Strategy for digitalisation and information management in healthcare and social welfare

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Abstract

The preparation of the strategy for digitalisation and information management in healthcare and social welfare began in February 2023. The aim was to identify the strategic priorities based on the need to develop activities. Approximately 6,000 experts and citizens were invited to participate in the preparation of the strategy. The vision of the strategy describes digitalisation as the foundation for healthcare and social welfare. The four main objectives of the strategy are as follows: information-based foresight and digital services help people independently maintain their health, wellbeing and ability to work; digital services are the primary choice in all wellbeing services counties whenever appropriate or for those clients who are able to use them; the workload of healthcare and social welfare personnel has been reduced by making better use of information and introducing advanced technological solutions; and information on services and benefits is widely available to managers, decision-makers and researchers across administrative boundaries.

During the planning of the digitalisation programme, the objectives for the implementation of the strategy in the next few years were set out in accordance with the Programme of Prime Minister Orpo's Government. The progress made in implementing the strategy will be assessed halfway through the government term, and a mid-term review will be carried out at the end of the government term to assess whether the objectives of the strategy are still relevant.

Keywords	strategy work, information, digitalisation, development, implementation, planning		
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Digitaalisuus sosiaali- ja terveydenhuollon kivijalaksi
Sosiaali- ja terveydenhuollon digitalisaation ja tiedonhallinnan strategia 2023–2035

Sosiaali- ja terveysministeriön julkaisuja 2024:1

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Tiivistelmä

Sosiaali- ja terveydenhuollon tiedonhallinnan ja digitalisaation strategian valmistelu käynnistyi helmikuussa 2023. Tavoitteena oli tunnistaa strategiset painopisteet, jotka perustuisivat toiminnan kehittämisen tarpeisiin. Strategian valmisteluun osallistettiin noin 6000 asiantuntijaa ja kansalaista. Strategian visio kuvaa digitaalisuutta sosiaali- ja terveydenhuollon kivijalkana. Neljä päätavoitetta ovat: Henkilön on mahdollista ylläpitää omatoimisesti hyvinvointiaan, toimintakykyään ja terveyttään tietoon perustuvan ennakoinnin ja digitaalisten palvelujen tuella. Digitaalinen asiointi on ensisijaista kaikilla hyvinvointialueilla niissä palveluissa, joihin se sopii tai niille asiakkaille, jotka siihen kykenevät. Sosiaali- ja terveydenhuollon henkilöstön työkuormaa on vähennetty hyödyntämällä tietoa paremmin ja ottamalla käyttöön kehittyneitä teknologisia ratkaisuja. Johtajilla, päätöksentekijöillä ja tutkijoilla on laaja-alaisesti ja poikkihallinnollisesti käytössä palveluista ja etuuksista kertyvää tietoa.

Strategian toimeenpano lähivuosina on linjattu Orpon hallitusohjelman mukaiseksi digitalisaatio-ohjelmasuunnittelussa. Hallituskauden puolivälissä arvioidaan toimeenpanon edistyminen, ja sen lopulla tehdään väliarviointi siitä, ovatko strategian tavoitteet edelleen oikeat.

Asiasanat	strategiatyö, tiedonhallinta, digitalisaatio, kehittäminen, toimeenpano, suunnittelu

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Digitaliseringen som hörnsten i social- och hälsovården
Strategi för digitalisering och informationshantering inom social- och hälsovården 2023–2035

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Beredningen av strategin för digitalisering och informationshantering inom social- och hälsovård inleddes i februari 2023. Syftet med strategin var att identifiera de strategiska prioriteringarna utgående från utvecklingsbehoven inom verksamheten. I beredningen av strategin deltog cirka 6000 experter och medborgare. I visionen i strategin beskrivs digitaliseringen som en av hörnstenarna i social- och hälsovården. Strategins fyra huvudmål är att den kunskapsbaserade prognostiseringen och de digitala tjänsterna ökar människans möjligheter att själv upprätthålla sitt välbefinnande, sin hälsa och sin funktionsförmåga, att alla välfärdsområden i första hand använder digitala tjänster alltid när det är lämpligt eller alltid när kunderna har möjlighet att använda digitala tjänster, att social- och hälsovårdspersonalens arbetsbörda minskar genom att man utnyttjar information bättre och tillämpar avancerade teknologiska lösningar och att chefer, beslutsfattaren och forskare har bred tillgång till pålitlig, tidsenlig och jämförbar information över förvaltningsgränserna om tjänsterna och förmånerna.

Målen för genomförandet av strategin de närmaste åren har vid planeringen av digitaliseringsprogrammen fastställts enligt regeringsprogrammet för Orpos regering. Genomförandet utvärderas i mitten av regeringsperioden, och vid halvtidsutvärderingen i slutet av regeringsperioden bedöms behovet att ändra målen för strategin.

Nyckelord	strategiarbete, informationshantering, digitalisering, utveckling, genomförande, planering		
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FOREWORD

The development of digitalisation and information management in healthcare and social welfare involves a wide range of different objectives and expectations, which arise from the needs of the actors and customers and which can be mostly derived from changes in the operating environment. In the Programme of Prime Minister Orpo's Government, digitalisation is identified as a key means of reforming services: 'New operating modes, such as digital services, remote appointments, services taken to the client's home and mobile services, will be promoted, notably in sparsely populated areas. The introduction of digital service counselling will be promoted in wellbeing services counties in an effort to solve each patient's problem either digitally, over the phone or by referring the patient to their dedicated health and social services clinic or other services.' (VN 2023:60, p. 31). Digitalisation and information management have also been identified as a solution to the sustainability challenge: 'Digitalisation and advances in information management support the development of services and activities by healthcare and social welfare actors at national and especially at regional level. They facilitate the achievement of other national objectives arising from the content and development of healthcare and social welfare and provide the customer with a uniform service package.' (STM 2022:18) To clarify the strategic objectives, the Ministry of Social Affairs and Health decided to launch the preparation of a strategy for digitalisation and information management in early 2023.

