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Climate change adaptation;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Sustainable use and protection of water and marine resources;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
The circular economy;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Pollution prevention and control to air, water or land;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Protection and restoration of biodiversity and ecosystems.		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.

**Combating money laundering**

<b>Part 1</b>	<b>Yes</b>	<b>No</b>	<b>Justification if 'No' has been selected</b>
Climate change mitigation;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Climate change adaptation;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Sustainable use and protection of water and marine resources;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
The circular economy;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Pollution prevention and control to air, water or land;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Protection and restoration of biodiversity and ecosystems.		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.

**DNSH cyber**

<b>Part 1</b>	<b>Yes</b>	<b>No</b>	<b>Justification if 'No' has been selected</b>
Climate change mitigation;		X	The action will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Climate change adaptation;		X	The action will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Sustainable use and protection of water and marine resources;		X	The action will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
The circular economy;		X	The action will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Pollution prevention and control to air, water or land;		X	The action will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.
Protection and restoration of biodiversity and ecosystems.		X	The action will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.

## Pillar 3

### DNSH assessment

#### P3C1R1

#### Employment and labour market Nordic labour market services model

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The Nordic labour market services model will have no negative impacts on climate change mitigation.
Climate change adaptation;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The Nordic labour market services model will have no separate negative impacts on climate change adaptation.
Sustainable use and protection of water and marine resources;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The reform will not in itself have separate negative impacts on the sustainable use and protection of water and marine resources. The Nordic labour market services model will have no negative impacts on the sustainable use and protection of natural resources.
The circular economy;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The Nordic labour market services model will have no negative impacts on the transition to the circular economy.
Pollution prevention and control to air, water or land;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The Nordic labour market model will have no negative impacts on pollution prevention and control to air, water or land.

Part 1	Yes	No	Justification if 'No' has been selected
Protection and restoration of biodiversity and ecosystems.		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The Nordic labour market model will have no negative impacts on the protection and restoration of biodiversity and ecosystems.

**P3C1I3****Employment and labour market: World-class digital infrastructure to support migration of skilled labour**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The investment will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The investment will have no negative impacts on climate change mitigation.
Climate change adaptation;		X	The investment will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The investment will have no negative impacts on climate change adaptation.
Sustainable use and protection of water and marine resources;		X	The investment will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. Digitalisation of the immigration process will have no negative impacts on the sustainable use and protection of water and marine resources.
The circular economy;		X	The investment will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. Digitalisation of the immigration process will have no negative impacts on the transition to the circular economy.

Part 1	Yes	No	Justification if 'No' has been selected
Pollution prevention and control to air, water or land;		X	The investment will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. Digitalisation of the immigration process will have no negative impacts on pollution prevention and control to air, water or land.
Protection and restoration of biodiversity and ecosystems.		X	The investment will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. Digitalisation of the immigration process will have no negative impacts on the protection and restoration of biodiversity and ecosystems.

**P3C114****Employment and labour market: Incentive-based model (Ohjaamo)**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. Improving the operations of the Ohjaamo guidance points will have no negative impacts on climate change mitigation.
Climate change adaptation;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. Improving the operations of the Ohjaamo guidance points will have no separate negative impacts on climate change adaptation.
Sustainable use and protection of water and marine resources;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The reform will not in itself have separate negative impacts on the sustainable use and protection of water and marine resources. Improving the operations of the Ohjaamo guidance points will have no negative impacts on the sustainable use and protection of natural resources.



Part 1	Yes	No	Justification if 'No' has been selected
The circular economy;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. Improvement of the operations of the Ohjaamo guidance points will have no negative impacts on the transition to the circular economy.
Pollution prevention and control to air, water or land;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. Improvement of the operations of the Ohjaamo guidance points will have no negative impacts on pollution prevention and control to air, water or land.
Protection and restoration of biodiversity and ecosystems.		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. Improvement of the operations of the Ohjaamo guidance points will have no negative impacts on the protection and restoration of biodiversity and ecosystems.

**P3C1R5****Employment and labour market: Intermediate labour market operator**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The reform and investment will have a negligible or insignificant foreseeable impact on this environmental objective. Provisions can be entered into the Articles of Association of the enterprise to be established stating that it must not interfere with climate change mitigation, irrespective of its sphere of operations.
Climate change adaptation;		X	The reform and investment will have a negligible or insignificant foreseeable impact on this environmental objective. Provisions can be entered into the Articles of Association of the enterprise to be established stating that it must not cause negative climate impacts, irrespective of its sphere of operations.

Part 1	Yes	No	Justification if 'No' has been selected
Sustainable use and protection of water and marine resources;		X	The reform and investment will have a negligible or insignificant foreseeable impact on this environmental objective. Provisions can be entered into the Articles of Association of the enterprise to be established stating that it must not interfere with the sustainable use or protection of water and marine resources, irrespective of its sphere of operations.
The circular economy;		X	The reform and investment will have a negligible or insignificant foreseeable impact on this environmental objective. Provisions can be entered into the Articles of Association of the enterprise to be established stating that it must not interfere with or hinder the transition to the circular economy, irrespective of its sphere of operations.
Pollution prevention and control to air, water or land;		X	The reform and investment will have a negligible or insignificant foreseeable impact on this environmental objective. Provisions can be entered into the Articles of Association of the enterprise to be established stating that it must not interfere with pollution prevention and reduction targets, irrespective of its sphere of operations.
Protection and restoration of biodiversity and ecosystems.		X	The reform and investment will have a negligible or insignificant foreseeable impact on this environmental objective. Provisions can be entered into the Articles of Association of the enterprise to be established stating that it must not interfere with the protection or restoration of biodiversity and ecosystems, irrespective of its sphere of operations.

**P3C115****Extension of the work ability programme and IPS model****P3C116****Mental health as prerequisite for employment and productivity**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The programmes are aimed at improving operating practices and will have no negative impacts on climate change mitigation.
Climate change adaptation;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The programmes are aimed at improving operating practices and will have no negative impacts on climate change adaptation.
Sustainable use and protection of water and marine resources;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The reform will not in itself have separate negative impacts on the sustainable use and protection of water and marine resources. The programmes are aimed at improving operating practices and will have no negative impacts on the use of natural resources.
The circular economy;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The programmes are aimed at improving operating practices and will have no negative impacts on the transition to the circular economy.
Pollution prevention and control to air, water or land;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The programmes are aimed at improving operating practices and will have no negative impacts on pollution prevention and control.

Part 1	Yes	No	Justification if 'No' has been selected
Protection and restoration of biodiversity and ecosystems.		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The programmes are aimed at improving operating practices and will have no negative impacts on the protection and restoration of biodiversity and ecosystems.

**P3C2R1****Continuous learning reform; service system reform; guidance development; competence assessment and validation**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The continuous learning reform will have no negative impacts on climate change mitigation.
Climate change adaptation;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The continuous learning reform will have no negative impacts on climate change adaptation.
Sustainable use and protection of water and marine resources;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The continuous learning reform will have no negative impacts on climate change mitigation.
The circular economy;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The continuous learning reform will have no negative impacts on the sustainable use and protection of water and marine resources.

Part 1	Yes	No	Justification if 'No' has been selected
Pollution prevention and control to air, water or land;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The continuous learning reform will have no negative impacts on pollution prevention and control to air, water or land.
Protection and restoration of biodiversity and ecosystems.		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The continuous learning reform will have no negative impacts on the protection and restoration of biodiversity and ecosystems.

## P3C2R2

### Continuous learning digitalisation programme

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The continuous learning digitalisation programme will have no negative impacts on climate change mitigation.
Climate change adaptation;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The continuous learning digitalisation programme will have no negative impacts on climate change adaptation.
Sustainable use and protection of water and marine resources;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The continuous learning digitalisation programme will have no negative impacts on climate change mitigation.

Part 1	Yes	No	Justification if 'No' has been selected
The circular economy;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The continuous learning digitalisation programme will have no negative impacts on the sustainable use and protection of water and marine resources.
Pollution prevention and control to air, water or land;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The continuous learning digitalisation programme will have no negative impacts on pollution prevention and control to air, water or land.
Protection and restoration of biodiversity and ecosystems.		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The continuous learning digitalisation programme will have no negative impacts on the protection and restoration of biodiversity and ecosystems.

**P3C211****Raising the educational attainment by adding starts in higher education**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The investment will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. Adding starts in higher education will have no negative impacts on climate change mitigation.
Climate change adaptation;		X	The investment will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. Adding starts in higher education will have no negative impacts on climate change adaptation.

Part 1	Yes	No	Justification if 'No' has been selected
Sustainable use and protection of water and marine resources;		X	The investment will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. Adding starts in higher education will have no negative impacts on climate change mitigation.
The circular economy;		X	The investment will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. Adding starts in higher education will have no negative impacts on the sustainable use and protection of water and marine resources.
Pollution prevention and control to air, water or land;		X	The investment will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. Adding starts in higher education will have no negative impacts on pollution prevention and control to air, water or land.
Protection and restoration of biodiversity and ecosystems.		X	The investment will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. Adding starts in higher education will have no negative impacts on the protection and restoration of biodiversity and ecosystems.

**P3C2R3****Digitalisation and modernisation of education and training**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The reform will have no negative impacts on climate change mitigation.
Climate change adaptation;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The reform will have no negative impacts on climate change adaptation.
Sustainable use and protection of water and marine resources;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The reform will have no negative impacts on the sustainable use and protection of water and marine resources.
The circular economy;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The reform will have no negative impacts on the transition to the circular economy.
Pollution prevention and control to air, water or land;		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The reform will have no negative impacts on pollution prevention and control to air, water or land.
Protection and restoration of biodiversity and ecosystems.		X	The reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The reform will have no negative impacts on the protection and restoration of biodiversity and ecosystems.



**Investment package 1: RDI funding package supporting the green transition  
(P3C3I1)**

**RDI funding package supporting the green transition – Business driver funding**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	<p>The action falls under the intervention field Research and innovation processes, technology transfer and cooperation between enterprises focusing on the low carbon economy, resilience and adaptation to climate change (022) in Annex VI of the RRF Regulation, where the coefficient for the calculation of support to environmental objectives is 100%.</p> <p>It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle; no projects promoting the use of fossil fuels will be funded. Enterprises within the Emissions Trading System (ETS) may only be funded if their projects significantly reduce greenhouse gas emissions.</p>
Climate change adaptation;		X	<p>The action falls under the intervention field Research and innovation processes, technology transfer and cooperation between enterprises focusing on the low carbon economy, resilience and adaptation to climate change (022) in Annex VI of the RRF Regulation, where the coefficient for the calculation of support to environmental objectives is 100%.</p> <p>It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle; no projects promoting the use of fossil fuels will be funded. Enterprises within the Emissions Trading System (ETS) may only be funded if their projects significantly reduce greenhouse gas emissions.</p>
Sustainable use and protection of water and marine resources;		X	<p>The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle.</p>

Part 1	Yes	No	Justification if 'No' has been selected
The circular economy;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. Some of the projects may promote the transition to the circular economy. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle.
Pollution prevention and control to air, water or land;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle.
Protection and restoration of biodiversity and ecosystems.		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle.

### P3C312

#### RDI funding package supporting the green transition – Accelerating key industries and boosting expertise / Academy of Finland

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	<p>The action falls under the intervention field <i>Research and innovation processes, technology transfer and cooperation between enterprises focusing on the low carbon economy, resilience and adaptation to climate change (022)</i> in Annex VI of the RRF Regulation, where the coefficient for the calculation of support to environmental objectives is 100%.</p> <p>It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle; no projects promoting the use of fossil fuels will be funded. Enterprises within the Emissions Trading System (ETS) may only be funded if their projects significantly reduce greenhouse gas emissions. The investment will foster new knowledge and expertise relevant for the target.</p>

Part 1	Yes	No	Justification if 'No' has been selected
Climate change adaptation;		X	<p>The action falls under the intervention field <i>Research and innovation processes, technology transfer and cooperation between enterprises focusing on the low carbon economy, resilience and adaptation to climate change (022)</i> in Annex VI of the RRF Regulation, where the coefficient for the calculation of support to environmental objectives is 100%.</p> <p>It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle; no projects promoting the use of fossil fuels will be funded. Enterprises within the Emissions Trading System (ETS) may only be funded if their projects significantly reduce greenhouse gas emissions. The investment will foster new knowledge and expertise relevant for the target.</p>
Sustainable use and protection of water and marine resources;		X	<p>The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle.</p>
The circular economy;		X	<p>The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle.</p>
Pollution prevention and control to air, water or land;		X	<p>The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle.</p>
Protection and restoration of biodiversity and ecosystems.		X	<p>The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle.</p>

**P3C313****RDI funding package supporting the green transition – Accelerating key industries and boosting expertise / Business Finland**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	<p>The action falls under the intervention field <i>Research and innovation processes, technology transfer and cooperation between enterprises focusing on the low carbon economy, resilience and adaptation to climate change (022)</i> in Annex VI of the RRF Regulation, where the coefficient for the calculation of support to environmental objectives is 100%.</p> <p>It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle; no projects promoting the use of fossil fuels will be funded. Enterprises within the Emissions Trading System (ETS) may only be funded if their projects significantly reduce greenhouse gas emissions.</p>
Climate change adaptation;		X	<p>The action falls under the intervention field <i>Research and innovation processes, technology transfer and cooperation between enterprises focusing on the low carbon economy, resilience and adaptation to climate change (022)</i> in Annex VI of the RRF Regulation, where the coefficient for the calculation of support to environmental objectives is 100%.</p> <p>It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle; no projects promoting the use of fossil fuels will be funded. Enterprises within the Emissions Trading System (ETS) may only be funded if their projects significantly reduce greenhouse gas emissions.</p>
Sustainable use and protection of water and marine resources;		X	<p>The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle.</p>

Part 1	Yes	No	Justification if 'No' has been selected
The circular economy;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle.
Pollution prevention and control to air, water or land;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle.
Protection and restoration of biodiversity and ecosystems.		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle.

**P3C314****RDI funding package supporting the green transition Supporting innovative growth enterprises**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	<p>The action falls under the intervention field <i>Research and innovation processes, technology transfer and cooperation between enterprises focusing on the low carbon economy, resilience and adaptation to climate change</i> (022) in Annex VI of the RRF Regulation, where the coefficient for the calculation of support to environmental objectives is 100%.</p> <p>It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle; no projects promoting the use of fossil fuels will be funded. Enterprises within the Emissions Trading System (ETS) may only be funded if their projects significantly reduce greenhouse gas emissions.</p>

Part 1	Yes	No	Justification if 'No' has been selected
Climate change adaptation;		X	<p>The action falls under the intervention field <i>Research and innovation processes, technology transfer and cooperation between enterprises focusing on the low carbon economy, resilience and adaptation to climate change</i> (022) in Annex VI of the RRF Regulation, where the coefficient for the calculation of support to environmental objectives is 100%.</p> <p>It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle; no projects promoting the use of fossil fuels will be funded. Enterprises within the Emissions Trading System (ETS) may only be funded if their projects significantly reduce greenhouse gas emissions.</p>
Sustainable use and protection of water and marine resources;		X	<p>The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle.</p>
The circular economy;		X	<p>The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle.</p>
Pollution prevention and control to air, water or land;		X	<p>The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle.</p>
Protection and restoration of biodiversity and ecosystems.		X	<p>The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle.</p>

**Investment package 2: RDI funding package supporting the green transition****P3C315 and P3C316 – Local and national research infrastructures / Academy of Finland**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. Research infrastructure projects will be required to comply with sustainable development targets in their operations; this is a criterion for project selection. Applications will also be evaluated on the basis of how the projects will promote the green economy and address the target of carbon neutrality. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle; no projects promoting the use of fossil fuels will be funded. Enterprises within the Emissions Trading System (ETS) may only be funded if their projects significantly reduce greenhouse gas emissions. Depending on how the funded projects are oriented, the investment may foster new knowledge and expertise relevant for this environmental objective.
Climate change adaptation;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. Research infrastructure projects will be required to comply with sustainable development targets in their operations; this is a criterion for project selection. Applications will also be evaluated on the basis of how the projects will promote the green economy and address the target of carbon neutrality. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle; no projects promoting the use of fossil fuels will be funded. Enterprises within the Emissions Trading System (ETS) may only be funded if their projects significantly reduce greenhouse gas emissions. Depending on how the funded projects are oriented, the investment may foster new knowledge and expertise relevant for this environmental objective.

