FRA EUROPEAN UNION AGENCY FOR FUNDAMENTAL RIGHTS

FUNDAMENTAL RIGHTS OF OLDER PERSONS

ENSURING ACCESS TO PUBLIC SERVICES IN DIGITAL SOCIETIES

REPORT

Contents

Abbreviations

Key findings

Introduction

Why is this report needed?

Legal and policy context

Research methodology and definition of 'older persons'

Structure of the report

1. Ageing and digital societies: leaving no one behind

1.1 Ageing societies: the demographic change and its consequences

1.1.2 Drivers of population ageing

1.1.3 Consequences of population ageing

1.2 Digital societies

1.2.1 Social and digital inequalities

1.2.2 Digital divide(s)

1.3 The grey digital divide in equal access to public services that are undergoing digitalisation

1.3.1 The divide in the 'grey divide' and the impact of education

1.3.2 Access of older persons to the internet and preferred devices

1.3.3 Internet use by older persons

1.3.4 Older persons' digital skills

1.3.5 General and health-related digital activities of older persons

1.3.6 Older persons' use of digital public services

2. Legal and policy instruments at EU and international levels

2.1 Legal framework

2.1.1 European Union legal framework

2.1.2 Council of Europe legal framework

2.1.3 International legal framework

2.2 Policy framework

2.2.1 European Union policy framework

2.2.2 Council of Europe policy framework

2.2.3 International policy framework

3. Legal and policy instruments at national level

3.1 National laws regulating equal access to public services that are undergoing digitalisation

3.1.1 Approach 1: E-government law guarantees equal access to public services that are undergoing digitalisation

3.1.2 Approach 2: Sectoral law guarantees equal access to particular public services that are undergoing digitalisation

3.2 Laws addressing certain groups' particular risks of digital exclusion

3.2.1 Addressing age-based digital exclusion in law

3.2.2 Addressing disability-based digital exclusion in law

3.3 Complaint mechanisms and systematic monitoring concerning equal access to public services that are undergoing digitalisation

3.4 National policy frameworks on digitalising public services

3.4.1 Explicit mention of equal access to public services that are undergoing digitalisation in national policies and strategies

3.4.2 Explicit recognition of non-discrimination in national policies and strategies

3.4.3 Retaining offline public service options in policy documents

3.4.4 Recognising groups at risk of digital exclusion in policy

3.5 Financial resources for the implementation of national policies addressing digitalisation

4. Targeted individual and structural measures to promote older persons' equal access to public services that are undergoing digitalisation

4.1 First-level digital divide: closing the gap by increasing affordability

4.2 Second-level digital divide: enabling users through training

4.2.1 Addressing digital exclusion of older persons by implementing digital inclusion measures

4.2.2 Promoting digital literacy across the life cycle

4.2.3 Providing targeted offline and digital support services

4.2.4 Providing targeted digital support services

4.2.5 Fostering inclusive and user-centred service design through co-creation, co-design and participatory design

4.3 Third-level digital divide: empowering users

5. Ways forward: anchoring equal access to public services and non-discrimination in national law, policies and measures

5.1 Taking a fundamental rights perspective on ageing

5.2 Combatting ageism through the participation of older persons of all ages

5.3 Reaching out and motivating people of all ages to achieve basic digital skills

5.4 Monitoring digital decade targets for all ages through inclusive data collection

5.5 Preparing for the future of an ageing and digitalising Europe

Annex 1: Glossary

Endnotes

About this publication

Abbreviations

- **Charter** - EU Charter of Fundamental Rights
- **Declaration** - European Declaration on Digital Rights and Principles
- **DESI** - Digital Economy and Society Index
- **ECtHR** - European Court of Human Rights
- **EU** - European Union
- **EU-27** - 27 EU Member States
- **FRA** - European Union Agency for Fundamental Rights
- **ICT** - Information and communication technology
- **NRRP** - National recovery and resilience plan
- **UN** - United Nations

Key findings

The European population is continuously ageing, and society is growing increasingly digitalised. Public services are undergoing digitalisation (see Annex 1: Glossary), creating a risk of exclusion for older persons. Yet there are legal protections against discrimination based on age. Together, these facts invite an examination of how the digitalisation of public services is affecting older persons' enjoyment of their fundamental rights.

The 2020 Council of the European Union conclusions Human rights, participation and well-being of older persons in the era of digitalisation underlined the need to maintain some non-digital public services. The Council called for respect for older persons' rights and needs, regardless of disabilities. It "invite[d] the Fundamental Rights Agency to explore the impact of digitalisation on the fundamental rights, active participation and well-being of older persons".

In response, the European Union Agency for Fundamental Rights (FRA) collected information on Member States' legislation and policies. FRA examined how older persons' rights of access to and use of public services are protected, given digitalisation's impact. Statistical evidence from Eurostat data and FRA's Fundamental Rights Survey corroborated this analysis.

The European Union (EU) issued the European Declaration on Digital Rights and Principles in 2023. This commits the EU to a digital transformation that benefits everyone and to ensuring that the design, development, deployment and use of technological solutions respect fundamental rights. The EU makes a further commitment to a digital transformation that leaves no one behind. The transformation must benefit older persons; people living in rural areas; persons with disabilities; and marginalised, vulnerable or disenfranchised people, and those who act on their behalf.

The EU's founding treaty protects the rights of the growing group of older persons (Article 2 and Article 6, paragraph 3, of the Treaty on European Union). So does the EU Charter of Fundamental Rights (the Charter), Article 21 (non-discrimination), Article 25 (the rights of the elderly) and Article 26 (integration of persons with disabilities).

The EU and its Member States are required to respect fundamental rights whenever they implement EU law (Article 51 of the Charter). The Charter does not explicitly mention the right of access to public services. However, Article 34 (social security and social assistance), Article 35 (healthcare), Article 41 (right to good administration) and Article 42 (right of access to documents) cover certain aspects of that right.

Moreover, Protocol No. 26 to the Treaty on the Functioning of the European Union recognises the importance and diversity of services of general interest. Member States can choose how services are delivered. However, they must ensure a high level of quality, safety and affordability; equal treatment; the promotion of universal access; and the protection of user rights. From a fundamental rights perspective, this means that those who cannot or do not wish to access public services digitally should still have offline access, to ensure that no one is left behind.

The 2020 Council conclusions invite Member States and the Commission to adopt "a rights-based and a life-cycle perspective to ageing". The conclusions acknowledge that the digital gap between generations is significant and increases with age. They stress the need to maintain non-digital access channels to public services. The Council calls for respect for older persons' rights and needs, explicitly referring to older persons with and without disabilities.

The 2023 EU Declaration on Digital Rights and Principles confirms the EU's commitment to respect fundamental rights, inclusion, accessibility, equality, availability of services and everyone's rights and aspirations equally.

This report examines Member States' laws and policies relating to digitalised services provided by public administrations. This is in line with the Digital Decade policy programme.

The programme focuses on the fundamental rights of older persons and obligations relating to non-discrimination. The Digital Decade requires that all key public services are available online by 2030. This offers many advantages and opportunities, such as cost and time savings and efficiency. However, it also presents risks and challenges to groups susceptible to digital exclusion, such as older persons, persons with disabilities and those with low education and income levels.

The report findings show the following.

- **All Member States and candidate countries provide access to public services in digital societies** through generic or specific legal provisions. Some provisions refer broadly to the principle of good public administration.
- National legislation and policies do not always acknowledge the **risk of exclusion from digitalised public services**. They do not adequately **address barriers** to using digital services, such as insufficient coverage, costs of internet and devices, lack of skills and external support.
- The laws of four Member States include **provisions aimed specifically at protecting older persons' rights** to equal access to digitalised public services.
- Nine Member States' policy documents recognise the **importance of maintaining offline alternatives** or granting freedom of choice of access channel.
- There is **little evidence of national initiatives to provide digital skills training** for older persons or to offer **financial support** for reliable internet access or up-to-date devices and software. This is despite national authorities' efforts.
- Digital skills and up-to-date technological tools are essential to participate in public life. Only one in four people aged 65 to 74 in the 27 EU Member States have at least basic digital skills. Public consultations and policy discussions are increasingly carried out online. Therefore, **older persons face not being able to exercise their civil and political rights.**
- **Information and disaggregated data for persons aged 75 and older are missing. This makes it impossible to evaluate and monitor the impact and efficiency of the Digital Decade policy programme and national laws and policies on this group.** Nor can their equal

access to public services undergoing a digital transition be evaluated/monitored.

Introduction

Two major transformations are shaping Europe's future: demographic ageing and the digital transformation of everyday life, including the digitalisation (see Annex 1: Glossary) of public and private services. Consistently low birth rates and higher life expectancy are transforming the shape of the age pyramid of the European Union (EU), Eurostat's 'Statistics Explained' reports. By 2050, 30 % of the EU's population will be aged 65 and older. This demographic shift influences all aspects of life and has important economic and social implications.

At the same time, digital transformation in the EU is proceeding fast: the European Commission, through its European Digital Decade Policy Programme, is working towards having 100 % of key public services online across the EU (and in the accession countries North Macedonia and Serbia) by 2030. A considerable challenge now facing the EU and Member States is to address digitalisation from a fundamental rights perspective and ensure equal access to digital information and services for the rapidly growing group of older persons in all their diversity.

Not all older persons are at risk of digital exclusion; many actively use digital technologies on a daily basis (see more information in Section 1.3 The grey digital divide in equal access to public services that are undergoing digitalisation). Nevertheless, it is important to take into account that relevant policies do not always address the rights and needs of many older persons with low income or education levels, living in rural areas or with a migration background, and neither does the design of digital technologies and services. [1]

The EU and its Member States are required to respect human rights as one of the fundamental values of the EU (Article 2 of the Treaty on European Union), particularly in legislation, policies and decisions on implemented measures. The EU and its Member States, when implementing EU law, are also bound to respect the fundamental rights enshrined in the EU Charter of Fundamental Rights (the Charter). These legal obligations provide an important foundation for effectively protecting the fundamental rights of people who are at risk of digital exclusion.

Why is this report needed?

This report analyses the issue of equal access for older persons to public services that are undergoing digital transition, from the perspective of fundamental rights.

The increasing digitalisation in all areas of life offers a variety of economic and social opportunities. For many, digitalisation creates opportunities to participate, saves time and money, facilitates communication and makes services more accessible. However, some people cannot fully enjoy these opportunities because they lack the necessary skills to use digital tools or because they cannot afford them. Older persons, a heterogeneous group with diverse socio-economic backgrounds, are among those whose enjoyment of fundamental rights might be at risk from digitalisation.

Along with the potential for positive change, digital advancements also carry risks. Recognising that, the Council of the European Union adopted conclusions on Human rights, participation and well-being of older persons in the era of digitalisation in 2020. The conclusions invite Member States and the Commission to adopt "an age-integrated approach including a rights-based and life-cycle perspective to ageing, bearing in mind the differences between women and men, through, for instance, the promotion of positive communication on and images of ageing, a focus on the opportunities and challenges of ageing, as well as an acknowledgement of the wide range of differences between older persons and a greater understanding of the contribution that older persons make to social cohesion and economy." [2]

Some digitalised public services, such as pensions, and health or social benefits, are legally guaranteed fundamental rights. Excluding people from accessing them may breach the law and can increase older persons' dependency, social isolation and disempowerment.

The Council conclusions stress the need to maintain some non-digital public services. They call for respect for older persons' rights and needs, including those with and without disabilities. In its conclusions, the Council invites the European Union Agency for Fundamental Rights (FRA) to explore the impact of digitalisation on the fundamental rights, active participation and well-being of older persons. [3]

Digitalisation can impact many rights of older persons, including the enjoyment of their rights as citizens, and their participation in political, social and cultural life.

This report focuses on rights to public services. It analyses how far national legal and policy frameworks on digitalisation address fundamental rights implications related to equal access to digital public services. It maps current legislation, policies and practices fostering digital inclusion and equal access to public services undergoing digitalisation, and the availability of offline access channels for older persons who are unable or unwilling to use online options. It emphasises EU policy, which is where most EU initiatives relating to the rights of older persons have emerged.

Legal and policy context

The right to access to public services is part of the right to good administration protected under Article 41 of the Charter. This includes equal access to public services that are in the process of digitalisation. The requirement of equal access is based on prohibition of discrimination on the ground of age (Article 21 of the Charter) and the general prohibition of discrimination on any grounds enshrined in Article 10 of the Treaty on the Functioning of the European Union. Article 25 of the Charter states that "The Union recognises and respects the rights of the elderly to lead a life of dignity and independence and to participate in social and cultural life."

The Charter is legally binding on the EU, and on EU Member States when they are implementing EU law (Article 51 of the Charter). The aforementioned provisions therefore govern the design, interpretation and application of EU legislative and policy initiatives, including those concerning digitalisation. They provide the relevant and applicable legal basis for assessing older persons'

access to digitalised public services from a fundamental rights perspective. Moreover, Article 2 of the Treaty on European Union affirms that respect for human rights is a fundamental value on which the Union is founded.

At this time, there is no EU legislation in the form of directives or regulations dedicated to the rights of older persons. At policy level, however, a number of initiatives can be highlighted.

The European Commission presented its vision for a digitally transformed Europe by 2030 in its communication 2030 digital compass: The European way for the digital decade of 9 March 2021. It proposed a European Digital Decade policy programme, which presents the objectives, the targets to be reached by 2030 and the annual monitoring mechanism for measuring progress.

The European Declaration on Digital Rights and Principles(the Declaration), adopted on 15 December 2022, reflects European values. [4] It refers to the Charter, the European Pillar of Social Rights and other rights, such as data protection [5] and data privacy. [6] The Declaration refers to principles of solidarity and inclusion in access to technologies and commits EU Member States to taking measures to ensure that fundamental rights are respected online as well as offline and that nobody is left behind in the transition. Furthermore, the Declaration commits Member States to undertaking digital transformation in a way that includes older persons, those living in rural areas, persons with disabilities, and marginalised, vulnerable or disenfranchised people, and those who act on their behalf.

The Digital Compass also encourages Member States to ensure that by 2030 their "Public services should be fully accessible online, including for persons with disabilities, and benefit from easy-to-use tools with high security and privacy standards." [7] The European Digital Decade policy programme sets as targets for 2030 that 100 % of all key public services should be available online, all citizens should have access to their e-medical records and use a digital ID solution, and 80 % of citizens aged 16 to 74 years should have at least basic digital skills. With public services increasingly moving to a digital mode, it calls upon Member States to ensure that nobody is left behind. All targets are monitored on an annual basis by a structured, transparent and shared monitoring system, namely the Digital Economy and Society Index (DESI).

Research methodology and definition of 'older persons'

Franet, FRA's research network, collected the information for this comparative report between April and July 2022. The information covers all EU Member States and the candidate countries North Macedonia and Serbia. With its analysis, FRA aims to contribute to relevant EU and national policy discussions on ensuring a digitally just society for all, including for all older persons. The research maps if and how national legal and policy provisions ensure the right to equal access for all to public services that are undergoing digitalisation, and for specific groups at higher risk of digital exclusion, such as older persons, persons with disabilities, low incomes or low education levels, and people living in rural areas.

For this purpose, Franet mapped national legal and policy instruments addressing the

digitalisation of public administration and related public services, to collect evidence on provisions and safeguards that ensure equal access for all, or for older persons. The research also looked for information on the availability of offline access channels for persons who are unable or do not wish to use the online option. The focus was on public services relevant to older persons. The scope of this research does not cover assessing if public service websites conform with web accessibility standards, which are based on established criteria.

Research for this project entails desk research mainly based on publicly available secondary sources and, in specific cases, information obtained by specific requests from government officials, public bodies, equality bodies, national human rights institutions, civil society organisations and research institutes. FRA's Fundamental Rights Survey (2019), the Digital Economy and Society Index (DESI) report 2022 and the corresponding sections of Eurostat's database provided the data for the statistical context.

In the context of this research, 'older persons' were defined as aged 65 or older. A reason for the choice of the starting age is that, from this age on, people are less and less part of the active workforce. Therefore, they have fewer opportunities to acquire or maintain digital skills or access the internet through the workplace.

Older persons are not a homogeneous group but show the same heterogeneity of demographic and socio-economic characteristics, such as gender, education, income, health status, race and migration background, as the total population. That may affect whether and how they enjoy their fundamental rights.

The report does not reflect this intersectionality perspective (see the Glossary) in detail, as the information collected and the statistical data did not allow for an analysis by these characteristics. Instead, it mentions, where relevant, other groups with relatively high risks of digital exclusion, such as women, persons with disabilities, low education levels or low incomes, and people living in rural areas. All of those groups also include older persons.

Structure of the report

Chapter 1 of this report outlines the current context of demographic ageing, the consequences for digital societies, the 'grey digital divide', and the inequalities older persons might face in accessing public services that are undergoing digitalisation.

Chapter 2 outlines key legal and policy frameworks that address the rights of older persons and pave the way towards the digital decade.

Chapter 3 presents findings based on a comparative analysis of national reports from the EU-27, North Macedonia and Serbia, which Franet provided through desk research in 2022. It summarises national legislation, policy instruments, programmes and practices relating to digitalising public services from a fundamental rights perspective. It focuses on non-discrimination and equal access in general, and particularly for older persons and other groups at risk of digital exclusion.

Chapter 4 describes targeted measures at individual and structural levels that ensure equal access for older persons to public services that are undergoing digitalisation and the bridging of the different digital divides.

Chapter 5 outlines some key conclusions and suggestions for improving the participation of older persons in digital life.

1. Ageing and digital societies: leaving no one behind

The evolving digital landscape offers a multitude of new opportunities. It can improve communication with, and access to, public services, including health and social care services. [8] The European Pillar of Social Rights and the Declaration state that no one should be left behind as society advances (see Chapter 2 Legal and policy instruments at EU and international levels). However, there are risks that the digitalisation of public services may not be accompanied by measures and safeguards that adequately ensure the equal enjoyment of fundamental rights for older persons and other vulnerable groups. [9]

This chapter provides an overview of the demographic and digital situations in the 27 EU Member States (EU-27), North Macedonia and Serbia, and of equal access to public services for older persons.

Definition of 'older persons'

Ageing is a universal, biological and natural process. It is not a pathology, a disability or an illness, it is neither good nor bad, and it can be measured objectively by, for example, using the concept of chronological age. Terms such as 'old age' or 'being old' are not based on a natural concept, and are therefore neither neutral nor objective, but the outcome of a socio-cultural process, which is embedded in time and space. These terms can be defined differently for different purposes [10] .

The United Nations (UN) General Assembly, in Resolution 46/91 of 16 December 1991, acknowledged "the tremendous diversity in the situation of older persons, not only between countries but within countries and between individuals, which requires a variety of policy responses". It adopted five core principles: independence, participation, care, self-fulfilment and dignity [11] . In different ways, the digitalisation of everyday life has impacts on all these principles.

In April 2002, the Second World Assembly on Ageing adopted the Madrid International Plan of Action on Ageing and the accompanying political declaration [12] . The plan of action offers a bold new agenda for handling the issue of ageing in the 21st century. It focuses on three priority areas: older persons and development; advancing health and well-being into old age; and ensuring enabling and supportive environments. It asks governments to "Ensure that the benefits of new technologies, especially information and communication technologies, are available to all, taking into account the needs of older women" and to "Develop and disseminate user-friendly information to assist older persons to respond effectively to the technological demands of everyday life."

In December 2010, Resolution 65/182 of the UN General Assembly established the Open-Ended Working Group on Ageing. It was tasked with assessing the existing international framework of the human rights of older persons and asked to identify possible gaps and how

best to address them, including by considering, as appropriate, the feasibility of new instruments and measures [13] .

- **'Older persons' in the context of this report**
  This report uses the term 'older persons' for people aged 65 and more to describe an otherwise very diverse group of people who are often no longer fully engaged in the labour market (see section Research methodology and definition of 'older persons').

- **'Older persons' in the EU statistical context**
  Eurostat data on digital economy and society allow separate analysis for people aged 55 to 64 years and 65 to 74 years, and in specific cases the combined group aged 55 to 74, for more detailed breakdowns, mostly by gender and education level. The database does not provide information about persons aged 75 and older.

1.1 Ageing societies: the demographic change and its consequences

Based on demographic projections, the 2021 Ageing Report of the European Commission noted that the EU is "turning increasingly grey". [14] These projections predict a decline in the total population of the EU in the long term and a continuing significant ageing of its population.

1. Increasing share of older persons

Since the 1950s, EU Member States, like other developed countries, have experienced a continuous ageing of their populations. [15] In 2001, 16 % of persons in the EU-27 were 65 or older. [16] In 2020, this share rose to 21 %, and it is projected to reach almost 30 % in 2050 (see Figure 1).

