Making digital transport and communications services accessible

Action Programme 2017–2021

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Making digital transport and communications services accessible

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Authors	Irja Vesanen-Nikitin and Mikael Åkermarck	
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Abstract

The focus of this action programme is to ensure that common digital services are suitable for as many people as possible. A further focus is the availability of information concerned with physical accessibility and communicating it to service providers. The programme covers the digital services of both transport and communications and is primarily aimed at the administrative branch of the Ministry of Transport and Communications.

Promoting digitality is one of main objectives of the Government Programme. In the future, new digital services should make daily life easier for as many people as possible, regardless of their physical disabilities, and should not increase social exclusion. The programme meets the challenge of the ageing and internationalisation of the population. It is apt to promote the realisation of the obligations of the UN Convention on the Rights of Persons with Disabilities and the national Non-discrimination Act as well as the basic rights laid down in the Constitution of Finland, such as equality and freedom of expression.

The action programme aims at the implementation of the Design for All (DFA) principle and mainstreaming in the administrative branch of transport and communications, prevention of social exclusion in transport and communications services as well as the promotion of multi-channel services and technology neutrality.

The measures implemented in the programme include; 1. Taking accessibility into account in the everyday work of the administrative branch of transport and communications; 2. Clarifying legislation and updating guidelines; 3. Improving the definition and availability of accessibility information and increasing awareness among providers of mobility services; 4. Making daily life easier for those not yet able to use e-services who are at risk of social exclusion and 5. Targeting the research of agencies at promoting the ease of use and accessibility of e-services and new media services as well as developing new, increasingly accessible services and experimentation with the help of the Internet of Things and robotisation.

Kuvailulehti

Tiivistelmä

Toimenpideohjelman painopisteenä on yleisten digitaalisten palvelujen soveltuminen mahdollisimman monelle. Toisena painopisteenä on fyysistä esteettömyyttä koskevan tiedon saatavuus ja välittyminen palvelujen tuottajien käyttöön. Ohjelma kattaa sekä liikenteen että viestinnän digitaaliset palvelut ja se on suunnattu pääasiassa liikenne- ja viestintäministeriön hallinnonalalle.

Digitalisuuden edistäminen on yksi hallitusohjelman keskeisistä tavoitteista. Uusien digitaalisten palvelujen tulisi jatkossa helpottaa mahdollisimman monen kansalaisen arkea riippumatta heidän toimintarajoitteestaan, eivätkä ne saisi lisätä syrjäytymistä. Ohjelma vastaa väestön ikääntymistä ja kansainvälistymistä koskevaan haasteeseen ja on omiaan edistämään YK:n vammaisia henkilöitä koskevan yleissopimuksen ja kansallisen yhdenvertaisuuslain velvoitteiden sekä perustuslain perusoikeuksien kuten yhdenvertaisuuden ja sananvapauden toteutumista.

Toimenpideohjelman tavoitteena on kaikille suunnittelun periaatteen DFA:n eli design for all-periaatteen ja valtavirtaistamisen toteutuminen liikenteen ja viestinnän hallinnonalalla, syrjäytymisen ehkäiseminen liikenteen ja viestinnän palveluissa ja palvelujen monikanavaisuuden ja teknologianeutraalisuuden edistäminen.

Ohjelman toimenpidekokonaisuuksia ovat; 1. Esteettömyyden huomioon ottaminen liikenteen ja viestinnän hallinnonalalla sen jokapäiväisessä työssä; 2. Lainsäädännön selkeyttäminen ja ohjeistuksen päivitys; 3. Esteettömyystietojen määrittelyn ja saatavuuden parantaminen sekä liikkumispalvelujen tuottajien tietoisuuden lisääminen; 4. Niiden henkilöiden arjen helpottaminen, jotka eivät vielä pysty käyttämään sähköisiä palveluja ja ovat vaarassa syrjäytyä sekä 5. Virastojen tutkimuksen suuntaaminen sähköisten palvelujen ja uusien mediapalvelujen helppokäyttöisyyden ja esteettömyyden edistämiseen sekä uusien, entistä helppokäyttöisempien palvelujen kehittämiseen ja kokeiluihin esineiden internetin ja robotisaation avulla.

Presentationsblad

Referat

Tyngdpunkten i åtgärdsprogrammet är att allmänna digitala tjänster ska vara lämpliga för så många medborgare som möjligt. Den andra tyngdpunkten är att informationen om fysisk tillgänglighet ska vara tillgänglig och förmedlas till producenter av tjänster. Programmet omfattar både digitala transporttjänster och digitala kommunikationstjänster och är främst riktat till Kommunikationsministeriets förvaltningsområde.

Främjande av digitalisering är ett av de viktigaste målen i regeringsprogrammet. De nya digitala tjänsterna bör framöver underlätta vardagen för så många medborgare som möjligt, oberoende av deras funktionsnedsättning, och får inte öka diskrimineringen. Programmet svarar på utmaningen med befolkningens åldrande och internationalisering. Det främjar genomförandet av skyldigheterna i FN:s konvention om rättigheter för personer med funktionsnedsättning och i den nationella diskrimineringslagen samt de grundläggande rättigheterna i grundlagen, bland annat jämlikheten och yttrandefriheten.

Målet för programmet är att genomföra principen Design For All (DFA) och integreringen inom förvaltningsområdet för trafik och kommunikation, att förebygga diskriminering i transport- och kommunikationstjänsterna och att främja flerkanalstjänster och teknikneutralitet.

Åtgärdshelheterna i programmet är 1. Ta hänsyn till tillgängligheten inom förvaltningsområdet för trafik och kommunikation i dess dagliga arbete 2. Förtydliga lagstiftningen och uppdatera anvisningar 3. Förbättra definitionerna och tillgången till tillgänglighetsinformation samt öka medvetenheten hos producenterna av mobilitetstjänster 4. Underlätta vardagen för personer som ännu inte kan använda e-tjänster och som riskerar att bli utslagna samt 5. Rikta ämbetsverkens forskning till främjande av lättanvändbarheten och tillgängligheten till e-tjänster och nya medietjänster samt till utveckling av och försök med nya, mer lättanvända tjänster genom sakernas internet och robotik.

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FOREWORD

While the role of public authorities is to enable the creation of new services, it is also – and especially – to guarantee fundamental and human rights, thus ensuring genuine equality and freedom of expression as well. Public authorities must also promote awareness of accessibility and its significance. The mission of the Finnish Ministry of Transport and Communications is to promote the wellbeing of people and the competitiveness of businesses, as well as to ensure that people have access to well-functioning, safe and reasonably priced transport and communications networks.

In recent years, society has become digitalised and a considerable share of data is transmitted as electronic or e-services. New digital services offer consumers plenty of new opportunities, but the development of these services is still largely incomplete, which is also the case with the 'Mobility as a Service' (MaaS) concept. In the future, new digital services should make daily life easier for as many citizens as possible, regardless of age, functional limitations or language, for example, and they should not increase social exclusion.

The focus of this action programme is to ensure that common digital services are suitable for as many people as possible. A further focus is the availability of information concerned with physical accessibility and communicating it to service providers. As developing e-services on their own, without concrete physical services, is not a sustainable solution, the programme also highlights the fact that the transport system – including the vehicle fleet, the infrastructure, customer service and traditional traffic information services – must be continuously developed so as to make it more accessible. However, the general accessibility of transport is not the main focus in this programme.

Instead, the action programme puts forward concrete priority measures that can be implemented and monitored in the short term, in order to increase equal access to digital transport and communications services. The programme also takes a stand on how responsibilities should be divided between different authorities.

The programme covers the digital services of both transport and communications and is primarily intended for the administrative branch of the Ministry of Transport and Communications. However, it also provides guidelines for product developers, service providers and producers, research and development centres, non-governmental organisations (NGOs) and any other party involved in transport or communications, while also setting an example for other administrative branches.

Helsinki, 22 May 2017
Anne Berner, Minister of Transport and Communications

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DEVELOPMENT POLICIES FOR ACCESSIBILITY IN TRANSPORT AND COMMUNICATIONS SERVICES BY 2017

I n the area of communications policy, two action programmes were published in 2005 and 2010 with a view to improving the accessibility of the information society for all citizens. The 2005 action programme entitled *Towards barrier-free communication*[1] aimed to increase awareness of the problems encountered by elderly people, people with disabilities and other special groups, as well as interaction between the authorities, disability organisations, providers of communications services, and consumers. The action programme ran until 2010.

In 2010, the Ministry of Transport and Communications published another action programme, entitled *Towards a barrier-free information society – Action Programme 2011– 2015*[2]. The programme aimed to clarify coordination in the development of information society accessibility; to improve information society capabilities of the citizens and government services; to improve the usability of hardware, software and auxiliary devices; and to promote services contributing to the accessibility of online and television contents.

In the area of transport policy, a strategy and action programme entitled *Kohti esteetöntä liikkumista* ('Towards Accessible Transport') were published in 2003. The strategy was based on several resolutions adopted by the European Conference of Ministers of Transport (ECMT) and the results of several European COST studies, etc. The strategy was premised on the principles of Design for All and mainstreaming within the transport administration. The strategy also involved an action programme and the ELSA research and development programme, which included more than 30 research projects.

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1 https://julkaisut.valtioneuvosto.fi/handle/10024/78409
2 https://julkaisut.valtioneuvosto.fi/handle/10024/78122

DEFINITIONS

ACCESSIBLE SERVICES are services that can be used by elderly people and people with various functional limitations as independently as possible. They are well suited to promoting an active lifestyle and opportunities to work, study, engage in leisure interests and participate in society in other respects as well. Products and services designed for all are of high quality and, ideally, should not involve any such stigma that is typically associated with various special services and assistive devices.

DIGITALISATION refers not only to the increasing provision of e-services and utilisation of information and communications technology (ICT), but also to the fact that as one thing becomes digital, the entire broad network and procedures around it change. This is why digitalisation has an impact on almost all daily activities in one way or another. Digitalisation should also be put to use when developing the transport system. Information and communications technology can be used to promote equality by means such as facilitating access to services regardless of place of residence.

THE DESIGN FOR ALL PRINCIPLE (DfA) refers to the principle of universal design, according to which products, environments, programs and services are designed and implemented to be suitable and easy to use for as many user groups as possible, so that there is essentially no need for separate products, environments, programs or services intended for special groups. However, the DfA principle does not rule out the use of assistive devices or software specifically designed for certain groups of people with disabilities, for example, to supplement general e-services, as required.. (UN Convention on the Rights of Persons with Disabilities, Article 2)

MAINSTREAMING refers to development of governance and operating procedures that contribute to promoting equality as part of public-sector operations. Public officials foster equality as part of their duties. The aim is to take the perspectives of different population groups and implementation of accessibility extensively into account and to integrate promotion of equality into all operations.

FUNCTIONAL LIMITATIONS are used in this programme to refer to a broad concept that has been in use for a long time in the transport sector and is considerably broader than just 'disability'. Naturally, the term covers at least visual impairments, low vision, hearing impairments, deafblindness, autism spectrum disorders, speech impairments, intellectual and developmental disabilities, mental disabilities, memory disorders and various types of reduced mobility. In addition to permanent functional limitations, it may also be based on a temporary disability or illness. Functional limitations may also be caused by age-related problems, such as memory disorders. Likewise, functional limitations may also arise due to language or culture. It must be noted that sign language is also an official language.

In other words, people with functional limitations are not only those with disabilities, but also those speaking a foreign language, those moving about with young children or travelling with heavy luggage, pregnant women, and elderly people in general, because they all face similar problems with access to information and mobility as the above-mentioned people with disabilities, albeit to varying degrees. Furthermore, almost all individuals will have more or less reduced mobility and functional ability at some point in their lives, for instance, due to a temporary musculoskeletal injury resulting from an accident. In the transport sector, it has been noted that mobility and functional impairments affect all people at some point in their lives, estimating that people spend an average of about 40% of their lives with different types of mobility or functional impairments (*Kohti esteetöntä liikkumista. Liikenne- ja viestintäministeriön esteettömyysstrategia. Liikenne- ja viestintäministeriö, ohjelmia ja strategioita 2/2003* [Towards Accessible Transport. Accessibility Strategy of the Ministry of Transport and Communications. Ministry of Transport and Communications, Programmes and Strategies 2/2003]). In other words, instead of medical definitions, the key point in terms of accessibility focuses on concrete needs relating to limitations while travelling or receiving messages.

The number of people with medical disabilities has been estimated to remain more or less stable, because a certain proportion of babies are born with disabilities, while the annual variation in the number of people disabled in accidents is relatively small. On the whole, Finland has over a million inhabitants with mobility or functional impairments. Based on the statistics of disability organisations, their proportion is estimated to stand at 19.5% of the population.

MULTI-CHANNEL SERVICES mean that transport information and brokerage services and various mobile applications are available in formats suitable for people with hearing and visual impairments. In terms of public transport, this refers to the availability of information such as timetables through both displays and announcements.

With regard to television and radio broadcasts, multi-channel services essentially mean that the same television or radio broadcast can be simultaneously distributed through different technical distribution channels and using more than one single main channel in the same geographical area. Television programmes can also be provided to recipients' terminal devices as a separate business run by a third party, such as a mobile communications operator.

Multi-channel television and radio broadcasts also refer to the accessibility of programming to people with either visual or hearing impairments by means such as subtitling and audio-subtitling services, both in traditional distribution channels and in video on-demand programming. Such operations should pay attention to changes in media consumption habits and new technological solutions.

Table 1. **Estimated numbers of people with disabilities in Finland.**

The following table provides estimated numbers of people with disabilities living in Finland. The list is not exhaustive, because it does not include an estimate of individuals whose mobility has declined due to old age without any specific diagnosis, for example. Please also see the definition of functional limitations provided in the table above, which is the key definition in terms of developing accessibility. Please also refer to the relevant publication of the Ministry of Transport and Communications[3].