Part 1	Yes	No	Justification if 'No' has been selected
Sustainable use and protection of water and marine resources;		X	<p>The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle. Research infrastructure projects will be required to comply with sustainable development targets in their operations; this is a criterion for project selection.</p> <p>Depending on how the funded projects are oriented, the investment may foster new knowledge and expertise relevant for this environmental objective.</p>
The circular economy;		X	<p>The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The infrastructures will mainly support research projects. Applications will be evaluated on the basis for example of how the projects will promote the green economy and address the target of carbon neutrality. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle. Research infrastructure projects will be required to comply with sustainable development targets in their operations; this is a criterion for project selection.</p> <p>Depending on how the funded projects are oriented, the investment may foster new knowledge and expertise relevant for this environmental objective.</p>
Pollution prevention and control to air, water or land;		X	<p>The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle. Research infrastructure projects will be required to comply with sustainable development targets in their operations; this is a criterion for project selection.</p> <p>Depending on how the funded projects are oriented, the investment may foster new knowledge and expertise relevant for this environmental objective.</p>



Part 1	Yes	No	Justification if 'No' has been selected
Protection and restoration of biodiversity and ecosystems.		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The infrastructures will support (research projects). It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle. Research infrastructure projects will be required to comply with sustainable development targets in their operations; this is a criterion for project selection. Depending on how the funded projects are oriented, the investment may foster new knowledge and expertise relevant for this environmental objective.

**P3C317****Innovation infrastructures / Business Finland**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle; no projects promoting the use of fossil fuels will be funded. Enterprises within the Emissions Trading System (ETS) may only be funded if their projects significantly reduce greenhouse gas emissions.
Climate change adaptation;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle; no projects promoting the use of fossil fuels will be funded. Enterprises within the Emissions Trading System (ETS) may only be funded if their projects significantly reduce greenhouse gas emissions.

Part 1	Yes	No	Justification if 'No' has been selected
Sustainable use and protection of water and marine resources;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle.
The circular economy;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle.
Pollution prevention and control to air, water or land;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle.
Protection and restoration of biodiversity and ecosystems.		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. It will be required in the selection criteria and ensured in the decision-making process that the projects comply with the DNSH principle.

**P3C411****Growth accelerator programme for small enterprises**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The investments in the reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. Funding will be particularly allocated to the leveraging of digital technologies and practices in the business operations and internationalisation efforts of small enterprises in particular, which may be estimated to have some impact on climate change mitigation. However, no precise assessment can be made, because the projects for this action will be selected through competitive application rounds, and the projects to be funded are not known in advance. The reform in itself will have no specific negative impacts on climate change mitigation.
Climate change adaptation;		X	The investments in the reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The reform in itself will have no specific negative impacts on climate change mitigation.
Sustainable use and protection of water and marine resources;		X	The investments in the reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The reform will not in itself have separate negative impacts on the sustainable use and protection of water and marine resources.
The circular economy;		X	The investments in the reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The reform in itself will have no specific negative impacts on the transition to the circular economy.
Pollution prevention and control to air, water or land;		X	The investments in the reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The reform in itself will have no specific negative impacts on pollution prevention and control to air, water or land.
Protection and restoration of biodiversity and ecosystems.		X	The investments in the reform will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The reform in itself will have no specific negative impacts on the protection and restoration of biodiversity and ecosystems.

**P3C412****Key industries for international growth**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation	X  (for the procurement aid for new gas-powered vehicles)	X  (for other investments)	<p>The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.</p> <p>The purpose of the programme to promote low-carbon approaches, the circular economy and the digital transformation in industry and to facilitate increased exports of industrial services is to enhance the competitiveness of Finnish enterprises in business models for the circular economy, in global digital service markets, business models and added-value services particularly in scalable digital services for the manufacturing industries. These will have no significant negative impacts on greenhouse gas emissions. The investment will have no significant negative impacts on climate change mitigation.</p> <p>The purpose of the investment in health and wellbeing expertise and technology is to develop health care ecosystems and new solutions for exports (e.g. for digital health care).</p> <p>The growth and export programme for water expertise will have a negligible or insignificant positive impact on this environmental objective, for example in respect of the energy efficiency of water management.</p> <p>The investment in the electric heavy transport ecosystem will promote electrification of transports, which is consistent with the DNSH principle according to the Commission guidelines.</p> <p>The procurement and conversion aid will reduce emissions from traffic by promoting the replacement of fossil fuels as motive power with electricity and biogas. The investments will be made in compliance with Directive (EU) 2018/2001. It will be possible to propose in respect of the legislation that the procurement aid for gas-powered vehicles must be allocated to biogas-powered vehicles.</p> <p>Significant adverse impacts will be an exclusion criterion in the preliminary assessments preceding the funding decisions. It will be ensured with selection criteria that the projects selected comply with this requirement.</p>

Part 1	Yes	No	Justification if 'No' has been selected
Climate change adaptation;		X	<p>The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.</p> <p>The programme to promote low-carbon approaches, the circular economy and the digital transformation in industry and to facilitate increased exports of industrial services will have no significant negative impacts on climate change adaptation.</p> <p>The purpose of the investment in health and wellbeing expertise and technology is to develop health care ecosystems and new solutions for exports (e.g. for digital health care).</p> <p>The growth and export programme for water expertise will have a negligible or insignificant positive impact on this environmental objective, for example in respect of the energy efficiency of water management.</p> <p>The investment in the electric heavy transport ecosystem will promote electrification of transports, which is consistent with the DNSH principle according to the Commission guidelines.</p> <p>The procurement and conversion aid will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.</p> <p>Significant adverse impacts will be an exclusion criterion in the preliminary assessments preceding the funding decisions. It will be ensured with selection criteria that the projects selected comply with this requirement.</p>

Part 1	Yes	No	Justification if 'No' has been selected
Sustainable use and protection of water and marine resources;		X	<p>The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.</p> <p>The programme to promote low-carbon approaches, the circular economy and the digital transformation in industry and to facilitate increased exports of industrial services will have no significant negative impacts on the state of water formations. The investment will have no significant negative impacts on the sustainable use and protection of water and marine resources.</p> <p>The purpose of the investment in health and wellbeing expertise and technology is to develop health care ecosystems and new solutions for exports (e.g. for digital health care).</p> <p>No adverse impacts on the sustainable use and protection of water and marine resources have been identified for the investment in the electric heavy transport ecosystem.</p> <p>The procurement and conversion aid will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.</p> <p>As an indirect impact, the processing of biogas raw materials such as manure at biogas plants will reduce adverse impacts on the Baltic Sea, on inland waterways and on the soil.</p> <p>The growth and export programme for water expertise is related to the intervention field <i>Water management and water resource conservation</i> (040) in Annex VI of the RRF Regulation, where the coefficient for the calculation of support to climate change objectives is 40% and the coefficient for the calculation of support to environmental objectives is 100%. The investment will support growth and export packages in the water industry supportive of Sustainable Development Goal 6.</p> <p>Significant adverse impacts will be an exclusion criterion in the preliminary assessments preceding the funding decisions. It will be ensured with selection criteria that the projects selected comply with this requirement.</p>

Part 1	Yes	No	Justification if 'No' has been selected
The circular economy;	X  (for the procurement aid for new gas-powered vehicles)	X  (for other investments)	<p>The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.</p> <p>The purpose of the programme to promote low-carbon approaches, the circular economy and the digital transformation in industry and to facilitate increased exports of industrial services is to promote low-carbon approaches, the circular economy and the digital transformation in industry and to facilitate increased exports of industrial services. The investment will have no negative impacts on the transition to the circular economy.</p> <p>The purpose of the investment in health and wellbeing expertise and technology is to develop health care ecosystems and new solutions for exports (e.g. for digital health care).</p> <p>The growth and export programme for water expertise will have a negligible or insignificant positive impact on this environmental objective, for example in respect of the energy efficiency of water management.</p> <p>No adverse impacts for the circular economy, including prevention of waste generation and waste recycling, have been identified for the investment in the electric heavy transport ecosystem.</p> <p>The procurement and conversion aid will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.</p> <p>Significant adverse impacts will be an exclusion criterion in the preliminary assessments preceding the funding decisions. It will be ensured with selection criteria that the projects selected comply with this requirement.</p>

Part 1	Yes	No	Justification if 'No' has been selected
Pollution prevention and control to air, water or land;		X	<p>The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.</p> <p>The programme to promote low-carbon approaches, the circular economy and the digital transformation in industry and to facilitate increased exports of industrial services will have no significant negative impacts on pollution prevention and control to air, water or land.</p> <p>The purpose of the investment in health and wellbeing expertise and technology is to develop health care ecosystems and new solutions for exports (e.g. for digital health care).</p> <p>The growth and export programme for water expertise will have a negligible or insignificant positive impact on this environmental objective, for example in respect of enhancing waste water processing and management.</p> <p>The investment in the electric heavy transport ecosystem will not significantly increase emissions into the air or discharges into the water or the soil of impurities, compared to the situation before the launching of the ecosystem.</p> <p>The procurement and conversion aid will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.</p> <p>Increasing the percentage of electric and gas-powered vehicles in the vehicle stock will reduce the level of impurities in the air, as it will reduce emissions of nitrogen oxides and fine particles.</p> <p>Significant adverse impacts will be an exclusion criterion in the preliminary assessments preceding the funding decisions. It will be ensured with selection criteria that the projects selected comply with this requirement.</p>



Part 1	Yes	No	Justification if 'No' has been selected
Protection and restoration of biodiversity and ecosystems.		X	<p>The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.</p> <p>The programme to promote low-carbon approaches, the circular economy and the digital transformation in industry and to facilitate increased exports of industrial services will have no significant negative impacts on protection and restoration of biodiversity and ecosystems.</p> <p>The purpose of the investment in health and wellbeing expertise and technology is to develop health care ecosystems and new solutions for exports (e.g. for digital health care).</p> <p>The growth and export programme for water expertise will have a negligible or insignificant positive impact on this environmental objective, for example in respect of enhancing waste water processing and management.</p> <p>No significant adverse impacts on the state or resilience of ecosystems or on the protection of habitat types and species have been identified for the investment in the electric heavy transport ecosystem.</p> <p>The procurement and conversion aid will have at most an insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle.</p> <p>Significant adverse impacts will be an exclusion criterion in the preliminary assessments preceding the funding decisions. It will be ensured with selection criteria that the projects selected comply with this requirement.</p>

**Part 2: procurement aid for new gas-powered vehicles**

Questions	No	Substantive justification
Climate change mitigation; Is the investment expected to lead to significant greenhouse gas emissions?	X	<p>The investment will promote the use of renewable energy in transport and replacement of fossil-based fuels. The investment will not promote the use of natural gas or other fossil-based fuels.</p> <p>The investment will foster a transition in transport from fossil-based fuels to alternative motive power, such as ethanol, biogas and electricity. Considering the life cycle of fuels, biogas may help achieve significant emission reductions, even exceeding 100% compared to fossil-based fuels. Biogas accounted for 54% of all gas used as motive power in transport in Finland in 2019 (Statistics Finland). This percentage has been increasing year on year. Biogas investments on Finnish farms have been supported for example out of the Rural Development Programme for Mainland Finland 2014–2020.</p> <p>Estimates of the biogas production potential vary between 2.5 and 10 TWh per annum. The most significant obstacle to growth in the biogas industry has been the low profitability of production facility projects. It seems that increasing the use of biogas in transport will require production aid, at least initially. The lack of a distribution network has also prevented more widespread use of biogas in transport. Biogas sold as transport fuel in Finland must comply with the sustainability criteria and greenhouse gas emission reduction criteria given in the <i>Renewable Energy Directive 2018/2001 (REDII)</i>.</p> <p>The investment is intended to create a market and to encourage the use of biogas in transport. Finland is undertaking several actions to realise the production potential for biogas and to extend the distribution network so that biogas could be used over an ever larger geographical area.</p> <p>In April 2021, Prime Minister Marin's Government submitted a bill to Parliament proposing the adding of biogas to the Act on the Promotion of the Use of Biofuels for Transport. Public infrastructure aid will also be allocated to the building of biogas distribution stations. It is proposed that this aid be extended to the period 2022–2025. Biogas production can also be supported for example with energy aid and nutrient recycling compensation. Decisions on funding should be made as part of the decision-making of the national energy and climate strategy 2021. Biogas investments will be supported with transition-period funding from the European Agricultural Fund for Rural Development and with EU recovery funds with the support percentage raised to 50%. Biogas use can also be encouraged through taxation, etc. If necessary, it will be possible to enter a requirement for the procurement aid for gas-powered vehicles that the parties using that aid should prefer biogas.</p>

Questions	No	Substantive justification
Climate change adaptation		
Sustainable use and protection of water and marine resources;		
The circular economy; Is the investment expected to lead to significant inefficiencies in the direct or indirect use of any natural resource at any stage of its life cycle or lead to a significant increase in the generation, incineration or disposal of waste?	X	By-products, scraps and waste with no other recovery potential will be used for biogas production. Transport biofuels will be produced using raw materials consistent with REDII that result in substantial emission reductions, such as industrial waste. Increasing the demand for biogas in transport will increase the beneficial use of biowaste generated in agriculture (mainly manure) and raise its added value. Instead of biowaste being burned for energy, it can be used to manufacture biofuels for transport.
Pollution prevention and control to air, water or land;		
Protection and restoration of biodiversity and ecosystems.		

**P3C413****Revitalisation aid for the cultural and creative industries**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The investments will mainly involve designing operating and service models. They will be labour-intensive and promote digitalisation, and they are not expected to have negative impacts on climate change mitigation. The investments will go towards funding digitalisation in enterprises, and the overall impacts of this will be consistent with climate change mitigation. However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance. In the application rounds conducted by the Ministry of Education and Culture, applications will be assessed on the basis for example of the Ministry's sustainable development policies and the sustainable development criteria specific for each sector and for each application round. <sup>54</sup>
Climate change adaptation;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The investments will mainly involve designing operating and service models. They will be labour-intensive and promote digitalisation, and they are not expected to have negative impacts on climate change adaptation. Digitalisation will help enterprises adapt to climate change. However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance. In the application rounds conducted by the Ministry of Education and Culture, applications will be assessed on the basis for example of the Ministry's sustainable development policies and the sustainable development criteria specific for each sector and for each application round.

<sup>54</sup> <http://urn.fi/URN:ISBN:978-952-263-706-2>

Part 1	Yes	No	Justification if 'No' has been selected
Sustainable use and protection of water and marine resources;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The investments will mainly involve designing operating and service models. They will be labour-intensive and promote digitalisation, and they are not expected to have negative impacts on the sustainable use and protection of water and marine resources. Digital operating practices will reduce the environmental load generated by enterprises. However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance. In the application rounds conducted by the Ministry of Education and Culture, applications will be assessed on the basis for example of the Ministry's sustainable development policies and the sustainable development criteria specific for each sector and for each application round.
The circular economy;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The investments will mainly involve designing operating and service models. They will be labour-intensive and promote digitalisation, and they are not expected to have negative impacts on the transition to the circular economy. Digital operating models do not generate recyclable materials. However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance. In the application rounds conducted by the Ministry of Education and Culture, applications will be assessed on the basis for example of the Ministry's sustainable development policies and the sustainable development criteria specific for each sector and for each application round.