The extent and speed of this development vary by Member State. In 2020, the share of persons aged 65 years and more ranged from 25 % in Italy to just below 15 % in Luxembourg and Ireland. [17] These differences will increase over time, and in 2050 more than a third of people in Greece, Portugal and Italy are expected to be aged 65 and older, compared with fewer than a quarter in Sweden and Cyprus (Figure 1).

Figure 1 – People aged 65 and older in the EU-27 in 2020 and projected for 2050 (% of total population)

A double bar chart showing that the range of the percentage of persons aged 65 or over in the population will increase from 16% to 22% in 2020 to a range of 22% to 34% in 2050.

Source: FRA (2023), based on Eurostat (2020), 'Data browser – Demographic balances and indicators by type of projection', online data code: PROJ_19NDBI, accessed 23 January 2023

1.1.2 Drivers of population ageing

Population ageing is driven by low birth and mortality rates, across EU Member States, as over the

last 50 years women have had fewer children and given birth later in life. Migration patterns also affect age structures, for instance if younger or retired persons have moved to other Member States or emigrated outside the EU or if young refugees and immigrants have settled in some Member States more often than others. [18]

Europeans live longer and experience more years in good health, because of better healthcare, among other reasons. In 2021, a 65-year-old in the EU could expect to live for another 19.3 years on average. That number is less for men (17.3 years) than for women (20.9 years). [19] Furthermore, the number of healthy life years that one could expect at the age of 65 in 2020 is 9.8 years: 9.5 for men and 10.1 for women. [20]

In 2050, projections foresee that 65-year-old men will have a life expectancy of 18.8 more years in Bulgaria, and up to 22.6 more years in France. Women of the same age can expect to live for 22.3 more years in Bulgaria, and 26.5 more years in France. [21]

1.1.3 Consequences of population ageing

Because of this demographic shift, the old-age dependency ratio is projected to increase significantly. This ratio calculates how many persons of working age (20 to 64 years) are available to work to cover the care and pension costs of an older person aged 65 and more. In the EU, the old-age dependency ratio rose within the past 20 years from just over one older person to four working-age adults in 2001 to just over one to three in 2019. By 2050, less than two working-age adults per older person will be available to finance care and pension costs. [22]

This will significantly increase costs, especially in the long run, mainly of healthcare and pensions. The main policy debates therefore revolve around the financial impact of population ageing. One policy option is to increase the retirement age. This provokes resistance but is already implemented or planned in most Member States. Other options include measures to develop active and healthy ageing. [23]

1.2 Digital societies

In the 21st century, digital technologies and services have become core elements of everyday life, including for public administrations and services. The European Digital Decade (2020 to 2030) provides a vision for a digital Europe and sets targets monitored by the DESI to ensure that fundamental and social rights are respected online in the same ways as offline. [24]

1.2.1 Social and digital inequalities

While many have benefited from using information and communication technology (ICT), not everyone has the same motivation, opportunities and skills to access and use it. [25] Digital inequalities reflect and can even exacerbate social inequalities for those lacking access to the

internet or digital skills.

For instance, people with low incomes can be digitally excluded, for example from using digital public or private services, as they may not have the means to pay for the necessary devices, internet access or support. It is often assumed that support comes from the social environment, such as family members or friends, which is not always the case. Consequently, some people or groups profit more from digital opportunities because they have earlier and better access to ICT or support. In the COVID-19 crisis, digital inequality was of particular concern for older persons and people with lower education levels or health problems. [26]

1.2.2 Digital divide(s)

The digital divide is understood as the division between people with access to and use of ICT, and the necessary skills, and those without. It is framed primarily in terms of (in)equalities. Clearly, the availability and advancement of ICT has brought enormous advantages and reduced social inequalities for many people who become motivated to use new technologies, have physical access and master the necessary basic skills. With the propagation of the use of ICT, the related costs will decrease, and access to low-cost or free and easy-access information will be affordable for previously excluded groups too. [27]

The most often used categorisation of the digital divide uses three levels.

The **first-level digital divide** concerns physical access to ICT. In 2022, 92 % of all households in the EU-27 had internet access at home, a rapid increase from 75 % in 2012. [28]

The **second-level digital divide** relates to ICT use and the skills needed. In 2022, 91 % of people aged 16 to 74 years had used the internet in the previous 12 months, and 7 % had never used the internet. [29] In 2021, 54 % of 16- to 74-year-olds had basic or above basic overall digital skills. [30]

The **third-level digital divide** concentrates on outcomes and usage. Interaction with public services, for instance related to tax declarations or pension rights, through the internet can be used as an indicator. In 2021, 59 % of 16- to 74-year-olds had used the internet for interaction with public authorities in the previous 12 months. [31]

These EU-level statistics, with significant variations between Member States, show that the first-level digital divide is closing. However, the rapid development of new generations of technical devices might still leave a substantial gap. While there is progress on the second-level divide, with an increase in internet use, the gap related to digital skills remains large, as does the gap on the third level. Behind these divides are social and digital inequalities, often linked to specific groups or socio-demographic backgrounds. [32]

The concept of the '**grey digital divide**' focuses on the digital disadvantages of older persons. [33]

Research shows that the major challenges for older persons in the digital world are participation and communication through networks, or in the healthcare environment. [34] In addition, any progress made by people aged 75 and older in mastering essential digital skills and using the internet in different environments or subject areas is not monitored through the DESI, as the official data collection ends at the age of 74.

Understanding older persons' use of technology

The following quotations are drawn from the qualitative study 'Understanding older adults' use of social technology and the factors influencing it'. It explored the experiences of a small group of older persons aged 65 years and over when using the internet for social contacts. The focus was on motivators, skills and benefits. The quotations reflect the diversity of reactions of older persons when confronted with digital technology.

"I'm liable, the occasions that I do go on [a desktop computer], I have to scream, help, why can't I get this? Why can't I get that? I don't like [the desktop computer]. I've not grown up with one. I have persevered with [the iPad] and I can adapt. I don't need any [thing other than the iPad]."

(P018, female, 78 years)

"I know a lot of friends of my age hardly use mobile technology or computers. They just feel very uncomfortable and don't know what they are doing."

(P017, male, 76 years)

"I don't know if there will come a time as I get older when I drop out because I feel I can't keep up with it anymore. I don't think I will. I don't think that the pace is, you know, beyond me."

(P019, male, 67 years)

"Talking about doing my banking online, I got a scam email and I thought this isn't right, so I printed it off and took it down to the bank, and because I had printed it off I was able to see things that you wouldn't see on the screen. They could see that it came from Russia."

(P005, female, 79 years)

Source: Wilson, G., Gates, J. R., Vijaykumar, S. and Morgan, D. J. (2023), 'Understanding older adults' use of social technology and the factors influencing use', *Ageing and Society*, Vol. 43, No. 1, pp. 222–245.

1.3 The grey digital divide in equal access to public services that are undergoing digitalisation

The 'grey digital divide' refers to the obstacles that older persons encounter in terms of access, skills and opportunities. [35] As all persons are entitled to access public services whatever their age, access to public services that are undergoing digitalisation is used as an example of the fundamental rights challenges of older persons in digital societies.

The following analysis uses Eurostat data that provide information about the age groups 55 to 64 and 65 to 74. For a more detailed analysis, the two groups can be combined. Eurostat's statistics on the digital economy and society do not cover people aged 75 years and older.

1.3.1 The divide in the 'grey divide' and the impact of education

There are further divides within the grey digital divide, [36] apparent in the two age groups used by Eurostat, as members of older generations have been exposed to digitalisation in different ways and at different times, for example in the workplace or at younger ages. For persons aged 75 years and older, it can only be assumed that the barriers in the digital world are even higher, as some results from FRA's Fundamental Rights Survey show. [37]

Education is a supportive factor for digital skills, but also interlinked with other socio-demographic characteristics such as gender, income, background of parents, area of domicile, migration background and race. It often can be used as proxy for socio-economic status, if more detailed data or information is missing.

At all ages, education is a strong asset in a digitalising world. People with higher educational outcomes are more at ease in the digital world than those with lower levels of education, all the results in this report show. In the last few decades, the share of older persons, aged 55 to 74, who had attained at most a low education level (International Standard Classification of Education levels 0–2) decreased by more than 20 percentage points in the EU-27, from 55 % in 2004 to 32 % in 2021. At the same time, the share of older persons with high education levels (International Standard Classification of Education levels 5–8) increased to 22 %, 10 percentage points more than in 2004. However, the results varied widely across Member States in 2021, from fewer than 10 % of older persons having low education levels in Lithuania, Latvia and Czechia to more than 50 % in Spain, Italy, Malta and Portugal. [38]

The most impressive change concerns the closing of the gender gap in education for 55-to-74-year-old women. In 2021, only slightly more older women than older men (34 % to 29 %) finished their education at a low level, while the gender gap for medium and high education levels closed further by two to three percentage points. Going forward, women will on average be better educated than men. [39]

However, even with all this progress, nearly one out of three older persons in the EU-27 may still face difficulties in the digital sphere due to low educational achievements.

1.3.2 Access of older persons to the internet and preferred devices

In 2019, the reasons provided most frequently for **not** having internet access at home were the high cost of access (23 %), equipment (25 %) or both (32 %), together with lack of skills (45 %) and lack of interest (45 %). [40] These answers were provided at household level, by persons aged 16 to 74 years, but it can be assumed to also reflect the situation of the 28 % of older persons aged 65 to 74 years who in 2021 had never used the internet. [41]

Therefore, as the first digital divide relating to internet coverage and physical access in the EU-27 is closing, the motivation for using the internet and the necessary skills have become more relevant for the digital inclusion of older persons.

In terms of equipment, older persons increasingly use mobile devices for the internet – 81 % of 55- to 64-year-olds and 60 % of 65- to 74-year-olds in 2021 - even though 33 % and 24 %, respectively, also still use a desktop computer or other devices. [42] These findings underline the importance of device-agnostic software or data that have been designed to work across a range of devices rather than just one, especially for applications that public services use.

1.3.3 Internet use by older persons

Between 2011 and 2021, the share of 55- to 74-year-old people in the EU-27 who had used the internet in the previous 12 months increased from 42 % to 78 %. Progress was visible in all Member States, North Macedonia and Serbia, with country-specific variations. The grey digital divide is very visible in internet use in 2021 (Figure 2): 86 % of people aged 55 to 64 years used the internet in 2021, compared with 68 % of those aged 65 to 74 years. [43]

In some Member States with very high general user rates, this gap is nearly closed. For instance, in Ireland, Denmark and Luxembourg, between 99 % and 95 % of people aged 16 to 74 years, 55 to 64 years or 65 to 74 years had used the internet in the previous 12 months. However, in other countries with high general user rates (90 to 95 %) the difference in internet use between people aged 55 to 64 years and 65 to 74 varies between 13 percentage points in Belgium and France and 23 percentage points in Austria. [44]

Figure 2 – Older persons having used the internet in the last 12 months, 2021 by age group (%)

A double bar chart showing that the range of the percentage of older persons aged 65 to 74 who have used the internet in the last 12 months is between 36% and 98% compared to a range of 67% to 99% for those between 55 and 64 years old.

Source: FRA (2023), based on Eurostat (2022), 'Individuals – internet use', online data code: ISOC_CI_IFP_IU, accessed 6 January 2023

Across all EU Member States, North Macedonia and Serbia, the share of persons aged 55 to 64

who have used the internet in the last 12 months ranges from 67 % in Greece to 99 % in Ireland, and that of those aged 65 to 74 ranges from 36 % in Greece to 99 % in Ireland. The biggest differences between the two age groups are in Serbia, Bulgaria, Greece and Croatia, at 30 to 40 percentage points. [45]

In 2021, 96 % of persons aged 55 to 74 with high education levels had used the internet in the previous 12 months, compared with 61 % with low education levels. In all Member States and candidate countries, at least 85 % of highly educated older persons were internet users, and at least 19 % of older persons with low levels of education. However, in the last 10 years the share of older persons with low educational attainment using the internet in the EU-27 has tripled. And in about half of the Member States and candidate countries, at least 50 % of people aged 65 to 74 with low education levels have used the internet in the last 12 months. [46]

The findings reflect the differences in the advancement of the digitalisation of societies, the generational differences in the motivation to embrace new technologies and splits in the grey digital divide. It can be assumed that, for people aged 75 years and more, the situation is even worse than for 65- to 74-year-olds.

1.3.4 Older persons' digital skills

As outlined in the DESI report of 2022, "Insufficient levels of digital skills hamper the prospects of future growth, deepen the digital divide and increase risks of digital exclusion as more and more services, including essential ones, are shifted online." [47] For 2030, the Digital Decade has a target of 80 % of adults (aged 16 to 74 years) having at least basic digital skills. The related indicator covers five areas (information and data literacy; communication and collaboration; digital content creation; safety; problem solving), each with a list of various activities. [48] To have at least basic digital skills, at least one activity in each area has to be mastered.

Figure 3 – Older persons with at least basic digital skills, by Member State and age group, 2021 (%)

A double bar chart showing that the range of the percentage of older persons aged 65 to 74 who have at least basic digital skills is between 3% and 61% compared to a range of 15% to 74% for those between 55 and 64 years old.

Source: FRA (2023), based on Eurostat (2022), 'Individuals' level of digital skills (at least basic or above basic skills)', online data code: ISOC_SK_DSKL_I21, accessed 6 January 2023

In 2021, 42 % of 55- to 64-year-olds and 25 % of those aged 65 to 74 had at least basic digital skills, with major differences at Member State level (Figure 3). In the Netherlands and Finland, more than 70 % of people aged 55 to 64 years had at least basic digital skills; in North Macedonia,

Serbia and Romania, 15 % or fewer did. In comparison, 65- to 74-year-olds had basic skills considerably less often, between 50 % in Ireland and fewer than 5 % in Serbia, Romania and North Macedonia, not considering the outstanding 61 % in the Netherlands. Reflecting the results for internet use, a strong gap exists, with only one out of four people aged 65 to 74 having the necessary skills to participate in digitalising societies (Figure 3).

Slightly more men (39 %) than women (31 %) aged 55 to 74 have at least basic digital skills. The higher the education level, the more older persons have the necessary digital knowledge – only 15 % of people with a low level of education compared with 66 % of highly educated people. [49]

1.3.5 General and health-related digital activities of older persons

Older persons use the internet in different ways. Sending emails and looking for information are frequent digital activities among both age groups under consideration, followed by telephone and video calls and internet banking. A large share of 55- to 64-year-olds (53 % to 70 %) use the internet for these activities, while only 36 % to 50 % of 65- to 74-year-olds do (Figure 4).

Access to health information and records is important for older persons, but only a few use the internet for this. However, this also depends on the digital offers from health providers. Some 48 % of 55- to 64-year-olds use the internet to seek health information, compared with 36 % of the older age group. Only 15 % of 65- to 74-year-olds access health records online, and 22 % organise appointments with practitioners using the internet, while 55- to 64-year-olds use the internet for these activities slightly more often (21 % and 30 %) (Figure 4).

Figure 4 – Online activities by older persons in 2022 in the EU-27, by age groups (%)

A double bar chart showing that the range of the percentage of older persons aged 65 to who perform certain online activities is between 12% and 50% compared to a range of 16% and 70% for those between 55 and 64 years old.

Source: FRA (2023), based on Eurostat (2022), 'Individuals – internet activities', online data code: ISOC_CI_AC_I, accessed 22 January 2023

Overall, older persons are increasingly using the internet and learning digital skills. Older women aged 55 to 74 use the internet slightly more for social networking and for health information than men, but less for online banking. [50] Given the great differences between older persons, not all are at risk of digital exclusion, as a significant share of older persons actively use digital technologies.

1.3.6 Older persons' use of digital public services

The possibility of using digital public services instead of physical access can be a good alternative for some groups of older persons. However, if the service is only offered online, people without internet access, the necessary skills or people who can support them will find it challenging to use these services.

In 2021, 53 % of people aged 55 to 64 and 38 % of those aged 65 to 74 had been in contact with public services using the internet in the previous 12 months. The higher the education level, the more often people aged 55 to 74 interacted digitally with public services. For example, 76 % of older persons with a high level of formal education interacted through the internet with public

services, compared with 26 % with low educational attainment. Men (50 %) use this type of interaction slightly more often than women (43 %). [51]

Among internet users, 39 % of 55- to 64-year-olds and 27 % of 65- to 74-year-olds used the internet in 2021 to submit a completed form to public services in the last 12 months. Persons aged 55 to 74 with a high educational level (61 %) more often than with low levels (30 %), and slightly more men (47 %) than women (40 %). [52]

People aged 55 to 74 constitute a large and growing part of the population and contribute to achieving the 2030 targets of the Digital Decade. One of these targets is that 80 % of 16- to 74-year-olds should at least have basic digital skills. But with three out of four older persons not having the skills considered necessary for basic online activities, the target might not be achieved, and a substantial group will be at risk of digital exclusion. These persons will be at risk of having their right to equal access to public services violated.

The following chapters will analyse the extent to which legal and policy frameworks, measures and programmes protect the rights of older persons and other groups at risk of digital exclusion, to support them to participate fully in societies that are digitalising.

2. Legal and policy instruments at EU and international levels

The following chapter provides an overview of selected laws and policies that aim to ensure equal access to public services that are undergoing digitalisation, at the levels of the EU, the Council of Europe and the UN.

2.1 Legal framework

2.1.1 European Union legal framework

At EU level, the **Charter** binds EU institutions, and EU Member States implementing EU law. It does not "distinguish or limit the enjoyment of rights on the basis of age". [53] All civil, political and socio-economic rights that it enshrines are universally valid fundamental rights, which are owed to everyone, regardless of age. The horizontal clause on non-discrimination in the Treaty on the Functioning of the European Union (Article 10) establishes non-discrimination as one of the fundamental principles of EU law, which the EU and national legislation and policy frameworks must observe. [54]

Article 25 of the Charter recognises and respects the rights of the elderly to lead a life of dignity and independence and to participate in social and cultural life. In addition, the Charter prohibits discrimination on the ground of age (Article 21). More generally, the Charter also recognises other rights that are particularly relevant to older persons, namely the right to social security and assistance (Article 34), the rights of access to healthcare and to services of general economic interest (Articles 35 and 36), the right to vote (Article 39), the right to good administration (Article 41) and the right of access to documents (Article 42).

In terms of secondary EU legislation, the 2000 **Employment Equality Directive** introduced the criterion of age as a prohibited ground for discrimination in employment and occupation. [55] Although the directive is primarily work-related, it has helped increase awareness of the rights of older persons in the EU. [56] Other areas relevant to older persons, including social protection, healthcare, and access to goods and services, are not yet covered by EU legislation on non-discrimination based on the categories of age and disability. [57]

To date, little progress has been made on the proposal for a directive that would extend the principles of non-discrimination horizontally, [58] that is, one that all legislative and policy documents should observe. It would cover various grounds, including age. [59]

Aiming to ensure that all people enjoy the advantages of digitalisation, the Council of the European Union adopted **conclusions on human rights, participation and well-being of older persons in the era of digitalisation** in 2020. [60] This measure emphasises that policymakers should take into account the diverse living conditions of older persons depending on various

circumstances and factors. These should also be acknowledged when developing effective policies that directly or indirectly affect older persons. [61] There are presently no EU directives or regulations dedicated to protecting the fundamental rights of older persons.

Legal framework - Council of the European Union conclusions affirm rights-based perspective on ageing

In 2020, the Council of the European Union adopted **conclusions on the protection of human rights, participation and well-being of older persons in the era of digitalisation**. [62] It stressed that digitalisation entails opportunities and challenges for all groups of society, including older persons.

The Council affirmed that the digital divide between generations is significant and increases with age. It invited Member States and the Commission to adopt "an age-integrated approach including a rights-based and a life-cycle perspective to ageing, bearing in mind the differences between women and men, through, for instance, the promotion of positive communication on and images of ageing, a focus on the opportunities and challenges of ageing, as well as an acknowledgement of the wide range of differences between older persons and a greater understanding of the contribution that older persons make to social cohesion and economy" (para. 23). The Council further observed that an increasingly digitalised world makes digital literacy more important (para. 8). Digitalisation can exacerbate inequalities and/or exclude certain groups who have no or limited access to digital technology (ibid.).

In this regard, the Council has invited Member States and the European Commission to act in their respective areas of competence and with due regard for the principle of subsidiarity. It invited them to mainstream ageing in all policy fields, to help societies and economies to adapt appropriately to demographic change with a view to developing societies that accommodate the needs and interests of persons of all ages (para. 28). It also invited them to actively involve older persons, in particular older women, in all decision-making processes affecting their lives, and to balance the benefits and risks of these decisions in each individual case, with full respect for the rights and participation of older persons, taking into consideration an appropriate balance and solidarity between generations (ibid.).