Building a digital foundation for healthcare and social welfare services was formulated as the vision for the strategy based on the priorities set in the digitalisation and information management strategy. The name reflects the idea that digitalisation acts as the layer enabling changes and reforms in the operating and service processes of healthcare and social welfare, and that an efficient and well-functioning service system can be built on this basis. A large number of citizens and experts on healthcare, social welfare and information management were involved in the preparation of the strategy to ensure that the strategic objectives can be identified on a needs basis.

The objectives set out in the strategy for digitalisation and information management in healthcare and social welfare will mostly be implemented in accordance with the Government Programme as part of the national services reform set out in the digitalisation programme but also within the framework of other projects, such as the ongoing Kanta service development projects, projects included in the sustainable growth programme and the reform of pharmaceutical matters. The main purpose of the digitalisation programme is to support wellbeing services counties as they work to boost the effectiveness of healthcare and social welfare services, one of the aims set for them. The progress achieved will be assessed halfway through the government term and a mid-term review of the relevance and appropriateness of the objectives set out in the strategy will be prepared at the end of the government term. The strategy will be maintained on a rolling basis, which means that the objectives can be updated, for example, when a new government takes office.

Kari Hakari
Helsinki, December 2023

1 Introduction

1.1 Objectives set for the preparation of the strategy

In February 2023, the Department for Steering of Healthcare and Social Welfare in the Ministry of Social Affairs and Health launched the preparations of the strategy for digitalisation and information management in healthcare and social welfare. The aim was to identify national strategic priorities that would be based on the needs arising from the development of healthcare and social welfare and would, at the same time, provide a more detailed basis for the development of digitalisation and information management over the long term. On this basis, the aim was to ensure a long-term approach to and continuity of the development of digitalisation and information management across government terms or any other transitional periods. The strategy was eventually named 'Building a digital foundation for healthcare and social welfare services'. The name reflects the idea that digitalisation acts as the layer enabling changes and reforms in the operating and service processes of healthcare and social welfare, and that an efficient and well-functioning service system can be built on this basis. Information management and ensuring of interoperability provide a firm foundation for building digitalisation.

The national objectives for healthcare and social welfare (STM 2022:18) describe the aims set out for the activities and define the task of digitalisation and information management as follows: 'Information management and digitalisation planned at national level and at the level of collaborative areas support the achievement of the objectives and customer-oriented reform of the activities'. The aim is to ensure that digitalisation and information management would support the development of the services and work of healthcare and social welfare actors and would provide the customer with a uniform service package.

A vision (description of the desired end state) was not the only aim of the preparatory process as the intention was also to determine why these objectives should be achieved and how they could be achieved. The objectives set out in the previous strategy to develop information management in healthcare and social welfare (Sote-tieto hyötykäyttöön) were considered useful (STM 2014) but shortcomings were identified in its implementation (STM 2019:1). A common roadmap and a development continuum to implement the strategy were lacking. For this reason, in the preparation of the new strategy, it was considered important to define the mechanisms for monitoring and, if necessary, updating the

implementation process. Despite the challenges arising from the implementation, the earlier strategy has provided a good basis for development, and the strategy itself has made healthcare and social welfare actors more aware of the role of information management. (STM 2019:1.)

The results of the work on the new strategy were compiled into a strategic-level roadmap and proposals for measures, which can be found in Chapter 4 of this publication. The preparation of the strategy can be used as a basis for productivization and specifying responsibilities. The implementation of the strategy is also in line with the digitalisation objectives envisaged in the document 'A strong and committed Finland', the Programme of Prime Minister Orpo's Government (VN 2023:60). The preparation of the strategy is steered by the digitalisation and information management division operating under the Advisory Board on Healthcare and Social Welfare. The digitalisation and information management division is responsible for ensuring the monitoring of the implementation of the strategic objectives and for maintaining the strategy as a whole (see Chapter 5 for more details).

WHY ARE DIGITALISATION AND INFORMATION MANAGEMENT IMPORTANT?

In **digitalisation**, operating practices are developed and updated using information management as a basis. It involves the changing of an organisation's processes and electrification of services in line with the advances of information and communications technology.

Planned digitalisation measures can only be successfully implemented if the change is planned and coordinated by the key actor instead of allowing the change to be driven by information management and information technology.

Information management means the definition of the contents and uses of information as well as the collection, organisation and storage of information in such a manner that the information can be retrieved and used appropriately and in a controlled manner. In information management, information technology solutions are combined with an organisation's activities and the flow of information in the organisation.

Information management and ensuring interoperability are prerequisites for digitalisation.

In Finland, **promoting interoperability** is based on the European interoperability framework (COM(2017) 134). Ensuring interoperability involves four levels: (1) Legal interoperability means that operations are harmonised on the basis of legislation and its implementation. (2) Organisational interoperability means the interoperability of the operating models and processes of different actors, such as healthcare and social welfare organisations, so that common objectives and benefits can be achieved. (3) Semantic interoperability means that the meaning of information remains unchanged when information is transferred between actors. Semantic interoperability allows information to be used within the limits of the access rights possessed by different parties. It requires open data models, and common data specifications, concepts, vocabularies, classifications and code sets or other jointly agreed data structures. (4) Technical interoperability means technical planning and implementation at information system level so that system interoperability supports such features as data transfer between systems. Among other things, it requires common standards, open interfaces and integration services. Technical interoperability in healthcare and social welfare is supported by Kanta information system services and the standards introduced as part of them.