Part 1	Yes	No	Justification if 'No' has been selected
Pollution prevention and control to air, water or land;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The investments will mainly involve designing operating and service models. They will be labour-intensive and promote digitalisation, and they are not expected to have negative impacts on pollution prevention and control to air, water or land. The environmental load generated by digital operating practices, for example in the events industry, is always smaller than that generated by physical activities. However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance. In the application rounds conducted by the Ministry of Education and Culture, applications will be assessed on the basis for example of the Ministry's sustainable development policies and the sustainable development criteria specific for each sector and for each application round.
Protection and restoration of biodiversity and ecosystems.		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The investments will mainly involve designing operating and service models. They will be labour-intensive and promote digitalisation, and they are not expected to have negative impacts on the protection and restoration of biodiversity and ecosystems. The events industry and the creative economy are not in direct contact with bioecosystems. However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance. In the application rounds conducted by the Ministry of Education and Culture, applications will be assessed on the basis for example of the Ministry's sustainable development policies and the sustainable development criteria specific for each sector and for each application round.

**P3C414****Sustainability and digitalisation growth in the tourism industry**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	<p>The investment will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The investment will have no significant negative impacts on climate change mitigation.</p> <p>The investment is intended for designing and delivering digital tools, cooperation practices and sustainable travel packages. There will be a few dozen international tourism operators participating in the piloting of sustainable travel packages, and the travel is not expected to have a significant negative impact on greenhouse gas emissions. However, no precise assessment can be made of the impact of investments on this environmental objective as far as RDI funding application rounds are concerned, because the RDI projects for this action will be selected through competitive application rounds, and the projects to be funded are not known in advance. Significant adverse decisions may be an exclusion criterion in the preliminary assessments preceding the funding decisions. Depending on how the funded projects are oriented, the investment may foster new knowledge and expertise in the tourism industry that are relevant for this environmental objective.</p>

Part 1	Yes	No	Justification if 'No' has been selected
Climate change adaptation;		X	The investment will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The investment will have no negative impacts on climate change adaptation. The investment is intended for designing and delivering digital tools, cooperation practices and sustainable travel packages. There will be a few dozen international tourism operators participating in the piloting of sustainable travel packages, and the travel is not expected to have a significant negative impact on greenhouse gas emissions. However, no precise assessment can be made of the impact of investments on this environmental objective as far as RDI funding application rounds are concerned, because the RDI projects for this action will be selected through competitive application rounds, and the projects to be funded are not known in advance. Significant adverse decisions may be an exclusion criterion in the preliminary assessments preceding the funding decisions. Depending on how the funded projects are oriented, the investment may foster new knowledge and expertise in the tourism industry that are relevant for this environmental objective.
Sustainable use and protection of water and marine resources;		X	The investment will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The investment will have no significant negative impacts on the sustainable use and protection of water and marine resources. The investment is intended for designing and delivering digital tools, cooperation practices and sustainable travel packages. There will be a few dozen international tourism operators participating in the piloting of sustainable travel packages, and the travel is not expected to have a significant negative impact on greenhouse gas emissions. However, no precise assessment can be made of the impact of investments on this environmental objective as far as RDI funding application rounds are concerned, because the RDI projects for this action will be selected through competitive application rounds, and the projects to be funded are not known in advance. Significant adverse decisions may be an exclusion criterion in the preliminary assessments preceding the funding decisions.



Part 1	Yes	No	Justification if 'No' has been selected
The circular economy;		X	<p>The investment will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The investment is not expected to have any negative impacts on the transition to the circular economy.</p> <p>The investment is intended for designing and delivering digital tools, cooperation practices and sustainable travel packages. There will be a few dozen international tourism operators participating in the piloting of sustainable travel packages, and the travel is not expected to have a significant negative impact on greenhouse gas emissions. However, no precise assessment can be made of the impact of investments on this environmental objective as far as RDI funding application rounds are concerned, because the RDI projects for this action will be selected through competitive application rounds, and the projects to be funded are not known in advance. Significant adverse decisions may be an exclusion criterion in the preliminary assessments preceding the funding decisions. Depending on how the funded projects are oriented, the investment may foster new knowledge and expertise in the tourism industry that are relevant for this environmental objective.</p>
Pollution prevention and control to air, water or land;		X	<p>The investment will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The investment is not expected to have significant negative impacts on pollution prevention and control to air, water or land.</p> <p>The investment is intended for designing and delivering digital tools, cooperation practices and sustainable travel packages. There will be a few dozen international tourism operators participating in the piloting of sustainable travel packages, and the travel is not expected to have a significant negative impact on greenhouse gas emissions. However, no precise assessment can be made of the impact of investments on this environmental objective as far as RDI funding application rounds are concerned, because the RDI projects for this action will be selected through competitive application rounds, and the projects to be funded are not known in advance. Significant adverse decisions may be an exclusion criterion in the preliminary assessments preceding the funding decisions.</p>

Part 1	Yes	No	Justification if 'No' has been selected
Protection and restoration of biodiversity and ecosystems.		X	The investment will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. The investment is not expected to have significant negative impacts on the protection and restoration of biodiversity and ecosystems. The investment is intended for designing and delivering digital tools, cooperation practices and sustainable travel packages. There will be a few dozen international tourism operators participating in the piloting of sustainable travel packages, and the travel is not expected to have a significant negative impact on greenhouse gas emissions. However, no precise assessment can be made of the impact of investments on this environmental objective as far as RDI funding application rounds are concerned, because the RDI projects for this action will be selected through competitive application rounds, and the projects to be funded are not known in advance. Significant adverse decisions may be an exclusion criterion in the preliminary assessments preceding the funding decisions.

## Pillar 4

### Outline draft / DNSH assessment

#### 1. Promoting compliance with the care guarantee (including in mental health services) and reducing the treatment, rehabilitation and service deficit in health and social services caused by the coronavirus pandemic.

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.]
Climate change adaptation;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.]
Sustainable use and protection of water and marine resources;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.]
The circular economy;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.]
Pollution prevention and control to air, water or land;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.]
Protection and restoration of biodiversity and ecosystems.		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.]

## 2. Promoting compliance with the care guarantee by reinforcing preventive measures and early identification of problems

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.]
Climate change adaptation;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.]
Sustainable use and protection of water and marine resources;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance.
The circular economy;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance.
Pollution prevention and control to air, water or land;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance.

Part 1	Yes	No	Justification if 'No' has been selected
Protection and restoration of biodiversity and ecosystems.		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance.

### 3. Strengthening the knowledge base and effectiveness-based guidance supporting the cost-effectiveness of health and social services

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance.
Climate change adaptation;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance.
Sustainable use and protection of water and marine resources;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance.

Part 1	Yes	No	Justification if 'No' has been selected
The circular economy;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance.
Pollution prevention and control to air, water or land;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance.
Protection and restoration of biodiversity and ecosystems.		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance.

#### 4. Introducing service-oriented digital innovations that will help achieve the care guarantee.

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance.
Climate change adaptation;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance.

Part 1	Yes	No	Justification if 'No' has been selected
Sustainable use and protection of water and marine resources;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance. [Separate, specific explanation for the growth and export programme for water expertise.]
The circular economy;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance.
Pollution prevention and control to air, water or land;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance.
Protection and restoration of biodiversity and ecosystems.		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance.

**Investment 5. Client-oriented digital care information system in Åland**

Part 1	Yes	No	Justification if 'No' has been selected
Climate change mitigation;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance.
Climate change adaptation;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance.
Sustainable use and protection of water and marine resources;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance. [Separate, specific explanation for the growth and export programme for water expertise.]
The circular economy;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance.
Pollution prevention and control to air, water or land;		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance.



Part 1	Yes	No	Justification if 'No' has been selected
Protection and restoration of biodiversity and ecosystems.		X	The investments will have a negligible or insignificant foreseeable impact on this environmental objective, taking into account both direct and indirect impacts across the life cycle. [Brief justification.] However, no precise assessment can be made, because the investments for this action will be selected through competitive application rounds, and the investments are thus not known in advance.

## Appendix 4 Calculations on the impact of the Recovery and Resilience Facility

### Alternative calculation on the impact of the Recovery and Resilience Facility

The impacts of the RRF have also been estimated using the KOOMA model at the Economics Department of the Ministry of Finance. The results produced by applying the model are shown here as deviations, the baseline being the economic trend if the RRF were not deployed.

The KOOMA model illustrates Finland's national economy and is a Neo-Keynesian macroeconomic model. The model assumes two kinds of consumers: some are forward-looking and maximise their wellbeing over time, consuming and saving as they consider best; others have limited access to financial markets and spend all of their income in each period. Monopoly enterprises generate added value in the economy. Enterprises set prices and gain their pricing power from product differentiation. Only some of the profit-maximising enterprises – in typical Neo-Keynesian fashion – are able to set the prices they wish for their products. This restriction results in nominal rigidity in the model. In the production processes of end products, enterprises use both domestic and foreign production inputs as intermediate products. End products produced by enterprises are used for consumption or investments domestically or exported.

In this model, the public sector collects revenue in the form of various taxes in order to finance its own consumption and investment expenditure and the income transfers made to consumers. The public sector may go into debt. As this is a small, open economy, actions in this model have no impact on exchange rates or international interest rates. By contrast, the interest rates encountered by the agents in the model depends on the external net assets of the country: if the country becomes indebted to foreign countries, it will have to pay a risk premium over and above the international interest rates.

In the KOOMA model, unemployment and other labour market behaviour (wage formation, labour market tightness, hours and labour demand) are illustrated in a matrix where employment is a function of jobseeking on the labour market. (For further information on the modelling, see e.g. Pissarides (2000), Obstbaum (2011).) Wages are agreed between employers and employees on the labour market. The model assumes that wages do not immediately adapt to changes in the economy.

An increase in public spending and public investments has a direct positive impact on overall demand in the national economy, boosting the GDP by 0.1% in the first year and by 0.2% in the second year compared to the baseline trend. The short-term fiscal policy coefficient is 1.03. Public spending displaces private spending to some extent but not completely, so private spending will increase slightly as public spending increases. Because increasing public spending has the effect of increasing overall demand, domestic prices will begin to rise. As a result, the demand for Finnish products on the global markets will decline. Public investments increase the volume of capital available to enterprises for production investments. Public investments partly displace private investments, causing a decline in their volume.

Increasing public spending has a dual impact on the labour market. Changes in overall demand are reflected in the expected profits of enterprises, which initially increase somewhat. This leads to enterprises adding more jobs and to employment figures improving. Increasing public spending also affects the behaviour of consumer-employees through the wealth effect. Consumption is now less attractive than working, so the average working hours per person go up.

The results derived from applying the KOOMA model are consistent with the results from commonly used macroeconomic models (Coenen et al. 2010). The fiscal policy coefficients obtained are, on the average, on a par with empirical findings.

**Table 1:** Impact of RRF public spending and investments on Finland's national economy.

Deviation from baseline trend, %

	GDP	Private consumption	Private investments	Public consumption	Public investments	Exports	Employment	Inflation
2021	0.1	0.0	-0.1	0.1	0.9	0.0	0.1	0.0
2022	0.2	0.0	-0.3	0.5	2.2	-0.1	0.2	0.1
2023	0.1	0.0	-0.6	0.3	3.6	-0.1	0.2	0.2
2024	0.0	0.0	-0.7	0.2	2.3	-0.1	0.0	0.1
2025	0.0	0.0	-0.6	0.1	1.3	0.0	0.0	0.0
2026	0.0	0.0	-0.4	0.0	0.5	0.0	0.0	0.0
2027	0.0	0.0	-0.2	0.0	0.4	0.0	0.0	0.0
2028	0.0	0.0	-0.1	0.0	0.3	0.0	0.0	0.0
2029	0.0	0.0	-0.1	0.0	0.2	0.0	0.0	0.0
2030	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0

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## Indirect impacts on Finland of recovery actions in other EU Member States

The above-mentioned impact assessments concern the programme's direct impacts on domestic output. RRF-based fiscal stimulus in other EU countries might also spill over to Finland through export demand. In empirical literature,<sup>55</sup> it is noted regarding the spill-over impacts of fiscal stimulus on the GDP of other countries that the trans-border impacts of fiscal policy actions in individual countries may be quite limited, and that there are potential benefits to be had of a combined fiscal recovery in the euro zone.

The combined effect of the stimulus measures introduced at the same time would probably boost Finland's export demand. According to the calculations prepared in the Ministry of Finance, the impact of the RRF on Finland's GDP through growth in foreign trade would be rather modest. The strongest growth effect would be felt in 2021, when GDP growth is estimated to be almost 0.2 percentage points higher than without the Recovery and Resilience Facility. In 2022, GDP growth would still be nearly 0.1 percentage points higher than without the RRF, but in the following years this would decline. As a result of the spill-over effects, between 2021 and 2025, Finland's GDP would on average be less than 0.3% higher than without stimulus. The Recovery and Resilience Facility would have positive impacts on exports. In 2021 and 2022, exports would grow by 0.8 and 0.3 percentage points more, respectively, than without the RRF. Between 2021 and 2025, exports would be slightly more than 1% higher than without the RRF.

The above assessment of the spill-over effects of the Recovery and Resilience Facility is based on European Commission's estimates of its impact on European total output and the statistical models used by the Ministry of Finance Economics Department in its projections.<sup>56</sup> The European Commission examined the impacts of the RRF on overall production at the EU level in its Economic Forecast in autumn 2020. The calculation

<sup>55</sup> See e.g. Alloza et al. (2019)

<sup>56</sup> For more details of the methods used, see the memorandum: *Reaalitalouden ennusteprosessi ja -menetelmät valtiovarainministeriössä* (Real economy forecasting process and methods at the Ministry of Finance). Ministry of Finance 2020.

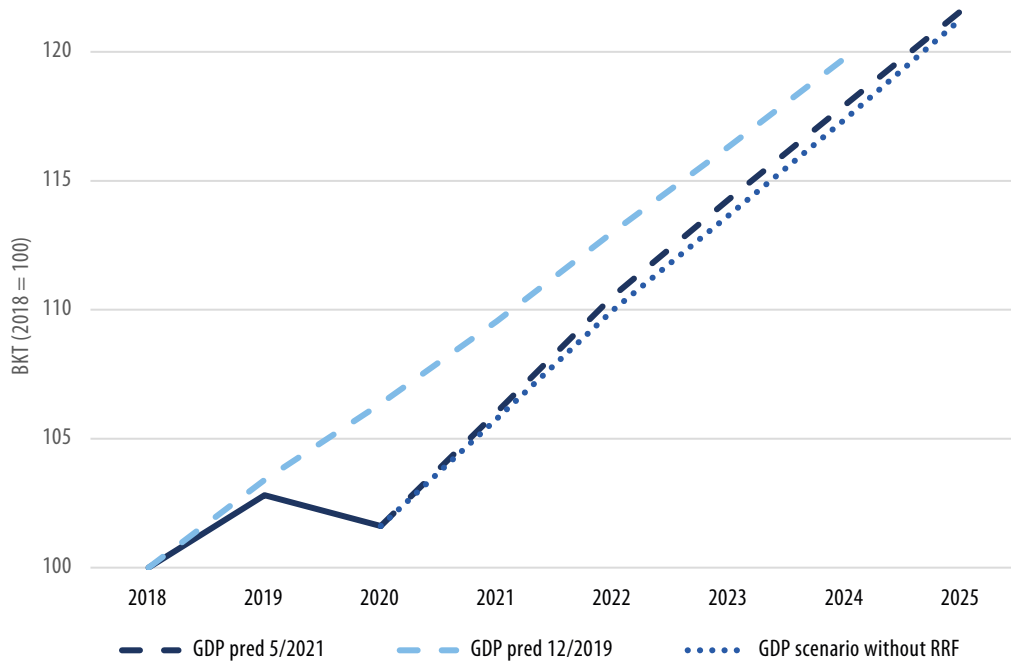
had been made using the QUEST macroeconomic model at DG ECFIN. The calculation performed by the Commission is not a prognosis, but it does give an idea of the impact that the RRF will have on GDP trends in the EU. The assumptions underlying the Commission's analysis were also used for the present study.

Based on these scenarios, estimates derived from statistical models have been produced for this impact assessment for the volume of goods trade in the European Union, for trends in Finland's export demand and, on this basis, for Finland's exports. Based on the foreign value added of exports, the elasticity by which exports are expected to boost imports is put at 0.35. On this basis, the impact of net exports on GDP in four different scenarios can be calculated, and these scenarios are then compared against a scenario in which the effects of the RRF have not been taken into account. Based on the calculation, between 2021 and 2025 GDP will be between 0.1% and 0.3% higher than without stimulus, depending on the scenario. The scenario assuming a rapid implementation and lower effectiveness of the measures has been used as the basis for the final calculation. In this case, the average GDP between 2021 and 2025 would be less than 0.3% higher than without the Recovery and Resilience Facility.