Although EU law forbids it, age-related discrimination occurs frequently. It stigmatises older persons and intersects with other discrimination grounds. Addressing that fact, the Council adopted the **conclusions on mainstreaming ageing in public policies**. [63]

The conclusions invite Member States, in accordance with their competences and taking account of national circumstances, while respecting the roles and autonomy of social partners, to draw up national strategic documents for mainstreaming ageing (para. 26). It should present guidelines and recommendations on how to maximise the benefits, to deal

with the potential risks and to address the main challenges of the increasing longevity of the population. Of particular relevance to the issue of older persons' access to public services and enjoyment of fundamental rights, the Council invites Member States to continue to close "the gaps in the protection of the rights of older persons, where applicable, and to combat ageism and discrimination on the basis of age beyond employment, notably in the areas of education and training, access to goods and services and social protection" (para. 34).

These Council conclusions also invite Member States and the European Commission, within their respective areas of competence and with due regard to the principle of subsidiarity, while respecting the role and autonomy of the social partners, to "adopt an age-integrated approach including a rights-based and a life-cycle perspective [...] taking into account the dual approach of mainstreaming ageing: the ageing of the population with the responsibility for society to prepare and adapt to the individual needs of citizens, throughout their lives; continuing encouraging and enabling active, healthy ageing" (para. 44). The Council invites them to "Jointly work towards implementing the principles of the European Pillar of Social Rights for people of all ages, in particular those related to the right to access quality health and long-term care services, old-age income and pensions, gender equality, inclusion of persons with disabilities and equal opportunities" (para. 46).

The EU had previously adopted only two legal instruments targeting access (but not necessarily equal access) of services that are undergoing digitalisation: the **Web Accessibility Directive** [64] and the **European Accessibility Act**. [65]

The Web Accessibility Directive obliges Member States to ensure that the websites and mobile apps of public sector bodies put in place specific technical accessibility standards, which are accessible to everybody, including persons with disabilities. Member States were required to transpose the directive by September 2018, to establish national monitoring mechanisms to track compliance, and to submit a report to the Commission every three years.

The European Accessibility Act improves cross-border trade between Member States of the EU in accessible products and services. This includes everyday digital products and services, such as computers, check-in machines, smartphones or banking services.

These two strategic directives set out concrete obligations. The Member States are obliged to implement them in national legislation. They must also comply with other international legal standards in this area adopted by the UN.

The EU legal framework, in the treaties, the Charter and the non-discrimination principle, underlines a rights-based approach. With the adoption of the Council conclusions on human rights, participation and well-being of older persons in the era of digitalisation in 2020, the strategic legal framework for addressing ageing and ongoing digitalisation was put into effect. It stresses both opportunities and risks for older persons.

2.1.2 Council of Europe legal framework

At the level of the Council of Europe, the **European Convention on Human Rights** [66] protects civil and political rights. Article 14 of the Convention reflects the general prohibition of discrimination; it prohibits discrimination based on sex, race, colour, language, religion, political or other opinion, national or social origin, association with a national minority, property, birth or other status. Age and age discrimination are not addressed explicitly, in either Article 14 of the Convention or Protocol No. 12 to the Convention, which covers anti-discrimination. [67] However, the European Court of Human Rights (ECtHR) has recognised that "age might constitute 'other status' for the purposes of Article 14 of the Convention" and has interpreted the Convention as proscribing discrimination on grounds of age. [68]

The **European Social Charter** [69] and its Additional Protocol of 1988, [70] which entered into force in 1992, were the first legally binding international instrument to make explicit provision for the social rights of older persons. Article 23 of the charter sets forth the right of older persons to social protection, requiring States Parties to adopt measures enabling older persons to participate in social life and "lead independent lives in their familiar surroundings". It also includes the rights to work in Article 1, to social security in Article 12, to social and medical assistance in Article 13, and to protection against poverty and social exclusion in Article 30, to equal treatment in Article 20 and 27, and to social, legal and economic protection for families in Article 16, although these articles do not explicitly prohibit discrimination based on age. [71]

The European Social Charter guarantees non-discrimination in Article E. It includes specific protection for the rights of potentially more vulnerable population groups, based on any ground such as race, colour, sex, language, religion, political or other opinion, national extraction or social origin, health, association with a national minority, birth or other status. [72] Age, however, is not enumerated as one of the protected grounds in Article E. [73]

2.1.3 International legal framework

At international level, older persons' rights are protected under the Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights (1966) and the International Covenant on Economic, Social and Cultural Rights (1966).

Acknowledging the potential intersection between older age and disability, the **UN Convention on the Rights of Persons with Disabilities** [74] is an additional relevant legal instrument protecting older persons' rights. All EU Member States and the EU itself are parties to it. The Convention promotes self-determination, autonomy and individual control over one's life, reaffirming the right of persons with disabilities to access all aspects of society on an equal basis with others. [75] Article 9 specifically refers to accessibility matters, calling for the identification and elimination of obstacles and barriers to information and communication (reiterated in Article 21), including information and communication technologies and systems, and to other facilities and services open or provided to the public, both in urban and in rural areas. [76]

Furthermore, UN Human Rights Council resolution 24/20 (renewed through resolution 42/12) established the mandate of an Independent Expert on the enjoyment of all human rights by older persons. [77] This mandate is not only to assess the implementation of national, regional and international standards relevant to the rights of older persons but also to highlight and promote best practices regarding the protection of these rights. The independent expert reports on developments, challenges and protection gaps and provides an annual report to the Human Rights Council and to the General Assembly. [78]

The UN's **Open-Ended Working Group on Ageing**, established in 2010, [79] has further advanced the promotion of a rights-based approach towards ageing.

2.2 Policy framework

This section surveys the applicable policy framework relating to the rights of older persons emanating from the EU, the Council of Europe and the UN.

Rights of older persons according to the EU, Council of Europe and the UN

"Technology should be used to unite, and not divide, people. The digital transformation should contribute to a fair and inclusive society and economy in the EU."

Source: European Declaration on Digital Rights and Principles for the Digital Decade, adopted 15 December 2022, Chapter II.

In addition to legal instruments, various EU and UN policies aim to ensure that older persons' rights are respected, to foster active and healthy ageing, to advance digitalisation and to promote equal access to public services.

2.2.1 European Union policy framework

In 2021, the European Commission launched the **Green Paper on Ageing**. [80] Aiming to initiate a broad policy debate on the challenges and opportunities of Europe's ageing society.

The Green Paper promotes the strengthening of intergenerational solidarity while ensuring sustainable solutions for welfare systems across the EU. It promotes new approaches and ensuring that European policies are fit for purpose in an era of major change, respecting the green and digital transitions. It has further highlighted inequalities in access to digital services among rural communities, where older persons are overrepresented.

The European Commission presented its vision for a digitally transformed Europe by 2030 in its

communication of 9 March 2021, **2030 Digital Compass: The European way for the Digital Decade**. [81] It proposed a European **Digital Decade** policy programme, [82] which presents the objectives, the targets to be reached by 2030 and the annual monitoring mechanism for measuring progress. [83]

The goals of the Digital Decade are set out in the Digital Compass, which includes (1) a digitally skilled population and highly skilled digital professionals; (2) secure and sustainable digital infrastructures; (3) digital transformation of businesses; and (4) digitalisation of public services. More concretely, by 2030 at least 80 % of people aged 16 to 74 should have at least basic digital skills, and 100 % of key public services and 100 % of their medical records accessible online (see Section 1.2 Digital societies). Key public services are essential services provided by public entities to natural persons in their major life events and to legal persons in their professional life cycles. [84]

Various monitoring and cooperation mechanisms have been set up to measure progress of the **Digital Decade**. These include an annual report on the state of the Digital Decade, a monitoring system based on data from the **DESI**, multiannual strategic roadmaps in which Member States present their progress, a framework for discussing insufficient progress and an instrument to promote multi-country projects. [85] The DESI, however, provides information only on people aged 16 to 74.

Information on how to address digital inequalities is sparse in current documents. No concrete description exists of how older persons' rights and the rights of other vulnerable groups are to be protected and safeguarded to ensure equal access to public services that are undergoing digitalisation.

To ensure that EU rights and values are fully reflected in the online space as they are in the real world, the Commission proposed the **Declaration** in January 2022. [86] The Commission, the European Parliament and the Council adopted it in December 2022 as a joint declaration. [87]

The initial ambition of the Digital Decade was to ensure "access to high quality connectivity, to sufficient digital skills, to public services, to fair and non-discriminatory online services – and more generally, to ensure that the same rights that apply offline can be fully exercised online". [88] The adopted version underlined that "The European digital rights and principles will complement existing rights, such as data protection, ePrivacy, and the Charter of Fundamental Rights. They will build on the experience of the European Pillar of Social Rights. And, they will provide guidance for the EU and Member States as they adapt to the digital transformation." [89] Although these rights and principles are enshrined in a proclamation and are not legally binding, they form a crucial basis to ensure equal access to public services in the digital era.

These rights and principles are in line with the **Council conclusions on human rights, participation and well-being of older persons in the era of digitalisation** as adopted in 2020 (see Section 2.1 Legal framework). They stress the need to maintain non-digital services, while generally furthering the process of digitalising public services. [90]

The above policy documents and initiatives are consistent with the social rights framework

established in the **European Pillar of Social Rights**. [91] That is a broader instrument reflecting the common aspiration to move towards a more 'social Europe'. Strategic documents and initiatives follow it, setting out concrete targets related to digitalisation.

The pillar focuses on the EU's commitment and ambition to put people first and not to leave anyone behind. It sets out 20 key principles, in three categories, reflecting the need to provide equal opportunities and access to the labour market, fair working conditions, and social protection and inclusion. Some principles reaffirm rights already present in the Union *acquis*. Others set clear objectives for the path ahead as we address the challenges arising from societal, technological and economic developments.

In relation to ageing and digitalisation, principle 20 is of specific importance. It recognises the right of everyone to access essential services of good quality, including digital communications, and provides for support to access to such services for those who face barriers.

Another important instrument is the **European Skills Agenda**. [92] It addresses the digital skills and literacy of older persons and sets out an objective that 70% of 16- to 74-year-olds should have at least basic digital skills by 2025. The document does not specify how the digital skills of persons aged 75 or more will be enhanced, although the **European Commission's report on the impact of demographic change** [93] draws attention to the increasing proportion of older persons in the next few decades (see Section 1.1 Ageing societies: the demographic change and its consequences).

2.2.2 Council of Europe policy framework

The Council of Europe policy landscape is more limited than that of the European Union. This may be because the European Social Charter (revised) does not prohibit discrimination on the ground of age, and because the Convention emphasises civil and political rights.

In 2014, the Council of Europe's Committee of Ministers issued a **recommendation on the promotion of human rights of older persons**. It aimed to "promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all older persons", clearly defining the entry points from the perspective of equality/non-discrimination and participation. [94] Other than that, the Council of Europe's soft law recommendations focus on addressing older persons in situations of vulnerability (for example "organisation of palliative care") or the aggravating disadvantages stemming from intersecting grounds (for example focusing on older migrants or older persons with disabilities). [95]

2.2.3 International policy framework

UN policies on ageing take as their starting point Article 21 of the Universal Declaration of Human Rights. It proclaims that "Everyone has the right of equal access to public service in his country." [96]

The **Regional Implementation Strategy of the Madrid International Plan of Action on Ageing** provides guidance on how to advance older persons' access to new technologies and services. [97] So do goals 17, 18 and 28 of the **2017 Lisbon Ministerial Declaration**. [98]

Furthermore, in 2020, the Secretary-General of the UN announced a **Roadmap for Digital Cooperation**. [99] It describes eight major areas for action:

1. achieving universal connectivity by 2030;
2. promoting digital public goods to create a more equitable world;
3. ensuring digital inclusion for all, including the most vulnerable;
4. strengthening digital capacity building;
5. ensuring the protection of human rights in the digital era;
6. supporting global cooperation on artificial intelligence;
7. promoting trust and security in the digital environment; and
8. building a more effective architecture for digital cooperation.

The roadmap focusses on safety and equality in the digital world.

3. Legal and policy instruments at national level

Building on information gathered from Franet, this chapter describes EU Member States' legislation, policy instruments, programmes and practices related to equal access to public services that are undergoing digitalisation. It compares and analyses them from the perspective of the fundamental rights of older persons. The objective of this analysis is to map the extent to which equal access to public services that are undergoing digitalisation is provided for at national level. The analysis focusses on older persons and, to a more limited extent, on other population groups vulnerable to digital exclusion, such as persons with disabilities.

The chapter also sets out some of the key legal drivers of ensuring that older persons have equal access to public services that are undergoing digitalisation, although the timeline for the process of digitalisation varies between Member States.

The chapter is divided in two sections. The first section analyses the legal framework addressing equal access to public services that are undergoing digitalisation. The second addresses national policy frameworks – digital strategies, action plans or comparable policies related to digitalisation for addressing equal access for everyone to public services that are undergoing digitalisation – and then focuses particularly on older persons.

3.1 National laws regulating equal access to public services that are undergoing digitalisation

All EU Member States guarantee the general principle of non-discrimination in their constitutions or basic laws. While all EU Member States have legal frameworks in place regulating the digitalising of public services, the national legal frameworks address to varying degrees and in different ways the issue of equal access and the principle of non-discrimination in the context of digitalisation.

Two main approaches were identified. Member States either guarantee equal access to public services that are undergoing digitalisation in 'e-government laws', which generally regulate the digitalisation of public administration, or have adopted specific/sectoral legislation (in laws regulating access to health, to social security, to information, etc.).

There are therefore two basic ways that Member States address equal access to public services that are undergoing digitalisation. Some guarantee it for everyone as a general principle, which should be applied horizontally and complements the principles of good administration as also guaranteed in Article 41 of the Charter. Others explicitly guarantee the right of equal access to public services that are undergoing digitalisation (for instance the right to equal access to public services). Both ways are then addressed either in the generic e-government law or in the sectoral laws in the country in question (see Table 1).

The first approach, guaranteeing the right to equal access to public services that are undergoing

digitalisation in generic e-government laws, is found in 13 countries (12 EU Member States and Serbia). 11 EU Member States have approach 1 only.

The second approach, guaranteeing the right to equal access to public services that are undergoing digitalisation in particular/sectoral laws, is found in 18 countries (17 EU Member States and North Macedonia). 16 EU Member States have approach 2 only.

Only two EU Member States, France and Latvia, have more developed frameworks, which guarantee the right to equal access to digitalising services both in e-government laws and in specific laws.

Table 1 – National laws regulating equal access to public services that are undergoing digitalisation, by approach and country

Country	Approach 1: E-government law guarantees equal access to digital public services		Approach 2: Particular laws guarantee equal access to particular digital public services	
	Explicit access guaranteed (Approach 1.a)	Access guaranteed as a general principle (Approach 1.b)	Explicit access guaranteed (Approach 2.a)	Access guaranteed as a general principle (Approach 2.b)
Austria			x	
Belgium			x	
Bulgaria	x			
Croatia			x	
Cyprus			x	
Czechia	x			
Denmark			x	
Estonia	x			
Finland	x			
France		x		x
Germany	x			
Greece		x		
Hungary			x	
Ireland			x	
Italy		x		
Latvia		x	x	
Lithuania			x	
Luxembourg		x		
Malta				x
Netherlands			x	
Poland				x
Portugal				x
Romania			x	
Slovakia			x	
Slovenia			x	
Spain		x		
Sweden	x			

Country	Approach 1: E-government law guarantees equal access to digital public services		Approach 2: Particular laws guarantee equal access to particular digital public services	
	Explicit access guaranteed (Approach 1.a)	Access guaranteed as a general principle (Approach 1.b)	Explicit access guaranteed (Approach 2.a)	Access guaranteed as a general principle (Approach 2.b)
North Macedonia			x	
Serbia	x			
Total per category	7	6	14	4

Sources: FRA, 2022 (data collection refers to valid and effective legislation in EU Member States, North Macedonia and Serbia as of 31 May 2022).

3.1.1 Approach 1: E-government law guarantees equal access to public services that are undergoing digitalisation

In 12 Member States and Serbia, the national general e-government law guarantees, in some degree, equal access to public services that are undergoing digitalisation, either explicitly or as a principle, FRA findings indicate. Seven countries explicitly guarantee equal access to public services that are undergoing digitalisation (Bulgaria, [100] Czechia, [101] Estonia, [102] Germany, [103] Finland, [104] Serbia [105] and Sweden [106]). National regulations in these seven countries contain similar provisions on electronic governance, laying down freedom of choice as a general principle in ensuring that all users have free and equal access to public services that are undergoing digitalisation without any discrimination (see Table 1, Approach 1.a).

Member States' e-government laws address grounds for discrimination to varying degrees. Some refer to only some grounds, but in Sweden, for example, the Instrument of Government contains provisions to ensure the "equality of all before the law" [107] and to "combat discrimination of persons on grounds of gender, colour, national or ethnic origin, linguistic or religious affiliation, functional disability, sexual orientation, age or other circumstance affecting the individual", naming age explicitly. [108] In Serbia, the Electronic Government Act addresses the right to equal access explicitly by stipulating that "everyone has the right to use the e-government service". [109]

In Czechia, the Act on the right to digital services ensures the right of "natural and legal persons to the provision of digital services by public authorities in the exercise of their competences" and "the obligation of public authorities to provide digital services." [110] In the explanatory memorandum, the authors of the act emphasise that "anchoring the right to provide a digital service in no way excludes or limits the use of existing methods of service provision by public authorities at the choice of the service user".

Promising practice - Public authorities' duty to promote the realisation of equality on grounds of age

The Finnish Non-discrimination Act includes non-discrimination on the grounds of age. It notes public authorities' duty to evaluate the realisation of equality in their activities and to take effective, expedient and proportionate measures to promote the realisation of equality, taking into account the authorities' operating environment, resources and other circumstances. Furthermore, authorities must have a plan outlining the necessary measures to promote equality.

Source: Finland, Non-discrimination Act (*yhdenvertaisuuslaki/diskrimineringslag*), Act No. 1325/2014, 30 December 2014.

On the other hand, some Member States grant equal access to public services that are undergoing digitalisation in the form of a more general principle of non-discrimination and access to what is called digital governance (see Table 1, Approach 1.b). This group is composed of six Member States: France, Greece, Italy, Latvia, Luxembourg and Spain.

For example, France has adopted a Law for a Digital Republic [111] to ensure digital access for all. The Spanish eGovernment Act [112] sets out an accessibility principle, defined as "the set of principles and techniques to be respected in the design, construction, maintenance and updating of electronic services to ensure equality and non-discrimination in access for users".

3.1.2 Approach 2: Sectoral law guarantees equal access to particular public services that are undergoing digitalisation

A number of countries use particular/sectoral laws to address equal access to public services that are undergoing digitalisation. For instance, they may be related to e-health, electronic signature, access to information or social security services. Again, as with the previous grouping, provisions are either explicit (see Table 1, Approach 2.a) or as a general principle (see Table 1, Approach 2.b).

For example, Slovakia has two main laws covering the digitalisation of public administration: the Act on Information Technologies in Public Administration [113] and the Act on eGovernment. [114] Neither of these laws contains a section guaranteeing equal access to digital public services. However, they both provide a framework for public services to be digitally accessible in areas such as health records, public statutory pensions and social benefits.

Austria's eGovernment Act [115] lays down that users are free to choose how to contact public authorities, as a measure to ensure that people's rights are respected. It does not explicitly recognise equal access to public services that are undergoing digitalisation as a guiding principle

or set out a principle related to digital public administration. In Lithuania, the law on public administration [116] refers to the principles of public administration, which should apply to all digital services. In the Netherlands, the Digital Government Act [117] ensures that Dutch citizens and businesses have access to government-related entities by digitalised means.

Specific laws address e-health services, including patients' rights, in Belgium, Cyprus and Denmark. In Belgium, the Patients' Rights Law [118] and the Law relating to the institution and organisation of the eHealth platform [119] recognise the rights of patients to information. Similarly, in Cyprus, particular laws grant equal access to e-health, information, electronic signatures and electronic judicial services. [120] Denmark grants digital access to the e-health system, eID and the citizen's portal, including digital post services. [121]

Legislation in Belgium, [122] Bulgaria, Croatia, [123] Hungary and Latvia explicitly addresses access to digital public services via a **single electronic portal**. According to the Bulgarian Electronic Government Act, for example, electronic administrative services are to be accessed through a single electronic portal and must be provided in an accessible manner, including for persons with disabilities.

Croatia takes the same approach of a central electronic portal. [124] The legal framework establishes a central government portal system as a single point of contact in the virtual world. In contrast, Hungary [125] granted access to public services by digital means only, so certain public services are accessible only online or through a legal representative who has electronic access.