1.2 Changing operating environment

The development of digitalisation and information management in healthcare and social welfare involves a wide range of different objectives and expectations, which can be derived from the changes in the operating environment. The changes in the global security situation and the need to strengthen preparedness for cross-border threats and to secure functions critical to society (such as healthcare) arising from these changes are key international developments in this respect. At the same time, extreme weather and the spread of infectious diseases are two phenomena accelerated by climate change. At the level of society at large, more inequality also means more exclusion but it also heightens the need to ensure equal availability of and access to services regardless of such factors as geographical distances. At population level, ageing means more need for services and at the same time, it also

means that the number of professionals providing these services will be limited. Sustainability means economic sustainability and consideration of social and ecological sustainability in the development of solutions for the future.

For the service system, the changes in the operating environment mean that the manner in which high-quality services will be organised, provided and financed with maximum effectiveness and efficiency must be redefined. This also requires better information for the steering of the service system and the management of the development and provision of services. From the perspective of the service system, focus in the future will increasingly be on measuring effectiveness, quality, availability, efficiency and customer safety. Instead of understanding the outputs produced by the system, the aim is to understand the results that the service system produces and how the wellbeing of the customers, customer groups and the population develops. Customer events and services produce information that can be used with research and data processing methods to verify effectiveness and to steer and develop the service system. A high-quality service system requires a new approach to cooperation at national level so that common objectives can be defined to provide monitoring and indicators with a uniform meaning.

At the same time, healthcare and social welfare services themselves are becoming information-based (evidence-based) and increasingly personalised. In the needs arising from customers' health, the emphasis is increasingly on chronic, non-communicable diseases and inputs in preventive services. This requires a changeover from episode-based care to continuous improvement or maintenance of the customer's life quality and functional capacity. Similar pressures for change can also be seen in social welfare services as the ageing population is growing and the focus is shifting from interventions to managing the customer's diverse service needs and ensuring their everyday functional capacity. Well-functioning services require better interoperability in healthcare and social welfare for customers, professionals, services and information. In fact, it is becoming clear that the work of professionals is in the process of becoming increasingly multidisciplinary, consultative and coaching-based. They make increasing use of processed information, situation pictures suited for the context and decision-making support systems.

Rapid advances in technology mean changes in work but also the development of well-established health and social service operating models, reassessment of tasks and development of capabilities and skills. With information and advanced technology, new types of anticipatory and preventive services can be made available to individuals and the population as a whole. In fact, in the future, health should be treated as a resource and a comprehensive source of wellbeing in

which inputs are made, and the focus should no longer be on diagnosis-based thinking and healthy-ill division. Wellbeing can be the focus of proactive attention throughout a person's life cycle. (GOV.UK 2019, EU 2019)

Changing customer behaviour is also putting pressure on healthcare and social welfare services. The focus here is on such trends as consumerization and digital inclusion, which presents itself as an individual-level actor that, together with the service system, promotes its own interests. People want to use services independently of time and place, preferably with mobile devices, and if necessary, they would like to influence the content of the services. The heterogeneity of the customers will also increase as the needs, functional capacity and the situation of each individual increasingly impact the service packages. Customers are listened to and they are able to have a say when their own service needs are determined. People also manage and share their own personal data. In the future, health and wellbeing data can be supplemented with measurement and sensor data, on the basis of which personalised preventive recommendations, interventions and even diagnoses can be made. People also want to access their own customer data, and acquire adequate understanding of the functioning of the service system and the quality and effectiveness of the service providers. In the future, people may no longer only take care of their own wellbeing, as the management of personal networks, such as the wellbeing of close family members, is emphasised. In the future, the service system must also provide better support for situations where an individual is managing the affairs of another person. Moreover, not all people have the ability or willingness to play a strong role in the management of their own wellbeing, and for this reason, the system must continue to support all individuals in accordance with their personal situation.

While more extensive use is made of information, personalised services and monitoring devices and sensors, there is a risk that people's trust in different actors weakens creating a backlash against sharing and processing data. In fact, a key issue for the future is how to ensure continuous trust in the authorities and shared services. This requires, for example, that citizens are able to monitor, supervise and control the use of their own data.

1.3 International approaches to digitalisation strategies

To support the preparation of the strategy, a review of international healthcare and social welfare digitalisation strategies was carried out in spring 2023, with focus on countries adjacent to Finland (Satosuo 2023). Information searches were conducted using the following terms: digital health strategy, healthcare digitalization, digital

health care, eHealth strategy and eHealth plan. Although our own strategy covers both healthcare and social welfare, the term 'health' may in some countries include services that in Finland are part of social welfare. Digital healthcare and social welfare strategies of Sweden, Norway, Denmark, Estonia, Northern Ireland, United Kingdom, Spain, France and Australia were covered in the review. The digital strategies of these countries were selected because each of the countries had recently adopted a national strategy for promoting digitalisation in healthcare and social welfare. Similarities in healthcare systems and other factors likely to impact the nature of the strategy (such as demography and geography) between Finland and the countries concerned were also taken into account.

While the structure and scope of the digital strategies selected for the review varied significantly, some general features such as the vision, policy areas and action plan or management model were similar in most of the strategies. The digital strategies varied significantly in scope and degree of detail. It is noticeable that some of the digital strategies were closely linked to the other strategic objectives of the countries in question, or the countries had produced strategies to support the digital strategy in such areas as cyber security and the development of innovations. The key objectives of the strategies included in the review are very similar. The objectives of nearly all strategies could be divided into the following categories: the customer as an active actor, using digital solutions to make the operations more efficient, secure access to information, improving access and accessibility, and developing digital solutions.

The digitalisation strategies covered in the review identify a number of societal challenges to which the countries concerned are responding by developing digital services and information flows. All European countries are facing similar challenges in the field of healthcare and social welfare. Challenges to the sustainability of the service systems include the shortage of skilled labour, cost increases, an ageing population and, as a result, an increase in the proportion of people suffering from chronic illnesses and requiring care as well as regional bottlenecks in care. In fact, in many of the digitalisation strategies, the aim is to facilitate the work of healthcare and social welfare personnel and to streamline the services provided to the customers and to make them more efficient.