When applying fiscal multiplier 1 to direct domestic impacts and taking into account the spill-over effects of stimulus measures introduced in other EU countries on the Finnish economy, the overall impact of the Recovery and Resilience Facility on GDP growth would be about 0.3% in 2021, about 0.2% in 2022 and 0.3% in 2023. At the end of 2022, GDP is projected to be 0.5% higher than in the scenario without the RRF, while at the end of 2023, it is estimated to be 0.5% higher. Beyond that, GDP growth relative to the baseline trend would slow down as the level of aid decreased. Mainly due to spill-over effects, GDP in 2025 would still be about 0.3% higher than in the scenario without the RRF (Figure 1). This estimate does not take into account the changes in the growth potential arising from possible structural changes.

In 2023, the employment would be 0.3% higher than in the baseline scenario, corresponding to about 7,000 employed persons. Above all, due to the spill-over effect, the number of employed persons would still be more than 3,000 greater in 2025. The trend projection made by the Ministry of Finance in spring 2021 includes the direct impacts of the RRF and spill-over effects. These impacts were not considered in the scenario calculations on the domestic impact of the RRF in chapter 4.

**Figure 1:** Estimate of the impact of the Recovery and Resilience Facility in 2021–2025.



# Appendix 5 EU 2020 – Finland’s National Reform Programme 2021

## 1 Introduction

This year, Finland’s National Reform Programme will be published as an attachment to the Sustainable Growth Programme for Finland (recovery and resilience plan). This National Reform Programme to be published as an attachment focuses on reporting on progress in the execution of country-specific recommendations for 2019 and 2020, insofar as they are not discussed in the Sustainable Growth Programme. The National Reform Programme also reports on progress in terms of the targets of the Europe 2020 strategy and the sets of measures of EU funds.

The coronavirus pandemic and the measures taken to prevent its spread brought the global economy to a sudden standstill in 2020. The clear recovery of the economy from the pandemic has been postponed to the end of 2021, as the steep increase in infections in the spring of 2021 is still reflected in the economy as uncertainties. According to the independent estimate of the Economics Department of the Ministry of Finance, Finland’s economy is expected to increase by 2.6% this year. The economy will only return to normal when the epidemic can be considered to be under control.

In the longer term, economic growth is impacted by structural factors. The growth potential of the economy is weakened by structural unemployment and a shrinking working-age population. In addition, the development of the investment rate has been slow, which reduces the amount of capital and the growth potential of the economy. The investment and reform measures presented in Finland’s National Reform Programme aim to promote changes in structures so as to generate ecologically, socially and economically sustainable growth in the future in accordance with the goals set in the Government Programme.

Last year, the general government deficit increased considerably due to the coronavirus epidemic. General government finances decreased as a result of the economic recession and various supporting measures taken due to the epidemic. This year, the supporting measures decided on due to the coronavirus epidemic and the unravelling of the congestion in services and healthcare will keep the general government expenditure high. Economic growth in the next few years will strengthen general government finances, while they will remain lower than during the pre-pandemic period. The measures

introduced because of the coronavirus situation and their impacts on general government finances are discussed in more detail in Finland's Stability Programme, published together with the National Reform Programme.

When the acute stage of the crisis is over, it will be more important than ever to find solutions that will make the economic resources more efficiently and extensively available and that help to consolidate Finland's general government finances. In that situation, we must find ways to boost investments, employment and growth so that the public sector obligations and services can be safeguarded in an ageing Finland.

In its mid-term policy review on 21–29 April 2021, Prime Minister Marin's Government outlined extensive measures to strengthen employment and public finances, and to promote people's wellbeing in Finland in the aftermath of the coronavirus pandemic. The Government's goal is to strengthen general government finances through growth, employment and moderate adaptations. The Government is aiming at achieving an employment rate of 75% and stopping the increase in the debt ratio by the middle of the decade. Furthermore, the Government is committed to deciding on the additional measures required to ensure carbon neutrality by 2035. In its mid-term policy review, the Government published a sustainability roadmap, which brings together the current state of social, economic and ecological sustainability and the Government's goals for 2030.

Preparations for a comprehensive reform of Finland's health and social services are continuing (Chapter 3.1). The reform is needed so that gaps in wellbeing and health can be narrowed, better and more equal access to the services can be ensured, cost-efficiency of the services can be enhanced, and cost increases can be slowed down.

Prime Minister Marin's Government has also launched preparations for a comprehensive social security reform that would allow citizens to combine work and social security. In addition, incentives for work will be improved by preparing a reform in unemployment security and services provided for the unemployed. As described in Chapter 3.2, the measures designed to boost employment have targeted young people, immigrants and the long-term unemployed. Introduction of more effective employment and economic services, employment pilot projects in municipalities, the pilot project encouraging SMEs to recruit unemployed jobseekers, overhaul of the system of labour immigration, and the appointment of a parliamentary working group to overhaul the system of continuous learning are also designed to boost employment.

Included in the economic policy is the aim is to create opportunities for investments in research and development (R&D) activities and the transition to a low-carbon economy and sustainable transport, to implement feasible public investment projects earlier than planned, and to promote private investments to ensure the recovery of the economy



(Chapter 3.3). The Government has decided to provide additional funding for research and innovation. As part of the Sustainable Growth Programme for Finland, RDI activities for the green transition will be started. The Sustainable Growth Programme includes investment and reform measures focused on low-carbon energy systems and industries, green innovation, the circular economy and sustainable transport. The national reform of the Climate Change Act will continue as part of the transition to a low-carbon economy and energy. With regard to sustainable transport, the development of the transport infrastructure is key. The Government is also promoting the transition to low-carbon transport through legislative reforms, taxation and a roadmap for fossil-free transport. According to Prime Minister Marin's Government Programme, the fulfilment of Finland's digital infrastructure strategy will also be promoted.

The Government has introduced macroprudential measures to restrict lending by banks and to prevent households from accumulating excessive debts (see Chapter 3.4). In recent years, macroprudential instruments have been supplemented by various measures. A positive credit register has been seen as a key instrument in the efforts to curb excessive debts in a number of reports, and its establishment has been outlined in Prime Minister Marin's Government Programme. A proposal for an act on a positive credit register was completed in March 2021, and it is on a round of public comments. The government proposal is due to be submitted to Parliament during the autumn session 2021. The register is intended to be deployed in the spring of 2024.

On the basis of the new national assessment of money laundering and terrorist financing risks completed in March 2021, measures to prevent money laundering can be targeted proportionally at risk-bearing areas, considering the changing operating environment (Chapter 3.5). The productive monitoring of anti-money laundering provisions and compliance with them have also been promoted through the increased personnel resources of the Financial Supervisory Authority and the Financial Intelligence Unit.

Finland has made progress towards achieving the Europe 2020 goals and already in 2018, it met the targets for renewable energy, energy efficiency and higher education. In employment, Finland is getting closer to achieving the target set for 2020, but more work is still needed to achieve the poverty reduction target. There was a substantial decrease in R&D investments during the prolonged downturn, and the target for 2020 (R&D expenditure at least 4% of GDP) will probably not be met, despite a broad range of different policy measures.

## 2 Macroeconomic situation and scenario

The macroeconomic overview, including the impact of the RRF on it, is presented in Chapter 4 of the Sustainable Growth Programme for Finland. The situation of Finland's macroeconomy and general government finances is also described in more detail in Finland's Stability Programme and the General Government Fiscal Plan for 2022–2025 published on 12/05/2021.

## 3 Implementation of country-specific recommendations and policy priorities

### 3.1 Long-term sustainability of general government finances

*Recommendation 1 (2019): Ensure that the nominal growth rate of net primary government expenditure does not exceed 1.9% in 2020, corresponding to an annual structural adjustment of 0.5% of GDP. Improve the cost-efficiency of and equal access to social and healthcare services.*

*Recommendation 1 (2020): Implement the general exemption clause of the stability and growth agreement, considering all necessary measures to combat the coronavirus pandemic, maintain the economy and support the starting recovery; carry out a financial policy, the economic situation permitting, with the goal of achieving a moderate mid-term financing position for general government finances and ensure debt sustainability, while increasing investments; tackle the personnel shortage in healthcare to improve the resilience of the healthcare system and improve the availability of health and social services.*

### Structural reform of health and social services

The central objectives of the health and social services reform will be to reduce inequalities in health and wellbeing, safeguard equal and quality health and social services for all, improve the availability and accessibility of services, ensure the availability of skilled labour, respond to the challenges of changes in society, and curb the growth of costs.

The health and social services draft proposal, i.e. the Government proposal for Parliament regarding an act on the establishment of health and social services counties and the reform of the organisation of health, social and rescue services, was submitted to Parliament on 8 December 2020. In line with the draft proposal, 21 health and social services counties would be established in Finland and entrusted with the health, social

services and rescue service duties that are currently the responsibility of municipalities. The Government proposes a separate solution for the region of Uusimaa, with Uusimaa having four health and social services counties. The City of Helsinki would also in the future be responsible for organising healthcare, social welfare and rescue services. In addition, the joint county authority for the Hospital District of Helsinki and Uusimaa would be responsible for organising specialised healthcare in Uusimaa. The act is intended to enter into force in stages so that the responsibility for the organisation of services would pass on to the health and social services counties at the beginning of 2023.

The regional development of the current parties responsible for the organisation of health and social services will be supported in 2020–2021 by state subsidy projects under the structural reform. In particular, state subsidies have been granted for the development and harmonisation of the duties to organise health and social services.

One of the focus areas of the health and social services reform is the development of basic services, as implemented in the programme for future health and social services centres. The programme aims to reform the operating methods of health and social services, improve the availability of services and develop customer-driven service packages. The programme and its objectives are linked with the national and regional preparation of the restructuring of health and social services.

The Act on Client Charges in Healthcare and Social Welfare was ratified on 30 December 2020. According to the Government Programme, the act was reformed by expanding the range of free services and by making charges more reasonable. These changes promote equal health and the availability of healthcare.

### 3.2 Labour market

*Recommendation 2 (2019): Improve incentives to accept work and enhance skills and active inclusion, notably through well-integrated services for the unemployed and the inactive.*

*Recommendation 2 (2020): Strengthen measures that support employment and reinforce the active employment policy.*

#### Employment and entrepreneurship policy

The employment and entrepreneurship policy supports the development of employees' skills, growth of companies and starting businesses, and prevents unemployment and labour market incidence issues. Measures under the employment and entrepreneurship policy focused on responding to the coronavirus pandemic, helping the supply of and

demand for labour to meet, promoting entrepreneurship, and reducing youth and long-term unemployment. During changes in the exceptional operating environment, rapid support and significant additional resources in taking care of employment probably alleviated the impact of the pandemic on employment.

A municipal employment trial was launched in March 2021 to improve the efficiency of regional cooperation between different authorities in terms of employment. Some 230,000 clients of TE Offices will become the responsibility of municipalities, and approximately one third of TE Offices' personnel will be employed by municipalities (more than 1,100 person-years).

The goal of the service centre for continuous learning and employment is to improve proactivity for employment and competence needs, increase the educational range driven by working life, improve the efficiency of information, advice and guidance services and, in this way, enhance the competence level and therefore employment. Learning should be a life-long process, extending to different areas of life. Significant additional resources, totalling EUR 93 million, for 2020 and 2021 have already been obtained for development projects for continuous learning and for the development of the skills of the working population. The act on the service centre for continuous learning and employment is expected to enter into force in September 2021, with the service centre starting to operate at the end of 2021.

The national lifelong guidance strategy was published in December, and the national development and coordination of guidance services started on the basis of it. Short-, mid- and long-term measures have been planned to develop proactivity. A vision and roadmap have been prepared to develop digital services for continuous learning. The aim is to use digital services to support educational and career planning throughout the lifecycle.

The transfer of employment services to the local level is being prepared. Other development projects related to employment services include the reform of pay subsidies, the launch of a recruitment trial and the development of the legislation on multisectoral services. The goal is that these can be executed in 2022–2023. In December 2020, the Government agreed on measures to increase the employment rate in the 55+ age group. The measures will enter into force starting from 2023.

The reforms call for significant investments in IT systems and the development of digital services. The schedule of the reforms is often linked to the completion of digital solutions.

A multi-administrative project to advance the transfer from family leave to working life was completed at the end of 2020, with an extension granted for 2021–2023.

## Reforming unemployment security and services for the unemployed

The Government is preparing a reform of unemployment security and services for the unemployed. The aim is to reduce the duration of unemployment periods and encourage the unemployed to seek jobs. The unemployment security sanctions regime will also be reformed to keep the rights and obligations of the unemployed in balance. The purpose of the employment plan, prepared with an unemployed jobseeker, is to agree on a personal job-seeking obligation and services that support job-seeking and employment. The reform focuses on providing personal services for jobseekers at TE Offices. As a result, the resources of TE Offices will be increased significantly. The goal of the reform is to give jobs to some 9,500 unemployed. The draft proposal for the reform will be submitted to Parliament during 2021, and the reform is expected to enter into force in stages starting from the beginning of 2022.

### **The right to additional days of unemployment security**

Notwithstanding the maximum payment period, ageing unemployed are eligible for unemployment allowance until the age of 65 on certain conditions. This arrangement is called additional days of unemployment security.

Currently, the minimum age limit for the right to additional days of unemployment security is 62 years for people born in or after 1961. As part of the measures decided on in the 2020 Government budget session in conjunction with the 2021 budget negotiations, on 17 December 2020 Prime Minister Marin's Government decided on extensive measures concerning the right of people of at least 55 years of age to unemployment security and employment support, including a decision on the stage-by-stage termination of the right to additional days. In the model being prepared, the minimum age limit for the right to additional days regarding people born in 1963 and 1964 would be increased to 63 and 64 years, and the framework of additional days would be terminated for people born in or after 1965.

Alongside this reform, change security for people of at least 55 years and their opportunities to pay subsidies and part-time work are being developed. An employer's payment obligation concerning the new change security will be presented as part of the financing system in place of the major employer's deductible concerning financing provided for unemployment security related to the right to additional days.

The aim is to reduce unemployment and boost employment by extending working careers. The additional days may increase unemployment among ageing individuals in two ways. Firstly, the existence of the additional days may encourage companies to dismiss ageing employees first when reducing workforce. Secondly, the right to additional days may reduce incentives for employment among ageing unemployed, which in turn

may make re-employment more difficult. Previous increases in the minimum age of eligibility have helped a growing number of ageing workers to continue in working life.

### **Youth employment and integrated services**

The stabilisation of the one-stop-shop service points for young people has continued. Finland has 65 low-threshold service points for young people. These service points integrate services of different administrative sectors at a low threshold. An impact assessment of the operating model pointed out not only the potential of the operating model, but also the development measures required. The national development of the operating model is largely based on the recommendations of the impact assessment.

A nationally financed support structure will be built to strengthen the operating model, through which multisectoral services for young people and in general can be reinforced. RRF funding will also be applied for the development of the operating model, which will particularly be targeted at the more in-depth integration of health and social services, as well as educational services. Municipal employment trials enable the development of the low-threshold service points, particularly from the perspective of operational management.

### **Supporting the unemployed with partial work ability**

#### **Measures under the work ability programme**

As outlined in the Government Programme, the work ability programme will be jointly implemented by the Ministry of Economic Affairs and Employment and the Ministry of Social Affairs and Health. The goal of the work ability programme's projects and measures to be implemented by the Ministry of Economic Affairs and Employment is to promote the employment of people with partial work ability. Multisectoral services will be built in employment service pilot projects, considering not only employment support, but also needs for work ability support. Furthermore, employers' service needs will be considered at the same time. The special expertise of organisations will be used in development. The aforementioned pilot projects were planned during 2020 in cooperation with the Uusimaa TE Office and organisations. The pilot projects will start in 2021. The work ability coordination activities of TE Offices were promoted by increasing personnel resources by 20 person-years annually in 2020–2022.