Latvia's regulation for the Public Administration Services Portal [126] provides for equal treatment and non-discrimination. It also has concrete laws to grant access to public services that are undergoing digitalisation, such as social protection, social security, healthcare and customer rights. The Law on social security, for example, sets out that social services are provided without discrimination on the basis of a person's race, colour, gender, age, disability, health condition, religious, political or other conviction, national or social origin, property or family status or other circumstances. [127]

North Macedonia, Romania and Slovenia grant equal access to public services that are undergoing digitalisation in particular areas by addressing it in specific laws in combination with non-discrimination legislation. For example, North Macedonia established a legal framework for digital governance by adopting three interconnected laws: the Law on electronic documents, electronic identification and trusted services, [128] the Law on electronic management and electronic services [129] and the Law on the central population register. [130] In Romania, three separate regulations address digitalising public services, however, none of them provides any specific measures or provisions to ensure equal access.

The Slovenian legislation is divided into three laws. They guarantee access to measures promoting digital inclusion for all targeted groups under equal conditions. The purpose of the laws is to increase digital inclusion among the population of Slovenia. Digital inclusion is defined as the ability of individuals to access the available information and communication infrastructure and digital technologies, solutions and services, use them competently and securely, trust them

and thus actively participate in the information society.

The Protection against Discrimination Act [131] is a cross-cutting act providing for protection against discrimination. The Promotion of Digital Inclusion Act [132] guarantees access to measures promoting digital inclusion for all targeted groups under equal conditions. The Accessibility of Websites and Mobile Applications Act [133] regulates the measures and standards ensuring the accessibility of websites and mobile applications for all users.

Sixteen EU Member States have only particular laws and no generic regulations about equal access to public services that are undergoing digitalisation. Two countries have both (France and Latvia). Four countries (France, Malta, Poland, Portugal) do not explicitly grant equal access, despite having concrete public services regulations. They refer instead to the principle of public administration and indirectly promote equal access by establishing mechanisms that enable access to digital public services for the general population. In Poland, for example, the Act on electronic delivery stipulates the right to equal access to public services that are undergoing digitalisation. [134]

Although in Portugal the legislation available does not directly address the right to equal access, it may indirectly promote it by establishing mechanisms that enable access to digital public services for the general population. For instance, Decree-Law 74/2014 [135] establishes the rule of digital provision of public services, according to which public services must be provided digitally as well as face to face. Furthermore, those who cannot, will not, or do not know how to use digital tools can receive support and direction from a public officer/digital mediator in 'citizens' shops' (*Lojas do Cidadão*). The decree-law also sets out that the public officer/digital mediator plays a pedagogical role in promoting digital literacy regarding the use of digitalised public services.

The legal safeguard in all Member States is that there is at least a particular law focusing on a specific topic, incorporating the right to equal access to digitalised public services, even though in 16 Member States there is no general law granting equal access to digitalised public services.

3.2 Laws addressing certain groups' particular risks of digital exclusion

In addition to the rights and principles related generally to the equal access to digital public services contained in e-government laws and/or particular/sectoral laws, certain national legal instruments also contain specific provisions recognising the risk of digital exclusion for particular population groups. [136]

3.2.1 Addressing age-based digital exclusion in law

The laws of four EU Member States related to public services that are undergoing digitalisation make specific provision for older persons as a group that is potentially vulnerable to digital

exclusion and therefore at risk of being disenfranchised from equal access to digital public services. Those countries are Denmark, Greece, Slovenia and Spain. The remainder do not specifically regulate older persons' equal access to public services that are undergoing digitalisation.

The Danish parliament adopted an extensive legal framework on mandatory digital self-service in 2012–2015. [137] Digital self-service means that public services are available without the help of human beings, and individuals gain access to digital services entirely online. The framework emphasises that consideration must be shown to citizens who are unable to acquire digital competencies, and to citizens with special needs such as older citizens, citizens with disabilities or dementia, socially vulnerable citizens, foreign citizens in Denmark and Danes residing abroad. [138]

In Greece, the Digital Governance Law [139] refers specifically to older persons in the section regarding the general objectives. It stipulates that "The state must promote the interests of the citizens by ensuring connectivity and the widespread availability and take-up of very high capacity networks, [...] by ensuring a high and common level of protection […] and by addressing the needs, […], of specific social groups, in particular end-users with disabilities, older persons end-users and end-users with special social needs".

Spain ensures equality and non-discrimination in access for users, in particular persons with disabilities and older persons, in Article 2 of the Regulation on the Performance and Functioning of the Public Sector by Electronic Means. [140] The general principles of the regulation include the principle of accessibility, understood as the set of principles and techniques to be respected in the design, construction, maintenance and updating of electronic services.

The Slovenian Promotion of Digital Inclusion Act [141] guarantees access to measures promoting digital inclusion for all target groups under equal conditions. The target groups include children, pupils and students, but also job seekers (that is, economically active or inactive people or students seeking employment), pensioners and persons with disabilities.

3.2.2 Addressing disability-based digital exclusion in law

Some countries' legislation makes explicit provision for safeguarding measures to ensure equal access to digital public services. In Sweden, for example, a dedicated reporting system offers the option to notify authorities if accessibility needs have not been met, and to issue complaints. Moreover, public authorities must publish accessibility reports. [142]

The design of the new Danish secure login to access digital public services placed particular emphasis on safeguarding equal access for persons with disabilities. For example, blind people or people with visual impairments have the option to use an audio code reader to enter the one-time password required to access the digital public service. [143] Furthermore, the Irish Assisted Decision-Making (Capacity) Act 2015 [144] promotes a Decision Support Service to assist people with limited decision-making capacity. This may become an important tool to facilitate consent

and safeguarding aspects of digital public services.

These laws are primarily concerned with the protection of persons with disabilities. They address older persons only indirectly as a potential subgroup. Specific legal protection for both older persons and persons with disabilities, as groups particularly at risk of digital exclusion, could contribute to more effective safeguarding of both groups' access to public services.

3.3 Complaint mechanisms and systematic monitoring concerning equal access to public services that are undergoing digitalisation

The ongoing process of digitalisation requires Member States to establish equal access to public services, without discrimination. Non-discrimination in general is the subject of national monitoring mechanisms, but age-based discrimination in access to public services that are undergoing digitalisation is not specifically monitored and remains largely undetected.

Most Member States have not designated or established a specific institution or authority to monitor complaints raised in connection with equal access to public services that are undergoing digitalisation. Instead they rely on existing authorities and general approaches, with mechanisms that can hear complaints of discrimination based on various grounds, without specifically targeting discrimination based on age. Information on monitoring discrimination based on age, while very scarce, was found in the work of some EU Member States' ombuds institutions or national equality bodies, or of some advisory bodies with a different main mandate. The variety of existing systems for monitoring either non-discrimination or maladministration contributes to there being no coherent mechanism for systematic evaluation and conclusions.

Complaints regarding older persons' access to public services due to digitalisation have been captured through other means, such as older persons' helplines or mediators for pensions.

In Portugal, *Linha do Idoso* is a telephone helpline for older persons, provided by the Ombudsperson's office, to report complaints or discrimination. In 2021, 136 calls regarding public services were registered, with almost half (66) referring to difficulties in accessing the digital platforms of some public services. [145]

Similarly, almost half of the Member States' authorities – 13 out of 27 (Belgium, Bulgaria, Croatia, Finland, France, Hungary, Italy, Lithuania, Poland, Portugal, Romania, Slovenia, Sweden) – plus North Macedonia and Serbia have received complaints related to discrimination in access to digital public services, [146] although the majority do not specifically address age as a protected characteristic or older persons as a group at heightened risk.

In most countries, reports make general reference to difficulties in accessing public services that are undergoing digitalisation. In Belgium, for example, the 2021 annual report of the mediator/ombudsperson for the public pensions service addressed developments related to 'digital by default', reporting a series of problems linked to the digitalisation of tax forms and subsequent complaints. [147] In 2020, the mediation service for patient rights also highlighted

problems with the confidentiality and privacy of health data, notably complaints regarding unauthorised access to e-health records, undisclosed e-access records and sharing of sensitive psychiatric data, with a particular focus on care homes and older patients. [148] The French ombudsperson, the Defender of Rights, addressed difficulties in access to public services induced by the digitalisation of public services, but in a general way by referring to the complaints received, without providing any figures. [149]

Some countries reported significant increases in complaints over the past three years. That may be related to the COVID-19 pandemic, which accelerated the digitalisation of everyday life. Important steps towards better reporting systems on age discrimination in access to public services involve measures that increase people's awareness of their rights, and help and encourage them to report complaints.

3.4 National policy frameworks on digitalising public services

All EU Member States, North Macedonia and Serbia have national policies, strategies, action plans or comparable policies related to digitalisation in place, FRA's mapping shows. As Table 2 outlines, countries use different approaches to implement non-discrimination in their policy framework documents. These mirror the approaches applied in national legislative frameworks. Some of the countries explicitly mention non-discrimination but without concrete enforcement measures (see Section 3.2.1 Addressing age-based digital exclusion in law), and a very limited number of countries explicitly recognise non-discrimination (see Section 3.2.2 Addressing disability-based digital exclusion in law).

Twelve countries do not mention or recognise non-discrimination in their policy documents related to equal access to public services that are undergoing digitalisation (see Table 2, comparison of approaches 1 and 2). Although they do not mention it explicitly, these 12 countries also have to observe non-discrimination as a fundamental principle of EU law and may address it in general anti-discrimination legislation.

Table 2 – The role of policy frameworks in ensuring equal access to public services that are undergoing digitalisation

Country	National policy framework(s): digital strategy, action plan or comparable policy/ies in place	Approach 1: Explicit mention of equal access to public services that are undergoing digitalisation	Approach 2: Explicit recognition of non-discrimination	Approach 3: Retaining offline public service options in policy documents
Austria	• Digital Action Plan			
Belgium	• Brussels digital appropriation plan • Flanders 'Everyone digital' • Wallonia digital plan	x		
Bulgaria	• Digital Bulgaria 2025	x	x	
Croatia	• Draft of the National Plan for the Development of Public Administration 2021–2027			
Cyprus	• Digital Strategy for Cyprus			x
Czechia	• Digital Czechia	x		x
Denmark	• The Digitisation Partnership's report on visions and recommendations to Denmark as a digital pioneer country	x		x
Estonia	• Estonia's Digital Agenda 2030	x		
Finland	• Programme for the Promotion of Digitalisation	x		
France	• 'Writing tomorrow's digital society together'			x
Germany	• Shaping Digitalisation			
Greece	• Digital Transformation Bible	x		x
Hungary	• National Digitalisation Strategy 2021–2030			

Country	National policy framework(s): digital strategy, action plan or comparable policy/ies in place	Approach 1: Explicit mention of equal access to public services that are undergoing digitalisation	Approach 2: Explicit recognition of non-discrimination	Approach 3: Retaining offline public service options in policy documents
Ireland	• Harnessing Digital – The Digital Ireland Framework			x
Italy	• Three-year plan for information technology in public administration. Update 2021-2023 • National Strategy for Digital Competences • Action Plan for National Digital Competences Strategy	x		
Latvia	• Digital Transformation Guidelines 2021–2027			
Lithuania	• Digital Agenda of the Republic of Lithuania	x		
Luxembourg	• Electronic Governance Strategy 2021–2025 • National Action Plan for Digital Inclusion – For a digitally inclusive society	x		x
Malta	• National Digital Strategy 2014–2020: Digital Malta	x		x
Netherlands	• NL Digital: Government Data Agenda – 2020 update • Digital inclusion (letter to parliament)			
Poland	• Act on Electronic Delivery	x	x	
Portugal	• Action Plan for Digital Transition	x		x
Romania	• Policy proposal on e-government			

Country	National policy framework(s): digital strategy, action plan or comparable policy/ies in place	Approach 1: Explicit mention of equal access to public services that are undergoing digitalisation	Approach 2: Explicit recognition of non-discrimination	Approach 3: Retaining offline public service options in policy documents
Spain	• Plan for the Digitalisation of Spain's Public Administration 2021–2025			
Slovakia	• 2030 Digital Transformation Strategy for Slovakia • The Action Plan for Digital Transformation of Slovakia 2019-2022	x		
Slovenia	• Digital Slovenia 2020 – Development strategy for the information society until 2020			
Sweden	• National Digitalisation Strategy	x	x	
North Macedonia	• Strategy and Action Plan for Public Administration Reform 2018–2022 • National ICT Strategy 2021–2025 and the accompanying Action Plan	x	x	
Serbia	• E-Government Strategy and Action Plan	x	x	

Sources: Franet (2022), based on information provided in Franet country documents 'Ageing in digital societies: Enablers and barriers to older persons exercising their social rights' and on the national policy documents and plans adopted and in effect as of 31 May 2022.

3.4.1 Explicit mention of equal access to public services that are undergoing digitalisation in national policies and strategies

Seventeen of the 29 countries covered in the research have national policy frameworks that explicitly mention equal access to public services that are undergoing digitalisation. In the rest, the national policy frameworks do not address equal access explicitly. Some mention it vaguely or

refer indirectly to non-discrimination as an underlying principle when it comes to digitalised public services.

Equal access to public services that are undergoing digitalisation is evident in the national programme 'Digital Bulgaria 2025'. It defines as one of its goals (goal 11) the creation of conditions for equal access to digital public services for all social groups by effectively implementing general accessibility requirements and ensuring that certain principles and measures are respected when creating, maintaining and updating the websites and mobile applications of public sector organisations. [150]

The Portuguese Strategy for the Reorganisation of Government Services [151] promotes geographical, economic and social cohesion. In part, that involves providing the population with equal conditions and access to services, regardless of their geographical location or "social vulnerabilities". Older persons and persons with disabilities were recognised as most at risk of digital exclusion because of insufficient digital skills or difficulties in dealing with new technologies. Therefore, some measures were set out to protect the right to equal access to government services.

The Belgian Digital Ownership Plan makes general reference to equal access to public services that are undergoing digitalisation. That is the action plan of the Brussels Region for 2021–2024 to reduce inequalities in access to, use of and knowledge of digital tools. [152]

In 'Digital Czechia', the only reference to the right to equal access to public services is its emphasis on the process of standardising the services provided and thus making the range of services more transparent and more easily available for quality assessment. [153] In Denmark, the national policy framework mentions generally that efforts towards digitalisation should respect citizens' rights under national law and take care of citizens who are digitally excluded and citizens with disabilities. [154]

One of the core principles of the Italian strategy Digital Republic [155] is "ensuring inclusive and accessible services". That means that public administrations must design digital public services that are inclusive and meet the diverse needs of people and territories. Luxembourg's Electronic Governance Strategy 2021–2025 [156] recognises the right to equal access to public services that are undergoing digitalisation, regardless of individuals' competencies and devices.

3.4.2 Explicit recognition of non-discrimination in national policies and strategies

All 27 Member States, as well as North Macedonia and Serbia, address vulnerable groups generally in their national strategies related to digitalising public services. Seventeen national digitalisation policies address equal access to digital public services, and in five countries (Bulgaria, [157] North Macedonia, [158] Poland, [159] Serbia [160] and Sweden [161]) the national policy instruments explicitly recognise the principle of non-discrimination in accessing public services. Only Poland, Serbia and Sweden specifically address older persons.

For example, the national programme 'Digital Bulgaria 2025' [162] recognises equal access to digital public services in two of its guiding principles, namely the principle of inclusion and accessibility and the principle of social participation and digital inclusion. It defines the principle of inclusion and accessibility as the obligation of public authorities to design their electronic services to be socially inclusive and to respond to diverse needs, including the needs of older persons and persons with disabilities. The principle of social participation and digital inclusion requires that all European citizens, including disadvantaged groups and citizens with disabilities, and civil society organisations can participate and benefit fully from digital opportunities, unconditionally and without discrimination. [163]

In Poland, [164] the draft programme adopted by the Council of Ministers mentions people vulnerable to digital exclusion owing to their age, health conditions and disabilities. Moreover, to achieve sustainable social and economic development, it is necessary to ensure that women and men enjoy equal participation in all spheres of social life, regardless of their ethnic origin, age, health condition, residence, economic status, parental status, religion or worldview, sexual orientation, etc. The Swedish National Digitalisation Strategy clearly sets out that "all people, women and men, girls and boys, regardless of social background, functional ability and age, must be offered the opportunity to take part in digital information and services from the public sector and participate in an equal way in society." [165]

3.4.3 Retaining offline public service options in policy documents

Policy frameworks in nine countries (Cyprus, [166] Czechia, [167] Denmark, [168] Greece, [169] France, [170] Ireland, [171] Luxembourg, [172] Malta [173] and Portugal [174]) emphasise the importance of retaining offline public service options for those who cannot or do not want to engage with public services digitally.

The Czech policy on client-oriented public administration 2030 [175] underlines that "the possibility of offline access will be maintained for those groups of people who do not want or cannot communicate electronically". In Luxembourg, [176] the National Action Plan for Digital Inclusion outlines various initiatives to ensure equal treatment of all, including of older persons. Among other things, it highlights that analogue alternatives to digital solutions must remain guaranteed.

The Portuguese Programme for Accessibility to Public Services and on Public Roads [177] encourages, among other aspects, offline access to public services, specifically recognising groups that would benefit from such measures, such as persons with disabilities and all those who cannot, will not, or do not know how to use digital devices. Similarly, the French National Strategy for the Guidance of Public Policy [178] obliges administrations to implement efficient telephone reception service for users by 2022.

The Digital Ireland Framework commits to ensuring that no group within society is left behind. Service delivery is to be user-focused, and assisted digital support will be available where appropriate. [179]

As part of its public sector digitalisation strategy 2011–2015, [180] Denmark adopted a legal framework on mandatory digital self-service. Apart from various other measures, citizens encountering problems using the digital service should receive support through informative videos and telephone services, ITC courses for older citizens and one-on-one guidance. The Cypriot Digital Strategy for 2025 sets out the creation of an "open, democratic and inclusive digital society" as one of its four strategic objectives. [181]

3.4.4 Recognising groups at risk of digital exclusion in policy

The policy documents of 12 Member States address specific population groups at risk of being digitally excluded. The same number address these specific population groups in national laws. However, as Table 3 indicates, one or more policy documents on digitalising public policies in all the countries explicitly refer to persons with disabilities and older persons. In comparison, only seven Member States explicitly refer to older persons in national legal instruments.

National policy documents also mention a range of other groups with members who might have a higher risk of digital exclusion than others. Examples include children and young people, women, people living in rural areas, foreign nationals and migrants, ethnic minority groups, people with low educational attainment, low-income populations, prisoners, unskilled workers and people living in care homes. For example, in Belgium, the Brussels Region's *Digital ownership plan* for 2021–2024 identifies six groups needing special support: job seekers, young people, older persons, persons with disabilities, the needy and disadvantaged, and women. [182]

The Greek Digital Transformation Bible outlines the implementation of the national strategy. It explains how the need to support vulnerable population groups in acquiring digital skills and becoming familiar with new technologies is at the heart of the government's strategy. The policy framework explicitly refers to persons with disabilities and older persons as well as women and unemployed people. [183]

Only Austria, Germany and Sweden do not explicitly detail population groups at risk of digital exclusion in current policy documents, although the Swedish National Digitalisation Strategy explicitly recommends introducing a 'zero vision', meaning that no one should be excluded from the digital society.

In Austria, [184] the Federal Ministry for Digital and Economic Affairs has published the Digital Action Plan for Austria. It does not provide operational information on any of the visions outlined and also does not explicitly mention groups at risk of digital exclusion.

The plan for a digital Germany promotes the further implementation of the Online Access Act. [185] However, the strategy only mentions that digital access to the administration must be designed in a barrier-free way. It gives further information. [186]

Although Sweden [187] does not explicitly mention older persons to be under threat of digital exclusion, the government understands digital exclusion factors and underlines the need to

continue research so that the implementation of the policy can be based on evidence.

Table 3 – Population groups vulnerable to digital exclusion as indicated in national policies

Country	Population groups vulnerable to digital exclusion as indicated in national policies			
	Vulnerable population groups in general	Persons with disabilities	Older persons	Other population groups *
Austria	x			
Belgium	x	x	x	x
Bulgaria	x	x	x	
Croatia	x	x	x	
Cyprus	x	x		x
Czechia		x	x	x
Denmark	x	x		x
Estonia	x			x
Finland	x	x	x	x
France	x			x
Germany	x			
Greece	x	x	x	x
Hungary	x	x	x	x
Ireland	x		x	
Italy	x	x	x	x
Latvia	x	x	x	x
Lithuania	x	x	x	x
Luxembourg	x	x	x	x
Malta	x	x	x	x
Netherland	x		x	x
Poland	x	x	x	x
Portugal	x	x	x	x
Romania	x	x		
Slovakia		x	x	x
Slovenia	x	x	x	x
Spain	x			x
Sweden	x			
North Macedonia	x	x	x	x

Country	Population groups vulnerable to digital exclusion as indicated in national policies			
	Vulnerable population groups in general	Persons with disabilities	Older persons	Other population groups *
Serbia	x	x	x	x
Total	27 (25 + 2)	21	20	22

Sources: Based on explicit mentions in national policy document (national plan or strategy related to digitalisation) of population groups potentially at risk of digital exclusion, as outlined in Franet country documents 'Ageing in digital societies: Enablers and barriers to older persons exercising their social rights'.