Based on the digital strategies, the secure use and flow of sensitive information used in the services between different actors seems to be a major challenge in the digitalisation of healthcare and social welfare. Safeguarding legislation and the protection of people's privacy are also a challenge to the digitalisation of services and the development of digital solutions. Attitudes towards digital services have a significant impact on service development. In Estonia, which in many respects

is seen as a model country for digitalisation, the attitudes towards digital services are much more positive than in such countries as Germany where the digitalisation of healthcare is still in its early stages. Digitalisation in Germany has been slowed down by such factors as the lack of support for digital service systems and concerns arising from the data protection of digital services.

When services are digitalised, it is important to ensure that the services are equally accessible to everybody. It is recognised in digital strategies that there are groups for which using digital services is difficult and that are at risk of exclusion if services are only available digitally and on a remote basis. Especially in the ageing population, there is a large number of individuals that for various reasons do not use digital services. It should also be remembered that there is a great deal of customer work in healthcare and social welfare services, in which face-to-face contacts with the customer are especially important. Some customers also prefer traditional local services over digital services. Another important theme repeated in the digital strategies is the secure flow of information between actors and more efficient utilisation of the information collected from customers in care work, service work and research. Ensuring that healthcare and social welfare professionals are provided with sufficient competence in digitalisation matters must also be a key priority.

2 Preparation of the strategy

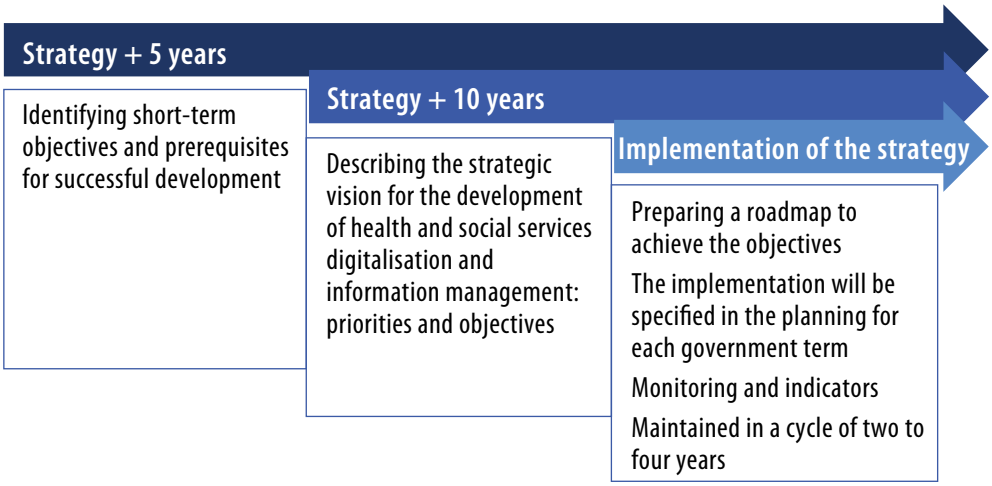
2.1 Planning the preparatory process

Preparation of the strategy for digitalisation and information management was launched in February 2023. The Ministry's own experts as well as the content and information management experts participating in the preparation first attended joint training to receive coaching for the strategy work. The purpose of the coaching was to ensure that the participants had a sufficiently uniform view of the baseline situation and the objectives of the work and to discuss such matters as the prerequisites for a successful strategy. At this stage, the participants recognised the need to involve key stakeholders appropriately to ensure that the stakeholders are sufficiently committed to the results of the work. It was also necessary to clarify the objectives of the use of digitalisation and information management in healthcare and social welfare at strategic level so that the key strategic objectives and means of implementing them can be identified, to make selections concerning the measures to be carried out within the framework of the available resources, and to reduce point-based steering and development in the digitalisation and information management of healthcare and social welfare. The objectives of the work were summed up in three questions: Which are the goals of the development of digitalisation and information management in healthcare and social welfare, why are these goals worth pursuing, and how can these goals be best achieved (see Figure 1).

Figure 1. Objectives of the strategy work as questions.

In the preparatory process, the strategy was identified from the outset as a step-by-step continuum, which was described in the planning stage as short-term objectives covering a period of about five years, as long-term objectives covering a period of between 10 and 15 years and, as part of these objectives, as an implementation planning process that would, if necessary, be specified on an annual basis (see Figure 2).

Figure 2. Target setting and phasing in the strategy work.



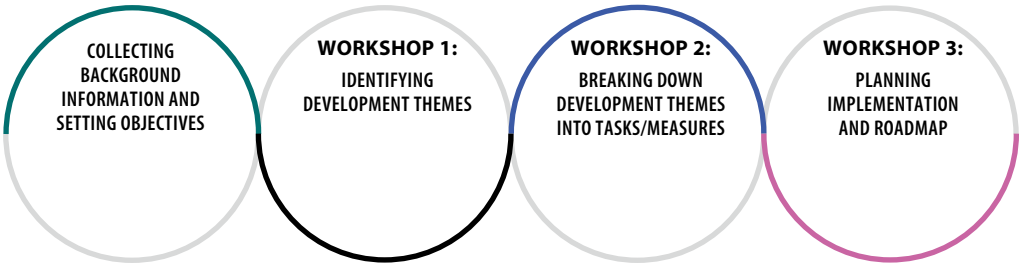
The preparation of the contents of the strategy began after the planning process by collecting existing material, by producing an international review of digitalisation strategies, and by identifying and processing needs in cooperation with experts of wellbeing services counties in workshops. The work to identify and clarify the objectives of the strategy began in cooperation with the wellbeing services counties, and as the work progressed, a wide range of different stakeholders were extensively involved and consulted.