Mobility/functional impairment	Estimated number of cases	Identified needs	Advocacy organisation
Intellectual/ developmental disability	40,000[4]	May have mobility or functional impairments or both	Finnish Association on Intellectual and Developmental Disabilities, Inclusion Finland KVTL, Inclusion Finland FDUV
Brain damage	100,000 (15,000–20,000 cases annually)[5]	May have mobility or functional impairments or both	Finnish Brain Association, Traumatic Brain Injury Association in Finland
Autism spectrum disorder	55,000 (varying functional limitations)[6]	Special characteristics of communication, clear visual and auditory cues (images and easy-to-understand language)	Finnish Association for Autism and Asperger's Syndrome
Spinal cord injury	3,000 (300 cases annually)[7]	¾ of these use a wheelchair > accessible toilets, ramps, lifts, etc. + possibly other assistive devices	Finnish Association of Spinal Cord Injured Akson, Finnish Association of People with Physical Disabilities

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3   Liikenteen digitaalisten palveluiden esteettömyyden edistäminen [*Promotion of accessibility in digital transport services*] (Liikenne- ja viestintäministeriön julkaisusarja 2/2017 [Publications of the Ministry of Transport and Communications 2/2017], http://julkaisut.valtioneuvosto.fi/handle/10024/79200). *In Finnish*.

4   Kehitysvammaisten tukiliitto ry [Inclusion Finland KVTL], 2016. Mikä on kehitysvamma [*What is an intellectual disability*]? http://www.kvtl.fi/fi/ammattisivut/. [Referenced on 21 September 2016.] *In Finnish.*

5   Aivovammaliitto ry [Traumatic Brain Injury Association in Finland], 2016. Aivovammat [*Brain injuries*]. http://www.aivovammaliitto.fi/aivovammat/. [Referenced on 21 September 2016.] *In Finnish.*

6   Autismi- ja Aspergerliitto ry [Finnish Association for Autism and Asperger's Syndrome]. Autismikirjo – mistä on kysymys [*Autism spectrum – what is it about*]? https://www.autismiliitto.fi/autismikirjo. *In Finnish.*

7   Selkäydinvammaiset Akson ry [Finnish Association of Spinal Cord Injured Akson], 2016. Selkäydinvamma [*Spinal cord injury*]. https://www.aksonry.fi/selkaydinvamma.html. [Referenced on 21 September 2016]. *In Finnish.*

Mobility/functional impairment	Estimated number of cases	Identified needs	Advocacy organisation
Hearing loss	750,000	Visual information or an induction loop or augmentative hearing devices	Finnish Federation of Hard of Hearing
Hearing aids provided	100,000[8]	Visual information or an induction loop or augmentative hearing devices	
Concurrent hearing and visual impairment	5,000[8]	Increased need for visual + auditory information	
Deafness and impaired hearing (sign language users)	4,000–5,000[8]	Visual information, sign languages, sign-language interpreting services	Finnish Association of the Deaf
Acquired deafness	3,000[8]	Visual information	Finnish Federation of Hard of Hearing
Deafblindness	1,000[9]	Tactile information	Finnish Deafblind Association
Muscle disease	10,000[10]	Mobility aids	Finnish Neuromuscular Disorders Association
Visual impairment	60,000[10]	–	Finnish Federation of the Visually Impaired, Federation of Swedish Speaking Visually Impaired in Finland
Low vision	51,000[10]	Need for auditory information	
Blindness	9,000[10]	Tactile information + need for auditory information	
Cerebral palsy	6,500[11]	Approx. 2‰ of the population; most use a wheelchair > accessible toilets, ramps, lifts, etc. + possibly other assistive devices	Finnish CP Association

8   The figure is an estimate. Source: Suomen kuurosokeat ry [Finnish Deafblind Association], 2016. Kuurosokeiden määrä Suomessa [*Number of deafblind people in Finland*]. http://www.kuurosokeat.fi/maara/index.php. [Referenced on 21 September 2016]. *In Finnish*.

9   Lihastautiliitto ry [Finnish Neuromuscular Disorders Association], 2016. Lihastaudit [*Muscle diseases*]. http://www.lihastautiliitto.fi/fi/Lihastaudit. [Referenced on 21 September 2016]. *In Finnish*.

10 The figures are estimates. Source: Näkövammaisten liitto ry [Finnish Federation of the Visually Impaired], 2016. An opinion issued on this plan.

11 CP-portaali [CP Portal], 2016. CP-vamma opetusmateriaalit [*Educational materials on CP*]. http://www.cp-portaali.fi/mita_cp-vamma_on. [Referenced on 28 December 2016]. *In Finnish*.

Mobility/functional impairment	Estimated number of cases	Identified needs	Advocacy organisation
Central nervous system disorder, such as Parkinson's, dystonia, Huntington's, etc.	16,000[12]	Progressive disorders slowing down and hindering mobility and causing weakness and trembling > mobility aids	Finnish Parkinson's Disease Association
Rheumatoid arthritis and other rheumatic diseases	Over 35,000[13]	Deteriorating mobility > mobility aids	Finnish Rheumatism Association
Shortness of stature	1,000[14]	Equipment placed at a low height	Little People of Finland
Multiple sclerosis (MS)	7,000[15]	Deteriorating vision and difficulties with mobility	Finnish Neuro Society
Total	**1,254,800**	**All assistive devices available**	

Source: Advisory Board for the Rights of Persons with Disabilities and disability organisations.

In addition to the identified needs listed in the table above, another need that should be mentioned in this context is easy-to-understand language, which is particularly important for many people with intellectual and developmental disabilities, for example. Demand for easy-to-understand material is continuously increasing due to the population's changing the age structure, immigration and the growing provision of eGovernment services. According to an assessment of easy-to-understand language needs published in 2014, demand among children and young people is estimated to stand at 8–12% of the age group, while the figure for the working-age population is 6–10%.[16] Demand for easy-to-understand material is clearly higher in old age when compared with the above-mentioned groups, standing at about 15–20%. In addition, easy-to-understand language is useful in certain situations for a larger proportion of about 20–25% of the population, including those who need it on a regular basis. To sum up, it is fair to say that there are more than 500,000 people in Finland who need easy-to-understand language, accounting for about 10% of the population.

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12 Suomen Parkinson-liitto ry [Finnish Parkinson's Disease Association], 2016. Tietoa [*Information*]. https://www.parkinson.fi/tietoa. [Referenced on 21 September 2016]. *In Finnish*.

13 Reumaliitto ry [Finnish Rheumatism Association], 2016. Reumataudit [*Rheumatic diseases*]. https://www.reumaliitto.fi/fi/reuma-aapinen/reumataudit. [Referenced on 21 September 2016]. *In Finnish*.

14 Lyhytkasvuiset ry [Little People of Finland], 2016. Etusivu [*Home page*]. http://www.lyhytkasvuiset.fi/. [Referenced on 21 September 2016]. *In Finnish*.

15 Neuroliitto ry [*Finnish Neuro Society*], 2016. Sairastuminen ja ensioireet [Becoming ill and first symptoms]. http://www.neuroliitto.fi/tietoa/ms-tauti/sairastuminen-ja-ensioireet. [Referenced on 21 September 2016]. *In Finnish*.

16 Source: http://selkokeskus.fi/selkokieli/tarvearvio. *In Finnish*.

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OBJECTIVES
OF THE ACTION
PROGRAMME

A ccessible digital solutions are not expensive, provided that they are implemented at the right time. The key is to apply the Design for All (DfA) principle from the very beginning. Its premise is to identify and allow for diverse user needs at every stage of the design process. Therefore, the aim is to embed this principle in the administrative branch of transport and communications.

The Design for All principle requires common services – such as mobile applications and traditional traffic information services – to be essentially developed, right from the beginning, to suit everyone, instead of creating special services for special groups. Applying this principle calls for open and regular dialogue between different parties, including providers and purchasers of services and manufacturers of products, as well as different types of users, such as consumers with different types of functional limitations and elderly consumers, in addition to taking any possible technical regulations or recommendations into account. This, in turn, always requires the usability of the service or product to be tested from the perspective of those concerned as well. For public authorities, it is important to create dialogue between both digital public services and companies' digital service developers.

The better a service or product works for these consumers, the better its functionality and usability are overall. In most cases, a solution developed in this manner is also of the highest quality standard from the average consumer's perspective.

THE ACTION PROGRAMME AIMS TO:

1. implement the Design for All (DfA) principle and mainstreaming in the administrative branch of transport and communications;

2. prevent social exclusion within transport and communications services; and

3. promote multi-channel services and technology neutrality.

When developing e-services, it would also be important to invest in the clarity of contractual terms and language in general. Information security should form part of the service package and its maintenance should be easier than is currently the case. Sufficiently clear user instructions should also be made available for equipment (including printed versions).

However, it is not enough to comply with the Design for All principle occasionally, such as in certain research projects or some legislative projects, when the objective for the future is to ensure that digital transport and communications services can be used by as many people as possible, regardless of age, language or functional limitation.

At present, agencies operating in the transport sector conduct studies, in particular in connection with various major projects, such as railway projects. In the communications sector, in turn, organisations commission surveys, such as user and quality surveys of audio-visual, postal and telecommunications services. Separate surveys, studies and experiments are also carried out in relation to public transport and the Mobility as a Service concept, for example, but only some of these pay sufficient attention to promoting accessibility. Studies conducted in the sector have not paid much attention to the accessibility of digital services, with the exception of the report prepared as a basis for this action programme.[17]

The study shows that the accessibility of digital services is, generally speaking, still at a modest level. The accessibility and usability of services vary considerably, depending on their nature and the parties involved in developing, distributing and maintaining them. The population groups that are not reached by digital services or that find them difficult or impossible to use include, in particular, many elderly people and those with sensory disabilities. Then again, it is also known that not even all young people know how to make use of digital services, except to a very limited extent, covering only Facebook and WhatsApp, for example, but not software such as MS Word word-processing or MS Excel spreadsheet programs. It is necessary to get rid of usability problems, not only to achieve the objective of equality, but also because many new services, such as digital transport services with their new solutions, such as door-to-door services, could especially benefit many elderly people and those with functional limitations.

Consequently, a further objective of the action programme is to contribute to ensuring that accessibility is taken into account in the daily operations of the administrative branch of transport and communications – in other words, to mainstream the perspectives of accessibility and equality in the administrative branch. The branch must also play an active role in disseminating information about the significance of accessibility to companies and other parties operating in the sector.

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17 Liikenteen digitaalisten palveluiden esteettömyyden edistäminen [*Promotion of accessibility in digital transport services*] (Liikenne- ja viestintäministeriön julkaisusarja 2/2017 [Publications of the Ministry of Transport and Communications 2/2017], http://julkaisut.valtioneuvosto.fi/handle/10024/79200). *In Finnish*.

Naturally, mainstreaming also extends to drafting legislation. The Non-discrimination Act (yhdenvertaisuuslaki 1325/2014) imposes obligations on both authorities and providers of goods and services. No-one may be discriminated against on the basis of age, language, disability, etc. Discrimination may be direct or indirect. Indirect discrimination means that an apparently neutral rule, criterion or practice puts a person at a disadvantage compared with others on the grounds of personal characteristics, unless there is a legitimate aim and the means for achieving the aim are appropriate and necessary. While an indirectly discriminating rule or practice does not specifically place anyone at a disadvantage, it is de facto discriminatory as it means that a disabled person is unable to receive a service or access business premises, for example. The equality objective thus involves an obligation to also pay more attention to the effects of sectoral legislation, such as legislation governing the transport and communications sector.

EXAMPLE OF THE BINDING NATURE OF THE NON-DISCRIMINATION ACT

In his decision of 22 July 2016 concerning the accessibility of railway transport (Decision on a complaint in a matter concerning the accessibility of restaurant cars, Reg. no. 651/4/15), the Parliamentary Ombudsman considered it unsatisfactory that not all disabled individuals had access to on-train restaurant car services, regardless of the fact that the EU's technical specifications governing the accessibility of rolling stock do not apply to restaurant cars and that the railway company had endeavoured to serve disabled customers by bringing all restaurant services, including alcoholic beverages, to disabled passengers. The Ombudsman considered it important that the Finnish Transport Safety Agency should endeavour, making use of the means at its disposal, to promote the accessibility of restaurant cars as well. The Ombudsman has also requested the European Ombudsman to issue an opinion on the matter. The obligation imposed in the Non-discrimination Act on public authorities must therefore be considered to be strict.

Multi-channel communication requires that services are provided in several ways and that alternatives to auditory, visual and text-based communication are always available, including customer service.

The action programme also aims to prevent social exclusion caused by the fact that current transport or communications services are difficult or impossible to use.

As services are rapidly becoming increasingly electronic, it is not possible to simply wait for new, more user-friendly products and services. In practical terms, not everyone, such as the very elderly or people with the most severe disabilities, is able to make use of even those digital services that have been designed to be as easy to use as possible, at least without auxiliary devices. This is why it is necessary to ensure that help is available for the

use of e-services as required, that service providers operate ethically in sales and service situations, and that, where necessary, important services are always available in other ways without unreasonable costs, so as not to exclude anyone. The same non-discrimination objective also applies to digitalisation of public services. In this respect, the Ministry of Finance is currently exploring different options and forms of cooperation with NGOs with regard to the so-called electronic mailbox, among other things. The same Ministry is also responsible for the AUTA project ('Helping customers to use digital services') to identify experiments to provide instruction in the use of e-services.

Research and development (R&D) efforts to make use of digital services are also ongoing in other administrative branches. The administrative branch of the Ministry of the Environment, for example, is involved in developing intelligent technological solutions to support elderly people's ability to live at home and dissemination of these solutions. Intelligent technological solutions require both a well-functioning mobile network and high-speed broadband connections. The Internet of Things (IoT) has been found to have the potential to enable the introduction of a new kind of intelligence into the homes and everyday lives of elderly people and individuals with functional limitations. The Internet of Things can be used to monitor home functions and the resident's activity level while also controlling household appliances in an accessible manner with various sensors and detectors, making use of automated diagnostics and controls.

Consequently, the transport and communications sectors should cooperate with other administrative branches, making use of experiences obtained from these and redirecting research and experiments. Experiments and research in the field of intelligent transport and communications technologies, such as the Internet of Things, automation and robotisation, should also be geared towards promoting accessibility.

The assessment and research functions (TEAS functions) of the Ministry of Transport and Communications should also be directed towards developing methods to monitor accessibility, while they should still be used to support accessibility in physical transport systems as well.

3

PROPOSED MEASURES

Building an accessible digital society is in the interests of all citizens. Transport and communications services are increasingly provided in a market-driven manner, which means that harnessing new legislation on public procurement, for example, to promote accessibility may become more challenging moving forward. Nevertheless, public authorities must make use of all the means at their disposal to ensure that equality is achieved and that entrepreneurs operating in the sector are kept informed by various means of the principles of Design for All and the commercial opportunities offered by the approach. It is also the duty of the authorities to actively monitor developments. Both new digital service providers and traditional parties must be informed of the significance of accessibility and of the fact that all customers need both digital services that are as easy-to-use and as multi-channel as possible and transport services that are as well-functioning as possible.