Notes:
- Countries included are EU-27 plus North Macedonia and Serbia
- Data collected by 31 May 2022.
* Other population groups include, for example, job seekers, young people, and women, as addressed explicitly in the respective national policy documents.

According to the Council conclusions on human rights, participation and well-being of older persons in the era of digitalisation in 2020, [188] national policies on digitalising public services are supposed to address digital exclusion of older persons or other vulnerable groups in an inclusive way. However, some laws, for instance in Denmark, [189] require people to apply for an official exemption from using digital public services, for example because of a disability or lack of digital literacy.

3.5 Financial resources for the implementation of national policies addressing digitalisation

The Recovery and Resiliency Facility entered into force on 19 February 2021. [190] The European Commission adopted it as part of a wide-ranging response to mitigate the **economic and social impact** of the coronavirus pandemic. It should also contribute to making European economies and societies more sustainable, resilient and better prepared for the challenges and opportunities of the green and **digital transitions**, as the European Digital Decade policy programme also underlines. The facility finances reforms and investments in Member States from the start of the pandemic in February 2020 until 31 December 2026.

The Council of the European Union has approved 25 EU Member States' national recovery and resilience plans (NRRPs). All of them fulfil the minimum requirement of dedicating 20 % of the total allocation to measures contributing to the digital transition or to addressing the challenges resulting from it (see Figure 5). Of this amount of EUR 127 billion, 37 % is dedicated to the digitalisation of public services and government processes and 17 % to the development of basic and advanced digital skills. [191] The NRRPs for Hungary and the Netherlands were not approved within the same timeline and were not evaluated in the first year of implementation.

Figure 5 – Share of estimated expenditure on digital objective in the 25 RRP approved by the Council

Single bar chart showing that the share of estimated expenditure on digital objectives in EU Member States ranges from 20% in Croatia, Romania and Sweden to 53% in Austria and Denmark.

Source: European Commission (2022), Digital Economy and Society Index (DESI) 2022: Thematic chapters, Brussels, available at 'Download European Analysis 2022 (.pdf)'

Digitalisation of public services is a priority in 24 of the 25 Council-approved NRRPs. Only Estonia [192] does not focus on the digitalisation of public services, as it is already a leader in e-government.

The effort on promoting digitalisation varies across Member States. Two countries, Austria [193] and Germany, [194] have more than doubled the required allocation to 53 %. However, no funds out of the allocated amount appear to be specifically allocated to the digital inclusion of older persons in the Austrian and German NRRPs.

A positive example of preparation work and involvement of stakeholders to address digitalisation is Slovenia. Its NRRP contains the provision that electronic services must be developed in cooperation with various stakeholders, including older persons, young people and persons with disabilities. [195]

Out of 25 Member States' NRRPs, 10 explicitly refer to vulnerable population groups, although many refer to their vulnerability in the context of COVID-19. Nine Member States specifically mention older persons as a population group that may be at risk of digital exclusion (Belgium,

Croatia, Finland, Ireland, Lithuania, Luxembourg, Poland, Romania and Slovakia). [196] These countries also allocate funding for the social inclusion of older persons. The Slovakian NRRP contains a subcomponent aiming to improve older persons' digital skills and access to digital services and aims to increase social inclusion. [197]

The NRRPs allocate 17 % to develop basic and advanced **digital skills**. However, none of them includes a multi-country project related to skills education, according to the European Commission's annual assessment in its **DESI 2022**. To reach the Digital Decade policy programme [198] target of at least 80 % of people aged 16 to 74 with at least basic digital skills by 2030, different national programmes have been drafted and implemented.

Still, there are some relevant national practices. In Belgium, [199] for example, the NRRP allocates EUR 585 million for training and education. EUR 450 million of that focuses on digital inclusion, and vulnerable groups are prioritised as target groups for training.

Some countries delegate the task of education and training to other stakeholders. The Bulgarian NRRP allocates EUR 1.18 billion for enhancing digital skills. The largest portion, EUR 319 million, goes to NGOs that design and implement digital literacy projects. [200]

Overall, the 25 NRRPs approved by the Council broadly recognise the risk of digital exclusion for vulnerable groups, but only nine of them explicitly address older persons.

4. Targeted individual and structural measures to promote older persons' equal access to public services that are undergoing digitalisation

This chapter details national measures aimed at overcoming challenges and barriers of the digital divide and its various levels (see Sections 1.2 Digital societies and 1.3 The grey digital divide in equal access to public services that are undergoing digitalisation), and at ensuring an inclusive and just society for all. It also reflects the specific measures adopted during the COVID-19 pandemic because digitalisation accelerated then. It is based on a comparative analysis of Franet country reports.

The prerequisites to use digital public services are a digital device, internet access and the necessary digital skills, as Sections 1.2 Digital societies and 1.3 The grey digital divide in equal access to public services that are undergoing digitalisation describe. To ensure equal access, alternative ways to access the services must be ensured for those who cannot or do not want to use the digital service.

4.1 First-level digital divide: closing the gap by increasing affordability

The first-level digital divide arises from unequal access to and affordability of infrastructure and new technologies, including broadband connectivity and digital devices (see Sections 1.2 Digital societies and 1.3 The grey digital divide in equal access to public services that are undergoing digitalisation), as several research papers point out. [201] While the first-level divide is starting to close, as coverage increases and costs decrease, affordability remains a problem for older persons and other groups at risk of digital exclusion.

This section analyses national policy frameworks with a focus on strengthening the digital infrastructure and related measures adopted to enable access to ICT for people at the risk of digital exclusion, particularly people with low incomes.

Only a few EU countries have measures to help people who cannot afford smartphones, computers or tablets to access digital public services through the internet. The **Slovenian** Digital Inclusion Act sets out the distribution of digital vouchers for specific population groups to purchase computer equipment. [202]

Promising practice - Devices for pensioners with easy access to the internet

Slovakia's Recovery Plan includes distributing 'senior tablets' to people older than 70. These tablets should contain applications providing easy access to the internet, news applications, communication tools (email, text messages, calls) and health applications (health diary,

doctor's visits calendar and potentially also connection to healthcare databases). They should also connect to selected public e-services addressing specific life situations of pensioners.

4.2 Second-level digital divide: enabling users through training

The second-level digital divide relates to digital exclusion because of lacking digital skills. Without this knowledge, it is impossible to fully participate in the digital and information societies of today and benefit from digital public services. The risk of digital exclusion is particularly high among older persons, especially those with low education (see Sections 2.2 European Union legal framework and 2.3 Council of Europe legal framework). National policies and measures could reflect this better.

This section analyses national policy frameworks with a focus on the digital inclusion measures addressing the different social groups. It provides examples of measures focused on strengthening digital literacy skills, and addresses the need for a participatory approach in designing policies and measures to ensure the digital inclusion of older persons. The analysis also assesses national measures providing targeted physical and digital support services.

4.2.1 Addressing digital exclusion of older persons by implementing digital inclusion measures

An important part of the digitalisation process is that digital strategies and documents translate the principles of a user-centred and inclusive approach into concrete measures. An inclusive methodology can provide a framework that ensures that digital inclusion measures are effective. Only six EU Member States (Italy, Luxembourg, Netherlands, Poland, Slovakia and Slovenia) and North Macedonia [203] address the risk of digital exclusion in their policy documents and have followed them up with concrete measures to strengthen digital inclusion.

For example, in Luxembourg, the Centre for Ageing Matters together with the association the Gerontological Competence Centre promotes innovative approaches with a positive influence on the lives of older persons. They include activities related to digital inclusion. [204]

In the Netherlands, the Ministry of the Interior and Kingdom Relations launched a helpline together with other organisations (the National Foundation for Older Persons, SeniorWeb, the Royal Library, VodafoneZiggo and the Digital Living Alliance). [205] Anyone who has a question about using their computer, laptop, mobile phone or tablet to access online services (and needs support) can call the digital helpline, and trained volunteers are ready to answer all questions on workdays. At present, it is mainly older persons who use it. [206]

In Poland, the Prime Minister's office launched the Digital Development Clubs. [207] They aim to provide digital education and help people at risk of digital exclusion familiarise themselves with new technologies.

Slovenia's largest organisation of pensioners, the Union of Pensioners' Associations of Slovenia is the leading partner in a project called 'Digitally included'. It addresses the integration of older persons into the information society, reducing the digital divide between generations. [208]

Other Member States should consider applying the above examples of practical measures. However, they should make sure that they are available across all regions.

Promising practice – Addressing the digital divide in Italy

The Italian national initiative Digital Republic addresses the digital divide by building a 'digital academy'. It provides everyone with educational material to ensure that digital solutions become accessible to people of all backgrounds. The initiative also promotes the development of lifelong learning programmes and materials for digital skills. It honours stakeholders by awarding National Digital Skills Awards in four categories: digital for all, digital inclusive, digital against gender gap and digital in education for schools.

For more information on the initiative and the projects it finances, see Italy, Department for Digital Transformation (*Dipartimento per la trasformazione digitale*) (n.d.), 'Digital Republic' ('Repubblica Digitale').

North Macedonia has created a national legal environment comparable to those of a number of EU Member States. It has developed three strategic documents focus on the users of public services that are undergoing digitalisation: the *Methodology for including end-users in the process of improving public services*, [209] the *Service optimisation guidelines* [210] and the *Standards for service delivery*. [211] The *Standards for service delivery* specifically note that services should be available to everyone. They add that the administration should provide a service that everyone can use, including persons with disabilities or other legally protected characteristics, and that services should be accessible to people who do not have access to the internet or who lack the skills or confidence to use it. [212]

4.2.2 Promoting digital literacy across the life cycle

Some major EU policy instruments have the objective of enhancing digital skills. They include Europe's Digital Decade, the European Pillar of Social Rights and its Action Plan, and the European Skills Agenda (see Chapter 2 Legal and policy instruments at EU and international levels). It is hence not surprising that almost all Member States as well as North Macedonia and Serbia see

the lack of digital literacy as a major barrier to the use of digital services and promote digital skills training as an effective remedy. This is reflected in national policies and programmes that aim to enhance older persons' digital literacy to allow for equal access to public services that are undergoing digitalisation.

Developing individuals' digital skills is an effective measure to foster digital inclusion and overcome digital exclusion, according to a large body of evidence. [213]

Several EU Member States implement measures and initiatives that focus on strengthening older persons' digital literacy skills. In Ireland, [214] a cross-government implementation group set up under the Adult Literacy for Life strategy is considering developing relationships with community actors (peer mentors, learner champions and ambassadors) to develop a nationwide campaign on digital literacy and the creation of a single entry point into digital and literacy training.

Other countries, such as Estonia, Latvia, the Netherlands, North Macedonia and Sweden, use public libraries in promoting digital literacy and providing the necessary resources for older persons to acquire digital skills.

In Estonia, for example, the Central Library of Tallinn offers a training programme titled Digismart Seniors. Older persons can learn skills in using computers, the internet and digital public services. The course is free of charge and can be held both virtually through Skype and on-site. [215]

Similarly, Latvian municipal libraries have regularly organised computer skills courses for seniors free of charge. [216] In the Netherlands, the national government started the Digital Government Information Points programme by opening information points at 15 local libraries. [217] North Macedonia's draft National ICT Strategy 2021–2025 and the accompanying Action Plan also address the important role of the public library in strengthening the digital skills of older persons. [218]

Communication campaigns are another effective means of reaching out to groups at risk of digital exclusion. The Swedish [219] Post and Telecom Authority disseminated basic information about digital services and tools by conducting an information campaign through non-digital channels such as posters at local municipalities, libraries and study associations, and information flyers.

Mentoring and peer programmes play an important role in promoting digital literacy. Some countries also recommend peer learning or intergenerational learning settings. For example, Slovenia [220] mentions intergenerational mentoring, while other countries use peer mentoring or trained mentors.

The digital literacy project 'We and Our Grandparents' in Portugal addresses info-exclusion of older persons. Students provide digital literacy sessions for people over 65, supervised by volunteers and/or teachers. The project covers the use of digital public services by teaching how to fill in the annual Personal Income Tax declaration online. It also serves as a social and intergenerational intervention in a community context, which aims to combat isolation and loneliness. [221]

In Austria, the Association for the Improvement of Digital Competences, together with the

Austrian Seniors Council, initiated 'Coffee Digital', a free in-person training course in digital competences, explicitly dedicated to the 60+ age group. [222]

The vast majority of Member States provide skills training through courses, workshops or training materials. In Finland, the Programme for the Promotion of Digitalisation includes distance training (e-learning, community college and special courses) developed for older persons and other groups at risk of digital exclusion. It is based on a nationwide network and on cooperation between stakeholders, and it provides digital support services locally. [223]

A range of practices and measures aim to enhance the digital literacy of older persons.

In Germany, the Federal Ministry for Family Affairs, Senior Citizens, Women and Youth funds the programme DigitalPakt Alter. The programme's digital platform provides a wide range of information and offers that relate to digital skills for older persons. The platform is also designed as an interactive tool for networking. Another programme in Germany, the Digital Compass, offers over 200 training materials in digital skills, facilitates access to the internet and serves as a meeting place for online and on-site training at over 100 locations. [224]

In Esch-sur-Alzette, Luxembourg, the Information Office for Special Needs and Senior Citizens, together with the city of Esch, implemented an 'E-senior' project to promote digital literacy for adults aged 55 years and more. There are tailored workshops, and a local TV station disseminates video tutorials to reach people without internet access. [225]

Promising practice - Train the trainer

The Austrian Institute for Telecommunication in Practice runs the nationwide service centre 'Digital Seniors'. It offers consulting services to educational institutions and trainers on how to plan and implement educational offers for older persons on digitalisation. The initiative provides free training materials, free workshops and counselling sessions to educators, a quality seal on digital education measures for older persons, and a training course on teaching digital literacy to older persons.

Source: see the Austrian Institute for Applied Telecommunications (*Österreichisches Institut für angewandte Telekommunikation*) website on Digitale SeniorInnen.

Another important aspect is targeted digital skills training for public authority staff who regularly communicate and engage with people who might be less digitally literate and need support in the digital use of public services. Addressing this aspect, the European Commission's Interoperable Initiative [226] supports the Member States directly. It focuses on how to expand the advanced digital skills of public administration staff in the area of interoperability. Interoperability allows public administration authorities to cooperate and make public services function across territorial, sectoral and organisational boundaries, while those authorities remain autonomous at all levels of

government.

Key to its implementation was the foundation of the Interoperable Europe Academy [227] in 2019. The academy offers all-online, self-paced massive open online courses, but also events, webinars and collaboration with universities, organisations, public administration authorities and other bodies that have an active role in digital transformation and interoperability. Its mandate could potentially also focus on implementing workshops, webinars or training on digital inclusion, and providing tools for fostering digital inclusion of vulnerable population groups in the context of public services and for avoiding discriminatory behaviour in administering digital public services.

Academic discourse [228] has criticised this strong focus on training individuals in digital skills, for neglecting systemic barriers that prevent some older persons from training and using digital technologies. Those barriers can include socio-economic and educational background, lack of social support systems, disadvantages related to the design of technology, and disability.

Lastly, the European Skills Agenda targets basic digital skills for a great share of the population. However, "basic digital skills" may not be sufficient to independently perform public service activities online.

4.2.3 Providing targeted offline and digital support services

Providing offline or digital support channels is another widespread measure across EU Member States. They can use access points to address concrete technical questions in person, or instructional videos and manuals.

In line with the targets of the Digital Decade programme, all EU Member States, North Macedonia and Serbia have embarked on the full digitalisation of their public services. However, only nine EU Member States appear to acknowledge the importance of retaining offline public service options for those who cannot or do not want to engage online with public services (see 'Retaining offline public service options in policy documents' in Section 3.4 National policy frameworks on digitalising public services). Dedicated physical support services could mitigate the risk of digital exclusion, including for older persons.

For example, the Germany-wide initiative DigitalPakt Alter, funded by the Federal Ministry for Family Affairs, Senior Citizens, Women and Youth, provides support at 'places of experience'; 150 sites in municipalities across the country where older persons can go for help. These spaces provide a low-threshold support programmes for enhancing older persons' digital skills. [229] In Luxembourg, the implementation of the National Action Plan for Digital Inclusion includes a project that encourages the creation of physical contact points at national and municipal levels. [230]

Greece has local Citizens' Service Centres which help people to find information and fill out forms. They can also help people interact digitally with public administration services that are undergoing digitalisation, in relation to health services, military service, education and other matters.

In the Netherlands, [231] alongside the initiative DigiHulpline, [232] people with difficulties in accessing digital services can go for support to physical Digital Government Information Points. [233] These points also provide training to improve digital skills. By 6 April 2022, 450 information points had opened. [234]

Promising practice - Service points bring administration closer to the citizens

In order to bring public services to the citizens wherever they live, the French government created a new reception structure: 'France service centres'. Over 2,000 information points are housed in small offices, information booths or sometimes travelling buses. They are part of an approach to re-establish the presence of counters and physical reception structures for users, which is the opposite of the idea of providing all public services only online.

Source: France, Ministry of Ecological Transition and Territorial Cohesion (*Ministère de la Transition écologique et de la Cohésion des territoires*) and Ministry of the Energy Transition (*Ministère de la Transition énergétique*) (n.d.), 'France services'.

4.2.4 Providing targeted digital support services

Various digital support services such as instruction videos and online live chats are available in several EU Member States.

Instruction videos are very useful measures, raising awareness about the services available online, and explaining access to these services. In Austria, [235] a video on access to the electronic health records portal was extensively used during the COVID-19 pandemic. The public statutory pension portal also features an informational video explaining how to use it. [236]

Another tool used for digital support services is online live chats. The Maltese [237] electronic portal servizz.gov has a live chat function allowing users to receive real-time support.

Another example of digital support services is helplines. In Czechia, [238] free helplines, some of them provided by municipalities, provide support in accessing all public services that are undergoing digitalisation.

Other countries have helplines for specific public services. For example, in Cyprus the online payment system has its own digital user support system, SISnet. [239] In Denmark, Public Statutory Pensions services are undergoing digitalisation, and support in accessing them is available by telephone but also online. [240]

Promising practice - Enhanced support for the use of digital services to safeguard equality

The Finnish Programme for the Promotion of Digitalisation includes a range of measures to improve accessibility and support, to safeguard equality in access to all services. Support ranges from online support via chat, phone or video, through local physical support services such as guidance points, peer support and support at home, to targeted training through e-learning, community college and special courses. Older persons are a key target group for the digital support services.

Source: Finland, Ministry of Finance (*valtiovarainministeriö/finansministeriet*), 'Promoting digitalisation'.

4.2.5 Fostering inclusive and user-centred service design through co-creation, co-design and participatory design

Ensuring inclusive and accessible digital service design is another important step towards ensuring equal access to digital public services. Participation of older persons in the creation and design of national policies, programmes or measures is a challenge for the digitalisation process.

Service design measures beyond those related to the EU Web Accessibility Directive [241] were rarely included in national policies or programmes or as specific measures under the NRRP, FRA's findings indicate. A few Member States, however, specifically address user-centred service design as part of their digitalisation strategies, but without a focus on older persons or other vulnerable groups.

For example, the Estonian Digital Agenda 2030 [242] stresses the importance of fostering inclusive design and accessible public spaces not only in physical contexts but also in digital architecture. The Finnish government programme calls for public services that are organised in a people-centric way, taking into account the specific needs and circumstances of citizens, businesses and organisations. Services are to be developed together with the clients and should be "easily accessible, understandable, interoperable, safe and reliable". [243]

The National Digital Strategy [244] in Cyprus adopts a principle-based approach towards digital transformation. 'User-centred' and 'inclusive and universal' are its guiding principles. It promotes a new delivery model for developing end-to-end high-quality digital services, called the Digital Services Factory model. The Digital Services Factory aims to enhance citizens' quality of life by providing 100 % of public services online, in a user-friendly, efficient and effective way. Citizens with diverse backgrounds will be involved throughout the design process to ensure the greatest possible usability.

Promising practice - Inclusive design

The Portuguese Usability and Accessibility Seal celebrates the application of best practices in websites and mobile applications. It aims to make using online public services better, simpler and more efficient for citizens, specifically those with disabilities who interact with computers or mobile devices through assistive technologies. The Declaration of Accessibility and Usability brought the usability seal into being. It aims to promote best practice in content design, and partnerships between public administrations and civil society to promote best practice for user experience.

For more information, see the website of Portugal Digital.