2.2 Participants in the preparatory process

A total of about 6,000 individual citizens, representatives of healthcare and social welfare organisations and wellbeing services counties as well as representatives of stakeholders in the sector were involved in the preparation of the strategy. The compilation of the strategy content was launched inductively (in bottom-up workshops) in cooperation with the representatives of the wellbeing services

counties (see Figure 3). A total of three workshops were arranged and they were attended by experts and development, digitalisation and information management directors from a number of wellbeing services counties. Representatives of key national actors were also present in the workshops. The work in the workshops was carried out as joint discussions and in small groups (learning cafes), each of which focused on identified themes.

Figure 3. Work in the strategy workshops.



Based on the prepared material, the first event where participants could openly comment on the strategy was held on 20 April 2023. The event was titled Suuntaviivat nyt! Sote digitalisaation ja tiedonhallinnan ajankohtaispäivässä and for it, the draft strategy was broken down on a Mentimeter platform for feedback. A round-table event to discuss customer and patient data systems of the future was also held on 9 May. The events were attended by representatives of organisations, researchers, system suppliers, representatives of organisations and education institutions, students and other interested parties.

The strategy material collected during the summer was further processed by public servants. Between 7 June and 14 July 2023, citizens were also able to take part in a citizen survey supporting the strategy preparation (see Chapter 2.3 for more information). Of the respondents, 4,418 were Finnish speakers and 49 Swedish speakers. The purpose of the survey was to collect feedback and development ideas reflecting the views of future service users by asking the following questions: What are the benefits of digital healthcare and social welfare services? What should be supplemented or corrected? What kind of digital healthcare and social welfare services would you like to use? The purpose of the survey was also to hear the views of individuals who are unable or unwilling to use digital services now or in the future.

Based on the draft strategy, feedback was first requested from the experts of the Ministry of Social Affairs and Health at two events (on 8 May and 23 August 2023). The Ministry's experts were also able to give written feedback on the Howspace platform between 18 August and 8 September 2023. At the same time, open feedback on the draft strategy was collected at two discussion events (on 4 and 12 September 2023) and an electronic feedback form was also opened. The individuals giving the feedback expressed strong belief in digital transformation but they also emphasised that the information management legislation must be updated to make the change possible.

When we compare the participatory method used in Finland with similar processes in other countries (Satosuo 2023), two different approaches to the preparation of the strategy can be identified. In Sweden and Denmark, for example, similar strategies have mainly been prepared in government agencies by involving regional management and key agencies. In some countries, more parties have been involved in the preparations, and service providers in particular have been given an opportunity to express their views. For example, in Norway, more than 60 actors and stakeholders have been consulted in the preparation of the country's digitalisation strategy, including patient and other lobbying organisations, healthcare and social welfare personnel, researchers and business operators in the sector. Almost 5,000 individuals representing healthcare professionals, private and public actors and individual citizens have been consulted during the preparations of the French strategy.

2.3 Citizen survey and its results

The citizen survey was carried out in summer and about 4,500 responses were received. The purpose of the survey was to collect feedback and development ideas reflecting the views of future service users by asking the following questions: What are the benefits of digital healthcare and social welfare services? What should be supplemented or corrected? What kind of digital healthcare and social welfare services would you like to use? The purpose of the survey was also to hear the views of individuals who are unable or unwilling to use digital services now or in the future. The responses were used as such to specify the objectives of the strategy and the measures proposed in it.

Based on the survey, citizens are mostly satisfied with the existing digital healthcare and social welfare services. Respondents felt that such services allow them to use the services in a more flexible manner. As a result, professionals have more time to meet customers who need personal services, for example, at appointments. In

fact, digital services can be considered as local services that are easily accessible at home, for example. Of the existing solutions, users are particularly satisfied with the electronic prescription and the associated MyKanta services as well as the electronic booking of appointments. On the other hand, users are confused by the large number of digital services.

Suggestions for improvements to existing solutions were also listed in the responses. Users feel that the accessibility of the services should be a higher priority, as finding the right application or user interface can be difficult. Similarly, the ease of use and comprehensibility of the digital solutions should be improved and plain language should be used more extensively. This also involves the need to improve the language selection of digital health and social services so that the services would also be equally accessible in such languages as Swedish or Sámi. Moreover, there should be enough information available on the digital services so that the users could trust these solutions and the processing of the information in them as well as the expertise of the professionals who may be involved.

Instead of offering a large number of different services, service providers should give compatibility and interoperability of the solutions a higher priority. In this context, interoperability means, for example, 'one-stop-shop services'. In other words, an individual wants to be sure that they receive the services that they need on an equal basis and regardless of the means that they use to access the service system. In fact, interoperability ensures that the information already collected and stored is available to all parties involved in the service. It should also be ensured that the information can be transferred between service providers or between the customer and the service provider. Above all, digital services of the future are expected to make services more flexible and allow personalisation of services for one's own needs or life situation.

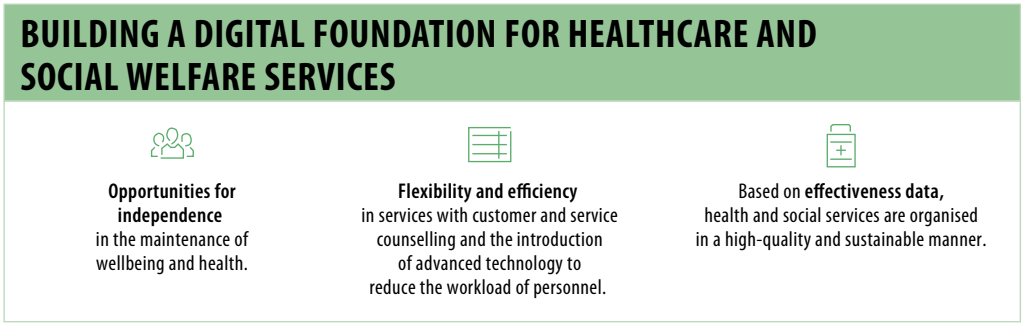
The respondents emphasised that with digital services, professionals can spend more time with customers and on concrete service tasks instead of managing administrative duties. When talking about future developments, respondents emphasised the role of digital local services, as flexible and personalised service experiences independent of time and place are increasingly valued. People want to make better use of information and competence. Digital services of the future could also enhance the way in which individuals experience their own health and wellbeing.