Alongside encouraging and guiding measures, more robust action is also required in order to enable citizens to participate in a digital society as its full members.

The measures have been selected with a view to taking into account their concrete nature and the possibility to start implementing them as early as during the action programme period. An interim report will be prepared by the relevant agencies in 2019 to assess the extent to which the action programme has achieved its objectives by that time and any possible changes that should be made to the measures. Furthermore, regular meetings will be arranged during the action programme period to monitor the progress of the measures mentioned in the programme together with key parties, including NGOs, hardware and software manufacturers, programme producers, telecommunications companies, and MaaS operators.

The following passages list the key measures, which are followed by specific projects:

3.1 Taking accessibility into account in the everyday work of the administrative branch of transport and communications

MEASURES, IMPLEMENTATION RESPONSIBILITIES AND SCHEDULES

1. Taking NGOs, such as disability and immigrant organisations, into account as key stakeholders while cooperating with organisations in general. > Agencies, Ministry of Transport and Communications ('Ministry'); ongoing.

2. Developing statistics compilation, customer satisfaction surveys and monitoring methods falling within the duties of agencies, so as to take the perspectives of individuals with functional limitations and elderly people into account more effectively. > Agencies; as of spring 2017.

3. Drawing up equality plans. > Agencies; according to a schedule separately decided for these.

4. Aiming to consistently establish the impacts of projects on different population groups, including elderly people and individuals with functional limitations, as part of any project run by the Ministry or agencies in the transport and communications sector that have a bearing on people's mobility or the accessibility of communications. > Ministry, agencies; ongoing.

5. Including accessibility as part of the transport system status review as one of the key themes. > Finnish Transport Agency (FTA), Ministry; as of spring 2017.

Mainstreaming can only be achieved when each public official is aware of the significance of promoting accessibility in terms of their own work and that the importance of the theme is acknowledged across the agencies at all levels of operation, rather than regarded as being the responsibility of a single individual, for example.

In practical terms, mainstreaming calls for measures such as developing statistics compilation efforts and customer satisfaction surveys in transport and communications so as to better reflect the views of different population groups, including elderly people, individuals with functional limitations and immigrants. Accessibility should also be viewed as an essential part of quality and usability.

NGOs, such as those advocating for disabled and elderly people, should be recognised as important partners and stakeholders in general terms, rather than just within certain projects. These parties will naturally be invited to submit expert opinions, and they will also

be involved in various projects on an equal footing with other stakeholders. Agencies are also tasked with communicating to other parties, such as companies and parties involved in purchasing transport services, about their responsibility for promoting accessibility.

The first thing to do in order to advance mainstreaming is to draw up operational equality plans, or a joint plan, for the Ministry and agencies in keeping with the Non-discrimination Act at the earliest opportunity. These should include more specific obligations for each agency to stimulate staff's awareness of the significance of equality and accessibility and an obligation to monitor progress in the agency's operations, such as the amount of cooperation with disability organisations and other NGOs and satisfaction with agency operations among different population groups. In terms of legislative projects, it would also be necessary to investigate the extent to which impact assessments concerning equality have been implemented as part of impacts on different population groups.

Progress made in accessibility should also be monitored with regard to both physical transport and digital services as part of the status of the transport system. Agencies within the administrative branch of transport are currently monitoring developments in the status of the transport system nationally, using status indicators. Monitoring the status of the transport system means production of follow-up data and analyses to cater for planning and decision making of transport policy and at a strategic level over a 5–30-year time span.[18]

Information on the status of the transport system plays an integral part in the monitoring of the operating environment of the transport administration. The monitoring system is currently divided into five themes, which include key indicators describing developments in the transport system status by means of statistical graphics and written analyses. One of the themes is service trends.

The Finnish Transport Safety Agency (Trafi) oversees the implementation of passenger rights with regard to business and disabled travellers based on Community law, while it is also involved elsewhere in developing a common EU tool for the purpose of collecting data on the accessibility of railway transport (the Accessibility of railway stations in the European Union website). While Trafi oversees passenger rights, the Finnish Communications Regulatory Authority (FICORA) supervises progress in the accessibility of services in its own sector. However, neither of these agencies have been assigned any comprehensive monitoring obligations. This type of more general monitoring should nevertheless be developed. A previously produced report[19] on key accessibility indicators could be utilised with regard to FICORA.

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18 See: liikennejärjestelma.fi. *In Finnish*.

19 Liikenne- ja viestintäministeriö [Ministry of Transport and Communications]: Viestintäpalveluiden esteettömyysindikaattorit [*Accessibility indicators in Communication Services*]. http://julkaisut.valtioneuvosto.fi/handle/10024/78794. *In Finnish; partly translated into Swedish and English*.

Furthermore, the agencies within the administrative branch should take action in keeping with the Ministry of Finance policies in order to update public-sector websites to conform to the requirements of the Web Accessibility Directive. This Directive (EU) 2016/2102 of the European Parliament and of the Council on the accessibility of the websites and mobile applications of public sector bodies will enter into force in Finland in the autumn of 2019.

3.2   Clarifying legislation and updating guidelines

MEASURES, IMPLEMENTATION RESPONSIBILITIES AND SCHEDULES

1. Clarifying legislation as required while taking equality impacts and opportunities to increase accessibility into account whenever new legislation is being drafted or current laws are being amended. > Ministry; ongoing.

2. Providing information on existing and forthcoming legislation, recommendations and guidelines. > Ministry, agencies; ongoing.

Provisions of national transport and communications legislation promoting accessibility are currently included in several different Acts, but the objective of promoting accessibility and equality is not clearly stated in law. Therefore, legislation should, at the very least, be clarified at the level of objectives. The objective according to which different population groups, including individuals with functional limitations and elderly people, essentially have the right to receive transport and communications services on an equal footing should also be clearly enshrined in different Acts.

In addition to general clarification of legislation, it is also necessary to provide information and guidelines on various opportunities. Technical recommendations (such as dimensional requirements of vehicles, ramp slopes or certain text fonts) are essential in terms of accessibility, in order for the primary target group to actually be able to use services in the safest, most independent and dignified manner possible. It is also necessary to know how to make use of technical regulation and recommendations when putting services out to competitive tendering, for example. At present, however, people are not necessarily even able to make use of the existing legislation. In order for public contracting procedures to ensure accessible taxi services, for example, it would be possible to require compliance with not only existing technical specifications and professional certification, but also take advantage of the provisions of the EU Regulation on public passenger transport services concerning public service contracts so as to make taxis an integral part of public transport.

In addition to EU regulation, Finland needs clearer national regulation, crucial technical specifications or recommendations, as well as dissemination of information on the existing legislation, standards (such as those concerning accessible web services) and practical guidelines as widely as possible. When the Finnish Transport Agency draws up new design guidelines for signage for visually impaired people, for example, it would probably be advisable to also communicate to parties such as local authorities about these.

Practical recommendations facilitating business operations should also be updated on a continuous basis. Among other things, the need to update recommendations has emerged with regard to traditional digital transport services, such as passenger information provided in passenger terminals and on vehicles.[20]

Future guidelines and recommendations should also specifically emphasise multi-channel access to information, so as to ensure equality, safety and freedom of expression for individuals with visual and hearing impairments more effectively. More attention should be paid to safeguarding access to information in emergencies, for example. The importance of using easy-to-understand language should also be emphasised.

As more and more services are becoming electronic, it is necessary to ensure, by means such as recommendations, that companies are also aware of international standards concerning the accessibility of web services (and other e-services), so as to also encourage them to develop their web services and mobile applications in alignment with public administration. This would ensure that visually impaired people, in particular, would be able to make use of new services.

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20 Liikenne- ja viestintäministeriön julkaisuja 16/2015 [Publications of the Ministry of Transport and Communications 16/2015]. Liikennejärjestelmän esteettömyys. Yhteenveto säädöspohjasta, suunnitteluohjeista ja keskeisistä kehittämishaasteista. Liikenne- ja viestintäministeriön mietintöjä ja muistioita B 2/2003. Ohje käyttäjäystävällisyyden parantamiseksi. *[Transport system accessibility. A summary of legislation, planning guidelines and development challenges. Reports and Memoranda of the Ministry of Transport and Communications B 2/2003. Guidelines for improving user-friendliness.] In Finnish.*

3.3 Improving the definition and availability of accessibility information and increasing awareness among providers of mobility services

MEASURES, IMPLEMENTATION RESPONSIBILITIES AND SCHEDULES

1. Promoting a consistent definition of accessibility information essential to forming travel chains across different modes of transport, so as to make it easier to utilise data in machine-readable format, while encouraging direct distribution of such information between information systems through open interfaces. > FTA, Social Insurance Institution of Finland (Kela), local authorities (various administrative branches); implementation schedule for the Transport Code and the related Government Decree.

2. Harmonising accessibility information relating to the usability of services and infrastructure in different modes of transport from the perspective of the nodes of the travel chain, while developing and issuing guidelines for information contents in general terms. > FTA, Ministry; ongoing.

3. Taking the use of accessibility tools (such as speech and magnifying programs for visually impaired people) into account when coding interface data of MaaS applications. > FICORA; in connection with the Ticket project

4. Initiating cooperation with NGOs and companies in order to develop interfaces and technological services so that they are easy to use from the start. > Ministry, agencies; as of spring 2017.

5. Launching training and information measures intended for relevant parties in order to develop accessible applications and take accessibility information into account. > Agencies; as of spring 2017.

MaaS services form a new, evolving sector that has the potential to meet many accessibility requirements and the mobility needs of various user groups in a completely new way. In order to be able to include accessibility in MaaS services in a timely and cost-efficient manner, the Ministry of Transport and Communications looked into the information base required to form accessible travel chains and the current status of the necessary information.[21]

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21 Liikenteen digitaalisten palveluiden esteettömyyden edistäminen [*Promotion of accessibility in digital transport services*] (Liikenne- ja viestintäministeriön julkaisusarja 2/2017 [Publications of the Ministry of Transport and Communications 2/2017], http://julkaisut.valtioneuvosto.fi/handle/10024/79200). *In Finnish.*

A key question in terms of MaaS services is how to make sure that customer information on the accessibility of transport services and the infrastructure is available to providers of MaaS services, similar to other journey-related information. Furthermore, it is necessary to take note of communicating information concerning special customer needs to MaaS operators and actual providers of transport services. Alongside the challenges, development of MaaS services will also create new opportunities to provide customised ancillary accessibility services, develop mobility services for special groups, make use of accessibility information produced by users themselves, manage accessibility across the entire travel chain, etc.

In order for accessibility to become reality in travel chains, the above-mentioned report concerning the accessibility of MaaS services includes the following recommendations, among others:

Accessibility information on vehicles and the transport infrastructure should be provided in a standard open-data format as part of the other information required by MaaS services, in order for information on accessibility to be made available to consumers. In the opposite direction, it is necessary to make sure that information concerning special customer needs is transmitted from customers to transport service providers via a MaaS service. It is also important to ensure confidentiality when processing any possible detailed information included in customer profiles.

Digital applications should be designed from the start with a view to creating accessible user interfaces and interoperability with the most common utility programs, in order to ensure that the service can be used by as many people as possible. Accessible applications only involve minor additional costs, as they primarily require information and training.

The best way to ensure the accessibility of MaaS services is to engage different user groups and specialists in different stages of the design process.

Additional services – such as telephone services or alternative sales channels – are also needed for those who cannot use digital services for some reason. It is therefore necessary to decide who will be responsible for these services and how they can be provided.

Information on the accessibility of mobility services and the transport infrastructure must be transmitted as part of other information required by MaaS services from mobility service providers and infrastructure operators to MaaS operators and further on to consumers.

High usability for everyone is also a prerequisite for providing publicly organised transport services directly with existing MaaS services.

3.4 Making daily life easier for those not yet able to use e-services and at risk of social exclusion by providing information on alternative services through agencies

MEASURES, IMPLEMENTATION RESPONSIBILITIES AND SCHEDULES

1. Cooperating with the Ministry of Finance, including joint consumer information relating to one of the key projects of the Government Programme, Digi 1, and accessibility. > Ministry; schedules of Ministry of Finance working groups and the AUTA project.

2. Taking alternatives to e-services into account in legislation governing transport and communications. > Ministry; schedules for relevant legislation, such as the Transport Code.

3. Distributing information to companies on the importance of web accessibility and consumers' rights to receive alternative services to e-services. > Agencies; as of spring 2017.

At present, people can learn how to use e-services independently or with assistance at home, in institutions, or in places such as libraries, making use of advisory services provided by various NGOs and associations, such as elderly people's own associations. By way of example, the Central Association of Finnish Pensioners has a website, verkostavirtaa. fi, providing advice on where to find help, while the Finnish Association for the Welfare of Older People encourages people to establish peer-support tutoring through its SeniorSurf campaign, and the Senioriverkko ('Senior Web') project provides information on applications suitable for senior citizens. In addition, Enter Association provides help with using computers, tablets and smart phones free of charge, while help is also available from the Technology for the Elderly Centre run by the Finnish Union for Senior Services (Valli).

The Finnish Broadcasting Company (YLE) offers an online package on media and digital skills as part of its educational website, Yle Oppiminen, exploring the everyday digital skills of modern life as well as providing tools to develop media literacy. The digital skills package, dubbed 'Digitreenit' ('Digitraining'), involves learning things that make everyday life easier and preventing digital inequality in society. The media skills section focuses on helping learners understand various media contents and their influence and critically examine the information that they receive.[22]

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22 See: yle.fi/oppiminen. *In Finnish.*

In addition to help offered by peers, libraries and associations, it would also be advisable to consider, moving forward, whether personal help and advice could be integrated as part of other services provided by local authorities or public institutions, such as transport services, and whether equipment suppliers or home service enterprises – including Posti Group – could also expand their operations in this sector.

Young people's social exclusion could be prevented by increasing provision of instruction in using e-services at school in broad terms, including various types of software and basics of information security.