4.3 Third-level digital divide: empowering users

The third-level digital divide is about inequalities of outcome, even if access and skills are equal. An example is how during the COVID-19 pandemic it became obvious how important ICT is for online banking, e-shopping, and communication so that people can participate and remain independent and healthy. Yet older adults are often stereotypically portrayed as incapable, technophobic or unwilling to engage with ICT. This may contribute to the digital divide, as age stereotypes have the power to act as self-fulfilling prophecies. [245]

Many older persons are already using digital devices in various areas of life (see Sections 1.2 Digital societies and 1.3 The grey digital divide in equal access to public services that are undergoing digitalisation). However, the pandemic and the associated electronic registration for vaccination were particularly challenging for older persons. A significant proportion of older persons may not be able to follow all the digital developments, even with support and training.

FRA activity - Equitable access in the COVID-19 vaccine rollout

To ensure equitable access to vaccines and overcome the digital divide, all EU Member States established a variety of ways to register. They catered for the specific needs of older persons, persons with disabilities and those with low digital skills or without access to digital technology, FRA's evidence shows.

Online platforms were the main way to register for vaccination across the EU. In addition, it was possible to register by telephone, through medical doctors, at pharmacies, at the workplace or directly at a vaccination centre. In some cases, local authorities and civil society organisations helped older persons, persons with disabilities and other vulnerable

people to register electronically for vaccination.

For more information, see FRA (2021), Coronavirus pandemic in the EU – Fundamental rights implications: Vaccine rollout and equality of access in the EU, Luxembourg, Publications Office.

5. Ways forward: anchoring equal access to public services and non-discrimination in national law, policies and measures

Adopting a fundamental rights perspective to assessing access to public services that are undergoing digitalisation highlights older persons' particular vulnerability to access barriers. All Member States have laws providing general protection for access to digitalised public services, and all have obligations under EU law to protect against discrimination, including on the basis of age. Yet older persons are disproportionately at risk of being excluded from accessing public services.

In 2001, 16 % of persons in the EU-27 were 65 or older. [246] In 2020, this share rose to 21 %, and it is projected to reach 30 % in 2050. [247] In 2022, 92 % of all households in the EU-27 had internet access at home. [248] Rapid population ageing and the digitalisation of all areas of life will strongly influence the future of the European Union and its Member States.

The digitalisation of all areas of life, and public services in particular, offers a multitude of advantages, such as cost- and time-effectiveness and efficiency. However, it also presents a risk to older persons' enjoyment of fundamental rights and may increase the digital divide within societies.

Not all persons can equally enjoy the advantages and opportunities of digitalisation. Nor are they equally exposed to the risk of exclusion. For instance, public consultations, engagement in policy dialogue and participation in public life more generally take place online more and more.

As people have different capacities and needs, they need solutions and support that reflect their diversity. Many older persons, in particular the oldest, those with low educational attainment, those at risk of poverty, and those with health issues or disabilities, are left behind and face digital exclusion, data show. That is often interlinked with social exclusion.

Moreover, the prerequisites for digital participation are not fulfilled for everyone. Not all can afford devices and internet access or have the necessary skills and security knowledge to use the digital communication, information and service opportunities. Furthermore, information on the digital skills and internet use of people aged 75 and over is not systematically available in official statistics. That hampers evidence-based policy responses.

5.1 Taking a fundamental rights perspective on ageing

FRA's mapping of national legislation and policies did not find a clear fundamental rights perspective applied to ensuring older persons' access to public services that are undergoing digitalisation. Rather, it revealed a heterogenous landscape. Legal protections regarding equal

access to public services and digital exclusion are general. There are few specific references to older persons and no dedicated legal protection for their fundamental rights that may be at risk because of digitalisation.

The 2020 Council conclusions identified important steps for Europe's digital development in the next decade. They include addressing digital inequalities and putting people at the centre of digital transformation, by taking a rights-based and life-cycle perspective, which highlights that the digital gap between generations is significant and increases with age. The conclusions also stress the need to maintain non-digital access channels to public services. They call for respect for older persons' rights and needs, explicitly referring to older persons with and without disabilities.

Member States have legal obligations to protect older persons' fundamental rights against discrimination based on age. Therefore, Member States should be encouraged to provide explicit legal protections at national level to safeguard older persons' equal access to public services that are undergoing digitalisation.

5.2 Combatting ageism through the participation of older persons of all ages

The involvement of end-users in the development of services varies, FRA's research shows. To ensure that the needs of older users of digital public services are considered, they should be involved in designing inclusive and accessible digital services and relevant support services.

Definitions of age groups often use arbitrary cut-offs. That is an implicit form of ageism. The definition of 'older persons' varies significantly in the context of technology, and in related policy programmes, practices, research and data collection, FRA's findings demonstrate, in line with existing research and policy reports. Especially arbitrary are the definition of 'old' in the context of technology and the use of the term 'adult' to refer to the age group 16 to 74 years based on chronological age.

Definition of 'ageism'

Ageism is the stereotyping of, prejudice against or discrimination against individuals or groups based on their age. Although ageism can target young people, most studies in this area focus on the unfair treatment of older persons. [249]

Ageism is deeply structural. That means it "finds expression in institutional systems, individual attitudes and inter-generational relationships". [250] All manifestations of ageism – at individual, group or societal level – undermine people's right to human dignity and reduce their potential to contribute actively to society.

To foster equal access to public services that are undergoing digitalisation, it is crucial that policy and research targeting older persons with and without disabilities from various backgrounds and genders should have participatory designs.

It is important to encourage dialogue and engagement from the start between older persons, on the one hand, and policymakers, public service designers and engineers, on the other. That will lessen the influence of the deficit-oriented picture of older persons and reduce ethical concerns and structural barriers.

5.3 Reaching out and motivating people of all ages to achieve basic digital skills

The Digital Decade policy programme set the objective that 80 % of people aged 16 to 74 years should have basic digital skills by 2030. Reaching that requires targeted efforts. People who are older than 75 perceive their lack of skills as an obstacle to using the internet more often than other age groups, as FRA's Fundamental Rights Survey shows. [251]

To avoid their digital exclusion and demotivation, it is crucial to include older persons of all ages and motivate them to acquire basic digital skills. For instance, that involves using age-inclusive language and avoiding stereotypical assumptions around older age in the context of technology and digital skills. Moreover, those providing training in digital skills must receive training in avoiding ageist language and behaviour.

Ageism has negative consequences for older persons' willingness and ability to engage with certain new technologies. Awareness of that also needs to be raised.

A way forward may be for Member States to foster intergenerational or peer learning and intragenerational training. A strong policy focus on digital literacy, lifelong learning opportunities and the promotion of a life course approach would help. They should use the structural funding opportunities effectively, to ensure sustainability of learning and training for all.

The responsibility for acquiring digital skills should not lie only with the individual. Member States should proactively support all initiatives by opening lifelong learning opportunities to older persons of all ages. However, the individual should not be obliged to acquire the necessary digital skills for access to digital services. Public administrations should always provide other access channels for those citizens who cannot, or do not want to, acquire these skills.

National legislation and policies referring to digitalising public services should identify older persons as a group at higher risk of digital exclusion. In addition, efforts should be made to ensure that upper age limits do not exclude them from acquiring digital skills through adult education programmes.

5.4 Monitoring digital decade targets for all ages through inclusive data collection

Among the targets of the European Digital Decade policy programme is that at least 80 % of the adult population, limited to the age group between 16 and 74 years old, should have at least basic digital skills by 2030. The DESI monitors this age group using data collected through EU-wide surveys and made available through Eurostat's database.

However, the arbitrary upper age limit of 74 years excludes a substantial and growing part of the adult population, those aged 75 years and more. That group is projected to rise to 20 % of the total in 2050. Excluding them from systematic data collection means that the specific needs and situations of older persons cannot be assessed and monitored.

An unknown proportion of older persons lives in institutions, such as retirement homes and care facilities. Official data collection through surveys does not include such residential institutions. Thus, the monitoring system exclude these people or does not cover them sufficiently.

5.5 Preparing for the future of an ageing and digitalising Europe

To ensure that they monitor the socio-economic situations and needs of older persons and persons living in institutions as for other groups, Member States and Eurostat should look into the possibility of developing inclusive data collection approaches. While acknowledging the difficulty of surveying persons living in institutions, all relevant actors should consider ways of including these population groups in the statistical and monitoring system.

However, age cut-offs should not be arbitrary, and reasons should be provided when specific groups are excluded from the data collection. In addition, inclusive language should be applied to avoid perceptions of exclusion. For example, using the term 'adults' for those aged 16 to 74 years could potentially imply that older persons might not be adults.

Annex 1: Glossary

For the purposes of this report, the following definitions of terms apply.

- Digital divide
  The digital divide means that internet access has benefits and lack of access has negative consequences. The concept stems from a comparative perspective on social inequality.
- Digital inclusion
  Digital inclusion is a policy approach that promotes equal access to digital technologies that individuals need in order to participate in everyday social and economic life. It is an EU-wide effort aiming to empower everyone to contribute to and benefit from the digital world. [252]
- Digital inequality
  Digital inequality refers to the disadvantages some groups face in accessing the internet and the ability to participate in a digital society. It has been described as a "unique status quo where groups differing in characteristics such as socioeconomic background, age and gender are disadvantaged in terms of access, knowledge, competency, and costs with respect to digital resources." [253]
  The impact of digital inequality can be widespread. It can exacerbate existing inequalities including education, health and life expectancy. Some suggest that the true extent of the impact of digital inequality is difficult to predict as digital technology advances; "As economic and social divides are synergistic, we have to accept that as long as such divides persist, the digital divide cannot be bridged." [254]
- Digital literacy
  Digital literacy is based on individuals' capacity to search for, find, evaluate, create and communicate information digitally. The concept hence involves specific digital skills and competences, and general awareness of digitalisation. [255]
- Digital poverty
  Digital poverty is the inability to access the online world when and how people need to. [256]
- Digitalisation
  Digitalisation is the ongoing integration of digital technologies and digitised data. This report uses the terms digitalised public services and public services undergoing digitalisation, as the extent of digitalisation of key services varies widely across the EU. Therefore, this report refers to all public services, including those services that are not digital, and those that are in the process but are not yet fully digitalised, as well as fully digitalised public services, reflecting the various stages of digitalisation across Member States.
  Digitalisation is an ongoing process; even if all services become available online, technology and skill needs will also continue to evolve.
  The digitalisation of public services is one of the four cardinal points of the Digital Decade policy programme. The target is for 100 % of key public services to be digitalised by 2030.
- E-government
  E-government is a technology-enabled transformation of government. It aims to reduce

costs, promote economic development, increase transparency, improve service delivery and public administration, and facilitate the advancement of an information society.

- Electronic health record
  The electronic health record is a system that gives citizens secure access to a comprehensive electronic record of their health data anywhere in the EU. Citizens should remain in control of their health data and be able to share them securely with authorised parties for medical treatment, preventive services, research or any other purpose they deem appropriate. This should be irrespective of where the data are located and in line with data protection legislation. Unauthorised access should be prevented.
- Equal access to public services
  Equal access means everyone having full access to public services provided by the local, regional or national administration, online and offline. Examples include pension services, health services and services related to social benefits.
- European Digital Decade
  The European Digital Decade is a policy programme that presents the objectives, targets and annual monitoring mechanism for measuring the progress (the DESI) of the European Commission's vision for a digitally transformed Europe by 2030. The Commission proposed the programme in its communication '2030 digital compass: The European way for the digital decade' of 9 March 2021. The European Declaration on Digital Rights and Principles for the Digital Decade was adopted on 15 December 2022 to ensure that European values are reflected in the digital transition process.
- Intersectionality
  Intersectionality is described as "a concept and theoretical framework that facilitate[s] recognition of the complex ways in which social identities overlap and, in negative scenarios, can create compounding experiences of discrimination". [257]
  For example, older persons' enjoyment of their fundamental rights is therefore influenced by not only their age but a complex interaction of their social identities and experiences. These may combine to affect their ability to thrive in digitalising societies.
- Life course approach/perspective
  The life course approach is when researchers or policymakers focus on structural, social and cultural contexts across a person's life span. The life course is hence understood as a socially constructed and dynamic process that interrelates with individual life trajectories. [258]
- Older persons, elderly persons and other age groups
  Older persons, sometimes called elderly persons, are an open-ended age group; the minimum age is often 65 years. This aligns with the most widely used maximum working age: 64 years. This report uses the age of 65 years, because many people are no longer in employment at this age and therefore have less access to training, devices and internet through their workplaces.
  However, policies, statistics and research often use different age groups for different purposes. For example, Eurostat data often allow breakdowns for 55 to 64 years, 65

to74 years and 55 to 74 years. No data about people aged 75 years and older are available. See the text in the box on Definition of ‘older persons’ in Chapter 1 Ageing and digital societies: leaving no one behind.

- Public administration
  Public administration refers to all organisations of the executive authority at central, regional and local levels involved in the design, regulation or enforcement of public policies. Its role is to ensure access to high-quality public services. In the context of the digital transformation of public services, it is responsible for ensuring that all citizens have public services close at hand, and equal and easy access to them.
- Public services
  Public services are all interactions between the government and citizens, businesses and other service users, where some kind of exchange of information or funds takes place. For example, registering, licensing, applying and paying are considered public services. The most visible public services concern health, education, the police and welfare. [259] Services need to ensure equality or universality by being available to all under the same conditions.
- Social inequality
  Social inequality is described as unequal access to, or allocation of, goods or resources in a society. It can result in disparities between different groups and/or individuals in a society and their wealth, power or privilege.

Endnotes

[1] Köttl, H., Allen, L. D., Mannheim, I. and Ayalon, L. (2022), ' Associations between everyday ICT usage and (self-)ageism: A systematic literature review', The Gerontologist, gnac075; Mannheim, I., Wouters, E. J., Köttl, H., van Boekel, L. C., Brankaert, R. and van Zaalen, Y. (2022), 'Ageism in the discourse and practice of designing digital technology for older persons: A scoping review', The Gerontologist, gnac144.

[2] Council of the European Union (2020), Council conclusions on human rights, participation and well-being of older persons in the era of digitalisation, Brussels, 9 October 2020, para. 23.

[3] Ibid., para. 50.

[4] European Community, Treaty on European Union, OJ 1992 C 191, Art. 2.

[5] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC, OJ 2016 L 119 (General Data Protection Regulation).

[6] Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector, OJ 2002 L 201 (Directive on privacy and electronic communications).

[7] European Commission (n.d.), 'Digital public services: Part of 2030 digital compass: Your Digital Decade'.

[8]Abdi, J., Al-Hindawi, A., Ng, T. and Vizcaychipi, M. P. (2018), 'Scoping review on the use of socially assistive robot technology in elderly care', BMJ Open, Vol. 8, e018815; Buyl, R., Beogo, I., Fobelets, M., Deletroz, C., Van Landuyt, P., Dequanter, S., Gorus, E., Bourbonnais, A., Giguère, A., Lechasseur, K. and Gagnon, M. P. (2020), 'e-Health interventions for healthy aging: A systematic review', Systematic Reviews, Vol. 9, No. 1, 128.

[9] Köttl, H. and Mannheim, I. (2021), Ageism & digital technology: Policy measures to address ageism as a barrier to adoption and use of digital rechnology, EuroAgeism Policy Brief, EuroAgeism.

[10] Quinn, G. and Doron, I. I. (2021), Against ageism and towards active social citizenship for older persons: The current use and future potential of the European Social Charter, Strasbourg, Council of Europe, pp. 15–17.

[11] UN (1991), United Nations principles for older persons, General Assembly Resolution 46/91, 16 December 1991.

[12] UN (2002), Political declaration and Madrid International Plan of Action on Ageing, New York.

[13] UN, Department of Economic and Social Affairs (n.d.), 'Open-Ended Working Group on Ageing for the purpose of strengthening the protection of the human rights of older persons'.

[14]European Commission (2021), The 2021 ageing report: Economic & budgetary projections for the EU Member States (2019–2070), Institutional Paper 118, Luxembourg, Publications Office of the European Union (Publications Office), p. 3.

[15] Długosz, Z. (2011), 'Population ageing in Europe', Procedia – Social and Behavioral Sciences, Vol. 19, pp. 47–55.

[16]Eurostat (2023), 'Population structure indicators at national level', online data code: DEMO_PJANIND, accessed

11 January 2023.

[17]Ibid.

[18]European Commission (2021), The 2021 ageing report: Economic & budgetary projections for the EU Member States (2019–2070), Institutional Paper 118, Luxembourg, Publications Office; Eurostat (2020), Ageing Europe – Looking at the lives of older people in the EU, Luxembourg, Publications Office; European Commission (2023), The impact of demographic change in a changing environment, Luxembourg, Publications Office.

[19]Eurostat (2023), 'Life expectancy at age 65, by sex', online data code: TPS00026, accessed 11 January 2023.

[20] Eurostat (2023), 'Healthy life years at age 65 by sex', online data code: TEPSR_SP320, accessed 11 January 2023.

[21] Eurostat (2023), 'Projected life expectancy by age (in completed years), sex and type of projection', online data code: PROJ_19NALEXP, accessed 11 January 2023.

[22] Eurostat (2020), Ageing Europe – Looking at the lives of older people in the EU , Luxembourg, Publications Office.

[23]European Commission (2021), The 2021 ageing report: Economic & budgetary projections for the EU Member States (2019–2070), Institutional Paper 118, Luxembourg, Publications Office.

[24] European Commission (2021), 2030 digital compass: The European way for the Digital Decade, COM (2021) 118 final, Brussels, 9 March 2021.

[25] van Dijk, J. A. (2006), 'Digital divide research, achievements and shortcomings', Poetics, Vol. 34, Nos. 4–5, pp. 221–235.

[26] van Dijk, J. (2020), The digital divide, Cambridge, United Kingdom, Polity; Eurofound (2023), Economic and social inequalities in Europe in the aftermath of the COVID-19 pandemic, Luxembourg, Publications Office; Holmes, H. and Burgess, G. (2022), 'Digital exclusion and poverty in the UK: How structural inequality shapes experiences of getting online', Digital Geography and Society, Vol. 3, 100041; Imran, A. (2022), 'Why addressing digital inequality should be a priority', Electronic Journal of Information Systems in Developing Countries, Vol. 89, No. 3, e12255; van Deursen, A. J. (2020), 'Digital inequality during a pandemic: Quantitative study of differences in COVID-19-related internet uses and outcomes among the general population', Journal of Medical Internet Research, Vol. 22, No. 8, e20073; Scheerder, A. J., van Deursen, A. J. and van Dijk, J. A. (2019), 'Internet use in the home: Digital inequality from a domestication perspective', New Media & Society, Vol. 21, No. 10, pp. 2099–2118.

[27] van Dijk, J. (2020), The digital divide, Cambridge, United Kingdom, Polity.

[28]Eurostat (2023), 'Level of internet access – Households', online data code TIN00134, accessed 28 March 2023.

[29] Eurostat (2023), 'Internet use by individuals', online data code TIN00028, accessed 28 March 2023.

[30]Eurostat (2023), 'Individuals with basic or above basic overall digital skills', online data code: ISOC_SK_DSKL_I21, accessed 28 March 2023.

[31]Eurostat (2023), 'Internet use by individuals for interaction with public authorities', online data code: TIN00012, accessed 28 March 2023.

[32] Imran, A. (2022), 'Why addressing digital inequality should be a priority', Electronic Journal of Information Systems in Developing Countries, Vol. 89, No. 3, e12255.

[33] van Dijk, J. (2020), The digital divide, Cambridge, United Kingdom, Polity; Hargittai, E. and Dobransky, K. (2017), 'Old dogs, new clicks: Digital inequality in skills and uses among older adults', Canadian Journal of Communication, Vol. 42, No. 2, pp. 195–212.

[34] Mubarak, F. and Suomi, R. (2022), 'Elderly forgotten? Digital exclusion in the information age and the rising grey digital divide', INQUIRY: The Journal of Health Care Organization, Provision, and Financing, Vol. 59; Lopez de Coca, T., Moreno, L., Alacreu, M. and Sebastian-Morello, M. (2022), 'Bridging the generational digital divide in the healthcare environment', Journal of Personalized Medicine, Vol. 12, No. 8, 1214.

[35] Alexopoulou, S., Åström, J. and Karlsson, M. (2022), 'The grey digital divide and welfare state regimes: A comparative study of European countries', Information Technology & People, Vol. 35, No. 8, pp. 273–291.

[36] Friemel, T. N. (2016), 'The digital divide has grown old: Determinants of a digital divide among seniors ', New Media & Society, Vol. 18, No. 2, pp. 313–331.

[37] FRA (2020), 'Selected findings on age and digitalisation from FRA's Fundamental Rights Survey', background paper for the online conference Strengthening older people's rights in times of digitalisation – Lessons learned from COVID-19, 28–29 September 2020.

[38] Eurostat (2023), 'Population by educational attainment level, sex and age', online data code: EDAT_LFS_9903, accessed 28 March 2023.