3 Strategic goals

3.1 Vision

The objective of the strategic change process is summed up in the vision for digitalisation and information management in healthcare and social welfare (Figure 4). The vision is summarised in the title of the strategy (Building a digital foundation for healthcare and social welfare services). Citizens will be provided with better opportunities to independently take care of their wellbeing and health as individuals, service customers or as persons managing the affairs of their close family members. The flexibility and efficiency of healthcare and social welfare services will be enhanced through customer and service counselling and the introduction of advanced technology, while at the same time, the workload of the personnel will be reduced. Health and social services will be organised on the basis of effectiveness data and evidence (research findings or evaluated data) on a higher quality basis and in a socially, economically and ecologically sustainable manner.

Figure 4. A summary of the vision for the strategic development of digitalisation and information management in healthcare and social welfare.



3.2 Objectives and their descriptions

To put the vision into practice, four key objectives have been identified and achieving them provides the basis for making the vision a reality. The objectives are described below:

1. **Individuals are able to independently take care of their wellbeing, health and functional capacity with the support of information-based anticipation and digital services**. Individuals are able to independently take care of their wellbeing, health and functional capacity using effective digital operating models that support prevention and lifestyle counselling (such as increasing physical activity) across administrative boundaries. The digital tools available to individuals are easy to use and they can be personalised if necessary. Information-based anticipation of service needs allows early prevention and reduces the need for more work-intensive services.
2. **In all wellbeing services counties, digital channels are the primary choice whenever appropriate or for customers that are able to use digital services**. Digital healthcare and social welfare services are the primary choice whenever appropriate. Healthcare and social welfare activities and services are gradually digitalised in a manner encouraging digital participation. The customer is able to use digital services regardless of time and place. Digital customer and service counselling has been developed regionally utilising uniform nationwide solutions (such as the one-stop-shop principle, and the digital health and social services centre).
3. **The workload of healthcare and social welfare personnel has been eased by making better use of information and by introducing advanced technological solutions**. Healthcare and social welfare professionals and customers have access to the up-to-date customer information required for providing the services and care. Adequate digitalisation competence of the customers and professionals is also ensured as part of the services. The information is easily and safely available across organisational boundaries and between different healthcare and social welfare services. The workload of professionals is reduced through system development and legislation. Kanta Services support the utilisation of digital services throughout the country. Digital healthcare and social welfare services are effective, proactive and information-based, and flexible and ecologically sustainable for the customer.

4. **Senior managers, decision-makers and researchers have extensive access across administrative boundaries to information accumulating on services and benefits**. Reliable, up-to-date and comparable information on the service system, provision of services, and benefits is available in a secure manner and in a manner processed in accordance with the data protection principles for the needs of different user groups (such as senior managers, researchers and innovators). For the purpose of steering wellbeing services counties, information is collected on such matters as the wellbeing of the population, and the use, quality and effectiveness of the services. Advanced technology can be utilised in the combination and analytics of datasets.

3.3 Prerequisites for success (success factors) and their descriptions

Six success factors have also been identified as a prerequisite for making the vision and the objectives a reality. These prerequisites for success help to ensure the achievement of the vision and the objectives.

1. **Enabling legislation**. Preparing legislation enabling digitalisation that will provide a basis for such matters as the sharing of information, development and utilisation of digital operating processes, roles of professionals, and the use of new technologies. The tasks also include the integration of the information produced by citizens and professionals, enabling of automated decision-making and facilitating of data transfer. The development of EU legislation will also be taken into account.
2. **Roles and responsibilities specified at national level (development of the steering model for digitalisation and information management in healthcare and social welfare)**. Developing the steering and management model for digitalisation and information management. Ensuring interoperable operating models and processes between individual actors: national actors, collaborative area, wellbeing services county, municipalities and cooperation with companies. Enabling the use of digital services across regional boundaries.
3. **Information management policies.** Updating the information management policies in accordance with strategic objectives and ensuring interoperability at different levels of information management.

At the same time, ensuring the implementation of the information security and data protection principles in the solutions to be used.