3.5 Focusing the research of agencies on promoting the ease of use and accessibility of e-services and new media services as well as developing new, increasingly accessible services and experimentation with the help of the Internet of Things and robotisation

MEASURES, IMPLEMENTATION RESPONSIBILITIES AND SCHEDULE

In terms of the action programme, it would be particularly important to focus R&D activities at least on:

1. a method that would enable assessing the benefits and cost effects of accessible transport and communications services > agencies; spring 2018;

2. developing new, secure Internet of Things services that would help elderly people, those with functional limitations, as well as linguistic minorities and tourists to move about independently and use public transport > FTA, Trafi

3. research aiming to develop and introduce new, cost-effective audio-subtitling and subtitling service methods in Finland as well, including speech-recognition technology that would also enable subtitling live broadcasts, such as talk-shows > FICORA;i

4. study on the best ways to promote the accessibility of new, internet-based video-on-demand programme services and their availability for hearing and visually impaired people and language learners, for example > FICORA

5. studies and experiments concerning robotisation to investigate how well automated vehicles would also be suitable for use by disabled and elderly people and, subsequently, the suitability of such vehicles for use as leased or rental vehicles in transport services, for example > Trafi, FTA.

The primary responsibility for launching R&D projects would rest with agencies, because unlike before, the Ministry itself has limited opportunities to finance studies and surveys and organise experiments. Development projects could also be carried out as the government's assessment and research projects. Such projects could also be international. Projects could make use of funding sources such as the Finnish Funding Agency for Innovation (Tekes) and the Finnish Innovation Fund Sitra.

The themes of the action programme could be developed into transport programme initiatives for the EU's Horizon 2020 Framework Programme for Research and Innovation and for the EU's 9th Framework Programme starting in 2021.

4

BACKGROUND OF THE ACTION PROGRAMME
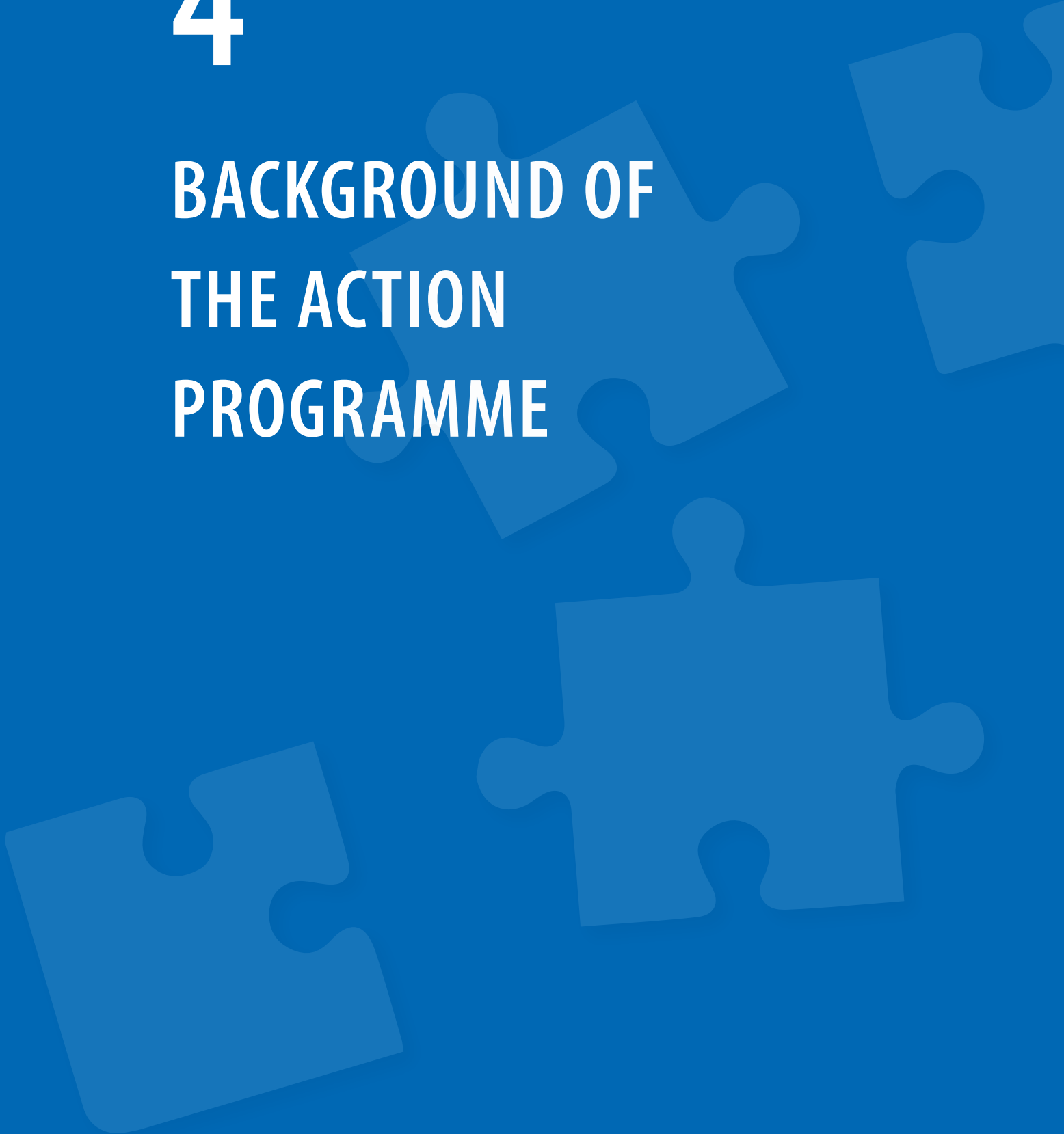
4.1 Preparation of the action programme

The action programme was drawn up by public officials, but the process also involved an unofficial working group with representatives from the Finnish Transport Safety Agency (Trafi), the Finnish Transport Agency (FTA) and the Finnish Communications Regulatory Authority (FICORA), as well as the Finnish Federation of the Visually Impaired, the Finnish Federation of Hard of Hearing, the Finnish Association of the Deaf, the Finnish Association of People with Physical Disabilities, the Finnish Union for Senior Services (Valli) and the Finnish Association on Intellectual and Developmental Disabilities. In order to collect some background information for the programme, the Ministry of Transport and Communications commissioned a study, the highlights of which were published in a separate report[23]. The study explored:

1. means to ensure that the accessibility data of different transport services is comprehensively made available for use by all key parties in real time, in order to develop and implement the Mobility as a Service (MaaS) concept;
2. means to ensure that those consumers who find it inconvenient or difficult to use mobile devices or communicate with service operators due to age, visual or hearing impairment or foreign language, or for some other similar reason, can also make use of the Mobility as a Service concept on an equal footing with other consumers;
3. the most effective means to promote the accessibility of digital communications services and whether the public service obligation is a sufficient incentive to encourage telecommunications operators to assume responsibility for accessibility;
4. views on the development needs of the 2014 publication entitled *Viestintäpalveluiden esteettömyysindikaattorit (Accessibility Indicators in Communication Services)*.[24]

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23 Liikenteen digitaalisten palveluiden esteettömyyden edistäminen [*Promotion of accessibility in digital transport services*] (Liikenne- ja viestintäministeriön julkaisusarja 2/2017 [Publications of the Ministry of Transport and Communications 2/2017], http://julkaisut.valtioneuvosto.fi/handle/10024/79200). *In Finnish.*

24 (http://www.lvm.fi/julkaisu/4428957/viestintapalveluiden-esteettomyysindikaattorit)

The action programme has gone through a consultation process. Opinions were submitted by a total of 34 parties, including the Ministries of Justice, Finance, Social Affairs and Health, Economic Affairs and Employment, and the Interior, all the agencies within the government transport administration, the Finnish Competition and Consumer Authority (FCCA), the National Institute for Health and Welfare (THL), the Association of Finnish Local and Regional Authorities, the Social Insurance Institution of Finland (Kela), several disability and elderly people's organisations, as well as certain parties involved in developing telecommunications and web services and those operating in the transport sector, such as Helsinki Region Transport (HSL). In these opinions, the programme was considered to be comprehensive, covering key target groups and their special needs. The objectives and measures of the programme received support. The opinions mostly suggested some specifications to the text, which were used to revise the programme.

4.2   Digitalisation as a megatrend

Information and communications technologies (ICT) and ICT-related services are in the process of radically transforming the workings and power structures of society. The Internet of Things (IoT), utilisation of big data, robotisation and various intelligent technologies are examples of the future digital world in which companies will compete for customers and market shares. Those who will come out on top in this transformation are the ones that are capable of providing high-quality, reliable and reasonably priced services that meet their customers' needs.

The digitalisation of society has an impact on almost all daily activities – including transport and communications – in one way or another. Digitalisation refers not only to the increasing provision of e-services, but also to the fact that as one thing becomes digital, the entire broad network around it changes. This has occurred with the digitalisation of banking services, books, music, images, maps and travel, etc.

Promoting digitalisation is one of the key objectives set out in the current Government Programme. Government aims to create a favourable operating environment for digital services and new business models. Creating a digital single market is also among the European Union's priorities. When building a transport system for the future, utilisation of digitalisation is a key driver, but a technological perspective on development is not enough on its own. A major role is also played by legislative development so as to enable various new types of travel and service chains, as well as more open communications and more affordable pricing required by these chains. In any event, regardless of legislative changes, the key is for different parties to understand the benefits and earning potential of interoperability, on the one hand, and the diversity of consumers, on the other.

Digitalisation generally becomes more tangible as new information technology (IT) services. This can also be referred to as the 'digital service economy' or the 'platform economy', where outputs are intellectual services, which are mainly produced, supplied and consumed via digital platforms and often built on products or services provided by third parties.

When developing services, the key is to have in-depth insights into customers and the opportunities of modern information technology. As these competencies are seldom combined in a single individual, such work calls for cooperation across traditional boundaries and new working methods. Now is the last chance for IT people to set their sights on the end customer, while business leaders also need to keep their fingers on the pulse of developments. The best thing would be for them to seek influences beyond a narrow focus on their own sector. By doing so, it will be possible to discover unique insights and opportunities on which to build future successes.

Digitalisation offers major technological opportunities. The Internet of Things will redefine many things in our lives, and in the future, working with intelligent devices will become a skill that is equally important as using a computer is today. In the Internet of Things, devices are constantly connected to the network and to each other. This will call for networks with more and more capacity. Therefore, the Internet of Things can be promoted in practice by building and developing secure, real-time, wide-coverage and energy-efficient fixed and wireless connections, which will make it possible to control devices remotely. While the Internet of Things will create significant benefits, it also involves security risks, which will require considerable attention. The Internet of Things will also force us to rethink what privacy means.

Examples of applications currently available include remotely readable electricity meters and utility software and services for smart phones, such as BlindSquare, a speaking navigator, which may make it easier to walk around at least in street environments, as it provides details such as locations and distances with compass points. Some people already use smart glasses, where reality is augmented with elements that make life easier for elderly people and individuals with cognitive challenges. The smart glass display may show instructions for preparing food or making minor home repairs, for example. The potential uses of the Internet of Things will expand considerably in the future.

The Internet of Things is also currently used in Finland for intelligent transport purposes, such as in the test area for automated driving in Tunturi Lapland.

The Government Programme's objective of promoting digitalisation also covers promotion of robotisation and automation. In June 2016, government adopted a resolution on

intelligent robotics and automation[25]. 'Automation' refers to self-acting, i.e. automatic, devices or systems. In general language usage, robots are often perceived as being physical objects, but in a broader sense, 'robotics' also includes software robots, also known as softbots or agents, which are able to use digital data to help users in customer service or data collection, for example.

In the transport sector, automation is making rapid progress in road transport, in particular, but developments are also taking place in other modes of transport. Automated vehicles are expected to enter the production phase and general traffic as early as the 2020s, while the first applications are already expected to make an appearance on public roads by 2025. Even before the launch of automated vehicles, automated functions relating to vehicle control and vehicles capable of connecting to each other and to their traffic environments via information networks will become increasingly common. At present, many vehicle manufacturers are testing automated driving in general traffic. Finland also welcomes automated driving and, in particular, tests on these vehicles, but the focus in tests is on ensuring safety. It should be noted that functions that are already partially automated in vehicles assist drivers in driving situations (such as lane departure warning systems), which can add years to elderly people's independent mobility. A fully automated vehicle could even make it possible for a blind person to travel independently. Finland's road traffic legislation already enables very high-level automation tests. By way of example, there is already an ongoing automated bus project in the Hernesaari district of Helsinki. In the short run, increasing automation and developing background system automation will be helpful precisely in terms of accessible mobility, because they make it possible to offer new types of support provided by data and equipment robotics. Examples of these include machine vision, voice commands and guidance, movement assistance, etc.

Robotics and automation can also be utilised in nursing care. It has been estimated that at least 20% of tasks performed by registered nurses at hospitals and practical nurses in long-term elderly care could be carried out by these means. As the use of robotics would free up nursing professionals' working hours, they could dedicate more of their time working directly with patients, which requires expertise and cannot be carried out by machines. A good example is a robot designed to support mobility, which can considerably increase people's ability to move about outside the home, thus allowing more independent living.

Naturally, using robotics will also raise ethical questions, not only about safety and employment, but also about responsibility and the range of purposes for which robots are

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25 Kokemuksia massadatan, omadatan sekä älykkään robotiikan ja automaation osaamistarpeista ja -tarjonnasta [*Experiences with the competence needs and offering for big data, my data and intelligent robotics and automation*] (Liikenne- ja viestintäministeriön julkaisusarja 13/2016 [Publications of the Ministry of Transport and Communications 13/2016], https://julkaisut.valtioneuvosto.fi/handle/10024/78893. *In Finnish.*

developed. In terms of nursing care, clients are entitled to receive good service and this should also be the objective when using robotics.

In addition to digitalisation, the transport sector has recently started to pay special attention to servitisation, which means the growing significance of services in society. Servitisation requires service providers to understand customers' values and assume a human-centric mindset, which, in turn, calls for a holistic approach. A holistic approach easily lends itself to creating new business models, as the focus turns from provision of goods and services to service packages. A service provider that understands human diversity and variation is also best equipped to promote the creation of new services and service packages that are suitable for as many people as possible.

In the transport sector, the mindset that places emphasis on service packages is especially manifested in the MaaS concept, which is a vision of a transport system of tomorrow that is much more intelligent and efficient than that of today, and which enables new and innovative transport services more effectively. One of the purposes of MaaS is to promote new types of door-to-door travel or goods transport service packages, which may offer users good alternatives to using their own cars.