In 2020, an employment acceleration programme was launched through procurement in cooperation with the Association of Finnish Local and Regional Authorities. In the autumn of 2020, a national project coordinator started working with the Association of Finnish Local and Regional Authorities. The selection of regional personnel resources started at the end of 2020. The targeting of demand for employees at people with partial work ability will be strengthened by preparing a strategy for societal businesses. The process

started by conducting a survey in the autumn of 2019. The strategy will be prepared in the spring of 2021.

In addition to the aforementioned measures, the Government decided, in its budget negotiations on 16 September 2020, to establish a new intermediate labour market party to strengthen the opportunities of people with partial work ability and other people in a difficult position to transfer to open labour markets by providing a subsidised job and sufficient support services. In the autumn of 2020, Hannu Mäkinen, Director General of Finnish Customs, was appointed to define the content of the model, the organisation of activities, and arrangements regarding financing and implementation. Activities will be started as part of the Sustainable Growth Programme for Finland, and the EU RRF will be used to start and stabilise the activities.

Basic services will be strengthened as part of the health and social services reform and they also include the services supporting the work ability and employment of the unemployed. The purpose of the work ability programme is to make the services a permanent part of the service system so that measures can be taken to support the work ability of the unemployed and they can proceed on their employment paths more rapidly. Job coaching provided by social services helps jobseekers to move to open labour markets. This calls for integrated services in different sectors. The key is to ensure equal services to support work ability for all working-age people.

In addition to TE Office services, the unemployed with partial work ability often require services to support their ability to work, consisting of health, social and rehabilitation services under the branch of the Ministry of Social Affairs and Health. Measures within the scope of the Ministry of Social Affairs and Health strengthen the employment opportunities of the unemployed with partial work ability.

The goal of the work ability programme under the branch of the Ministry of Social Affairs and Health is to 1) improve the employment opportunities and social engagement of the unemployed with partial work ability; 2) build multisectoral services, in which the need for the unemployed with partial work ability for work ability support is identified and in which services and service paths are customer-driven; 3) develop the skills of professionals so that they are competent in work ability support services and can use them for the benefit of clients; and 4) produce information to coordinate the services and benefits of the unemployed with partial work ability and to support the development of the legislation.

In 2020, the Ministry of Social Affairs and Health provided municipalities and joint municipal authorities with state subsidies of EUR 17 million for the development of work ability and employment support services for people with partial work ability. Subsidies are paid to 22 regional projects.

Funding for multisectoral services for work ability support and related investments has been proposed through the EU RRF. The goal of the reform is to improve the employment rate in Finland by supporting the paths of people with partial work ability towards working life and their work ability and work retention, and to ensure the availability and quality of work ability support services.

### **Measures supporting the employment of immigrants**

During 2020, measures were continued in cooperation between different authorities to support the opportunities of immigrants to be actively engaged in Finnish society, accelerate education and employment paths, and improve the use of immigrants' expertise in the business and innovation policy.

During the coronavirus pandemic, the number of non-Finnish and foreign-language speaking unemployed jobseekers increased nearly at the same pace as the total number of unemployed jobseekers. The service capacity of TE Offices has been strengthened by increasing resources in services for discharged or laid off immigrants. Integration training was provided remotely.

A comprehensive action plan for the reform required in integration services was prepared during 2020, and it will be submitted to Parliament as a policy report in the spring of 2021. The report will present the stronger mainstreaming of integration promotion as part of different political sectors. The goal of the plan is to accelerate the employment of immigrants by developing their skills, improve receptiveness in working life, promote health and wellbeing through health and social services, and improve integration by supporting families.

Guidance and advice services for immigrants were strengthened in 2020 by providing 21 municipalities and joint municipal authorities with subsidies for these services. During 2020, the support provided for multi-professional integration competence centres was continued in seven municipalities. Measures have been developed for recruitment discrimination, which exists in Finnish labour markets and damages the employment opportunities of immigrants, as part of the diversity programme for working life.

### **Promoting international recruitment and labour immigration**

Created in 2017–2020, the goal of the Talent Boost action plan, a cross-administrative policy programme to promote study- and employment-based immigration, is to attract international professionals to strengthen Finland's employment rate, the quality, diversity and internationalisation of universities, growth, internationalisation and reform of companies and RDI activities, and the landing of investments in Finland. As a key part



of the plan, a development project for immigrant legislation and permit processes was launched in 2020 to make residence permit processes quicker and easier, and to prevent the exploitation of foreign workforce. The goal is to have an average of one-month processing period for all study- and employment-based residence permits during the government term. For specialists and startup entrepreneurs, the goal is to reduce the average processing period to two weeks, already during 2021. The development project also includes the reform of provisions on non-Finnish seasonal workers.

Established in 2020, the subcommittee for the prevention of the exploitation of foreign workforce has prepared measures to better prevent, detect and combat all forms of exploitation of foreign workforce. The measures are based on developing the legislation, providing different authorities with more resources, and increasing the competence of and cooperation between different parties.

Increased employment and border-crossing restrictions due to the coronavirus pandemic have caused the Talent Boost action plan to be re-prioritised and re-evaluated. When the crisis broke out, the Talent Boost action plan focused on international professionals already staying in Finland. During 2020, Talent Boost measures to attract international professionals were targeted at specialists, startup entrepreneurs, students and researchers, while focusing on attracting professionals in digital services.

The steep decline in the economy has an impact on demand for employees and immigration volumes in the short term. Despite the economic trend, securing sustainable finances and a welfare state calls for long-term increases in study- and employment-based immigration. Finland's working age population is decreasing, and population growth is based exclusively on immigration. During 2020, the preparation of a roadmap of study- and employment-based immigration was started to define the target state of study- and employment-based immigration for 2035, as well as the required guidelines and measures.

### **Incomes Register**

The preparation of the Incomes Register started in 2015, and it has been deployed in stages starting from 1 January 2019. The Incomes Register is defined in the act on the incomes information system (53/2018), and its controller is the Incomes Register Unit of the Finnish Tax Administration. Reporting data to the register is mandatory, and data must be reported no later than on the fifth day after the payment date, apart from a few exceptions. In more than 99% of all cases, data is reported to the register using electronic channels. The Incomes Register does not use the data reported to the register in any way; instead, it provides income data for data users in real time to the extent they need the

data in their operations. The right of the Incomes Register's data users to access data in the Incomes Register is always based on legal provisions on access to data.

From the beginning of 2019, earnings payment data have been reported to the Incomes Register, and the registered data has been used by the Tax Administration, the Social Insurance Institution of Finland (Kela), the Employment Fund, all pension institutions and the Finnish Centre for Pensions. At the beginning of 2020, the group of data users was expanded to insurance companies providing statutory occupational accident insurance or statutory motor insurance, certain insurance centres, municipalities and joint municipal authorities, the State Treasury, unemployment funds, occupational safety authorities, Development and Administration Centres (KEHA), TE Offices, Statistics Finland, and organisations under the Government of Åland. From the beginning of 2021, the register's data content was expanded to pensions and other benefits. In addition, enforcement authorities joined the group of data users. A project is currently in progress to expand the group of data users to the Police of Finland, Finnish Customs, the Grey Economy Information Unit, the Housing Finance and Development Centre of Finland and general legal aid, supervision of interests and debt guidance. They are expected to become data users during 2022. It is also being investigated when the register's data content could be expanded to income types that do not yet exist in the register (various capital income, in particular).

### Social security reform

A parliamentary committee was appointed in March 2020 to prepare the social security reform, and its term extends to 2027. The aim is to create a system that is more clearly structured and functions better than the existing one and that allows citizens to combine work and social security in changing life situations. When reforming social security, the focus should be on securing social justice and on protecting income security for people who are faced with social risks. In the future, social security will support the balance between an individual's rights and obligations in a manner that is compatible with achieving stronger general government finances and a higher employment rate. The objective of the social security reform is to reduce the need for long-term social assistance. The social security committee started by defining key problems to be solved in Finnish social security. The committee has assessed the complexity of social security, coordination between gainful employment and social security, the relationship between basic security, housing benefits and social assistance, and questions related to coordination between services and benefits.

The parliamentary committee is supported by five divisions: the employment and competence division, the work capacity and functional ability division, the housing division, the administrative division, and the research and assessment division. Of these,

the administrative division is responsible for harmonising the concepts and payment dates of benefits and simplifying the application process. The division examines the concepts of family and income, and its task is to develop the use of digitalisation and AI in the implementation of the benefits system and the service system connected to it, considering development needs for information systems and privacy protection. The opportunities of the Incomes Register in making the service system smoother are key.

Benefits and pensions have been reported to the Incomes Register starting from 1 January 2021. The Incomes Register's data is not only used in the processing of benefits, it is also used in the calculation of different customer fees, taxes, pension benefits and insurance reimbursements. The payment and coordination of different benefits has become easier, as the data required for the payment of benefits does not need to be separately attached to applications, since the data is comprehensively available in the Incomes Register.

### Reforming the Act on Social Assistance

On 28 May 2020, the Ministry of Social Affairs and Health appointed a working group to prepare the reform of the Act on Social Assistance. The working group will propose amendments to the legislation on social assistance and social welfare with the aim of strengthening the role of social assistance as a last-resort form of financial support within the social welfare system.

### Combining partial disability pension and earned income

In the Government budget session of the autumn of 2019, a linear model for partial disability pension was decided to be deployed in accordance with the Government Programme. The model aims to improve employment incentives for people on partial disability pension and to abolish any inactivity traps. The Government proposal for the linear model will be submitted to Parliament in the autumn of 2022, and the new acts could enter into force on 1 January 2024.

### Reforming rehabilitation

In December 2020, the Ministry of Social Affairs and Health published its Action Plan for Reforming Rehabilitation Services 2020–2022 ([Publications of the Ministry of Social Affairs and Health 2020:39](#)). The plan includes measures to increase employment from the perspectives of the early identification of needs for rehabilitation, the development of rehabilitation services, and the coordination of services and benefits.

As part of the Action Plan for Reforming Rehabilitation Services 2020–2022, the rehabilitation legislation within the scope of social insurance will be developed in a

separate project in accordance with Prime Minister Marin's Government Programme on the basis of the rehabilitation committee's proposals ([Ministry of Social Affairs and Health, reports and memos 2017:41](#)).

### 3.3 Investments in research, innovation and low-carbon economy

*Recommendation 3 (2019): Focus investment-related economic policy on research and innovation, low carbon and energy transition and sustainable transport, taking into account regional disparities.*

*Recommendation 3 (2020): Take measures to increase liquidity in the real economy, especially in small and medium-sized enterprises; implement feasible public investment projects earlier than planned and promote private investments to ensure the recovery of the economy; target investments at the green transition and digital breakthrough, especially at the generation and use of clean and effective energy, the sustainable and effective infrastructure, and research and innovation.*

Finland has set its sights on achieving carbon neutrality by 2035 and halting the loss of biodiversity by 2030. In addition, Finland aims to be the first fossil-free welfare state and has committed to halving its emissions from traffic by 2030. Pioneering climate action and the resulting innovations may present Finland with simultaneous opportunities for reducing greenhouse gas emissions, creating new jobs, improving its economy and exports, increasing its carbon handprint and promoting biodiversity. The global market for clean solutions is growing exponentially. Finland is among the most interesting innovators whose talents are in demand globally.

The preparation of low-carbon roadmaps for industrial sectors has shown that low-carbon technology will be a significant future competitive advantage for Finnish companies. Considering the above objectives, the conditions for sustainable growth include reducing the use of natural resources and directing consumption towards products that cause the least harm to the climate and the environment. According to the Government Programme, new sustainable growth will come from energy and materials efficiency, carbon neutrality, eco-friendly investments, cleantech, the circular and bioeconomies, and resource scarcity, among others, all of which have the potential for new Finnish industry success stories and as building blocks for prosperity. Various national strategies and programmes, such as the strategic programme to promote the circular economy, emphasise the targeting of RDI investments at the green economy.

The Sustainable Growth Programme for Finland responds broadly to the European Commission's country-specific recommendations for Finland. The programme addresses

key reform and investment needs proposed in recommendations for 2019 and 2020. The programme focuses on measures that support the economic structural change and are expected to have a positive long-term impact. At least 50% of the Sustainable Growth Programme's appropriations will be allocated to measures that support the green transition.

The Sustainable Growth Programme for Finland includes investment and reform measures focused on low-carbon energy systems and industries, green innovation, the circular economy and sustainable transport. Key measures include deploying new energy technologies, stopping to heat buildings with oil, investing in the deployment of the hydrogen technology, recovering and using carbon dioxide in the industries, focusing on the circular economy's demonstration plants and the recycling of battery minerals, reducing process industry emissions through electrification, and investing in digitalisation. Combined with the overall reform of energy taxation and other reforms, the measures aim to significantly reduce greenhouse gas emissions and increase green business research, expertise and exports.

For sustainable transport, the programme accelerates the reduction of emissions by building a distribution infrastructure for alternative power sources and by digitalisation in rail transport. In addition, reducing the climate and environmental impact of buildings and promoting environmental sustainability through nature-based solutions will be supported.

The programme also supports several EU-level flagship projects. Investments in the energy system breakthrough promote the "Power up" flagship project. In addition, the investments are also linked to the "Renovation Wave" and "Recharge and Refuel" flagship projects. Reforms and investments in the green transition in the industries promote the "Power up" and "Recharge and Refuel" flagship projects. In addition, supporting the private and public recharge and refuel infrastructure promotes transport emission reductions and, in this way, promotes the "Recharge and Refuel" flagship project. The "Renovation Wave" flagship project is also supported by the discontinued use of oil in heating. This fulfils the flagship project's key principle of stepping away from coal and integrating renewable energy sources.

In addition to the EU RRF, Finland has allocated national appropriations to the green transition in the after-care of the coronavirus crisis and also otherwise. The additional budget for 2020 includes EUR 1.5 billion in appropriations for projects that support the green transition.

## RDI activities for the green transition

As part of Finland's recovery and resilience plan, RDI activities for the green transition will be started. The goal of the activities is to accelerate green transition solutions that enable significant emission reductions in Finland and globally, and support national carbon neutrality and circular economy objectives. The green transition calls for solid expertise and investments in it, and the development and deployment of key technologies related to the low-carbon circular economy and the green transition through research, partnerships and business investments. Finland's goal is to develop into the globally leading country in the hydrogen and circular economy, bioproducts of a high processing value, zero-emission energy systems and other climate and environmental solutions, improve energy efficiency and accelerate the change towards fossil-free transport and heating.

Investments in research and innovation activities are not only a prerequisite, but also enable the achievement of goals by increasing expertise and reforming businesses and society at large. Overall, investments address the priorities of the green transition pillar, such as the new applications of low-carbon hydrogen (including Power-to-X), the electrification and digitalisation of processes and machinery, material technologies (including reuse and recycling), the recovery and storage/use of carbon dioxide (CCS/CCU), clean energy solutions, and the increased processing value of bio-based products (including wood construction).

**Funding for leading companies** supports partnerships and ecosystems of companies and other research organisations that strengthen the competitiveness of business life and increase the impact of RDI activities. Partnerships financed through Finland's recovery and resilience plan will focus on growing areas that support the green transition. Previously, funding for leading companies has been used to place fibre-based products that reduce the carbon footprint on the consumer market, for the research and development of raw materials that reduce the use of crude oil, and to introduce solutions that support mobility in line with sustainable development in urban environments. Partnerships are broader in scope than the national programme and other funding, and link other sources of EU and international funding more closely to activities. Partners are expected to commit to the goals and implementation of partnerships in the long term. As presented above, partnerships will focus on growing areas in accordance with the recovery and resilience plan's priorities, and they will be selected on the basis of a competition. Flexible partnerships combine the desire of companies for radical changes, the use of different public financing instruments in the development of ecosystems (research, development and growth), the development of enabling capabilities, and new operating models to test, pilot and scale innovation. Partnerships increase cooperation between RDI organisations, raise the level of ambition in RDI goals, strengthen internationalisation, and improve access to global value networks and ecosystems.