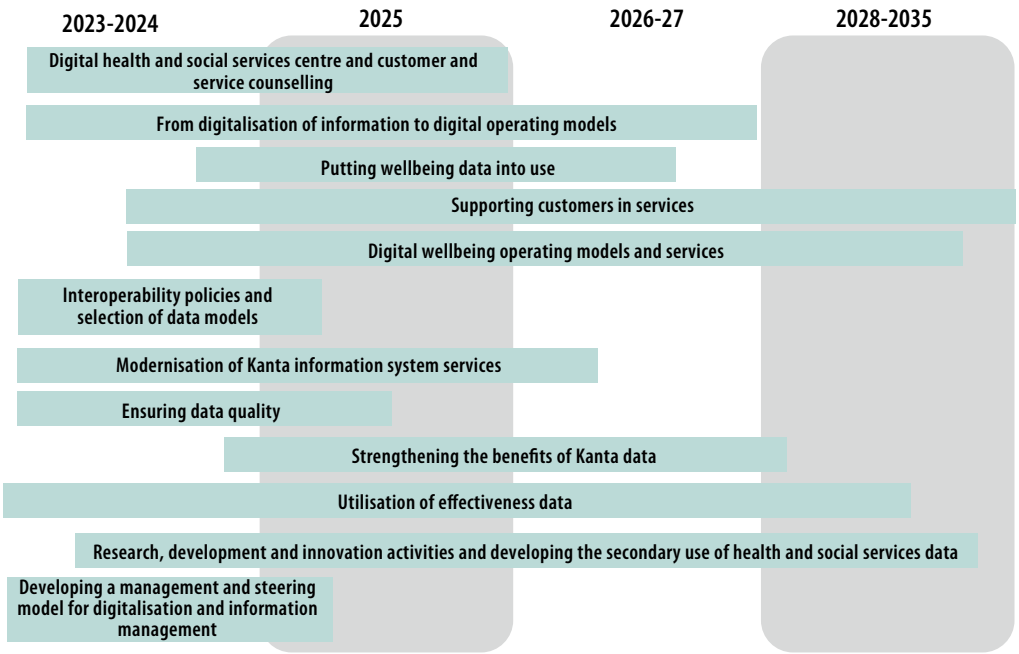
4. **Enhancing digital competence**. Ensuring that citizens know how to use digital services, that organisations have the capacity to provide digital services and that professionals master digital operating processes. Making digital competence a basic civic skill. Ensuring support for individuals that are unable to use digital services.
5. **Ethical aspects and sustainability of digital healthcare and social welfare services and their development (responsibility)**. Supporting the development of digital services so that digital inclusion is strengthened and equality in health and social services becomes a reality. Providing individuals with opportunities to manage their digital health and information. The development of digital services is human-oriented ensuring easy-to-use services, bilingualism or (if necessary) multilingualism and accessibility. For example, in services utilising artificial intelligence, measures are taken to ensure transparency, comprehensibility and non-discrimination. Ecological, social and economic sustainability is taken into account in the development of digital services.
6. **Utilising technological advances**. Monitoring new innovations and research, and selecting technical solutions and common standards so that up-to-date and advanced technologies deemed effective and cost-efficient (such as artificial intelligence, robotics, wearable electronics solutions, and sensors) are available. Ensuring that the Ministry of Social Affairs and Health appropriately steers the process in the desired direction. Clarifying the requirements for experiments and companies. Research and innovation activities support development at national level, create business opportunities and boost international success and exports. Also linked to the growth programme for the health and wellbeing sector managed by the Ministry of Economic Affairs and Employment, Ministry of Social Affairs and Health and the Ministry of Education and Culture.

4 Implementation of the strategy

4.1 Strategic roadmap

The tasks identified for the strategic objectives are described in the common roadmap (Figure 5). The roadmap describes the overall development process (the measures or sets of tasks identified for the objectives that can be used to achieve the objectives). The roadmap is an indicative description of the development process, which means that the sets of tasks will be promoted in accordance with a more detailed implementation plan and within the available resources. In the more detailed planning process, the sets of tasks listed in the roadmap and the timetables for implementing them will be specified on the basis of the Government Programme each year.

Figure 5. The roadmap listing the tasks set out in the strategy.



4.2 Sets of tasks

A total of 13 sets of tasks are listed in the strategic roadmap. In addition to the main description, the preliminary responsibility and the proposed indicator for the planned monitoring are also given for each set of tasks.

4.2.1 Digital health and social services centre and customer and service counselling

Launching a national digital health and social services centre on a trial basis to ensure the integration of national and regional services. Ensuring that nationwide services are used in all health and social services centres and in customer and service counselling by making use of such instruments as a joint customer plan.

Responsible parties: regional cooperation, Ministry of Social Affairs and Health, Finnish Institute for Health and Welfare

Indicator: percentage of digital service use, usage of the digital health and social services centre, customer feedback, percentage of customers for whom a service needs assessment has been made

4.2.2 From digitalisation of information to digital operating models

Developing and enabling digital operating models in wellbeing services counties and on their interfaces; establishing interoperable models on a nationwide basis. Carrying out a baseline assessment of regional activities and examining funding for digital archiving. Helping regions to identify tasks in which system automation could be utilised; these could include the treatment of chronic diseases (digitalisation of the monitoring process) or the monitoring of prolonged situations.

Responsible parties: regional development and cooperation, possible national support and evaluation

Indicator: job satisfaction, customer satisfaction, number of automated processes

4.2.3 Giving customers access to their own data

Customers have access to their own customer and patient data and also generate data themselves (wellbeing data). Evaluating the primary wellbeing data required for the health and social services system. Clarifying the business model of the Kanta PHR, compatibility with EHDS and ensuring interfaces with mobile Kanta and the use of customer data in applications (COM(2022) 197). Preparing a proposal for the eligibility of wellbeing applications for reimbursement.

Responsible parties: Ministry of Social Affairs and Health (legislative work), Finnish Institute for Health and Welfare (operating models), Kanta Kela

Indicator: use of wellbeing data in service processes, customer satisfaction

4.2.4 Customer participation in services

Reducing inequality and digital exclusion; supporting the inclusion of individuals in their own services and care as well as digital literacy. Developing digitalisation capabilities of customers and professional staff so that customers can receive the services that they need, and professionals are able to perform their own tasks by making extensive use of digital services in accordance with customer needs. For example, the digital health check is based on the data already available on the individual in question in the services. Ensuring that individuals acting on behalf of their family members or other parties are able to participate and receive sufficient support in the customer's services. Producing information on the service system to support the customer's freedom of choice.

Responsible parties: in broad-based cooperation

Indicator: customer satisfaction, number of digitally performed tasks, application usage and usability

4.2.5 Digital wellbeing operating models and service task

Digital operating models support prevention and the use of services promoting wellbeing across sectoral boundaries. Ensuring interoperability through national steering. Strengthening the information base of wellbeing services counties, municipalities and the third sector as a factor supporting effective prevention.

Responsible parties: Regional development and cooperation supported by a national actor

Indicator: healthcare measures (Avohilmo), number of people doing physical activity, etc. (Healthy Finland)

4.2.6 Ensuring data quality

Introducing data quality standards and ensuring data quality, taking into account its uses. Reducing overlapping data collection by developing data transfer solutions and by increasing automation in data storage and quality control. At the same time, making data more accessible.