[39]Ibid.

[40] Eurostat (2023), 'Households – Reasons for not having internet access at home', online data code: ISOC_PIBI_RNI, accessed 28 March 2023.

[41] Eurostat (2023), 'Individuals – Internet use', online code ISOC_CI_IFP_IU, accessed 26 June 2023.

[42] Eurostat (2022), 'Individuals – Devices used to access the internet', online data code: ISOC_CI_DEV_I, accessed 6 January 2023.

[43] Eurostat (2022), 'Individuals – Internet use (last internet use in the last 12 months)', online data code: ISOC_CI_IFP_IU, accessed 6 January 2023.

[44]Ibid.

[45]Ibid.

[46]Ibid.

[47] European Commission (2022), Digital Economy and Society Index (DESI) 2022: Thematic chapters, Brussels, pp. 7–8, available at 'Download European Analysis 2022 (.pdf)'.

[48] European Commission, EU Science Hub (n.d.), 'DigComp framework'.

[49] Eurostat (2022), 'Individuals' level of digital skills (at least basic or above basic skills)', online data code ISOC_SK_DSKL_I21, accessed 6 January 2023.

[50] Eurostat (2022), 'Individuals – internet activities', online data code ISOC_CI_AC_I, accessed 25 July 2023.

[51] Eurostat (2022), 'E-government activities of individuals via websites (Internet use: interaction with public authorities (last 12 months))', online data code ISOC_CIEGI_AC, accessed 25 July 2023.

[52] Eurostat (2022), 'E-government activities of individuals via websites (Internet use: submitting completed forms (last 12 months)', online code: ISOC_CIEGI_AC, accessed 25 July 2023.

[53] FRA (2018), Shifting perceptions: Towards a rights-based approach to ageing, Luxembourg, Publications Office, p. 16.

[54] European Union (2016), Consolidated version of the Treaty on the Functioning of the European Union , OJ 2016 C 202, Art. 10.

[55]Council Directive 2000/78/EC of 27 November 2000 on establishing a general framework for equal treatment in employment and occupation, OJ 2000 L 303.

[56] FRA (2018), Shifting perceptions: Towards a rights-based approach to ageing, Luxembourg, Publications Office.

[57]Ibid.

[58] European Commission (2008), 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 final, Brussels, 2 July 2008.

[59] FRA (2018), Shifting perceptions: Towards a rights-based approach to ageing, Luxembourg, Publications Office.

[60] Council of the European Union, Council conclusions on human rights, participation and well-being of older persons in the era of digitalisation, Brussels, 9 October 2020.

[61]Ibid.

[62] Council of the European Union, Council conclusions on human rights, participation and well-being of older persons in the era of digitalisation, Brussels, 9 October 2020.

[63] Council of the European Union, Council conclusions on mainstreaming ageing in public policies, Brussels, 12 March 2021.

[64]Directive (EU) 2016/2102/EC of the European Parliament and of the Council of 26 October 2016 on the accessibility of the websites and mobile applications of public sector bodies, OJ 2016 L 327.

[65]Directive (EU) 2019/882/EC of the European Parliament and of the Council of 17 April 2019 on the accessibility requirements for products and services, OJ 2019 L 151.

[66] Council of Europe, Convention for the protection of human rights and fundamental freedoms, CETS No. 005, 1950.

[67] Council of Europe, Protocol No. 12 to the Convention for the protection of human rights and fundamental freedoms, CETS No. 177, 2000.

[68] ECtHR, Carvalho Pinto de Sousa Morais v. Portugal, No. 17484/15, 25 July 2017; see also ECtHR, Schwizgebel v. Switzerland, No. 25762/07, 10 June 2010.

[69] Council of Europe, European Social Charter (revised), CETS No. 163, 1996.

[70] Council of Europe, Additional protocol to the European Social Charter, CETS No. 128, 1988.

[71] Quinn, G. and Doron, I. I. (2021), Against ageism and towards active social citizenship for older persons: The current use and future potential of the European Social Charter, Strasbourg, Council of Europe.

[72] Council of Europe, European Social Charter (revised), CETS No. 163, 1996.

[73]Ibid.

[74] UN, Convention on the Rights of Persons with Disabilities, 13 December 2006.

[75]Ibid.

[76]Ibid., Art. 9.

[77] OHCHR (n.d), Independent Expert on the enjoyment of all human rights by older persons.

[78] UN (n.d.), 'Independent Expert on the enjoyment of all human rights by older persons'.

[79] UN, Department of Economic and Social Affairs (n.d.), Open-Ended Working Group on Ageing for the purpose of strengthening the protection of the human rights of older persons;

[80] European Commission (2021), Green Paper on ageing: Fostering solidarity and responsibility between generations, COM (2021) 50 final, Brussels, 27 January 2021.

[81] European Commission (2021), 2030 digital compass: The European way for the digital decade, COM (2021) 118 final, Brussels, 9 March 2021.

[82] European Commission (2023), 'Digital Decade policy programme 2030', 5 January 2023.

[83] European Commission (n.d.), 'Europe's Digital Decade: Digital Targets for 2030'.

[84]Decision (EU) 2022/2481 of the European Parliament and of the Council of 14 December 2022 establishing the Digital Decade policy programme 2030, OJ 2022 L 323.

[85] European Commission (n.d.), 'Europe's Digital Decade: Digital targets for 2030'.

[86] European Commission, European declaration on digital rights and principles for the Digital Decade , COM (2022) 28 final, Brussels, 26 January 2022.

[87] European Commission (n.d.), 'European digital rights and principles'.

[88] European Commission (2021), 'Europe's Digital Decade: Commission sets the course towards a digitally empowered Europe by 2030', press release, 9 March 2021.

[89] European Commission (n.d.), 'European digital rights and principles'.

[90] Council of the European Union (2020), Council conclusions on human rights, participation and well-being of older persons in the era of digitalisation, Brussels, 9 October 2020.

[91] European Commission (n.d.), 'European Pillar of Social Rights – Building a fairer and more inclusive European Union'.

[92] European Commission (n.d.), 'European Skills Agenda'.

[93] European Commission (2023), The impact of demographic change in a changing environment, Luxembourg, Publications Office.

[94] Council of Europe, Committee of Ministers (2014), Recommendation CM/Rec(2014)2 of the Committee of Ministers to member States on the promotion of human rights of older persons, 19 February 2014.

[95] See Council of Europe, Committee of Ministers (1999), Recommendation No. R(99)4 of the Committee of Ministers to member States on principles concerning the legal protection of incapable adults, 23 February 1999; Council of Europe, Committee of Ministers (2003), Recommendation(2003)24 of the Committee of Ministers to member States on the organisation of palliative care, 12 November 2003; Council of Europe, Committee of Ministers (2009), Recommendation CM/Rec(2009)6 of the Committee of Ministers to member States on ageing and disability in the 21st century: Sustainable frameworks to enable greater quality of life in an inclusive society, 8 July 2009; and Council of Europe, Committee of Ministers (2011), Recommendation CM/Rec(2011)5 of the Committee of Ministers to member States on reducing the risk of vulnerability of elderly migrants and improving their welfare, 25 May 2011.

[96] UN, Universal Declaration of Human Rights, 10 December 1948.

[97] UN (2002), Report of the Second World Assembly on Ageing: Madrid, 8–12 April 2002, New York.

[98] UN, United Nations Economic Commission for Europe (2017), 2017 Lisbon ministerial declaration – 'A sustainable society for all ages: Realizing the potential of living longer, 4th UNECE Ministerial Conference on Ageing, Lisbon, 20–22 September 2017.

[99] UN (2020), Report of the Secretary-General: Roadmap for digital cooperation, New York.

[100] Bulgaria, Electronic Government Act (Закон за електронното управление), 12 June 2007, last amended 22 February 2022.

[101] Czechia, Act No. 12/2020 Coll. on the right to digital services (Zákon č. 12/2020 Sb. o právu na digitální služby), 17 January 2020.

[102] Estonia, Public Information Act (Avaliku teabe seadus), 15 November 2000, § 32 (1) 6.

[103] Germany, Act to improve online access to administrative services (Gesetz zur Verbesserung des Onlinezugangs zu Verwaltungsleistungen (Onlinezugangsgesetz – OZG)), 14 August 2017.

[104] Finland, Administrative Procedures Act (hallintolaki/förvaltningslag), Act No. 434/2003, 6 June 2003.

[105] Serbia, Electronic Government Act (Zakonoelektronskojupravi), 6 April 2018.

[106] Sweden, Administrative Procedure Act (2017:900) (Förvaltningslag (2017:900)), 28 September 2017; Sweden, Instrument of Government (Kungörelse (1974:152) om beslutad ny regeringsform), 28 February 1974.

[107] Sweden, Instrument of Government (Kungörelse (1974:152) om beslutad ny regeringsform), 28 February 1974, Chapter 1, Section 9.

[108]Ibid., Chapter 1, Section 2.

[109] Serbia, Electronic Government Act (Zakon o elektronskoj upravi), 6 April 2018.

[110] Czechia, Act No. 12/2020 Coll. on the right to digital services (Zákon č. 12/2020 Sb. o právu na digitální služby), 17 January 2020.

[111] France, Law No. 2016-1321 for a digital republic (Loi n° 2016-1321 pour une République numérique), 7 October 2016.

[112] Spain, Ministry of the Presidency, Relations with Parliament and Democratic Memory (Ministerio de la Presidencia, las Relaciones con las Cortes y la Memoria Histórica), Royal Decree 203/2021 of 30 March 2021 approving the regulation on the performance and functioning of the public sector by electronic means (Real Decreto 203/2021, de 30 de marzo, por el que se aprueba el Reglamento de actuación y funcionamiento del sector público por medios electrónicos), 30 March 2021.

[113] Slovakia, Act 95/2019 Coll. on information technologies in public administration and on amendments to certain acts (Zákon č. 95/2019 Z.z. o informačných technológiách vo verejnej správe a o zmene a doplnení niektorých zákonov), 18 April 2019.

[114] Slovakia, Act 305/2013 Coll.Act on the Electronic Form of the Exercise of the Powers of Public Authorities and on Amendments to Certain Acts (e-Government Act) (Zákon č. 305/2013 Z.z. o elektronickej podobe výkonu pôsobnosti orgánov verejnej moci – Zákon o eGovernmente), 8 October 2013.

[115] Austria, eGovernment Act (E-Government-Gesetz), Federal Law Gazette (Bundesgesetzblatt) No. 10/2004, 27 February 2004.

[116] Lithuania, Law on public administration (Lietuvos Respublikos viešojo administravimo įstatymas), 17 June 1999, as amended November 2022.

[117] Netherlands, State Secretary for the Interior and Kingdom Relations (2018), Bill for the Digital Government Act (Algemene regels inzake het elektronisch verkeer in het publieke domein en inzake de generieke digitale infrastructuur (Wet digitale overheid): Voorstel van wet), parliamentary document 34,972, No. 2, The Hague, House of Representatives.

[118] Belgium, Patients' Rights Law (Loi relative aux droits du patient), 22 August 2002.

[119] Belgium, Law relating to the institution and organisation of the eHealth platform (Loi relative à l'institution et à l'organisation de la place-forme eHealth), 21 August 2008.

[120] Cyprus, The eHealth Law of 2019 (Ο περί Ηλεκτρονικής Υγείας Νόμος του 2019), 19 April 2019.

[121] For information on the official health portal, sundhed.dk, see Denmark (n.d.), 'History of sundhed.dk' ('Historien om sundhed.dk'); Denmark, Ministry of Finance, Act No. 801 of 13 June 2016 on public digital post from public senders (LBK nr 801 af 13/06/2016 om digital post fra offentlige afsendere), 13 June 2016.

[122] Belgium, Law on the accessibility of the websites and mobile applications of public sector bodies (Loi relative à l'accessibilité des sites internet et des applications mobiles des organismes du secteur public), 19 July 2018.

[123] Croatia, Act on the right to access information (Zakon o pravu na pristup informacijama), Official Gazette (Narodne novine) No. 25/2013, 28 February 2013.

[124] Croatia, Law on the state information infrastructure (Zakon o državnoj informacijskoj infrastrukturi), Official Gazette (Narodne novine) No. 92/2014, 28 July 2014.

[125]Hungary, Act CCXXII of 2015 on the general rules on electronic administration and trust services (2015. évi CCXXII. törvény az elektronikus ügyintézés és a bizalmi szolgáltatások általános szabályairól), 15 December 2015.

[126] Latvia, Cabinet of Ministers, Rules of the public administration services portal (Valsts pārvaldes pakalpojumu portāla noteikumi), Regulation No. 400, 4 July 2017.

[127] Latvia, Cabinet of Ministers, Regulations regarding the types of the unified customer service centres of the state administration, the scope of services provided and the procedures for the provision of services (Noteikumi par valsts pārvaldes vienoto klientu apkalpošanas centru veidiem, sniegto pakalpojumu apjomu un pakalpojumu sniegšanas kārtību), Regulation No. 401, 4 July 2017.

[128]North Macedonia, Law on electronic documents, electronic identification and trusted services (Закон за електронски документи, електронска идентификација и доверливи услуги), Official Gazette of the Republic of North Macedonia (Службен весник на Република Северна Македонија) No. 98/2019, 21 May 2019.

[129]North Macedonia, Law on electronic management and electronic services (Закон за електронско управување и електронски услуги), Official Gazette of the Republic of North Macedonia (Службен весник на Република Северна Македонија) No. 101/2019, 22 May 2019.

[130]North Macedonia, Law on the central population register (Закон за централен регистар на население), Official Gazette of the Republic of North Macedonia (Службен весник на Република Северна Македонија), No. 98/2019, 21 May 2019.

[131]Slovenia, Protection against Discrimination Act (Zakon o varstvu pred diskriminacijo), 21 April 2016, and subsequent modifications.

[132]Slovenia, Promotion of Digital Inclusion Act (Zakon o spodbujanju digitalne vključenosti), 28 February 2022.

[133]Slovenia, Accessibility of Websites and Mobile Applications Act (Zakon o dostopnosti spletišč in mobilnih aplikacij), 17 April 2018, and subsequent modifications.

[134] Poland, Act on electronic delivery (Ustawa o doręczeniach elektronicznych), 18 October 2020.

[135] Portugal, Decree-Law 74/2014, which establishes the rule of digital provision of public services, enshrines assisted digital attendance as its indispensable complement and defines the mode of concentration of public services in Citizens' Bureaux (Decreto-Lei 74/2014, que estabelece a regra da prestação digital de serviços públicos,

consagra o atendimento digital assistido como seu complemento indispensável e define o modo de concentração de serviços públicos em Lojas do Cidadão), 13 May 2014.

[136]Fang, M. L., Canham, S. L., Battersby, L., Sixsmith, J., Wada, M. and Sixsmith, A. (2019), ' Exploring privilege in the digital divide: Implications for theory, policy, and practice', The Gerontologist, Vol. 59, No. 1, pp. e1–e15.

[137] Denmark, Ministry of Finance (Finansministeriet), Act. No. 558 of 18 June 2012 amending the Act on the Central Person Register, the Act on day, leisure, and club offers to children and adolescents, the Public Schools Act and the Health Act (Lov nr. 558 af 18. juni 2012 om ændring af lov om Det Centrale Personregister, lov om dag-, fritids- og klubtilbud m.v. til børn og unge, lov om folkeskolen og sundhedsloven), 18 June 2012; Denmark, Ministry of Finance (Finansministeriet), Act No. 622 of 12 June 2013 amending various legal provisions on applications, notifications, requests, notices and declarations to public authorities (Lov nr. 622 af 12. juni 2013 om ændring af forskellige lovbestemmelser om ansøgninger, anmeldelser, anmodninger, meddelelser og erklæringer til offentlige myndigheder), 12 June 2013; Denmark, Ministry of Finance (Finansministeriet), Act No. 552 of 2 June 2014 on amending various legal provisions on applications, notifications, notices, requests and declarations to public authorities (Lov nr. 552 af 2. juni 2014 om ændring af forskellige lovbestemmelser om ansøgninger, anmeldelser, meddelelser, anmodninger og erklæringer til offentlige myndigheder), 2 June 2014; Denmark, Ministry of Finance (Finansministeriet), Act No. 742 of 1 June 2015 amending various legal provisions on applications, requests, notices and complaints to public authorities (Lov nr. 742 af 1. juni 2015 om ændring af forskellige lovbestemmelser om ansøgninger, anmodninger, meddelser og klager til offentlige myndigheder), 1 June 2015.

[138] Danish Agency for Digital Government (Digitaliseringsstyrelsen), 'Legislation on mandatory digital self-service' ('Lovgivning om obligatorisk digital selvbetjening').

[139] Greece, Law No. 4727/2020: Digital governance (integration in Greek legislation of Directive (EU) 2016/2102 and Directive (EU) 2019/1024) – Electronic communications (integration in Greek law of Directive (EU) 2018/1972) and other provisions (Νομοσ Υπ' Αριθμ. 4727: Ψηφιακή Διακυβέρνηση (Ενσωμάτωση στην Ελληνική Νομοθεσία της Οδηγίας (ΕΕ) 2016/2102 και της Οδηγίας (ΕΕ) 2019/1024) – Ηλεκτρονικές Επικοινωνίες (Ενσωμάτωση στο Ελληνικό Δίκαιο της Οδηγίας (ΕΕ) 2018/1972) και άλλες διατάξεις), Government Gazette (Φύλλα Εφημερίδας της Κυβέρνησης) A'184/2020, 23 September 2020, Art. 111.

[140] Spain, Ministry of the Presidency, Relations with Parliament and Democratic Memory (Ministerio de la Presidencia, las Relaciones con las Cortes y la Memoria Histórica), Royal Decree 203/2021 of 30 March 2021 approving the regulation on the performance and functioning of the public sector by electronic means (Real Decreto 203/2021, de 30 de marzo, por el que se aprueba el Reglamento de actuación y funcionamiento del sector público por medios electrónicos), 30 March 2021.

[141] Slovenia, Promotion of Digital Inclusion Act (Zakon o spodbujanju digitalne vključenosti), 28 February 2022.

[142] Sweden, Act (2018:1937) on accessibility of digital public services (Lag (2018:1937) om tillgänglighet till digital offentlig service), 22 November 2018, Sections 13–15; Sweden, Ordinance (2018:1938) on accessibility of digital public services (Förordning [2018:1938] om tillgänglighet till digital offentlig service), 22 November 2018, Section 5.

[143] Denmark, Ministry of Finance (Finansministeriet), Act No. 692 of 8 June 2018 on accessibility to public organs' websites and mobile applications (Lov nr. 692 af 8. juni 2018 om tilgængelighed af offentlige organers websteder og mobilapplikationer), 8 June 2018.

[144] Ireland, Assisted Decision-making (Capacity) Act 2015, Act No. 64 of 2015, 30 December 2015.

[145] Portugal, Ombudsperson's Office, written response, 18 May 2022.

[146] Franet information.

[147] Belgium, Pension Ombudsman (Médiation Pensions) (2021), Annual report 2021 (Rapport annuel 2021), Brussels, Collège des Médiateurs pour les Pensions.

[148] Belgium, Verhaegen, M.-N., Ombelet, S., Van Hirtum, T., Deseyn, B., Martin, A. and Van Gompel, E. (2021), Annual report 2020 (Rapport Annuel 2020), Brussels, Federal Ombudsman Service for Patients' Rights (Service de médiation fédéral 'Droits du patient').

[149] France, Defender of Rights (Défenseur des droits) (2022), Annual activity report 2021 (Rapport annuel d'activité 2021), Paris Cedex.

[150] Bulgaria, Ministry of Transport, Information Technology and Communications (Министерство на транспорта, информационните технологии и съобщенията) (2019), National programme 'Digital Bulgaria 2025' (Национална програма 'Цифрова България 2025'), Sofia, p. 36.

[151] Portugal, Resolution of the Council of Ministers No. 55-A/2014, that approves the strategy for the reorganisation of public customer care services (Resolução do Conselho de Ministros n.º 55-A/2014, que aprova a Estratégia para a Reorganização dos Serviços de Atendimento da Administração Pública), 15 September 2014.

[152] Belgium, Brussels Region (Région de Bruxelles-Capitale), Digital ownership plan for the Brussels-Capital Region: 2021–2024 (Plan d'appropriation numérique pour la Région de Bruxelles-Capitale: 2021–2024), Brussels.

[153] Czechia, Dzurilla, V. and the Digital Czechia Team (2018), Digital Czechia (Digitální Česko), Prague, p. 13.

[154] Denmark, Agreement on digitalisation-ready legislation (Aftale om digitaliseringsklar lovgivning), 16 January 2018, p. 2.

[155] Italy, Repubblica Digitale (2020), National strategy for digital competence: Operational plan (Strategia nazionale per le competenze digitali: Piano operativo).