**Accelerating key sectors of the future** This funding supports RDI activities directed at key sectors and technologies of the green transition. It supports the execution of sector-specific low-carbon roadmaps, the implementation of the strategic programme for the circular economy and Finland's bioeconomy strategy, among others. The goal is to strengthen existing research clusters and increase expertise, also outside them, as well as to support changes in business activities. Projects will increase the expertise required to maintain and improve crisis resilience and the security of supply, and project outcomes will also otherwise be broadly applicable. Technologies that promote green growth and combat climate change also effectively contribute to the birth of new business and improve crisis resilience and self-sufficiency. Finland has first-rate, albeit narrow, research expertise in these areas. In a well-functioning society, integrating developing and disruptive technologies into the critical infrastructure and new business calls for cooperation between different scientific, research and business fields, as well as the ability to apply new technologies innovatively. This funding covers different scientific, research and business fields, including societal approaches, and addresses the technologies listed at the beginning of this chapter.

The goal of **young innovative company funding** is to increase RDI investments in SMEs and improve their opportunities towards the digital and green transition. The funding targeted at the green transition finances (sustainably growing) companies, whose solutions can, for example, achieve emission reductions in Finland and globally. The funding is already accelerating growth in export companies and also increasing the number of companies engaged in exports. Measures also strengthen research-based business by developing the further processing of outcomes achieved at universities and research institutions into new business that supports the green transition.

### RDI activities

The key objectives of the research and innovation policy are as follows: enhancing the quality and effectiveness of research and development activities (R&D), structural and operational overhaul of public research activities, creation of globally successful innovations, and diversification of the business structure. As a result, the productivity of the national economy will improve, as there will be more high added value jobs and international competitiveness will be stronger.

Policy measures are guided by Prime Minister Marin's Government Programme (2019–2023), the Research and Innovation Council's vision and roadmap for 2030 (prepared in 2017), and the national RDI roadmap for 2030 approved by the Ministerial Working Group on Competence, Education, Culture and Innovation in April 2020.

The Research and Innovation Council's vision sums up the four general development themes of the science and innovation policy: securing a competence base; strategic choices to support reform; the development of competence platforms and growth ecosystems; and internationalisation as a prerequisite for quality and impact.

The RDI roadmap supports sustainable growth and wellbeing based on high competence, education, research and innovation. Related measures improve the global attractiveness of the Finnish RDI environment and encourages companies to make more RDI investments. The roadmap features three strategic development themes: competence, a new partnership model and an innovative public sector. The partnership model serves to create an attractive environment and incentives for long-term cooperation between the research community, the business community and other RDI actors.

RDI funding will specifically be allocated to key areas that support economic changes and growth. According to the strategic goals of the Government Programme's science and innovation policy, Finland provides solutions for global development challenges and is an internationally attractive place to study, conduct research and make investments.

As a result of the coronavirus crisis, the Government decided, at the beginning of 2020, on a massive support package for companies through several additional budgets. Business Finland's funding authorisation was expanded by EUR 980 million to alleviate the impact of coronavirus and its loan authorisation by EUR 300 million. Considering R&D activities, additional funding to extend the campaign of major leading companies and to launch the new partnership model was key. The Academy of Finland received EUR 91 million of additional funding for launching the new partnership model, the flagship programme, research related to crisis resilience and the security of supply, and strengthening the research infrastructure.

The central government's R&D funding volume has been increasing since 2016, while it did not have any significant impact on the pre-coronavirus R&D intensity. In 2019, the central government's R&D funding intensity was 0.84%. Based on the actual budget, the intensity will increase in 2020 to roughly 0.88% as a result of additional R&D investments and the decrease in the GDP (apart from coronavirus funding which was more than EUR 1 billion).

The Government's goal is that the coordination and management of the research and innovation policy across administrative boundaries is strengthened throughout central government. This is important in developing cooperation between the public and private sectors and new partnership models. The Government is seeking new ecosystems on the scale of billions of euros, and aims to improve the preconditions to create globally successful innovation. The Government has prepared an act on an additional tax deduction in R&D activities for tax years 2021–2025.



Determined efforts will be made to attract and retain international talent. The Ministry of Education and Culture implements internationalisation policies for higher education and research (2017–2025). The Academy of Finland is focusing on quality, impact and renewal, all key areas in its international cooperation in the period 2017–2021. These policies are also in line with the Talent Boost action plan launched by the Government to attract international talent to Finland.

By investing in research environments and infrastructure, we will reinforce the international competitiveness and attractiveness of the Finnish research and science community. The roadmap on national research infrastructures was completed at the end of 2020.

Open access to public data will be a key principle in the data policy. An operating model will be drawn up for public administration and public companies to share public data even more systematically. The implementation of the data-oriented research development programme (2017–2021) is continuing. In addition, Finland will deploy one supercomputer of the European High Performance Computing Joint Undertaking (EuroHPC) during 2021.

In the spring of 2020, negotiations were held between the Ministry of Education and Culture and universities to define shared goals for universities for 2021–2024, as well as university-specific measures, strengths and degree targets. Cooperation between universities and research institutions and the development of the distribution of tasks will continue.

The implementation of the higher education and research in 2030 vision, prepared by the Ministry of Education and Culture together with stakeholders, will continue. The goal of the vision is to raise the level of education, increase opportunities for continuous learning at universities and increase the R&D intensity.

Ministries will continue their joint work to implement the health sector RDI growth strategy and to strengthen the research and innovation ecosystem. The establishment of national competence centres in the sector and the launch of activities are being accelerated.

Innovative public contracts and related services will be developed. This also helps to create reference markets. The aim is to increase the proportion of innovative purchases to 10% of all public contracts by the end of the parliamentary term. The KEINO centre, which promotes innovative purchases, has received extended funding to continue its successful activities.

### **Transition to low-carbon transport**

Transport emissions account for approximately a fifth of Finland's total greenhouse gas emissions and some 40% of emissions in the effort sharing sector. According to the current Government Programme, Finland's goal is to halve its transport emissions by 2030 compared with the 2005 emission level, and make transport free from emissions by 2045. The international targets for reducing traffic-related greenhouse gas emissions have been set by the IMO and ICAO within the framework of international cooperation.

Concrete measures to halve domestic transport emissions are defined in the roadmap for fossil-free transport. The roadmap also presents a path towards zero-emission transport by 2045. The roadmap was on a round of comments at the beginning of 2021. According to the draft, emission reductions would be made in three phases. In the first phase in the spring of 2021, a number of subsidies and incentives would be enforced, and the emission reduction potential of additional measures would be identified in the second phase by the autumn of 2021. In the third phase in the autumn of 2021, the Government would decide on any additional measures if the measures taken during the first two phases and actions at the EU level are not sufficient to reach the emission reduction target. To prepare for the third phase, the Ministry of Transport and Communications initiated the assessment of the national implementation of the emissions trading scheme for road transport in early 2021. The Government's decision-in-principle on the reduction of domestic transport emissions, i.e. the roadmap for fossil-free transport, will be made in the spring of 2021. Separate decisions-in-principle will also be made on the reduction of air, sea and inland water transport emissions.

Certain measures of the roadmap for fossil-free transport were already carried out in 2020: the act on the scrapping incentive campaign and the procurement support for gas-fuelled heavy goods vehicles entered into force in December 2020. Other measures involving alternative power sources/technologies that have already been introduced in Finland include the purchasing subsidies for fully electric cars and conversion subsidies for existing vehicles, subsidies for constructing the distribution infrastructure, and a subsidy scheme for charging points in housing companies.

Central government funding is allocated to municipal pedestrian and bicycle projects through the pedestrian and bicycle investment programme. Implemented since 2018, the pedestrian and bicycle investment programme distributed record-high EUR 31.5 million in 2020. In addition to the climate-based increase in public transport, the additional budget for 2020 granted additional appropriations of EUR 200 million in total for the purchase and development of public passenger transport services to support public transport during the prolonged coronavirus situation.

Key measures to reduce traffic emissions that have already been introduced include the act on distribution obligation and the binding CO<sub>2</sub> limits for car manufacturers in the EU. The act amending the act on distribution obligation was approved in February 2019. According to the act, biofuels must account for 30% of all liquid fuels sold for transport by 2030. The new binding CO<sub>2</sub> limits for passenger cars and vans for 2030 were approved in the EU in January 2019. The average CO<sub>2</sub> emissions (g/km) of new passenger cars must be 37.5% lower than in 2021. The average CO<sub>2</sub> emissions of new vans must be 31% lower than in 2021. The EU has also approved similar statutory limits for heavy vehicles.

In addition to the measures outlined in the roadmap, transport sector investments and the achievement of the climate objectives can also be steered through taxation. Started in the autumn of 2019, the tax and payment reform for the sustainable transport project being carried out by the Ministry of Finance working group will be completed in the spring of 2021.

Actions at the EU level will also have a significant impact on the development of greenhouse gas emissions of Finland's transport. In December 2020, the European Commission issued a communication on the strategy of sustainable and smart mobility. Under the strategy, the Commission will issue a number of new draft proposals and reassess key regulations that are essential considering transport emissions. It will reassess the threshold values set for vehicles and the directive on the deployment of alternative fuels infrastructure, for example. Emission trading in air transport will be strengthened, and emission trading is also being planned to be expanded to sea and road transport.

Finland aims to promote a green and digital transition in transport through funding obtained from the Recovery and Resilience Facility (RRF) by allocating funding to measures in line with the roadmap for fossil-free transport to support the construction of the distribution infrastructure for alternative power sources and to promote digitalisation in rail transport. In addition, RRF funding supports the production of alternative fuels.

The Sustainable Growth Programme for Finland responds to country-specific recommendations under digitalisation and the data economy as follows:

- Rail transport digitalisation (Digirail project) promotes sustainable transport, the green transition and the digital transition.
- The development of the quality and availability of communications networks supports the digital transition.
- Accelerating leading technologies promotes private investments, supports the digital transition and responds to the recommendation on investments in research and innovation.
- Investments in the research of cybersecurity and information security promote the digital transition and fulfil the recommendation on investments in research.

### **Rail transport digitalisation (Digirail project)**

When the lifecycle of Finland's current train control system ends, Finland must start to modernise train control during this decade, as obligated by EU regulations. The Digirail project will also ensure the safe operation of trains in the future. By implementing the digitalisation of rail transport in a modern way, significant benefits can be achieved, for example, in increasing the rail capacity, improving the service quality and obtaining environmental benefits.

The development of the physical infrastructure speeds up the green transition. Rail transport digitalisation helps to improve the energy efficiency of rail transport and to create preconditions for a smooth and attractive rail transport. A new digital train control system would make it possible to increase the rail capacity, improve punctuality and increase the number of trains and passengers in the current railway network. The impacts and duration of different disturbances would also decline. The new technology would enable traffic to run more smoothly across the Finnish railway network, especially in areas with large passenger numbers. A better and more punctual range of trains supports the transition to sustainable modes of transport, which reduces traffic emissions. Increasing the proportion of rail transport is also an EU-wide objective that is strongly highlighted in the European Green Deal, the European programme on green development. In addition, the green and digital transition in transport as a whole creates incentives for new business.

### **Broadband infrastructure**

According to the justification of the recommendations, Finland should, among concerns over health, the environment, regions and productivity, continue its measures to deploy high-speed broadband connections and improve other digital infrastructure in order to rationalise logistics and maintain a vital economy in sparsely populated areas.

The fulfilment of Finland's digital infrastructure strategy will be promoted in accordance with Prime Minister Marin's Government Programme. According to the objectives set by the European Commission and the goals set in the digital infrastructure strategy of the Ministry of Transport and Communications, all households should have access to connections with a minimum bit rate of 100 Mbit/s by 2025, with the option of upgrading the connection up to 1 Gbit/s. What is more, all socioeconomic actors should have access to very high-capacity connections. The largest towns and their key transport routes should be covered by 5G networks by the end of 2025. Finland is among the leading countries in the world in the deployment of 5G networks. Finland is the first country in Europe to deploy all 5G pioneer bands identified in the EU (700 MHz, 3.5 GHz and 26 GHz). Currently, commercial 5G networks are available in more than 100 towns. In addition, Finland supports and promotes the testing, research and development of 5G.

Another goal set in the Government Programme is that an optical fibre network will be built to cover the whole of Finland and that the bit rate will be increased as a public service obligation. The construction of the optical fibre network will be primarily carried out on market terms, and secondarily through financing by the state, municipalities and the European Union. The starting point is technological neutrality, which means that the development of fixed and wireless connections must be parallel.

According to the Government Programme, missing investments in broadband will be carried out by extending the broadband programme. The new Broadband Act entered into force on 1 January 2021. The objective of the aid scheme is to promote the achievement of broadband goals set by the EU and the digital infrastructure strategy of the Ministry of Transport and Communications. The aid scheme will target areas where no broadband will be available before 2025. For 2021, EUR 5 million has been allocated to the new aid scheme from the national budget.

Finland is also investigating the use of EU RRF funding to support the construction of high-speed broadband connections in areas where high-speed networks will not be built on market terms, i.e. primarily in sparsely populated areas and the countryside. Aid would promote comprehensive digitalisation opportunities for all people living in Finland and Finland-based companies in the best possible manner. High-speed and high-quality connections help to secure the daily activities of citizens, opportunities for multilocal work, and the operating and service range opportunities of companies and different organisations.

### 3.4 Household indebtedness

*Recommendation 4 (2019): Strengthen the monitoring of household debt and establish the credit registry system.*

In the country-specific recommendations for Finland for 2019 adopted by the Council within the framework of the European Semester, it is proposed that Finland should strengthen the monitoring of household debt and establish a credit registry system. A positive credit register has been mentioned as a key instrument in the efforts to curb excessive debts in a number of reports. The establishment of the register is outlined in Prime Minister Marin's Government Programme. On 9 March 2020, the Ministry of Justice appointed working groups to prepare the positive credit register. A steering group and two sub-groups have been appointed for the project. One of the sub-groups is responsible for preparing the legislation on the register, while the other is responsible for the operational side of the register.

A proposal for an act on a positive credit register was completed in March 2021, and it is on a round of public comments for six weeks. Three open hearings were held during 2020. The government proposal is due to be submitted to Parliament during the autumn session 2021. The register is intended to be deployed in the spring of 2024.

The aim is to define the register's purpose of use, data content and controller in the legislation. Another aim is to define the data reporting obligation and the situations when data can be disclosed from the register. The register would especially be used in lending when evaluating the creditworthiness and in the operations of certain authorities responsible for monitoring financial stability and supervising the credit markets. The register would have a broad data content. Comprehensive information on consumer credits would be saved in the register, as well as information on other credits taken out by private individuals if interest or other expenses are charged from the credit on the basis of the credit agreement. Provisions on consumer credits are laid down in chapters 7 and 7a of the Consumer Protection Act (38/1978). As a rule, these provisions apply to all credits granted to consumers by business operators, including the credits within the scope of the directives 2008/48/EC and 2014/17/EU. The Tax Administration's Incomes Register Unit has been proposed as the register's controller.

### 3.5 Anti-money laundering

*Recommendation 4 (2020): Ensure the productive supervision of and compliance with anti-money laundering regulations.*

The country-specific recommendations for Finland particularly highlighted that the national assessment of money laundering and terrorist financing risks is outdated, the Financial Supervisory Authority and the Financial Intelligence Unit have insufficient resources, and the exchange of information between the Financial Supervisory Authority and the Financial Intelligence Unit is insufficient.

As the operating environment is changing, there is a significant need to update the national assessment of money laundering and terrorist financing risks. The previous risk assessment was conducted in 2015, and the new assessment was completed in March 2021. On the basis of the new risk assessment, preventive measures can be targeted proportionally at risk-bearing areas, considering the changing operating environment. An action plan for the prevention of money laundering and terrorist financing has also been prepared on the basis of the new risk assessment, completed at the same time as the risk assessment. A data platform and risk analysis tool are also being planned to maintain and update the national risk assessment in a digital environment.