At the core of the Mobility as a Service concept lies provision of customer-oriented services. These services are generally available to customers at the touch of a single button via a single user interface (such as on a smart phone). Services tailored to meet individual customer needs would be provided by so-called MaaS operators. In other words, by using digitalisation, it would be possible to create, not only completely new kinds of business, but also new types of door-to-door services for passengers, covering the entire travel chain. These services would help people move about to such an extent that a private car would no longer be the only option for convenient transport.

MaaS services make it possible to facilitate journey planning and travel, especially for those people facing the most difficulties using their own car or combining different modes of transport. However, this means that the travel operator needs to be informed of the considerations required to ensure the accessibility of the travel chain being used as well as the passenger's other needs. This enables the MaaS operator to reliably guarantee that the travel package being sold is always as effective and accessible as possible for the passenger.

4.3   Finland is ageing and internationalising

4.3.1   Different groups – growing cultural differences

In addition to digitalisation, other megatrends of our times include economic globalisation, internationalisation, as well as urbanisation, climate change, ageing and demographic diversification. Finland has never been a monocultural country; the country has always been home to different population groups. Finland's traditional cultural minorities include Romani, Saami, Swedish-speaking, Jewish and Tatar people. Since the early 1990s, the country's population has become even more diversified in both cultural and linguistic terms as a result of increasing immigration.

According to Statistic Finland, a total of 339,925 people of foreign origin resided permanently in Finland at the end of 2015, accounting for 6.2% of the population. Of these, 286,803 were first-generation immigrants, i.e. those born abroad, while the second generation born in Finland amounted to 53,122 people. Immigrants expect to be treated equally with other population groups, while integration requires them to at least receive enough information about their new home country and its services.

By virtue of the Constitution of Finland (Suomen perustuslaki 733/1999) and the Non-discrimination Act, all minorities have the right to equality and non-discrimination. This means that Saami and Romani people, for example, can do the things that are part of their cultures and no-one may be discriminated against on the basis of language, origin or culture. All people living or staying in Finland have these rights regardless of citizenship.

The Constitution also specifically guarantees the status of the Swedish language and the rights of Saami people. It should be noted that sign language is also mentioned in the Constitution as its own language group enjoying a special status. The Sign Language Act (viittomakielilaki 359/2015), which entered into force in 2015, mentions details such as the obligation of the authorities to promote the opportunities of sign language users to use and receive information in their own language. One way of doing so is to include sign language information in web services.

Indeed, the significance of all cultural factors should be understood in depth when developing digitalisation of future transport and communications.

4.3.2   Elderly people

Finland's population structure will change rapidly over the coming years. Just over thirty years ago, people aged at least 65 accounted for about 12% of the population as a whole. At the end of 2016, their number exceeded a million people, accounting for over 20% of the whole population. In the light of the statistics, the growth has been fast and will also

continue as such. According to Statistics Finland's population projection, the proportion of those aged 65 or over will exceed 25% in the 2030s. Elderly people need to adapt to a new kind of society, where the use of technology plays a significant role. Society has become an information society. At present, elderly people are not particularly active users of digital devices. How can they be encouraged to join other users as services become digitalised? A major question is, indeed, whether elderly people can adapt to a digital society.

It should also be noted that information technology and its use cost money. The average pension in 2015 amounted to EUR 1,613 per month[26].

Research conducted by Statistics Finland indicates that computer use has clearly increased among elderly people in recent years[27]. Many elderly people have already acquired good IT skills during their working lives, but skills become outdated unless actively maintained. A survey gauging ICT use among the population, published annually by Statistics Finland, suggests that internet use is becoming more prevalent in the 65+ age group. In 2016, 38% of people aged 65 to 74 had used the internet several times a day, while the corresponding figure for those aged 75 to 89 was 16%. People using the internet on a daily or almost daily basis account for 52% of those aged 65 to 74 and 21% of those aged 75 to 89.

About 38% of people aged 65 to 74 have a smart phone in their own personal use, while the figure for those aged 75 to 89 stands at 14%. Use of tablet computers has also become more common among elderly people. In 2016, the proportions of the 65–74 and 75–89 age groups living in a household with a tablet accounted for 35% and 14%, respectively.

While the use of digital devices is increasing, there is still a lot to be done to ensure that more and more people will have access to the opportunities presented by the future. Digitalisation does not only affect younger generations, who have become accustomed to information technology at work. In many cases, however, user experiences are collected and user needs are surveyed exclusively among younger age groups, which is why these efforts almost invariably produce skewed data, resulting in the failure to pay sufficient attention to ease of use[28].

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26 Finnish Centre for Pensions, www.etk.fi.

27 Tilastokeskus [Statistics Finland]: Väestön tieto- ja viestintätekniikan käyttö 2016 [*Use of information and communications technology by individuals 2016*]. *In Finnish.*

28 Nordlund, Marika; Stenberg, Lea & Lempola, Hanna-Mari. Tietoteknologian käyttö ja käyttämättömyyden syyt 75–89-vuotiailla – Kooste kyselytutkimuksesta [*Use of information technology among the 75–89 age group and reasons for non-use – Summary of questionnaire survey.*] KÄKÄTE -projekti ja LähiVerkko-projekti [*KÄKÄTE Project* ('User Centred Technology for Elderly People and Care Givers') *and LähiVerkko Project* ('Local Network')]. 2014. *In Finnish.*

According to a survey of reasons for use or non-use of information technology among people aged 75 to 89[29], elderly people should already be engaged in developing the information society at the point when services and applications are being designed. At present, many elderly people may find user interfaces to be overly complicated and to include features that they consider completely irrelevant and unnecessary.

While technology to support elderly people's independent living is already available today, the solutions on offer are often quite traditional and mostly designed for healthcare and/or 'institutional' purposes, rather than to support independent living. There is a lack of technology specifically suitable for independent living and mobility, which is easy and convenient for elderly people to access and use. In order for elderly people to adopt new technologies more extensively, better efforts should be made to engage them in the design and testing stages.

Ageing is a completely individual process. Elderly people do not form a homogeneous group in terms of interests or lifestyles, for example, any more than other age groups, such as young people. Elderly people's health has generally improved and their life expectancy has increased. Despite improved health, however, ageing inevitably involves different problems of varying degrees, especially in more advanced age, relating to areas such as memory, balance, vision, hearing or musculoskeletal functions. Many elderly people have several of these problems. There is clear correlation between ageing and functional limitations. According to a background paper published by the European Commission, people reporting some form of functional limitation account for 32% of those aged 55 to 64, 44% of those aged 65 to 74, 60% of those aged 75 to 84, and 70% of those aged 85 or over[30].

With regard to transport services, it has been noted that elderly people prefer accessible services, such as low-platform buses, trams and trains. They also appreciate clear passenger information and staff who understand their needs. In particular, elderly people appreciate service buses, which have been in service in Finland for quite some time, giving diverse attention to accessibility. Service transport is also available as a demand-responsive service, but there is no mobile application for this. These services were initially developed with the needs of disabled people in mind.

The market has not necessarily understood as yet that over a third of consumers are elderly people, who should be provided with solutions that support equal and independent living as long as possible. However, substantial business opportunities are brewing within this field. According to the above-mentioned European Commission background paper,

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29 See Appendix 29.

30 Growing the European Silver Economy. Background Paper of 23 February 2015.

the 'Silver Economy' refers to the economic opportunities associated with the growing public and consumer expenditure related to population ageing.

4.4   Current legislation and pending legislative projects

The ongoing digitalisation has a bearing on the procedures of every ministry and public authority. In connection with changes, public authorities need to take note of their duty to safeguard the fundamental and human rights laid down in the Constitution, such as equality and freedom of expression. It is therefore important to take aspects such as the practical opportunities of different population groups to use e-services into account when promoting digitalisation. In practical terms, access to services may be prevented if authentication is complicated and requires installing a specific program, purchasing a device or obtaining online banking access codes. The need for assistance with information technology increases the risk of misuse of online banking codes. Access to services may also be prevented due to economic reasons, for example. The right to equal treatment entails an obligation to pay special attention to elderly and disabled people when promoting digitalisation. It is also important to bear linguistic rights in mind when designing websites and information systems, etc.

Under the UN Convention on the Rights of Persons with Disabilities, community services and facilities for the general population must be available to people with disabilities on an equal basis and be responsive to their needs. In practical terms, this means that barriers to accessibility must be identified and eliminated. The rights and needs of groups such as visually impaired people should be taken into account when designing and coding e-services and information systems. Services are accessible when everyone can participate in their use and development on an equal footing. Understandable communication forms an important part of accessibility. In other words, provision of services is premised on common services designed for everyone, which are then supplemented with special services as required.

Among other things, accessibility is promoted through the provision of the new Act on Public Procurement and Concession Contracts (*laki julkisista hankinnoista ja käyttöoikeussopimuksista 1397/2016*) stating that the description of a procurement intended for use by natural persons must, as a general rule, be specified in a manner that gives consideration to unimpeded access for disabled users or to a design that satisfies the requirements of all users. According to the Non-discrimination Act, neglecting to make reasonable adjustments necessary to realise equality of people with disabilities is a form of discrimination. The Non-discrimination Act and its underlying international obligations call for positive action in order to effect *de facto* equality. In addition to the obligations to promote equal-

ity, the law allows positive action, i.e. measures necessary to safeguard de facto equali-ty, which aim to improve the status and circumstances of a certain group. In other words, Government may implement targeted measures to ensure that everyone, regardless of characteristics such as age and financial standing, has practical opportunities to use digital services.

The internet and the proliferation of e-services also have a broad impact on realisation of freedom of expression included in the Constitution. Freedom of expression and opinion are key fundamental and human rights. The Constitution guarantees everyone's right to express, disseminate and receive information, opinions and other communications with-out prior prevention by anyone. In other words, the right to receive information forms an important part of freedom of expression. This right is included in several human rights agreements, such as the European Human Rights Convention. At a national level, the pro-visions have been specified by instruments such as the Act on the Exercise of Freedom of Expression in Mass Media (*laki sananvapauden käyttämisestä joukkoviestinnässä* 460/2003).

The special legislation currently in force in the field of transport and communications obliges various parties to ensure the equality and freedom of expression of elderly peo-ple and those with functional limitations and, expressly, the accessibility and availability of services. It is largely based on Community regulation, but also includes purely nation-al provisions. This regulatory framework varies in terms of its binding character. Some provisions are only laid down at a general, goal-oriented level, whereas others may be quite specific. Some concern the right to travel and receive assistance, thus also covering non-discrimination, whereas others impose obligations on service providers with regard to the quality of services, for example, and yet others lay down further provisions on tech-nical requirements. Most of these special provisions concern promotion of the accessibility of physical transport, while no specific provisions are currently in force on the accessibility of traffic information, for example.

The current Public Transport Act (*joukkoliikennelaki* 869/2009) and the Government Pro-posal for the Transport Code to replace it and several other Acts include provisions on ac-cessibility information, among other things. The Information Society Code (*tietoyhteiskun-takaari* 917/2014) covers certain obligations for audio-subtitling and subtitling services with visually and hearing impaired people in mind, but these provisions do not extend to on-demand services, as they only apply to the Finnish Broadcasting Company and those traditional television operators holding a programming licence for public interest chan-nels. The Information Society Code also imposes obligations relating to the accessibility of connections on telecommunications operators subject to the universal service obligation.

The list below covers the main legal instruments directly or indirectly governing the accessibility of transport and communications, including the relevant UN Convention:

1. The Constitution of Finland (*Suomen perustuslaki* 731/1999);
2. Non-discrimination Act (*yhdenvertaisuuslaki* 1325/2014);
3. United Nations Convention on the Rights of Persons with Disabilities adopted on 13 December 2006;
4. Regulation (EC) No 261/2004 of the European Parliament and of the Council establishing common rules on compensation and assistance to passengers in the event of denied boarding and of cancellation or long delay of flights;
5. Regulation (EC) No 1107/2006 of the European Parliament and of the Council concerning the rights of disabled persons and persons with reduced mobility when travelling by air;
6. Regulation (EC) No 1371/2007 of the European Parliament and of the Council on rail passengers' rights and obligations;
7. Regulation (EC) No 1177/2010 of the European Parliament and of the Council concerning the rights of passengers when travelling by sea and inland waterway;
8. Regulation (EU) No 181/2011 of the European Parliament and of the Council concerning the rights of passengers in bus and coach transport;
9. Directive 2009/45/EC of the European Parliament and of the Council on safety rules and standards for passenger ships;
10. Act on the Technical Safety and Safe Operation of Ships (*laki aluksen teknisestä turvallisuudesta ja turvallisesta käytöstä* 1686/2009), as well as further technical specifications issued by virtue thereof, in order to ensure that persons with reduced mobility are able to travel on passenger ships and high-speed passenger craft in a sufficiently accessible and safe manner;
11. Directive 2007/46/EC of the European Parliament and of the Council establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles; Commission Regulation (EU) No 407/2011 amending Regulation (EC) No 661/2009 of the European Parliament and of the Council as regards the inclusion of certain Regulations of the United Nations Economic Commission for Europe on the type-approval of motor vehicles, their trailers and systems, components and separate technical units intended therefor; Regulation No 107 of the United Nations Economic Commission for Europe (UNECE) on uniform provisions concerning the approval of categories M2 or M3 vehicles with regard to their general construction;
12. Railways Act (*ratalaki* 110/2007);

13. Government Decree on the safety and interoperability of the rail system (*valtioneuvoston asetus rautatiejärjestelmän turvallisuudesta ja yhteentoimivuudesta* 372/2011);

14. Commission Regulation (EU) No 1300/2014 on the technical specifications for interoperability relating to accessibility of the Union's rail system for persons with disabilities and persons with reduced mobility;

15. Taxi Transport Act (*taksiliikennelaki* 217/2007);

16. Decree on the Vehicle Construction and Equipment (*asetus ajoneuvojen rakenteista ja varusteista* 1256/1992);

17. Ministry of Transport and Communications Decree on quality requirements for accessible fleets used in taxi transport (*liikenne- ja viestintäministeriön asetus taksiliikenteessä käytettävän esteettömän kaluston laatuvaatimuksista* 723/2009);

18. Act on the Professional Qualifications of Taxi Drivers (*laki taksinkuljettajien ammattipätevyydestä* 695/2009);

19. Road Traffic Act (*tieliikennelaki* 267/1981);

20. Public Transport Act (*joukkoliikennelaki* 869/2009);

21. Land Use and Building Act (*maankäyttö- ja rakennuslaki* 132/1999);

22. Ministry of the Environment Decree on accessible building (*ympäristöministeriön asetus esteettömästä rakennuksesta*, National Building Code of Finland F1 (2005));

23. Act on the maintenance, cleaning and clearing of public areas (*laki kadun ja eräiden yleisten alueiden kunnossa- ja puhtaanapidosta* 669/1978);

24. Regulation (EU) No 1315/2013 of the European Parliament and of the Council on Union guidelines for the development of the trans-European transport network and repealing Decision No 661/2010/EU;

25. Act on Yleisradio Oy (Finnish Broadcasting Company) (*laki Yleisradio Oy:stä* 1380/1993);

26. Information Society Code (*tietoyhteiskuntakaari* 917/2014);

27. Postal Act (*postilaki* 415/2011);

28. Directive 2010/13/EU of the European Parliament and of the Council on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the provision of audiovisual media services, also known as the Audiovisual Media Services Directive, or AVMS Directive (amendment pending);

29. Directive (EU) 2016/2102 of the European Parliament and of the Council on the accessibility of the websites and mobile applications of public sector bodies, also known as the Web Accessibility Directive;

30. Act on Public Procurement and Concession Contracts (*laki julkisista hankinnoista ja käyttöoikeussopimuksista* 1397/2016); and

31. Administrative Procedure Act (*hallintolaki* 434/2003).

Relevant legislative proposals currently being drafted include:

32. Government Proposal 161/2016 for the Transport Code and for certain related Acts *(hallituksen esitys liikennekaareksi ja eräiksi siihen liittyviksi laeiksi HE 161/2016 vp)*;
33. Proposal for a Directive of the European Parliament and of the Council on the approximation of the laws, regulations and administrative provisions of the Member States as regards the accessibility requirements for products and services (COM(2015) 615), also known as the Proposal for a European Accessibility Act; and
34. Proposal for a Council directive on implementing the principle of equal treatment between persons irrespective of religion or belief, disability, age or sexual orientation (COM(2008) 426), also known as Proposal for an Equality Directive.