Responsible parties: Finnish Institute for Health and Welfare, Social Insurance Institution of Finland, regional cooperation

Indicator: data quality monitoring indicators

4.2.7 Interoperability policies and selection of data models

Committing to the jointly produced national interoperability policies by 2024. Ensuring semantic interoperability by introducing the necessary data models guiding the production, transfer, processing and distribution of information with international data models and standards as a basis, and by assessing interface solutions. Taking into account the perspectives of functional, legislative and technical interoperability.

Responsible parties: Finnish Institute for Health and Welfare as the coordinator

Indicator: Number of solutions using international/EU standards and interoperable data structures

4.2.8 Evaluating and updating the Kanta information system services

Modernising Kanta architecture and operating logic (A document-based system will be transformed into a data-based system). Introducing new technologies and standards in a controlled manner and based on evaluation, especially taking into

account the requirements of EU-level co-creation. Assessing the use of robotics in data transfer. For example, small private service providers will be able to record and save customer data directly to Kanta using a light user interface.

Responsible parties: Ministry of Social Affairs and Health (purchasing the evaluation from an external party), Social Insurance Institution of Finland, Finnish Institute for Health and Welfare (development measures); regional development in line with national development

Indicator: report on purchasing the light user interface, number of users, satisfaction of users, percentage of information transferred on the basis of data

4.2.9 Strengthening the benefits of Kanta data

Strengthening the role of Kanta as the customer's interface with their own data and making customer information more visible to the customer (person). Making Kanta Services more accessible to healthcare and social welfare professionals. Organising an operator-oriented dialogue on the needs and prioritisation of Kanta development. Introducing new technologies, such as AI-based solutions for using Kanta data.

Responsible parties: Finnish Institute for Health and Welfare, Social Insurance Institution of Finland; taking into account regional needs in the development process

Indicator: Kanta data transfer volumes, customer satisfaction, analysed register data, etc.

4.2.10 National and regional steering and management of the service system by developing secondary use of health and social services data

The development of the information base is linked to strategies steering the development of the national-level service system so that the national effectiveness, cost-efficiency and productivity targets can be met.

Responsible parties: Ministry of Social Affairs and Health, Finnish Institute for Health and Welfare; participants include the Social Insurance Institution of Finland and wellbeing services counties

Indicator: realisation of information base development needs, timeliness and level of automation in information production, customer satisfaction

4.2.11 Use of information in research, development and innovation activities

Enhancing the prerequisites of actors to engage in research and innovation and to cooperate in these fields. Efficient and high-quality environments for data processing and analysis are available. The operating environment supports international cooperation and international success of Finnish research and product development.

Responsible parties: Ministry of Social Affairs and Health (evaluation, legislation), Finnish Institute for Health and Welfare, Findata (main responsibility for development); controllers and the research community are also involved

Indicator: development of research and innovation activities, number of data permits, customer satisfaction, process turn-around time (Findata)

4.2.12 Developing a management and steering model for digitalisation and information management

The management and operating model for the steering and development of digitalisation and information management will be clarified (this will include tasks, roles and responsibilities). A more broad-based steering system and its development will be taken into account in the preparatory process in accordance with the objective set out in the Government Programme. The role of enterprise architecture in the steering of healthcare and social welfare will also be specified in the implementation process.

Responsible parties: Ministry of Social Affairs and Health, interactive discussion with government agencies and wellbeing services counties

Indicator: management model and new steering structures in use, utilisation of the results of the evaluation of the benefits generated by development projects

4.2.13 Digital security

Digitally secure activities of professionals in real time based on common principles, high-quality information and skills, minimising unfavourable events in a secure and managed manner, and ensuring smooth use of new technologies, taking into account changes in conditions as necessary.

Note: a more detailed description of the implementation can be found in the digitalisation programme plan.

Responsible parties: Ministry of Social Affairs and Health, wellbeing services counties, private service providers

Indicator: No separate indicators. Monitoring will be carried out as part of the steering model of the Ministry of Social Affairs and Health and the annual discussions conducted in the Ministry, and monitoring of the achievement of the targets set in them.

5 Monitoring and maintaining the strategy

The strategy will be implemented on a project basis as part of the other steering for digitalisation and information management in healthcare and social welfare. The steering currently includes steering of Kanta development (the development of national information system services), and for the healthcare and social welfare sector, the steering tasks of the Sustainable Growth Programme for Finland until 2025. The implementation during the government term will be specified as part of the national services reform, which will include the digitalisation programme, and as part of the reform of pharmaceutical matters, which will also include the development tasks in the information management of pharmaceutical matters.

National-level indicators were preliminary identified for monitoring the implementation already when the strategy was drafted. These indicators can be specified as the implementation programme planning progresses (for example as process and performance indicators). In order to determine the comparable baseline situation, a baseline survey of the targets identified in the set of measures included in the strategy can also be carried out. The aim is to monitor the implementation of the strategy and the success of the measures on an annual basis. The monitoring will take place in the digitalisation and information management division operating under the Advisory Board on Healthcare and Social Welfare. The division consists of experts from the Ministry of Social Affairs and Health, Ministry of Finance, Finnish Institute for Health and Welfare and the wellbeing services counties. If necessary, feedback can also be collected more extensively from wellbeing services counties and other key actors. Monitoring is carried out at least on an annual basis.

The first-stage implementation programme (digitalisation programme) will be prepared for the current government term. A more extensive mid-term review covering all objectives and measures identified in the strategy can be carried out at the end of the government term. Based on the mid-term review, the objectives and measures set out in the strategy or its implementation can be updated if necessary. The aim is to implement the strategy on a rolling basis (to update its objectives and tasks as appropriate). To ensure a sufficiently broad and visionary nature of the strategy, all changes to the strategy's objectives or the measures set out in it will be approved by the ministerial management group.

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