The Finnish Financial Supervisory Authority (FIN-FSA) established a separate anti-money laundering division in 2019 and, at the same time, increased its resources in the supervision of money laundering to a total of 10 people. The division is divided into two units, one of which inspects how organisations supervised by the FIN-FSA have carried out measures pursuant to the Act on Detecting and Preventing Money Laundering and Terrorist Financing. Inspections were targeted at financial institutions and other organisations supervised under the act in 2019 and 2020, and they will be completed during 2021. The second unit conducts continuous supervisory activities to generate a real-time view of anti-money laundering measures. Continuous supervision covers, above all, financial institutions, but it also extends to other organisations within the scope of supervision on the basis of risks. In addition, the FIN-FSA has issued several guidelines and notifications, through which it has outlined the practical implementation of anti-money laundering measures among the organisations it supervises.

The supervision of anti-money laundering measures is one of the development areas defined in the FIN-FSA strategy for 2020–2022. The goal is to enhance risk-based supervision, issue guidelines and feedback, and target effective supervisory measures and sanctions at the sector. The strategy will be implemented by allocating resources for the supervision of money laundering, developing the risk assessment tool for money laundering and also targeting them at the assessment of terrorist financing risks, and developing a risk-based model for supervision.

During 2019, the Financial Intelligence Unit increased its resources by five officials to 38. In addition, it continuously employs two to three project employees. Alongside personnel resources, the use and further development of the opportunities offered by IT are key in the development of the Financial Intelligence Unit's activities. In 2020, the Financial Intelligence Unit launched a two-year project to investigate the deployment of AI (RANKKA). In 2021, the Financial Intelligence Unit will launch a two-year robotics project (ILMO) to further improve the efficiency of the processing of the constantly growing number of reports concerning suspicious business activities.

During 2020, the Financial Intelligence Unit received 61,902 reports on suspicious business. The number of reports submitted by banks increased by roughly 28% from the previous year. The reporting obligation was extended to brokers of virtual currencies in December 2019, and they submitted 8,875 reports in 2020. The Financial Intelligence Unit opened more investigations in 2019 than during any other year: a total of 1,515 cases (1,401 cases in 2018). In 2019, the Financial Intelligence Unit had 1,469 data disclosure cases. During 2020, the Financial Intelligence Unit opened 1,845 new investigations and had 1,881 cases of data disclosure. The number of opened cases increased by 22% from 2019, while the number of data disclosures increased by 16%.

The Financial Intelligence Unit issued 126 freezing orders to stop business activities (in 2019: 73 orders). The number of freezing orders has doubled since 2018, and continues to increase in 2021.

In addition to operational analyses, the Financial Intelligence Unit has increased its tactical and strategic analysis products. Despite the coronavirus pandemic, the Financial Intelligence Unit has continued to cooperate with supervisors and to issue feedback for key organisations subject to the reporting obligation. It has also signed a memorandum of understanding (MoU) with the FIN-FSA, and the two authorities have been engaged in ever closer cooperation, particularly regarding high-risk organisations subject to the reporting obligation (hawalas, providers of virtual currencies, and providers of payment services).

In 2020, various forms of fraud, especially fraud taken place in data networks or exploiting them, were highlighted in the Financial Intelligence Unit's activities. Regarding the pandemic, the Financial Intelligence Unit aimed to actively prevent and uncover assistance fraud and other types of fraud. For example, it discovered cases where public subsidies had potentially been used for illegal purposes. There were also hints of channelling these funds to organised crime. Preventing and uncovering money laundering, fraud and narcotics offences based on virtual currencies became a significant part of the Financial Intelligence Unit's activities.

The unit launched the activities of the Public–Private Partnership (AML) specialist group for the authorities and organisations subject to the reporting obligation between all banks, Veikkaus and Finance Finland. In February 2021, the Financial Intelligence Unit, together with the Swedish financial intelligence unit (Finanspolisen), successfully completed Black Wallet, a two-year EU-funded project aimed to identify risks associated with money laundering and terrorist financing in the FinTech sector. On one hand, to enhance the processing and operational analysis of reports on suspicious business activities and, on the other, to improve its strategic and tactical analyses, the Financial Intelligence Unit has started a project (RANKKA) to use AI in the prevention of money laundering and terrorist financing.

Currently, the increased volume of data and its effective processing in supervisory activities and investigations is a major challenge in developing the exchange of information between competent authorities engaged in the prevention of money laundering. In Finland's recovery and resilience plan, the project to enhance the supervision and enforcement of anti-money laundering measures develops actions to:

- enhance the availability, processing, analysis and use of data by each supervisory authority,



- improve the exchange and use of information, and cooperation between different authorities,
- enhance the risk-based supervision of anti-money laundering measures and the uncovering of money laundering by increasing the risk of being caught,
- improve the preconditions of the enforcement of warning consequences and other supervisory measures,
- increase the ability of Finnish money laundering authorities to prevent money laundering in Finland, and
- increase Finland's credibility in the prevention of money laundering, also internationally.

The goal of the digitalisation project to enhance the supervision and enforcement of anti-money laundering measures is that, by 2026, the authorities and private sector parties participating in anti-money laundering activities must be able to exchange up-to-date information effectively, securely and reliably using digital solutions. Another goal is to increase cooperation between the authorities and to develop preventive measures together.

## 4 Progress in achieving the national targets of the Europe 2020 Strategy and sustainable development targets

Table 1 lists the targets laid out in the Europe 2020 Strategy, Finland's situation in 2019 and the strategy target for 2020. Each target is reviewed separately in the sections of this chapter.

**Table 1:** Targets laid out in the Europe 2020 Strategy and the national targets

	EU headline target	Finland in 2019	Finland in 2020
Employment rate (20–64-year-olds)	75%	74.2%,	78%
R&D expenditure/GDP	3%	2.79%, estimate 2.90% for 2020	target level 4%
<b>Climate:</b>			
Greenhouse gas emissions			
(outside emissions trading)	-10% from 2005 levels	29.6 million tonnes CO <sub>2</sub> equivalent <sup>1)</sup>	28.5 million tonnes CO <sub>2</sub> equivalent
- proportion of renewable energy	20%	43%	38%
- energy efficiency (end-use energy consumption)	-20%	300.9 TWh	310 TWh
<b>Education:</b>			
- proportion of 30–34-year-olds having completed tertiary education	40%	47.3%	42%
- early school-leavers	10%	7.3%	8%
People living at risk of poverty and social exclusion	20 million less	873,000	770,000

1) Finland's target for 2019 for the sector outside emissions trading is 29.1 million tonnes CO<sub>2</sub> equivalent. In 2019, the sector's emissions were 0.5 million tonnes CO<sub>2</sub> equivalent higher than the target. Source: Decisions (2013/162/EU; 2013/634/EU; EU/2017/1471); Greenhouse gas inventory, Statistics Finland 2021.

### 4.1 Employment target

The EU-level employment rate target for Finland is 78% in the age group of 20–64-year-olds. The Government's objective is to reach an employment rate of 75% (in the age group of 15–64-year-olds). According to the Labour Force Survey of Statistics Finland, the employment rate was 71.6% in 2020, while it was 72.6% in 2019 (15–64-year-olds). In 2020, the unemployment rate increased to 7.8% on average, being 6.7% in 2019.

In 2020, the impact of the coronavirus pandemic was the main reason for the negative development of employment. Negative impact on employment was particularly reflected in certain sectors, such as the travel and hospitality industry, and certain industrial sectors. Lay-offs accounted for a significant part of the increase in the number of the unemployed. Long-term unemployment also increased. The number of the unemployed increased the most in the age groups of under 55 years. There were fewer vacancies than in the previous year.

Functioning of the labour market and availability of skilled labour also play a crucial role when companies make investment decisions. The Finnish population is well-educated and there are also good opportunities for training during working careers. Continuous learning in working life is key to respond to the challenges of changing society and working life. Because of continuous changes in economic structures and the labour market, the Government is working to make these opportunities more flexible and to ensure that they can better promote new skills.

In the administrative branch of the Ministry of Social Affairs and Health, together with other administrative branches, work programmes included in the Government Programme will be implemented (work ability programme, action plan for working life and good mental health, WORK2030, and the research and development programme for work, health and work ability). The programmes support the achievement of the 75% employment rate set in the Government Programme by protecting employees' ability to work, supporting access to work, preventing any premature transfer from work, providing the unemployed with better access to employment, and increasing the productivity of work and working life innovation. The programmes will have an impact on factors that cause work ability problems and develop the changing working life during the transformation of work. They will increase the readiness of workplaces to support employees' mental health, and their ability to control risks associated with mental health. They will build work ability support services as part of the health and social service centres of the future, and provide research data on impactful measures for decision making and the better allocation of funding.

The aforementioned measures build human capital in working life and increase engagement. As a result, the achievement of sustainable development goals can be ensured. Investments in wellbeing have a positive impact on ecologically and socially sustainable economic growth, high employment and sustainable general government finances.

## 4.2 Research and development target

According to Statistics Finland, Finland's R&D intensity stood at 2.79% in 2019, and it is estimated to be 2.90% in 2020. The R&D intensity target of 3%, set by the EU, was not be achieved by 2020. At the same time, the national EU2020 target level (4%) approved in 2011 is very far. The intensity of government-provided research funding was 0.84% in 2019, but it will increase slightly in 2020 (preliminary estimate 0.88%, an increase of 2.7% in R&D funding volume compared with the previous year. The 2020 estimate does not include the R&D subsidies received by companies to alleviate the impact of the coronavirus crisis, estimated to exceed EUR 1 billion. These subsidies are temporary, and they are not expected to continue in 2021.

## 4.3 Climate and energy target

### Climate targets set out in the Europe Strategy

The aim in the energy and climate package of the EU for the year 2020 is to reduce the greenhouse gas emissions of the EU and its Member States by a total of 20% by the year 2020, compared with the base year 1990. The EU intends to achieve the target by means of the Emissions Trading Directive and the burden sharing decision applying to sectors outside emissions trading. The emissions trading scheme ensures that the emissions trading sector meets the greenhouse gas emissions reduction targets set for it by the EU (21% by 2020, compared with 2005 levels). The reduction of emissions outside emissions trading is the responsibility of the Member States. Finland is obliged to reduce these emissions by 16% by 2020, compared with the 2005 levels.

Greenhouse gas emissions generated by Finland have been on the decline since 2004. According to preliminary data of Statistics Finland, Finland's greenhouse gas emissions totalled 53.1 million tonnes of carbon dioxide equivalent (CO<sub>2</sub>-eq) in 2019 (19/03/2021). Emissions have decreased by 18.2 million tonnes, or 26%, from the base year 1990, and by 38% from 2003, when emissions were at their highest during the 1990–2019 time series. Compared with the previous year, emissions decreased by 6%. The decrease in the use of coal and peat had the highest impact on the lower emissions. Emissions outside the emissions trading scheme (e.g. the use of fuels in the heating of buildings, transport apart from air transport and international sea transport, agriculture, waste management and the use of F-gases) decreased by 1%, while exceeding the assigned amounts set by the EU by 0.6 million tonnes CO<sub>2</sub>-eq. The sum of emissions and removals (net sink) in the land use, land use change and forestry (LULUCF) sector is not included in these total emissions. In 2019, the LULUCF sector's net sink was -14.7 million tonnes CO<sub>2</sub>-eq.

Emissions of the energy sector decreased by 7%, and the emissions generated by industrial processes and product use decreased by 6% from 2018 to 2019. Emissions of

the waste sector decreased by 1% from the previous year, while agricultural emissions increased by 2%. The net sink in the LULUCF sector was 79% higher than in the previous year. In particular, the decrease in felling by 6% from the peak year of 2018 increased the land use sector's net sink.

The renewable energy target set by EU for Finland for the year 2020 is 38%. In 2019, renewable energy accounted for 43% of end-use energy consumption. Finland has been exceeding the renewable energy target since 2014.

The EU's renewable energy obligation for the transport sector is 10% (including double counting), but Finland has nationally decided on the higher target of 20% for 2020. The biofuels distribution obligation for sellers of transport fuels will ensure that this target is achieved. In 2019, biofuels accounted for 11% of all transport fuels (without double counting), showing an increase from 2018 (9%). In other words, the proportion of renewable energy was more than 20% in 2019.

As required under the Energy Efficiency Directive (EED), the Government has set a target of restricting growth of end-use energy consumption by improving energy efficiency so that in 2020, the (indicative) consumption would be a maximum of 310 TWh (26.7 Mtoe). Energy efficiency agreements between the central government and other actors (industry, services sectors, municipalities etc.) play a key role in Finland's energy efficiency activities. The first agreement period was 2008–2016, and new agreements for 2017–2025 were concluded at the end of 2016.

### Monitoring achievement of the 2030 climate targets

In December 2020, the EU set a new climate and energy policy target to reduce greenhouse gas emissions by at least 55% from the 1990 level by 2030. This will change the emissions trading and burden-sharing sector's targets in the near future. The emissions trading sector has a reduction target of 43% and the burden-sharing sector a reduction target of 30% from the 2005 levels. Under the burden-sharing regulation, which entered into force in spring 2018, Finland must reduce its emissions by 39% by the year 2030, compared with 2005 levels. Finland has decided to apply one-off flexibilities to achieve the emissions reduction target set for the burden-sharing sector.

The energy and climate policy targets beyond 2020 are discussed in the National Integrated Energy and Climate Plan that Finland submitted to the European Commission on 20 December 2019. The plan describes how Finland aims to achieve the energy and climate targets for 2030 set by the EU. Finland's National Integrated Energy and Climate Plan includes the energy and climate policy targets set in Prime Minister Marin's Government Programme. The measures set out in the National Integrated Energy and Climate Plan are

based on the National Energy and Climate Strategy presented in 2016<sup>8</sup> and the Medium-term Climate Change Policy Plan presented in 2017. The National Energy and Climate Strategy and the Medium-term Climate Change Policy Plan will be revised during 2021.

The National Integrated Energy and Climate Plan presents not only the targets set for 2030 and the policy measures required to achieve them, but also the impact of the determined policy measures on the expected development of greenhouse gas emissions, renewable energy and energy efficiency until 2040. The plan covers all five dimensions of the EU Energy Union: decarbonisation (including the reduction of greenhouse gas emissions and renewable energy), energy efficiency, energy security, the internal energy market, and research, innovation and competitiveness. The plan also describes the impact of the planned policy measures on the energy system, greenhouse gas emissions and removal of carbon dioxide by carbon sinks, economic development, the environment, and citizens' health. In addition, the plan contains an assessment of the impact of planned and existing policy measures on future investment needs.

The annual climate report<sup>57</sup> required in the national Climate Change Act monitors the achievement of the burden-sharing sector's targets set for 2020 and 2030, and the development of total emissions relative to the carbon neutrality goal set for 2035. It appears likely that Finland will meet the target for 2013–2020. The measures for 2021–2030 have also been planned ensuring that the obligation will be fulfilled.

The policy measures detailed in the annual climate report show that Finland has already introduced a number of new steering methods to implement the Medium-term Climate Change Policy Plan and that additional measures are being prepared. Emission reductions will be needed in every sector, while the development of emissions in the transport sector will be crucial considering the whole. They will depend on the use of biofuels, transport volumes and the renewal of the car stock. Annual changes in the share of biofuels are reflected in the emissions generated by the transport sector and the burden-sharing sector as a whole.

At the same time, emissions from the land use sector should be smaller than the calculated removals by carbon sinks. Finland aims to increase the share of renewable energy to at least 51% of end-use energy consumption and to 30% of end-use energy consumption in road transport. In energy efficiency, end-use energy consumption should not exceed 290 TWh in 2030. Under Finland's electricity interconnection target for 2030, the level of interconnectivity will be held above 15% of the domestic power generation capacity.

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57 <http://urn.fi/URN:ISBN:978-952-361-240-2>

## Government's climate targets for 2035

Achieving carbon-neutrality by the year 2035 is the most important energy and climate policy target contained in Prime Minister Marin's Government Programme, and it also provides a link between different emission sectors. According to the Government Programme, Finland will achieve carbon-neutrality by 2035 and be carbon negative soon after that. In addition, Finland aims to be the world's first fossil-free welfare society. According to the Government Programme, electricity and heat production in Finland must be made nearly emissions-free by the end of the 2030s while also taking into account the perspectives of security of supply and servicing. The new climate policy targets will be incorporated in the Climate Change Act, which will be updated so that the carbon-neutrality target can be achieved by 2035.