In addition, separate legislation is in force in the field of social welfare and social security, with the primary aim of safeguarding services for disabled or elderly people in so far as common services are not accessible or adequate. The costs of these special services are covered from public funds. Such Acts include:

35. Social Welfare Act *(sosiaalihuoltolaki* 1301/2014);
36. Act on Services and Assistance for the Disabled *(laki vammaisuuden perusteella järjestettävistä palveluista ja tukitoimista* 380/1987) and related Decree on Services and Assistance for the Disabled *(asetus vammaisuuden perusteella järjestettävistä palveluista ja tukitoimista* 759/1987), also known as the Disability Services Decree (an amendment to this legislation is currently being drafted);
37. Act on Special Care for Persons with Intellectual Disabilities *(laki kehitysvammaisten erityishuollosta* 519/1977); and
38. Health Insurance Act *(sairausvakuutuslaki* 1224/2004).

Furthermore, standards often play a significant role in terms of accessibility as well. For further information about legislation and certain standards, please see the Appendix, 'Current legislation and pending legislative projects'.

5

OPPORTUNITIES AND CHALLENGES FOR DIGITAL TRANSPORT AND COMMUNICATIONS SERVICES

5.1 Opportunities

Accessible digital services offer considerable opportunities. If designed well, the Mobility as a Service (MaaS) concept, for example, could solve many problems currently encountered by passengers with reduced mobility and their families: if the transport operator assumed responsibility for the functionality and accessibility of a journey or, in a more challenging case, the entire travel chain, this would save the customer or a family member the effort of researching every single detail relating to the journey, such as the suitability of the available vehicles and terminals and other important information.

Accessible digital services contribute to independent mobility on general public transport, thus helping to reduce public expenditure on special transport services.

Accessible digital services also present opportunities for companies. Investing in accessibility does not just mean that an accessible product, piece of software, service or infrastructure will be used exclusively by people with disabilities. Functional limitations affect almost 40% of the population. It has been noted that the low-platform technology developed to promote accessibility and eliminate level differences, for example, is very helpful for anyone travelling with children and luggage as well, and also allows passengers to get on and off the vehicle more quickly. The considerable growth of the ageing population not only means increasing demand for easy-to-use and well-functioning services, but also a substantial new market and, consequently, economic opportunities for companies willing to accept the challenge.

Digitalisation and accelerating technological developments make it possible to implement new solutions with more agility and less cost. Various mobile applications, for example, also provide special groups with continuous access to personal services while on the move. While personal service has to date been dependent on factors such as the staff at different stations, modern-day solutions allow users to get personal assistance whenever and wherever they need it.

With the development of open interfaces and applications, digitalisation allows lower costs while also lowering the threshold for developing accessible services. By way of ex-

ample, it is possible to use interfaces to include interpreting services for deaf people in mobile applications by connecting two different applications.

In addition to a total of about 750,000 people with hearing loss, the subtitling service for Finnish-language and Swedish-language television programmes is also helpful for immigrants and language learners. This technology is also apt to facilitate broadcasting programmes in public spaces, while parents of young children also like to make use of it. Using easy-to-understand language on news programmes helps both people with intellectual disabilities and many immigrants and, similar to subtitling, is an important way of enabling different groups to integrate into society.

In practical terms, it has also been noted that careful planning and design in keeping with the DfA principle have contributed to the creation and popularity of some of the most high-quality and sought-after products (such as top-quality smart phones) and services (such as low-platform tram services) available on the market. Careful design has helped to avoid creating the impression that the product or service is only intended for elderly people, for example.

At the same time, dialogue with different user groups also ensures that the efficiency requirements of companies are taken into account.

Digitalisation interests many young entrepreneurs and, indeed, those who have experience of the needs faced by their elderly parents, for example, have boldly embarked on developing a wide variety of easy-to-use digital services for elderly people both in Europe and in Finland, including dating services and means of communicating between homes and healthcare services. All that are missing at this point are new solutions catering to companies and administrative branches involved in transport and communications.

5.2   Challenges

A study[31] commissioned by the Ministry of Transport and Communications and the Ministry of Finance aimed to identify the types of obstacles that exist for transaction and information search services for visually impaired and blind people, hearing-impaired and deaf people, people with intellectual disabilities, and elderly people, and what could be done

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31 Liikenne- ja viestintäministeriö ja valtiovarainministeriö [Ministry of Transport and Communications and Ministry of Finance]: *Paina vihreää nappia! Asiointi- ja tiedonhakupalveluiden käytön esteitä erityisryhmien näkökulmasta [Press the green button. User obstacles met by special groups in transactions and information searches] (2014). In Finnish.*

to improve the state of affairs. As a result, the study identified a number of technical, economic and social barriers to the use of online services affecting all the examined special groups. The study suggested that some of these obstacles could be solved by adjusting technical implementation or providing additional funding, while others would require regulation laid down by law.

A study[32] by the National Institute for Health and Welfare (THL) suggests that elderly people and individuals experiencing poor health, those with low educational attainment and those outside employment lack the skills required to use e-services and they also use them less frequently than other groups. However, services should be guaranteed for those who cannot access them online. As things stand, it still seems that the groups that were supposed to reap the most benefits from online access to information and services are in fact being excluded from the digital leap forward.

While this programme does not take a stand on access to – let alone the regional or economic availability of – digital transport and communications services among all groups, such as poorly educated individuals, exclusion from digitalisation is a considerable challenge in all sectors, even with just elderly and disabled people in mind.

New media services are no more accessible than the traditional audiovisual services. On the contrary, even traditional parties would like to reduce the amount of programming also available to visually and hearing-impaired people as audio-subtitling and subtitling services for economic reasons. In practical terms, this would also reduce the quality of the service for language learners and elderly people, for example. Furthermore, unlike in many other countries, sign language and the Saami language still receive very little attention in communications in Finland, regardless of the fact that these languages enjoy a special status in the Constitution.

Digital services are certainly being developed enthusiastically, but customer needs are not necessarily understood deeply enough. Usability and the multi-channel approach tend to be forgotten. If new transport and communications services can only be accessed through an application which is available in a language that certain consumers do not understand or which they are afraid to use, or which is not designed to accommodate their poor vision or hearing, then these consumers are being excluded.

Furthermore, there have been unreasonable delays in the introduction of some services. By way of example, the Emergency Response Centre Administration set up a working

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32 THL [National Institute for Health and Welfare]: *Sosiaali- ja terveydenhuollon digitalisaatio [Digitalisation of healthcare and social welfare] (2016). In Finnish.*

group in 2009 to consider the introduction of a 112 emergency SMS service. The working group, comprising representatives from different ministries, the Finnish Association of the Deaf and the Finnish Federation of Hard of Hearing, among others, estimated that the service would be up and running in 2012. However, the new system is still at the performance testing phase. In January 2017, the Ministry of the Interior launched an investigation in support of the emergency response centre information system project. The aim is to cooperate with different parties involved in the project to ensure the introduction of the emergency response centre information system, including the new emergency SMS service, as soon as possible.

At the same time, easy-to-use digital transport services, such as new brokerage services, are of no use to elderly people or people with reduced mobility, unless it is understood that these people also need to be certain that a self-brokered transport service, such as taxi transport, will work for them, that the vehicle is suitable and the driver knows how to act correctly. Consequently, it is crucial to make use of all the available means to ensure that traditional transport services will work as well[33]

Finland has developed indicators for the purpose of monitoring the accessibility of communications. FICORA and Statistics Finland collect annual data which can already be used as a basis for time series and analyses, but efforts to develop indicators are still ongoing. This work is based on the previous action programme issued by the Ministry of Transport and Communications, entitled *Towards a barrier-free information society – Action Programme 2011–2015*. Besides supporting R&D activities in the field of accessible information society, one of its policies also included development of indicators. As a result, a publication entitled *Viestintäpalveluiden esteettömyysindikaattorit (Accessibility Indicators in Communication Services)* was issued during the action programme period, including 25 indicators relating to the accessibility of communications, some of which are accompanied by time series[34].

Demand for digital accessibility extends across different sectors, which means that it is not possible to solve the challenges involved in the accessibility of communications within a single administrative branch alone. There is currently very little cooperation between ministries in the area of accessibility, while NGOs such as disability organisations may be unable to make their voices adequately heard. Barring consultation procedures relating to legislative projects, cooperation is often haphazard. The parties seldom sit down at the

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33 National Action Plan on Fundamental and Human Rights 2017–2019 (Ministry of Justice 17/021/2015, 14 December 2016).

34 Liikenne- ja viestintäministeriö [Ministry of Transport and Communications]: Viestintäpalveluiden esteettömyysindikaattorit [*Accessibility indicators in Communication Services*] (https://www.lvm.fi/-/viestintapalveluiden-esteettomyysindikaattorit-841763). *In Finnish; partly translated into Swedish and English.*
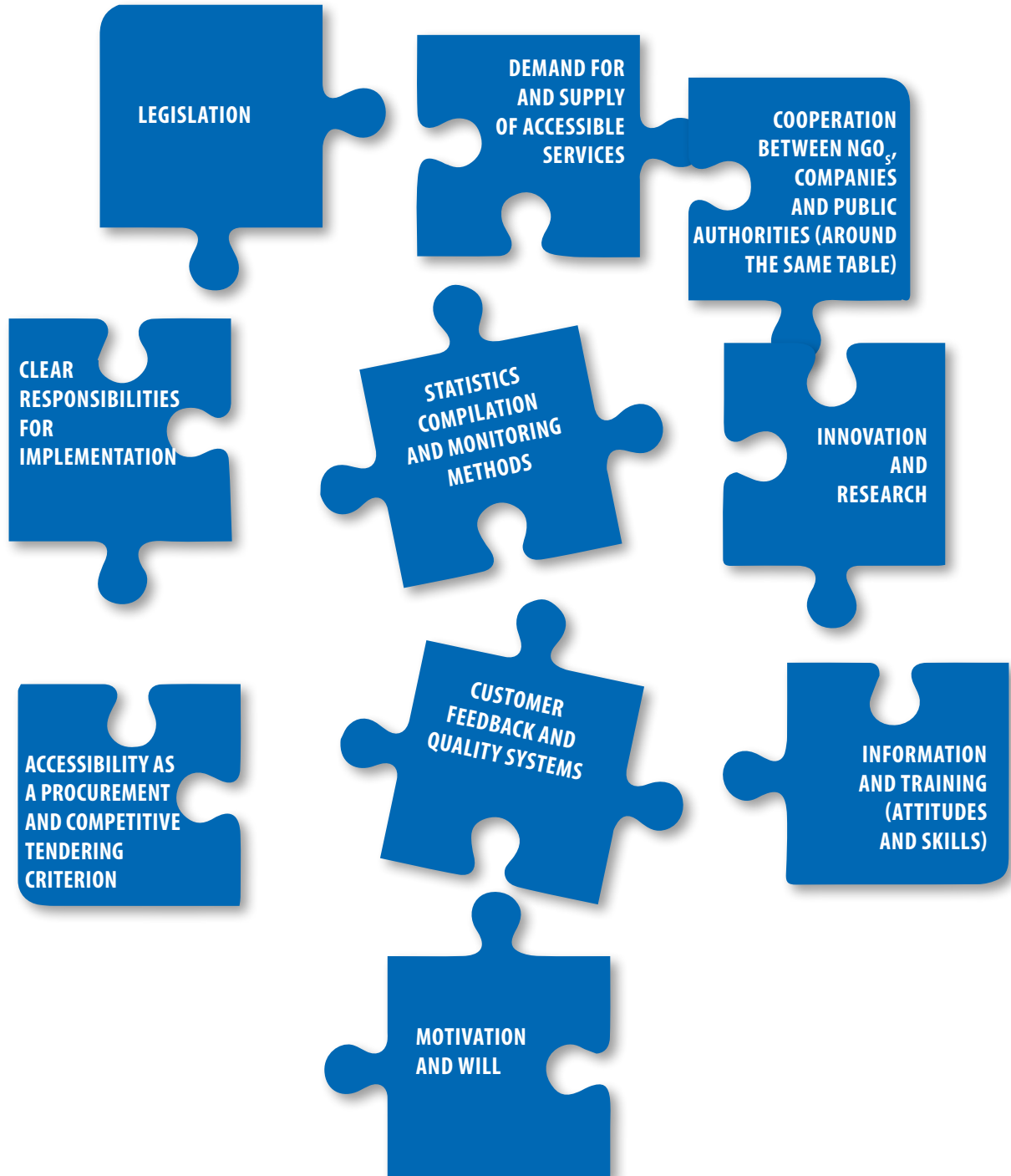
same table. Nevertheless, it would be advisable for parties operating in the field of digital accessibility to engage in broad cooperation, because there are many other parties besides disability organisations and other NGOs and government agencies, including local authorities, the research community, as well as various companies ranging from operators to equipment manufacturers. All these parties would do well to sit down together at the same table in order to understand each other's perspectives. In the transport sector, such broad cooperation at national and international levels used to be lively, leading to many concrete results, such as development of low-platform technology in different modes of transport. There used to be plenty of international research to promote accessibility, which ultimately contributed directly to the contents of Community law. No such systematic research has been carried out in order to develop an accessible information society, while international cooperation and research to promote accessibility in the transport sector has also dwindled of late.