[156] Luxembourg, Ministry for Digitalisation (Ministère de la Digitalisation) (2021), Electronic governance strategy 2021–2025 (Stratégie Gouvernance électronique 2021–2025), Luxembourg.

[157] Bulgaria, Ministry of Transport, Information Technology and Communications (Министерство на транспорта, информационните технологии и съобщенията) (2019), National programme 'Digital Bulgaria 2025' (Национална програма 'Цифрова България 2025'), Sofia.

[158] North Macedonia, Ministry of Information Society and Administration (Министерство за информатичко општество и администрација) (2018), Strategy and action plan for public administration reform 2018–2022 (Стратегија за реформа на јавната администрација 2018–2022 година); North Macedonia, Ministry of Information Society and Administration (Министерство за информатичко општество и администрација) (2021), North Macedonia national ICT strategy 2021–2025 (Северна Македонија Национална стратегија за ИКТ 2021–2025), Skopje.

[159] Poland, Act on electronic delivery(Ustawa o doręczeniach elektronicznych), 18 October 2020.

[160] Serbia, EGovernment Development Programme in the Republic of Serbia for the period from 2020 to 2022 with the Action Plan for its implementation: 85/2020-40 (Програм развоја електронска управа во Република Србији

за период од 2020. до 2022 година са Акционим планом за његово спровођење), 16 June 2020.

[161] Sweden, Ministry of Enterprise and Innovation (Näringsdepartementet) (2017), National digitalisation strategy (Digitaliseringsstrategin), N2017/03643/D, Stockholm.

[162] Bulgaria, Council of Ministers (2019), National Programme Digital Bulgaria 2025, (Национална програма „ЦифроваБългария 2025).

[163] Bulgaria, Council of Ministers (Министерски съвет) (2021), Updated strategy on the development of e-government in the Republic of Bulgaria for the period 2019–2025 (Актуализирана стратегия за развитие на електронното управление в Република България 2019 – 2025 г.), Sofia.

[164] Poland, Council of Ministers (2022), European funds for digital development 2021–2027: Draft programme adopted by the Council of Ministers on 5 January 2022 (Fundusze Europejskie na Rozwój Cyfrowy 2021–2027: Projekt Programu przyjęty przez RM 5 stycznia 2022 r.), Warsaw.

[165] Sweden, Ministry of Enterprise and Innovation (Näringsdepartementet) (2017), National digitalisation strategy (Digitaliseringsstrategin), N2017/03643/D, Stockholm.

[166] Cyprus, Ministry of Communications and Works Department of Electronic Communications (2012), Digital strategy for Cyprus, Nicosia.

[167] Czechia, Dzurilla, V. and the Digital Czechia Team (2018), Digital Czechia, (Digitální Česko), Prague.

[168] Denmark, Digitisation Partnership (Digitaliseringspartnerskab) (2021), Report on visions and recommendations to Denmark as a digital pioneer country (Visioner og anbefalinger til Danmark som et digitalt foregangsland).

[169] Greece, Ministry of Digital Governance (Υπουργείο Ψηφιακής Διακυβέρνησης) (2021), Digital transformation bible 2020–2025(Βίβλος Ψηφιακού Μετασχηματισμού 2020–2025), Kallithea.

[170] France, Société Numérique (n.d.), 'Writing tomorrow's digital society together' ('Ecrire ensemble la société numérique de demain').

[171] Ireland, Department of the Taoiseach (2022), Harnessing digital – The Digital Ireland Framework.

[172] Luxembourg, Ministry for Digitalisation (Ministère de la Digitalisation) (2021), Electronic governance strategy 2021–2025(Stratégie Gouvernance électronique 2021–2025), Luxembourg; Luxembourg, Ministry for Digitalisation (2021), National action plan for digital inclusion – For a digitally inclusive society, Luxembourg.

[173] Malta, Office of the Principal Permanent Secretary (2021), Achieving a service of excellence: A 5-year strategy for the public service, Valletta.

[174] Portugal, Minister for the Economy and the Digital Transition (Ministro da Economia e da Transição Digital) (2020), Portugal digital: Portugal's action plan for digital transition.

[175] Czechia, Ministry of Interior (Ministerstvo vnitra) (2019), Client-oriented public administration 2030 (Klientsky orientovaná veřejná správa 2030).

[176] Luxembourg, Ministry for Digitalisation (Ministère de la Digitalisation) (2021), National action plan for digital inclusion – For a digitally inclusive society, Luxembourg, p. 11.

[177] Portugal, Ordinance 200/2020, which creates and regulates the programme of accessibility to public services and on public roads (Portaria 200 /2020, que cria e regulamenta o Programa de Acessibilidades aos Serviços Públicos e na Via Pública), 19 August 2019.

[178] France, Société Numérique (n.d.), 'Writing tomorrow's digital society together' ('Ecrire ensemble la société numérique de demain').

[179] Ireland, Department of the Taoiseach (2022), Harnessing digital – The Digital Ireland Framework.

[180] Denmark, Digitisation Partnership (Digitaliseringspartnerskab) (2021), Report on visions and recommendations to Denmark as a digital pioneer country (Visioner og anbefalinger til Danmark som et digitalt foregangsland).

[181] Cyprus, Deputy Ministry of Research, Innovation and Digital Policy (2020), Digital Cyprus 2025.

[182] Belgium, Brussels Region (Région de Bruxelles-Capitale), Digital ownership plan for the Brussels-Capital Region: 2021–2024 (Plan d'appropriation numérique pour la Région de Bruxelles-Capitale: 2021–2024), Brussels.

[183] Greece, Ministry of Digital Governance (Υπουργείο Ψηφιακής Διακυβέρνησης) (2021), Digital Transformation Bible 2020–2025 (Βίβλος Ψηφιακού Μετασχηματισμού 2020–2025), Kallithea.

[184] Austria, Digital Austria (n.d.), 'Austria's digital action plan: Shaping digitisation together' ('Digitalen Aktionsplan Austria: Digitalisierung gemeinsam gestalten').

[185] Germany, Federal Government Commissioner for Information Technology (2020), 'The nine-point plan for a digital Germany', (9-Punkte-Plan für ein digitales Deutschland), 15 July 2020.

[186] Germany, Federal Government (Bundesregierung) (2021), 'Shaping digitalisation: implementation strategy of the Federal Government', Digitalisierung gestalten – Umsetzungsstrategie der Bundesregierung, June 2021, Berlin.

[187] Sweden, Ministry of Enterprise and Innovation (Näringsdepartementet) (2017), National digitalisation strategy (Digitaliseringsstrategin), N2017/03643/D, Stockholm.

[188] Council of the European Union (2020), Conclusions on human rights, participation and well-being of older persons in the era of digitalisation in 2020, Brussels, 9 October 2020

[189] Denmark, Digitisation Partnership (Digitaliseringspartnerskab) (2021), Report on visions and recommendations to Denmark as a digital pioneer country (Visioner og anbefalinger til Danmark som et digitalt foregangsland).

[190] European Commission (n.d.), 'The Recovery and Resilience Facility'.

[191] European Commission (2022), Digital Economy and Society Index (DESI) 2022: Thematic chapters, Brussels, available at 'Download European Analysis 2022 (.pdf)'.

[192] European Commission (n.d.), 'Estonia's national recovery and resilience plan'.

[193] European Commission (n.d.), 'Austria's national recovery and resilience plan'.

[194] Germany, Federal Ministry of Finance (Bundesministerium der Finanzen) (2021), German Recovery and Resilience Plan (Deutscher Aufbau- und Resilienzplan), p. 10.

[195] European Commission (n.d.), 'Slovenia's national recovery and resilience plan'.

[196] European Commission (2022), Digital Economy and Society Index (DESI) 2022: Thematic chapters, Brussels, available at 'Download European Analysis 2022 (.pdf)'.

[197] Slovakia, Government of the Slovak Republic (Vláda SR) (2021), ´Draft recovery and Resilience Plan for the Slovak Republic´, (Návrh Plánu obnovy a odolnosti Slovenskej republiky), 26 April 2021; Slovakia, Government of the Slovak Republic (Vláda SR) (2021), 'Draft recovery and resilience plan for the Slovak Republic Component 17: Digital Slovakia' (Komponent 17 Digitalne Slovensko), 26 April 2021, p.55.

[198] European Commission (2023), 'Digital Decade policy programme 2030'.

[199] Belgium, Office of the Secretary of State for Recovery and Strategic Investments, in charge of Scientific Policy (Cabinet du Secrétaire d'Etat à la Relance et aux Investissements Stratégiques, en charge de la Politique Scientifique) (2021), National Recovery and Resilience Plan (Plan national pour la reprise et la résilience), Brussels.

[200]Bulgaria, Council of Ministers (Министерски Съвет На Република Българ) (n.d.), 'National Recovery and Resilience Plan' ('Национален план за възстановяване и устойчивост').

[201]For example, Van Deursen, A. J. and Helsper, E. J. (2015), 'A nuanced understanding of internet use and non-use among the elderly', European Journal of Communication, Vol. 30, No. 2, pp. 171–187; Wei, K.-K., Teo, H.-H., Chan, H. C. and Tan, B. C. Y. (2011), 'Conceptualizing and testing a social cognitive model of the digital divide', Information Systems Research, Vol. 22, No. 1, pp. 170–187.

[202] Slovenia, Promotion of Digital Inclusion Act(Zakon o spodbujanju digitalne vključenosti), 28 February 2022.

[203] Information from Franet.

[204] Luxembourg, Gerontological Competence Centre (Kompetenzzenter fir den Alter) (n.d.), 'Our association and its missions' ('Notre association et ses missions').

[205] Netherlands, DigiHulp (n.d.), 'De Digihulplijn'.

[206] Netherlands, State Secretary for the Interior and Kingdom Relations (De staatssecretaris van Binnenlandse Zaken en Koninkrijksrelaties) (2021), 'Progress digital inclusion 2021' ('Voortgang Digitale Inclusie 2021'), letter to House of Representatives, 21 December 2021.

[207] Poland, Ministry of Digital Affairs (Ministerstwo Cyfryzacji) (2021), 'Digital development clubs – correction of false information!' (Kluby Rozwoju Cyfrowego – prostujemy nieprawdziwe informacje!), 29 October 2021.

[208] For more information, see Union of Pensioners' Associations of Slovenia (Zveza društev upokojencev Slovenije) (n.d.), 'Digitalno vključeni'.

[209] North Macedonia, Ministry of Information Society and Administration (Министерство за информатичко општество и администрација) (2020), Draft – Methodology for including end-users in the process of improving public services (Нацрт – Методологија за вклучување на крајните корисници во процесот на подобрување на јавните услуги), Skopje.

[210] North Macedonia, Ministry of Information Society and Administration (Министерство за информатичко

општество и администрација) (2020), Service optimisation guidelines (Насоки – за оптимизација на услугите), Skopje.

[211] North Macedonia, Ministry of Information Society and Administration (Министерство за информатичко општество и администрација) (2020), Draft – Standards for service delivery (Нацрт – Стандарди во давањето услуги), Skopje.

[212] Ibid., p. 24.

[213]Wild, D., Kydd, A. and Szczepura, A. (2016), 'Implementing digital skills training in care homes: A literature review', Nursing Older People, Vol. 28, No. 4, pp. 26–29; Garcia, K. R., Rodrigues, L., Pereira, L., Busse, G., Irbe, M., Almada, M., Christensen, C., Midão, L., Dias, I., Heery, D., Hardy, R., Quarta, B., Poulain, M. M., Bertram, M., Karnikowski, M. and Costa, E. (2021), 'Improving the digital skills of older adults in a COVID-19 pandemic environment', Educational Gerontology, Vol. 47, No. 5, pp. 196–206.

[214]Ireland, Department of Further and Higher Education, Research, Innovation and Science (2021), 'Adult Literacy for Life' – A 10-year adult literacy, numeracy and digital literacy strategy.

[215] Estonia, Tallinn Central Library (Tallinna Keskraamatukogu) (n.d.), 'Digismart Seniors' ('Seeniorid digitargaks').

[216] Latvia, Latgale Central Library (2021), 'Computer courses for seniors again available at library' ('Bibliotēkā atkal būs pieejami datorkursi senioriem'), 1 October 2021.

[217] Netherlands, Ministry of the Interior and Kingdom Relations (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties) (2021), 'State of affairs information points: Digital government' ('Stand van zaken Informatiepunten. Digitale Overheid'), The Hague.

[218] North Macedonia, Ministry of Information Society and Administration (Министерство за информатичко општество и администрација) (2021), North Macedonia national ICT strategy 2021–2025 (Северна Македонија Национална стратегија за ИКТ 2021–2025), Skopje, and the accompanying action plan.

[219] Sweden, Swedish Post and Telecom Authority (Post- och telestyrelsen) (2021), Stop the isolation – How to reduce digital exclusion for older persons (Bryt isoleringen – så kan vi minska det digitala utanförskapet för äldre), Stockholm.

[220] For more information, see the website of the Slovenian institute for intergenerational cooperation, Simbioza Genesis.

[221] For more information, see the INCoDe.2030 website.

[222] Austria, Fit4internet (n.d.), 'Kaffee Digital'.

[223] Finland, Digital and Population Data Services Agency (digi- ja väestötietovirasto/myndigheten för digitalisering och befolkningsdata) (n.d.), 'Digituki'.

[224] More information is available on the Digital Compass web page.

[225] Luxembourg, Association of Luxembourg Cities and Municipalities (Syvicol – Syndicat des Villes et Communes Luxembourgeoises) (2021), '"E-Senior": facilitating access to the digital world for the elderly', ("E-Senior": faciliter l'accès des personnes âgées au monde numérique), 22 June 2021.

[226] European Commission (n.d.), 'The new European interoperability framework'.

[227] European Commission (n.d.), 'Interoperable Europe Academy'.

[228]McGrath, C., Rudman, D. L., Polgar, J., Spafford, M. M. and Trentham, B. (2016), 'Negotiating "positive" ageing in the presence of age-related vision loss (ARVL): The shaping and perpetuation of disability', Journal of Aging Studies, Vol. 39, pp. 1–10; Rudman, D. L. and Molke, D. (2009), 'Forever productive: The discursive shaping of later life workers in contemporary Canadian newspapers', Work, Vol. 32, No. 4, pp. 377–389.

[229] For more information about the programme, see the DigitalPakt Alter website.

[230] Luxembourg, Ministry for Digitalisation (Ministère de la Digitalisation) (2021), 'Call for projects promoting digital inclusion' ('Appel à projets pour l'inclusion numérique'), 14 January 2022.

[231]Netherlands, Ministry of the Interior and Kingdom Relations (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties) (2020), NL Digitaal: Data agenda government (NL Digitaal: Data agenda overheid), The Hague.

[232] Netherlands, DigiHulp (n.d.), 'De Digihulplijn'.

[233]Netherlands, State Secretary for the Interior and Kingdom Relations (De staatssecretaris van Binnenlandse Zaken en Koninkrijksrelaties) (2021), 'Progress digital inclusion 2021' ('Voortgang Digitale Inclusie 2021'), letter to House of Representatives, 21 December 2021.

[234] Netherlands, Ministry of the Interior and Kingdom Relations (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties) (2022), 'Government: More money each year for digital government information points' ('Kabinet: jaarlijks meer geld voor Informatiepunten Digitale Overheid'), 6 April 2022.

[235] For more information on the electronic health record portal, see ELGA GmbH (n.d.), 'FAQ: ELGA-Portal'.

[236] See 'Und so funktioniert's' on the MeineSV website.

[237] Malta, Ministry for Senior Citizens and Active Ageing (2021), National strategic policy for active ageing, Valletta.

[238] Czechia, Act on civil service (Zakon o statnej sluzbe), 1 November 2014.

[239] For more information on the user support centre of the online system for the payment of the social insurance services contributions, see the SISnet website.

[240] Denmark, Ministry of Finance (Finansministeriet), Proposals to act amending various legal provisions on applications, notifications, requests, notifications and declarations to public authorities (Forslag til Lov om ændring af forskellige lovbestemmelser om ansøgninger, anmeldelser, anmodninger, meddelelser og erklæringer til offentlige myndigheder), 20 March 2013.

[241]Directive (EU) 2016/2102 of the European Parliament and of the Council of 26 October 2016 on the accessibility of the websites and mobile applications of public sector bodies, OJ 2016 L 327.

[242] Estonia, Ministry of Economic Affairs and Communications (Majandus- ja Kommunikatsiooniministeerium) (2021), Digital agenda 2030 (Digiühiskonna arengukava 2030).

[243] Finland (2019), Inclusive and competent Finland – A socially, economically and ecologically sustainable society, Publications of the Finnish Government 2019:33, Helsinki, p. 86

[244] Cyprus, Deputy Ministry of Research, Innovation and Digital Policy (2020), Digital Cyprus 2025.

[245] Köttl, H., Gallistl, V., Rohner, R. and Ayalon, L. (2021). ' "But at the age of 85? Forget it!": Internalized ageism, a barrier to technology use', Journal of Aging Studies, Vol. 59, 100971.

[246]Eurostat (2023), 'Population structure indicators at national level', online data code: DEMO_PJANIND, accessed 11 January 2023.

[247] Eurostat (2020), 'Data browser – Demographic balances and indicators by type of projection', online data code: PROJ_19NDBI, accessed 23 January 2023.

[248]Eurostat (2023), 'Level of internet access – Households', online data code TIN00134, accessed 28 March 2023.

[249] Officer, A., Schneiders, M.L., Wu, D., Nash, P., Thiyagarajan, J. A. and Beard, J. R. (2016), 'Valuing older people: Time for a global campaign to combat ageism', Bulletin of the World Health Organisation, Vol. 94, No. 10, pp. 710–710A. For more information, see Swift, H. J., Abrams, D., Lamont, R. A., Drury, L. (2017), 'The risks of ageism model: How ageism and negative attitudes toward age can be a barrier to active ageing', Social Issues and Policy Review, Vol. 11, No. 1, pp. 195–231; and Trusinová, R. (2013), 'No two ageism are the same: Testing measurement invariance in ageism experience across Europe', International Journal of Social Research Methodology, Vol. 17, No. 6, pp. 659–675.

[250] Equinet Secretariat (2011), Tackling Ageism and Discrimination, Brussels, p. 7; also see Levy, S. R. and Macdonald, J. L. (2016), 'Progress on understanding ageism', Journal of Social Issues, Vol. 72, No. 1, pp. 5–25.

[251] FRA (2020),'Selected findings on age and digitalisation from FRA's Fundamental Rights Survey', background paper for the online conference Strengthening older people's rights in times of digitalisation – Lessons learned from COVID-19, 28–29 September 2020.

[252]European Commission (n.d.), 'Digital Inclusion'.

[253] Imran, A. (2023). 'Why addressing digital inequality should be a priority', Electronic Journal of Information Systems in Developing Countries, Vol. 89, No. 3, e12255.

[254]Ibid.

[255]Bawden, D. (2008), 'Origins and concepts of digital literacy' in: Lankshear, C. and Knobel, M. (eds.), Digital literacies: Concepts, policies and practices, Bern, Peter Lang Publishing, pp. 17–32.

[256] See the Digital Poverty Alliance website.

[257]UN Network on Racial Discrimination and Protection of Minorities (2022),Guidancenote on intersectionality, racial discrimination and protection of minorities, 22 September 2022, p. 3.

[258] Elder, G. H. (1994), 'Time, human agency, and social change: Perspectives on the life course', Social Psychology Quarterly, Vol. 57, No. 1, pp. 4–15.

[259] European Commission, Directorate-General for Employment, Social Affairs and Inclusion (2017), Quality of public administration: A toolbox for practitioners, 2017 edition, Luxembourg, Publications Office.

About this publication

© European Union Agency for Fundamental Rights, 2023

Reproduction is authorised provided the source is acknowledged.

For any use or reproduction of photos or other material that is not under the European Union Agency for Fundamental Rights copyright, permission must be sought directly from the copyright holders.

Neither the European Union Agency for Fundamental Rights nor any person acting on behalf of the Agency is responsible for the use that might be made of the following information.

The reference period was until May 2023. Any legislative developments since then and up until the date of publication of these pages have been included whenever relevant or if known.

Luxembourg: Publications Office of the European Union, 2023

HTML

- ISBN: 978-92-9489-279-9
- doi: 10.2811/205995
- TK-05-24-037-EN-Q

PDF

- ISBN: 978-92-9489-202-7
- doi: 10.2811/061088
- TK-09-23-257-EN-N

Photo credits (cover):

- Cover: © Rawpixel.com/Adobe Stock

FRA – EUROPEAN UNION AGENCY FOR FUNDAMENTAL RIGHTS
Schwarzenbergplatz 11 – 1040 Vienna – Austria
T +43 158030-0 – F +43 158030-699

- Website
- Facebook
- Twitter
- LinkedIn