However, current measures are not sufficient to achieve the 2035 carbon-neutrality target. Additional measures are being prepared under the Ministerial Working Group on Climate and Energy Policy in conjunction with the preparation of the National Energy and Climate Strategy and the Medium-term Climate Change Policy Plan. In addition, the national Climate Change Act is being revised to respond to the Government Programme's carbon-neutrality target. The act will also include the land use sector and the target set for strengthening carbon sinks. The aim of these changes is to ensure that Finland can achieve its highly ambitious national climate targets.

## 4.4 Education target

### Early school leavers

In 2019, early school leavers accounted for 7.3% of all 18–24-year-olds.

The aim of the Government Programme is that, having completed their comprehensive school education, all students gain an upper secondary qualification. The minimum school leaving age will be raised to 18 years. In addition, student guidance and student welfare services will be improved, along with the capacity of comprehensive schools to provide everyone with the skills to complete upper secondary education. Expanded compulsory education will enter into force in 2021. The law will apply, for the first time, to students within the scope of compulsory education who are in the ninth grade in spring (mainly students born in 2005). Compulsory education ends when the person reaches the age of 18 or when they complete an upper secondary qualification (a general upper secondary qualification or a vocational qualification).

As outlined in the Government Programme, the Ministry of Education and Culture has launched programmes to enhance quality and equality in early childhood education and care, pre-primary education and basic education. The programmes will cover the

period 2020–2022. Under the Right to Learn development programmes, the equality grant scheme will be made permanent, and efforts will be made to narrow learning gaps, to strengthen the culture of literacy and reading and to make the early paths of learning more flexible. More support will be provided for learning and school attendance, and for pupils from immigrant backgrounds, measures will be introduced to enhance inclusion, and there will be more focus on high-quality implementation of curricula for early childhood education and care and other curricula, and continuous learning among teachers.

A development programme titled *Oikeus osata* ('Right to skills'), which aims to improve the quality and equality of vocational education and training in 2020–2022, contributes to ensuring that all students in vocational education and training acquire solid vocational competence and good basic skills for work, life and lifelong learning. The programme's aims also include narrowing and preventing gaps in learning and learning outcomes linked to gender, socio-economic background, place of residence or need for support, thus promoting equality and non-discrimination in vocational education and training. The development programme also supports the expansion of compulsory education.

### Tertiary education

In 2019, a total of 47.3% of all Finns in the 30–34 age group had completed tertiary education. The Government Programme has set a target for 2030, according to which at least 50% of all 25–34-year-olds should have a higher education degree. The admission procedures of higher education institutions have been updated to encourage students who have completed upper secondary education to move to universities. For example, more emphasis is now put on school certificates in the process. Flexible study paths, continuous learning, recognition of prior learning, and digital learning environments will be developed to facilitate completion of studies and to ensure better combination of work and studies.

Agreement negotiations for the term of 2021–2024 were held between the Ministry of Education and Culture and higher education institutions in 2020. During the negotiations, the degree targets set for higher education institutions were raised considerably, and strategy appropriations were allocated to increasing study places, promoting internationalisation and fulfilling the digital vision for tertiary education.

The Ministry of Education and Culture supports the fulfilment of the digital vision to build digital learning environments at higher education institutions by 2030. The objective of the digital vision is to make Finland a model country for flexible learning by making the national learning data resources available to individuals and society. The vision also helps to make Finland more competitive and strengthens the basis for research and innovation.



Funding models for higher education institutions were revised for the agreement term of 2021–2024 so as to better support the completion of basic degrees, faster graduation, the more effective use of study places, and continuous learning.

#### 4.5 Poverty reduction target

In 2010, the European Council agreed that the people at risk of poverty and social exclusion should be assessed on the basis of three indicators: relative risk of poverty, material deprivation and the under-employment of households. When all the indicators determined by the European Council are taken into account, risk of poverty and social exclusion affected a total of about 873,000 people in Finland in 2019 (compared to 856,000 in 2016). In Finland, the risk of poverty or social exclusion can mostly be explained with relative risk of poverty because in 2018, about 669,000 persons lived in low-income households (640,000 in 2017). This is about 77 % of all individuals at risk of poverty or social exclusion. About 376,000 individuals lived in under-employed households (compared to about 390,000 in 2016), while about 139,000 persons lived in households suffering from material deprivation (about 133,000 in 2016). During the poverty target monitoring period (since 2008), the number of people on low incomes and suffering from material deprivation has declined but the number of individuals living in under-employed households has increased.

Age group-specific differences between women and men at risk of poverty and social exclusion have narrowed in the 2010s, especially as a result of the narrowed low-income gaps between older women and men. Of the individuals living in low-income households, 438,000 were women and 435,000 were men. There are slightly more men than women in under-employed households, whereas the same number of women and men live in households suffering from material deprivation. In Finland, the low-income group also includes students, whose low-income status is usually of temporary nature.

All sub-indicators used to describe the risk of poverty and social exclusion are household-based, which means that in households with different-sex couples, both the woman and the man are considered low-income individuals, under-employed or individuals suffering from material deprivation if any of these criteria concerns the household in question. This means that differences between women and men in the perception of the risk are mostly differences between people living alone and single-parent households. Half of all women and almost half of all men at risk of poverty or social exclusion live alone.

Among the working population, i.e. those aged 18–64 years, those at risk are more often men than women. Among those past the retirement age, most of the people at risk of poverty and social exclusion are women (especially among the individuals aged 75 and

over). About 47% of all men at risk of poverty or social exclusion live in under-employed households, while the figure for women at risk is about 40%.

In 2019, there were about 415,830 Finns in the long-term low-income category, or 7.7% of the entire population, showing an increase of 0.2 percentage points from the previous year. Spending long periods in the low-income category is much more common among women than men in retirement age, whereas in the working-age population, it is slightly more common among men.

## 5 EU funds

The Partnership Agreement is a framework document bringing together the measures, results and reconciliation of European Structural and Investment Funds (ESIF). The ESIFs are as follows: the European Regional Development Fund (ERDF), European Agricultural Fund for Rural Development (EAFRD), European Maritime and Fisheries Fund (EMFF) and the European Social Fund (ESF). The purpose of the ESIFs is to support the national objectives of the Europe 2020 strategy. There have been no major changes in the country-specific recommendations issued to Finland between 2014 and 2020 since the preparation of the Partnership Agreement. In the recommendations, Finland has been urged to enhance the labour market capabilities of young people, long-term unemployed, immigrants and other groups in vulnerable labour market position and provide them with better employment opportunities. These recommendations are still valid. The measures targeting these groups have been included in the ESF priority axes of Finland's structural fund programme. Promoting entrepreneurship, competitiveness and internationalisation (through better innovation capabilities, for example) also plays a prominent role in the structural fund programme.

In the 2020 country-specific recommendations, Finland is urged to combat the pandemic, support the starting recovery by means of a financial policy and by increasing investments, and improve the availability of health and social services, considering the shortage of healthcare personnel. Employment and an active employment policy must be strengthened, the liquidity of SMEs must be improved, and public and private investments, particularly in the green transition and the digital breakthrough, must be promoted. For the rapid implementation of measures related to recovery from the coronavirus pandemic, the EU's recovery package will also provide funding during the ending programme period. The public funding framework of Finland's structural fund programme will increase by more than 10% as a result of the REACT EU funding made available for the final years of implementation. According to guidelines, the additional funding must be targeted specifically at ERDF and ESF measures that support the green and digital transitions.

All in all, it is estimated that about 70% of ERDF funding and 80% of ESF funding has been allocated directly to projects related to the country-specific recommendations. The employment rate target can be promoted by improving the skills and employability of the labour force on the basis of the working life needs. In ESF projects, public employment services are developed and the unemployed are provided with training, coaching and subsidised work as well as participatory opportunities. The purpose of ESF funding is to facilitate the labour market access of the unemployed and people with partial work ability with the help of support measures and service models. The impact assessments of the ERDF and ESF programmes suggest that ensuring an unbroken development path, smooth transfers and successful implementation of the individual stages are essential factors in employment projects.

Skills development measures introduced in ESF projects have been particularly effective in improving the skills of those already in employment. The projects have increased the number of students completing a higher education degree through actions that prevent the interruption of studies and support the completion of degrees. Furthermore, the projects have encouraged young people to move to education, training or working life and helped to develop educational and training services for groups with special needs. Improvements in employment, skills and inclusion are also reflected in a better renewal and innovation capacity. The multisectoral character of the measures and services is considered a key factor in ensuring their success.

The following factors are considered to be requirements for success in the activities to prevent social exclusion: genuine social participation from the planning stage onwards, use of a broad range of different measures and more extensively supported instruments, service packages (providing social inclusion services as well as employment and training services on a one-stop shop basis), long client relationships (when required) and higher financial inputs per person than in other priority axes.

In partial ERDF funding, support is provided for the growth and competitiveness of companies and thus also employment. A total of about EUR 700 million in public funding was allocated to these measures between 2014 and 2020. Most of the business development funding and the funding to developing business operating environments has been allocated to Eastern and Northern Finland. The ERDF has supported SMEs' access to loans by financing securities.

The European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund encourage companies to develop and grow and enhance business competence and cooperation skills. The purpose of rural development funding is to encourage the renewal of the business structure and the creation of new jobs by supporting the creation of new business and renewing investments. This also reduces

the need for current transfers and helps to reduce the number of low-income households. According to a number of surveys, rural development funding has created desired positive policy effects on business growth. The key challenge in rural areas is the poor availability of skilled labour, which hampers the growth of successful enterprises. Funding for leader groups provides a basis for better inclusion and competence of rural residents, for the growth of local entrepreneurship, and it also helps to identify solutions for renewing the rural service structure. The competitiveness of agriculture will be improved by strengthening expertise and by allocating various investment subsidies. The Rural Development Programme introduces significant environmental and climate measures through environmental agreements for agriculture, for example, and therefore improves adaptation to climate change. Different wetland and traditional biotope projects improve biodiversity and the state of watercourses. The aid provided by the EMFF helps to develop fisheries industries, new products and ways of entering new markets. These measures create new opportunities and reduce the need for current transfers. The European Maritime and Fisheries Fund also supports local-level development through fisheries local action groups. Supporting employment through training and networking projects has created job opportunities for individuals interested in working in the fisheries sector, especially in sparsely populated areas suffering from high unemployment.

The purpose of partial ERDF funding is to support the development of innovation and competence structures in regions and companies' innovation activities. Innovation hubs have also been developed in projects managed by universities and universities of applied sciences by improving the R&D infrastructure. In 2014–2020, approximately EUR 836 million of public funding was allocated to the aforementioned measures. Guidance and advisory services in competence and training, expert networks for employers, teachers and instructors as well as novel teaching and studying methods are also extensively developed with ESF support. A total of 20% of the ESF funding has been allocated to social inclusion and combating of exclusion. A total of about EUR 186 million in public funding was allocated to the above actions by the end of 2020.

Achievement of the climate targets set out in the Europe 2020 strategy are supported in the structural fund programme for mainland Finland by providing financing for ERDF projects promoting low-carbon activities in which the focus is on encouraging energy efficiency in SMEs and the development of renewable energy and energy efficient solutions. At the end of 2020, these measures accounted for 26.8% (about EUR 403 million) of all public funding allocated to ERDF measures. Moreover, in all ESF and ERDF projects receiving funding, the activities are assessed from the perspective of sustainable development. Projects promoting bioeconomy and circular economy that are closely connected with climate and environmental objectives are supported from the rural development programme for mainland Finland. Furthermore, rural development programme instruments also help to improve the status of the Baltic Sea and other

water bodies and find solutions to sustainable food production. Measures promoting sustainable development, such as measures connected with the management of aquatic ecosystems and improvement of their status, are also supported through the EMFF.

## **6 Institutional issues and the participation of stakeholders, especially social partners and other administrative levels in the preparations**

### **6.1 Preparation of the National Reform Programme and participation of stakeholders**

The Finnish Constitution lays down provisions on the national preparation of decisions made in the EU. Under these provisions, the Government is responsible for the national preparation of EU issues and decides on the measures to be taken by Finland in respect of them.

EU affairs are prepared in the competent ministries, if necessary working with other ministries, and they are coordinated in the coordination system for EU affairs, in sections under the Committee for EU Affairs and, if necessary, in the Cabinet Committee on European Union Affairs.

Under the Constitution, Parliament has extensive rights to be informed on EU affairs. The provisions are designed to ensure that Parliament has the opportunity to influence the content of the decisions made in the EU. Parliament participates in the forming of the national position during the entire preparation and negotiation process taking place in the EU. The views of Parliament are the basis for the Government's actions in the EU.

### **6.2 Stakeholder participation in the preparation of key reform projects Health and social services reform**

There will be stakeholder cooperation at several levels during the preparations of the health and social services reform. A separate division has been established for regional-level preparatory work, and in addition to ministries, municipalities, the Association of Finnish Local and Regional Authorities, greater regions, the municipal employer, and regional rescue services will also be represented in the division. The division will act as a link between the stakeholders and the law-drafting process. In early 2020, the Ministry of

Social Affairs and Health conducted discussions with regions, and there will also be closer cooperation with regional networks involved in the preparatory process as the reform progresses.

### Social security reform

The social security reform will be prepared by a parliamentary committee. Stakeholders, such as labour market central organisations, non-governmental organisations and research institutes, will serve as permanent experts in the committee and be represented in its divisions. The committee will also hear the views of a large number of citizens and non-governmental organisations, and will make use of inclusive working methods.

### Reform of the Climate Change Act

In autumn 2019, the Government launched the overhaul of the Climate Change Act to help Finland to achieve its carbon-neutrality target by the year 2035. It is a framework act, which means that it only imposes obligations on the authorities. Every effort will be made to ensure that the hearings held during the preparatory process are inclusive and correctly timed. Children and young people and the Saami community, two groups that are vulnerable to climate change, have been selected as key target groups in the hearings.

The preliminary preparations of the new act have included an extensive citizens' survey (attracting 2,500 responses), events in five public libraries (in Helsinki, Tampere, Seinäjoki, Rovaniemi and Inari) in which information on the reform was provided, and events for specific stakeholders. Furthermore, a round table discussion on climate and the Climate Change Act for young people has been held, a workshop has been arranged as part of the *Lapset valtaavat valtioneuvoston* (Children occupy the Government Building) event, there has been a visit by climate strikers of the Tiurasniemi school, and children's views on the Climate Change Act have been heard. Targeted stakeholder events have focused on different themes of the reform (business life, sinks and land use, municipalities and regions, and legal aspects). In the summer and autumn of 2020, discussion events were held in cooperation with the Timeout Foundation that, in addition to the reform of the Climate Change Act, served other legislative projects of the Ministry of the Environment (Nature Conservation Act, Land Use and Building Act).

Based on the hearings, majority of the respondents would like to have a more open and a clearer Climate Change Act written in an easy-to-understand language, which contains clear sector-specific objectives and a structure covering all emissions categories. Strengthening the cross-cutting character of environmental aspects in relation to other environmental laws and strengthening of a fair transition process have also been

highlighted in the hearings. In particular, the development of regulation on adaptation to climate change and the stronger engagement of indigenous peoples in climate measures were emphasised in Northern Finland.

### Comprehensive reform of energy taxation

The working group that investigated the reform of energy taxation in accordance with the Government Programme completed its activities in September 2020. The working group prepared the reform of energy taxation on the basis of the content of the Government Programme and assessed other needs for development in the energy taxation system, considering not only the carbon-neutrality target, but also the competitiveness of companies and the perspectives of social and regional policy.

Participating in the working group were experts from the Ministry of Finance, the Ministry of Agriculture and Forestry, the Ministry of Economic Affairs and Employment, the Ministry of the Environment and the Finnish Tax Administration. The working group also consulted researchers, various organisations and key stakeholders.

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