The business sector, in turn, often has inadequate information about means and tools, as well as recommendations and good practices, and little knowledge of the customer base, which means that the volume and market of user groups benefiting from accessibility remains untapped. Some recommendations have also already become outdated due to digitalisation.

The responsibility for developing digital transport and communications services to suit everyone is distributed over a very wide circle of parties, which will keep expanding. In terms of developing digital services, the responsibility rests first and foremost with providers of services, developers and manufacturers of digital devices, and various public authorities. The responsibility for transport services, in turn, is shared by providers and purchasers of transport services, and also by many other parties, such as maintenance operators. The circle is wide, because the accessibility of a transport service is experienced by the passenger as a travel chain that functions well from door to door, where each part of the chain, including planning and booking a journey, the way in which travel information is communicated, the safety of the street environment, the quality of stops, terminals and vehicles, as well as feedback channels, form an effective, integrated whole from the passenger's perspective. Other aspects important to the passenger include the attitudes and skills of staff.

Bild 1. Influencing accessible transport and communications services is like putting together a jigsaw puzzle. An example of some factors influencing accessibility.

Appendix: Current legislation and pending legislative projects

LEGISLATION

DEMAND FOR AND SUPPLY OF ACCESSIBLE SERVICES

COOPERATION BETWEEN NGOs, COMPANIES AND PUBLIC AUTHORITIES (AROUND THE SAME TABLE)

CLEAR RESPONSIBILITIES FOR IMPLEMENTATION

STATISTICS COMPILATION AND MONITORING METHODS

INNOVATION AND RESEARCH

ACCESSIBILITY AS A PROCUREMENT AND COMPETITIVE TENDERING CRITERION

CUSTOMER FEEDBACK AND QUALITY SYSTEMS

INFORMATION AND TRAINING (ATTITUDES AND SKILLS)

MOTIVATION AND WILL

Appendix: Current legislation and pending legislative projects

1.   Equality, freedom of expression and non-discrimination

Constitution of Finland (*Suomen perustuslaki* 731/1999)

The Constitution of Finland lays down provisions on everyone's basic rights. Section 6, concerning equality and non-discrimination, states as follows: "No one shall, without an acceptable reason, be treated differently from other persons on the ground of sex, age, origin, language, religion, conviction, opinion, health, disability or other reason that concerns his or her person." Furthermore, section 9 lays down provisions on everyone's freedom of movement in the country, while section 12 covers everyone's right to freedom of expression. Rights in support of communication further include section 17, which states as follows: "The rights of persons using sign language and of persons in need of interpretation or translation aid owing to disability shall be guaranteed by an Act."

Non-discrimination Act (*yhdenvertaisuuslaki* 1325/2014)

The Non-discrimination Act emphasises equality and non-discrimination. The rights of different population groups to gain equal access to services and independent living are to be actively promoted. In addition to public operations, the Non-discrimination Act imposes obligations on private activities, while also guaranteeing people who have been discriminated against the right to compensation (sections 1 and 23). Service providers are required to ensure that services are provided equally for customers, regardless of age, disability or language, etc. Services also include transport and communications services. The Act prohibits both direct and indirect discrimination (section 8). According to section 13, indirect discrimination refers to an apparently neutral rule, criterion or practice that puts a person at a disadvantage compared with others on the grounds of personal characteristics, such as age or disability.

United Nations Convention on the Rights of Persons with Disabilities

The guiding principle of the United Nations Convention on the Rights of Persons with Disabilities ('Disability Rights Convention') is non-discrimination. Article 9 of the Convention imposes an obligation on States Parties to take appropriate measures to ensure accessibility, such that people with disabilities have "access, on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and to other facilities and

services open or provided to the public, both in urban and in rural areas". According to Article 3, accessibility is one of the general principles of the Convention. Accessibility guides the implementation of the Convention and interpretation of its language as a whole. Consequently, accessibility should be examined across all the rights guaranteed by the Convention. The Disability Rights Convention is monitored by the Committee on the Rights of Persons with Disabilities, established by the Convention. As a States Party to the Convention, the European Union is obliged to report on implementation of the Convention to the Committee. In its concluding observations adopted on the initial report of the European Union, the Committee drew special attention to accessibility (CRPD/C/EU/CO/1). Finland has ratified the Convention and its Optional Protocol. Ratification establishes the status of disabled people's rights as legally binding human rights and the state's duty to take action to promote these rights. Finland is obliged to report on implementation of the Convention.

Sign Language Act (*viittomakielilaki* 359/2015)

The objective of the Act is to promote the linguistic rights of sign language users. The authorities must promote in their activities the opportunities of sign language users to use their own language and receive information in their own language. In the Act, 'sign language' means Finnish and Finnish-Swedish sign language, while a 'sign language user' means a person whose own language is sign language.

2   Publicly funded special services provided as health and social services

Social Welfare Act

Section 23 of the new Social Welfare Act (*sosiaalihuoltolaki* 1301/2014) states that accessible and well-functioning public transport is the primary means of providing transport suitable for all. According to the section, services supporting mobility are provided for those people who cannot independently use public transport due to illness, disability or some other corresponding reason reducing functional ability, and who require services to run errands or for some other need as part of daily life. Such services include transport escort services, group transport, and reimbursement of costs arising from transportation in a taxi or invalid taxi. Services based on the Social Welfare Act are income-related and mostly provided for elderly people.

Act on Services and Assistance for the Disabled

The Act on Services and Assistance for the Disabled (*laki vammaisuuden perusteella järjestettävistä palveluista ja tukitoimista* 380/1987), also known as the 'Disability Services Act', imposes an obligation on local authorities to provide and cover the costs arising from reasonable transport services and related transport escort services for a person with severe disabilities, if it is necessary due to the person's illness or disability to enable them to cope with the ordinary activities of daily living. According to the related Decree on Services and Assistance for the Disabled (*asetus vammaisuuden perusteella järjestettävistä palveluista ja tukitoimista* 759/1987), also known as the 'Disability Services Decree', a person diagnosed with a severe disability has the subjective right to 18 monthly one-way journeys relating to daily life, primarily within his or her municipality of residence. Under section 9 of the Act, a person with disabilities is to be reimbursed for any costs arising from other necessary assistance in full or in part, according to the need resulting from the disability or illness. Assistance may be granted for assistive devices, for example, and also for purchasing a car, modifications and accessories.

The Health Insurance Act (*sairausvakuutuslaki* 1224/2004), in turn, lays down provisions on the right to receive reimbursement from the Social Insurance Institution of Finland for journeys relating to healthcare or medical treatment. The Act on Interpretation Services for Persons with Disabilities (*laki vammaisten henkilöiden tulkkauspalveluista* 133/2010), also known as the 'Interpretation Services Act', provides for disabled people's right to receive interpreting services organised by the Social Insurance Institution of Finland. According to the Act, interpreting services are provided if a person with disabilities does not receive interpretation suitable for them by virtue of any other law. However, interpreting services may be organised if the service provided by virtue of some other law is delayed or if there is some other justifiable reason to provide the service. People entitled to interpreting services include those with concurrent hearing and visual impairments, hearing impairments or speech impairments, who require interpreting due to such impairment in order to work, study, run errands, participate in society, or engage in leisure interests or recreation. A further condition is that such people must be capable of expressing their own will with the aid of interpreting and have access to an effective means of communication.

New legislation governing services for disabled people is being drafted. The reform aims to consolidate the current Disability Services Act and the Act on Special Care for Persons with Intellectual Disabilities (*laki kehitysvammaisten erityishuollosta* 519/1977) into a single new Act. This Act would complement the Social Welfare Act, applicable to social welfare as a general act.

3 Legislation governing accessibility in the transport sector

Passenger rights

In the transport sector, non-discrimination and consumer rights are especially emphasised in European Union law concerning the rights of passengers.

EU Regulations governing passenger rights pay special attention to the rights of disabled people and those with reduced mobility to travel and receive assistance. EU Regulations governing air, rail, waterborne, bus and coach transport establish non-discrimination and the equal right to travel for people with mobility and functional impairments. In the context of EU Regulations, a 'disabled person' or 'person with reduced mobility' is defined to mean "any person whose mobility when using transport is reduced due to any physical disability (sensory or locomotory, permanent or temporary), intellectual disability or impairment, or any other cause of disability, or as a result of age, and whose situation needs appropriate attention and adaptation to his or her particular needs of the service made available to all passengers". The Regulations governing different modes of transport differ from each other to some extent.

The EU's Passenger Rights Regulations are as follows: **Regulation (EC) No 261/2004 of the European Parliament and of the Council establishing common rules on compensation and assistance to passengers in the event of denied boarding and of cancellation or long delay of flights; Regulation (EC) No 1107/2006 of the European Parliament and of the Council concerning the rights of disabled persons and persons with reduced mobility when travelling by air; Regulation (EC) No 1371/2007 of the European Parliament and of the Council on rail passengers' rights and obligations; Regulation (EC) No 1177/2010 of the European Parliament and of the Council concerning the rights of passengers when travelling by sea and inland waterway; and Regulation (EU) No 181/2011 of the European Parliament and of the Council concerning the rights of passengers in bus and coach transport.**

The Regulations governing different modes of transport differ to some extent in terms of content, but they all establish non-discrimination for disabled people and people with reduced mobility and their equal right to travel, receive assistance free of charge at terminals and on vehicles, and the right to receive information on their rights. The Regulations further establish the right to travel information, according to which any generally available, relevant travel information must be provided in an appropriate format which is accessible to disabled people and people with reduced mobility. The Regulations concerning air, bus and coach, and waterborne transport also include obligations on personnel training. In addition, the Regulation concerning rail transport contains a specific reference to Community technical specifications, ensuring that the station, platforms, rolling stock and other facilities are accessible to disabled people and people with reduced mobility. The Regula-

tion governing bus and coach transport includes an obligation to designate bus stations providing assistance. The Regulations concerning sea and air transport impose a further obligation to draw up and confirm quality standards for assistance provided for disabled people and people with reduced mobility. Parties responsible for ensuring non-discrimination as laid down in the Regulations include transport operators, tour operators, infrastructure managers and relevant authorities.

Compliance with the EU Passenger Rights Regulations is monitored in Finland by the Consumer Ombudsman in terms of consumer rights and by the Finnish Transport Safety Agency (Trafi) with regard to the rights of business travellers and disabled people.

Technical legislation relating to transport services

The transport sector has technical rules governing the accessibility of buses and coaches, rail rolling stock and waterborne craft, which are based on European Union law and aim to establish easy access to vehicles.

With regard to waterborne transport, for example, **Directive 2009/45/EC of the European Parliament and of the Council on safety rules and standards for passenger ships** provides that Member States must ensure that appropriate measures are taken to enable persons with reduced mobility to have safe access to all passenger ships of a certain type and to all high-speed passenger craft used for public transport. Consequently, the Finnish Transport Safety Agency has issued further technical specifications by virtue of the Act on the Technical Safety and Safe Operation of Ships (*laki aluksen teknisestä turvallisuudesta ja turvallisesta käytöstä* 1686/2009), in order to ensure that persons with reduced mobility are able to travel on passenger ships and high-speed passenger craft in a sufficiently accessible and safe manner.

Provisions on accessibility requirements for manufacturing of new buses and coaches are laid down in **Directive 2007/46/EC of the European Parliament and of the Council establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles; Commission Regulation (EU) No 407/2011 amending Regulation (EC) No 661/2009 of the European Parliament and of the Council as regards the inclusion of certain Regulations of the United Nations Economic Commission for Europe on the type-approval of motor vehicles, their trailers and systems, components and separate technical units intended therefor; and Regulation No 107 of the United Nations Economic Commission for Europe (UNECE) on uniform provisions concerning the approval of categories M2 or M3 vehicles with regard to their general construction.** In practical terms, the regulatory framework requires new urban buses to satisfy the technical acces-

sibility requirements concerned, but regulation of other types of buses and coaches has been left at the discretion of each Member State.

When constructing a railway, section 6 of the **Railways Act (*ratalaki* 110/2007)** states that attention must be paid, as far as possible, to the needs and barrier-free movement of different population groups.

Section 5 of the **Government Decree on the safety and interoperability of the rail system (*valtioneuvoston asetus rautatiejärjestelmän turvallisuudesta ja yhteen-toimivuudesta* 372/2011)** sets out requirements for accessibility in different subsystems, including infrastructure, rolling stock, traffic operation, and telematic applications for passenger services. These requirements concern design, construction, renewal, upgrade, maintenance and operation. According to the Decree, subsystems must be accessible to disabled people and those with reduced mobility. Furthermore, **Commission Regulation (EU) No 1300/2014 on the technical specifications for interoperability relating to ac-cessibility of the Union's rail system for persons with disabilities and persons with reduced mobility**, in force since the beginning of 2015, includes both general provisions and technical specifications relating to design of technical details for infrastructure and rolling stock. According to the Regulation, infrastructure must, prior to being placed in ser-vice, be subjected to assessment of conformity with regard to accessibility, among other things, in both planning and construction phases. Attention must also be paid to the ac-cessibility of technical systems, such as displays and platform lifts and ramps. The Regula-tion requires the Member States to establish an inventory of assets covering both infra-structure and rolling stock, with a view to identifying barriers to accessibility, providing information to users, and monitoring and evaluating progress on accessibility. The Finnish Transport Safety Agency (Trafi) is involved in drafting a recommendation on the subject to be submitted by the European Railway Agency (ERA).

Taxi transport is regulated at a national level. The accessibility requirements for taxi fleets are currently based on section 10 of the **Taxi Transport Act (*taksiliikennelaki* 217/2007),** which states that it is also possible to include conditions concerning accessibility in taxi licences, as required. In practical terms, it is easier to obtain a taxi licence for an accessi-ble vehicle. According to section 19 of the Act, the maximum numbers of taxi licences are confirmed annually for each municipality by the competent Centre for Economic Devel-opment, Transport and the Environment. The same decision also determines how many licences should include accessibility requirements.

Larger accessible taxis are also entitled to a higher car tax refund than other taxis, while invalid taxis are exempt from the car tax. **Requirements for invalid taxis are laid down in the Decree on the Vehicle Construction and Equipment (*asetus ajoneuvojen rak-enteesta ja kalusteista* 1256/1992), while those concerning other accessible taxis are**

included in the Decree of the Ministry of Transport and Communications on quality requirements for accessible fleets used in taxi transport (*liikenne- ja viestintäministeriön asetus taksiliikenteessä käytettävän esteettömän kaluston laatuvaatimuksista 723/2009). The principle for both types of vehicles is that they can be used while sitting in a wheelchair and have enough room to accommodate passengers, while access to the vehicle is easy and the wheelchair restraint system is safe.

National regulatory framework governing operation of public transport currently in force and under preparation

The Act on the Professional Qualifications of Taxi Drivers (*laki taksinkuljettajien ammattipätevyydestä* 695/2009) lays down provisions on taxi drivers' training requirements in general terms. Further provisions on the requirements are laid down in a Ministry of Transport and Communications Decree. The training pays special attention to the ability to serve people with disabilities. The Road Traffic Act (tieliikennelaki 267/1981), in turn, includes provisions on the driver's responsibility for the safety of disabled passengers.

At present, certain training requirements also apply to taxi entrepreneurs. In order to obtain a taxi licence under the **Taxi Transport Act (*taksiliikennelaki* 217/2007)**, a taxi entrepreneur is required to pass a compulsory test for entrepreneurs and a training course that includes a unit on serving people with disabilities.

The Act also contains quality requirements, which also include the driver's obligation to ensure that customers get in and out of the car safely and a duty to ensure that customers are provided with the necessary assistance. In addition, special attention is paid to assistance when regulating taxi fees.

In the **Public Transport Act (*joukkoliikennelaki* 869/2009)**, promoting accessibility and the equality objective are mostly associated with defining the level of service, the principles of transport planning, the quality promise of transport services, and procurement of transport services (one of the criteria for selecting the winning tender). The quality promise obligation imposed on bus and coach transport means that an entrepreneur is required to issue a quality promise, which must indicate the vehicle fleet being used and whether it includes low-platform vehicles, as well as services suitable for disabled people, etc., and to publish it on the corporate website. However, there is no obligation to offer accessible services.

Parliament recently passed **Government Proposal 161/2016 for the Transport Code and for certain related Acts (including the Act on Transport Services)** with certain amendments. The Act will enter into force on 1 January 2018 with regard to the provisions on opening of data and, in other respects, on 1 July 2018. One of the primary objectives of

the Act is to relax transport licensing procedures and regulation in general, while also promoting creation of new types of digital services. Once in force, the Act will ease the entry requirements to the taxi transport sector and change incentives for accessibility to some extent. However, the Act aims for an increasing number of parties to pay attention to the accessibility and safety of disabled passengers.

Section 1 of chapter 1 in part III of the Act requires both transport licence holders operating in passenger transport and brokerage service providers to also give information on their accessible transport services, in addition to timetables and procedures for processing customer feedback, etc. This provision states that they must provide information on the services and assistance available to passengers with functional limitations, accessibility of vehicles and any equipment that facilitate passengers' entry to the vehicle and interaction with the driver. According to the Government Proposal, the details listed above should be provided for passengers in a digital format. Furthermore, section 1 of chapter 2 in part III provides that operators offering passenger transport services must ensure that information on accessible services is available in real-time and freely accessible to everyone through an open interface.

According to section 2 of chapter 1 in part III of the Act, taxi licence holders are responsible for ensuring that the service provided by a driver is appropriate and that the driver is capable of giving due consideration for any special needs arising from a passenger's functional limitations. The section further requires the driver to ensure the passenger's safe entry to and exit from the vehicle and to be capable of taking the passenger's needs and any possible functional limitations into account. In addition, the new law also includes provisions on the driver's driving licence. Section 27a of the Vehicles Act (ajoneuvolaki 1090/2002) provides that the Finnish Transport Safety Agency may issue orders on accessible vehicles, such as the safety of accessible taxi fleets and requirements concerning suitability for passengers using a wheelchair.

Legislation governing the traffic environment and infrastructure

The accessibility of built environments and construction activities is based on the objectives set out in land use and building legislation. Under section 5 of the **Land Use and Building Act (*maankäyttö- ja rakennuslaki* 132/1999)**, the objective in land use planning is to promote a safe, healthy, pleasant, socially functional living and working environment which provides for the needs of various population groups, such as children, the elderly and the disabled. Section 117 of the Act states that a building must, in so far as its use requires, also be suitable for people whose capacity to move or function is limited. Section 117e provides that a party engaging in a building project must ensure that the building and its outdoor and recreational areas are designed and constructed as required

for their intended purpose, number of users and storeys, so as to take accessibility and usability into account, in particular with regard to children, the elderly and disabled people.

The Ministry of the Environment Decree on accessible building (*asetus esteettömästä rakennuksesta*, National Building Code of Finland F1 (2005) applies to administrative and service buildings, such as passenger terminals, buildings containing work premises as well as business and service premises in other buildings. Its regulations and guidelines are related to accessible access routes on the plot and inside the building, lift construction and accessibility of assembly and accommodation facilities, etc.

Section 3 of the **Act on the maintenance, cleaning and clearing of public areas (*laki kadun ja eräiden yleisten alueiden kunnossa- ja puhtaanapidosta* 669/1978)** states that the traffic classification of a street, the volume of traffic and the accessibility of transport are among the aspects that must be taken into account when determining its maintenance level.

Regulation (EU) No 1315/2013 of the European Parliament and of the Council on Union guidelines for the development of the trans-European transport network and repealing Decision No 661/2010/EU establishes the conditions, requirements and priorities for developing trans-European transport networks (TENs). These networks, shown on the maps included in the Annex to the Regulation, consist of the infrastructure for railway transport, inland waterway transport, road transport, maritime transport, air transport and multimodal transport. With regard to passenger transport, the maps indicate all the network routes and passenger terminals. The Regulation also applies to the network's telematic applications as well as measures promoting the efficient management and use of such infrastructure.

Article 4 of the Regulation contains the objectives of the trans-European transport network. The transport network is to strengthen the social, economic and territorial cohesion of the Union and contribute to the creation of a single European transport area which is efficient and sustainable, increases the benefits for its users and supports inclusive growth. According to point (d)(v) of the Article, it will increase the benefits for its users through accessibility for elderly people, people with reduced mobility and disabled passengers, among other things.

The trans-European transport network is developed through projects of common interest. Article 7 requires Member States to ensure that the projects are carried out in compliance with Union legal acts on accessibility, among other things. These projects are eligible for Union financial assistance.

One of the general priorities in the development of the network mentioned in Article 10 constitutes measures that are necessary for improving or maintaining the accessibility of infrastructure for all users, including elderly people, people with reduced mobility and disabled passengers.

4 Communications legislation to promote accessibility currently in force and under preparation

Finnish Broadcasting Company

The public service mission assigned to Finnish Broadcasting Company (YLE) is defined in section 7 of the Act on Yleisradio Oy (Finnish Broadcasting Company) (*laki Yleisradio Oy:stä* 1380/1993). Public service has customarily aimed to safeguard freedom of expression and everyone's right to receive information, enjoy education and culture and improve themselves. Public service must be available to all citizens on equal terms, regardless of place of residence and social or economic standing. The mission of public service is to provide services for linguistic groups other than native Finnish speakers, minority groups and special groups within the country. According to section 211 of the Information Society Code, audio-subtitling and subtitling services must be added to public service programme sets.

Information Society Code

Paragraph 1 of section 211 of the Information Society Code (*tietoyhteiskuntakaari* 917/2014) states as follows: "Finnish and Swedish television programmes shall be accompanied by subtitling and other programmes shall be accompanied by explanation or service where the text of the subtitled programme is converted to voice (audio-subtitling and subtitling service)." Making audio-subtitling and subtitling available to people with visual and hearing impairments promotes their right to receive information, opinions and other communications.

The Government Decree on Television and Radio Operations (*valtioneuvoston asetus televisio- ja radiotoiminnasta 1245/2014*) was issued on 18 December 2014. Section 8 of the Decree provides that audio-subtitling and subtitling services must be added to the programme sets of a programming licence holder, where the programmes are freely available throughout Finland and where they contain daily Finnish or Swedish programmes and daily news and current affairs programmes. According to the section, the Ministry of Transport and Communications will separately confirm by its decision those programme sets that must be accompanied by audio-subtitling and subtitling services.

Section 86 of the Information Society Code lays down provisions on the universal service obligation concerning the provision of public telephone services as follows: "A telecommunications operator that Ficora has designated as a universal service provider in public telephone services […] shall provide, at a reasonable price and regardless of the geographical location, a subscriber connection to the public communications network at the subscriber's or user's permanent place of residence or location. […] The subscriber connection to be provided shall allow all users, including those with disabilities, to use emergency services, make and receive national and international calls and use other ordinary telephone services."

Audiovisual Media Services Directive, Web Accessibility Directive and Proposal for a European Accessibility Act

In force since 2007, **Directive 2010/13/EU of the European Parliament and of the Council on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the provision of audiovisual media services, also known as the Audiovisual Media Services Directive (AVMS Directive)**, contains rules on accessibility for both television broadcasting and on-demand audiovisual media services. According to its Article 7, "Member States shall encourage media service providers under their jurisdiction to ensure that their services are gradually made accessible to people with a visual or hearing disability." The Directive is currently being revised due to changing market realities. According to the legislative proposal, the key objectives of the revision include improving protection of consumers including minors, guaranteeing a more level playing field and preserving the integrity of the internal market.

Web Accessibility Directive

Directive (EU) 2016/2102 of the European Parliament and of the Council on the accessibility of the websites and mobile applications of public sector bodies, also known as the Web Accessibility Directive, entered into force at the end of 2016. The Directive requires EU Member States to ensure that websites and mobile applications of their public sector organisations are made accessible to everyone. Member States must also monitor the achievement of accessibility on a regular basis. The Directive aims to promote the accessibility and harmonisation of public-sector websites. The purpose is to improve the opportunities of all users to make use of websites, which is especially important to people with functional limitations, such as disabled people. In Finland, the Web Accessibility Directive will be implemented in national law in 2018 and the law will become applicable in the spring of 2019.

The European Commission has also submitted a **Proposal for a Directive of the European Parliament and of the Council on the approximation of the laws, regulations and**

administrative provisions of the Member States as regards the accessibility requirements for products and services (COM(2015) 615), also known as the Proposal for a European Accessibility Act. The proposed Directive takes a stand on the accessibility of all electronic services. The objective of the Proposal for a European Accessibility Act is to harmonise legislation on certain products and services by defining common functional accessibility requirements for them. The Commission has aimed to pay special attention to the availability and accessibility to people with functional limitations of different products, such as smart phones and televisions, and mobility and banking services, but the process has only just started.

Postal Act

Provisions on accessibility included in Finland's postal legislation are mostly based on the Universal Postal Union Convention (Finnish Treaty Series 69/2011), which contains articles on the rights of blind people. Section 40a of the **Postal Act (*postilaki* 415/2011)** lays down provisions on items sent by people with visual impairments. According to the section, a postal undertaking obliged to function as a designated operator according to the Universal Postal Union Convention must offer a person with visual impairments the right to send an addressed item containing Braille, weighing less than seven kilograms, free of charge, with the exception of an additional air mail charge. Furthermore, section 16 imposes an obligation on universal service providers to make use of the means at their disposal in order to ensure that people with visual and mobility impairments, in particular, can conduct their business at service points without hindrance. The opportunity of visually impaired people to receive information using an audio-based mode of communication, in turn, is ensured by the ability to borrow audio books from Celia, the library for the visually impaired (Act on the Library for the Visually Impaired, *laki näkövammaisten kirjastosta* 638/1996, and Decree on the Library for the Visually Impaired, *asetus näkövammaisten kirjastosta* 639/1996).

The Postal Act is currently being revised. Among other things, the Government Proposal suggests that the Act be specified in terms of Braille items for visually impaired people so as to expand the right to send items free of charge to apply to all private citizens. The Government Proposal further submits that the Postal Act be amended with regard to delivery, so as to also allow items of correspondence delivered to residential blocks of flats to be deposited to building-specific post lockers rather than exclusively to flat-specific letterboxes. If post is delivered to building-specific lockers, which may also be located in the building's entrance hall, accessibility may become an issue. Consequently, it is proposed that, in the future, it would still be possible to also give consideration to local circumstances or personal special needs arising from the addressee's age or state of health when determining delivery points. Regarding the personal special needs, the addressee's disability and age, if

aged at least 75, would still have to be taken into account in the manner specified in more detail in a regulation of the Finnish Communications Regulatory Authority.

Certain technical standards

Standards contain recommendations presenting technical specifications for products, services and processes. Standards may sometimes also be referred to in legislation, in which case they may become the primary – and sometimes also mandatory – procedures, in order to fulfil the safety and compatibility requirements laid down in law, for example. In order for a standard to become a European EN standard, it needs to be adopted by a European standardisation organisation. Standards may also be broader international ISO standards.

Technical standards promoting accessibility and passenger safety referred to in national legislation (Decree) include national standard SFS 5912 on transporting wheelchair occupants by passenger car, van and lorry and international standard ISO 10542-1.

Accessible ICT products and services are governed by a European standard (EN 301 549) from 2014. The standard is especially intended for use by public authorities and other public-sector parties as part of procurement, in order to ensure that websites, software and digital devices are more easy to use and, consequently, available to a larger group of people. The aim is to give special consideration to people with functional limitations and elderly people as users of services and to ensure that mainstream products work seamlessly with various assistive devices and functions (such as text-to-speech). This standard is referred to in the above-mentioned Directive on the European Accessibility Act due to enter into force in the near future.