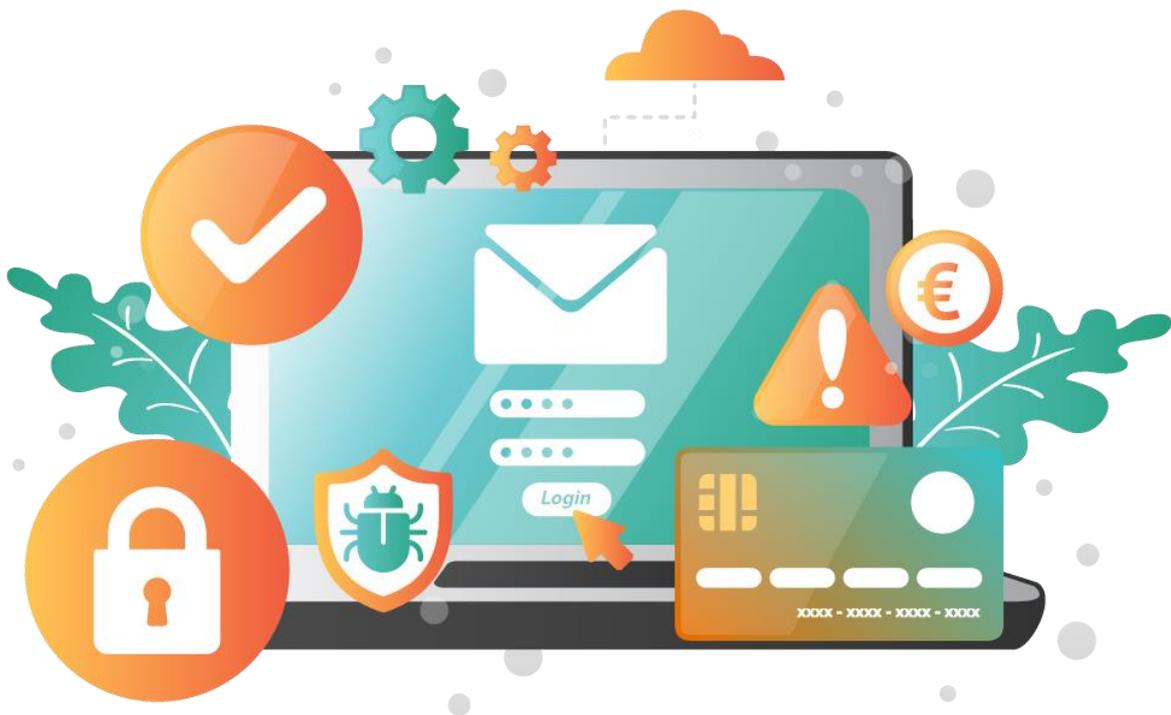




# e-Protect project

Consumer and data protection skills for the elderly



## IO1.A1 Desk research

Austria



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Austsch und Mobilität  
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## Partnership



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# 1. The Profile of the Elder Society

The Republic of Austria has been an EU member country since January 1<sup>st</sup> 1995, part of the Schengen area since December 1<sup>st</sup> 1997, and a member of the Eurozone since January 1<sup>st</sup> 1999 (European Union, 2020). Austria enjoys high living standards and is a well-developed market economy benefitting from a skilled labour force employed mostly by the service sector, as well as a small but advanced agricultural sector (CIA, 2020).

The Austrian population in 2020 constituted a total of 8,901,064 individuals, 1,693,627 or 19% of which were over the age of 65 (Statistics Austria, 2020a). *Figure 1* below shows the Austrian population pyramid, which also differentiates between Austrians (light blue) and non-Austrians (dark blue).

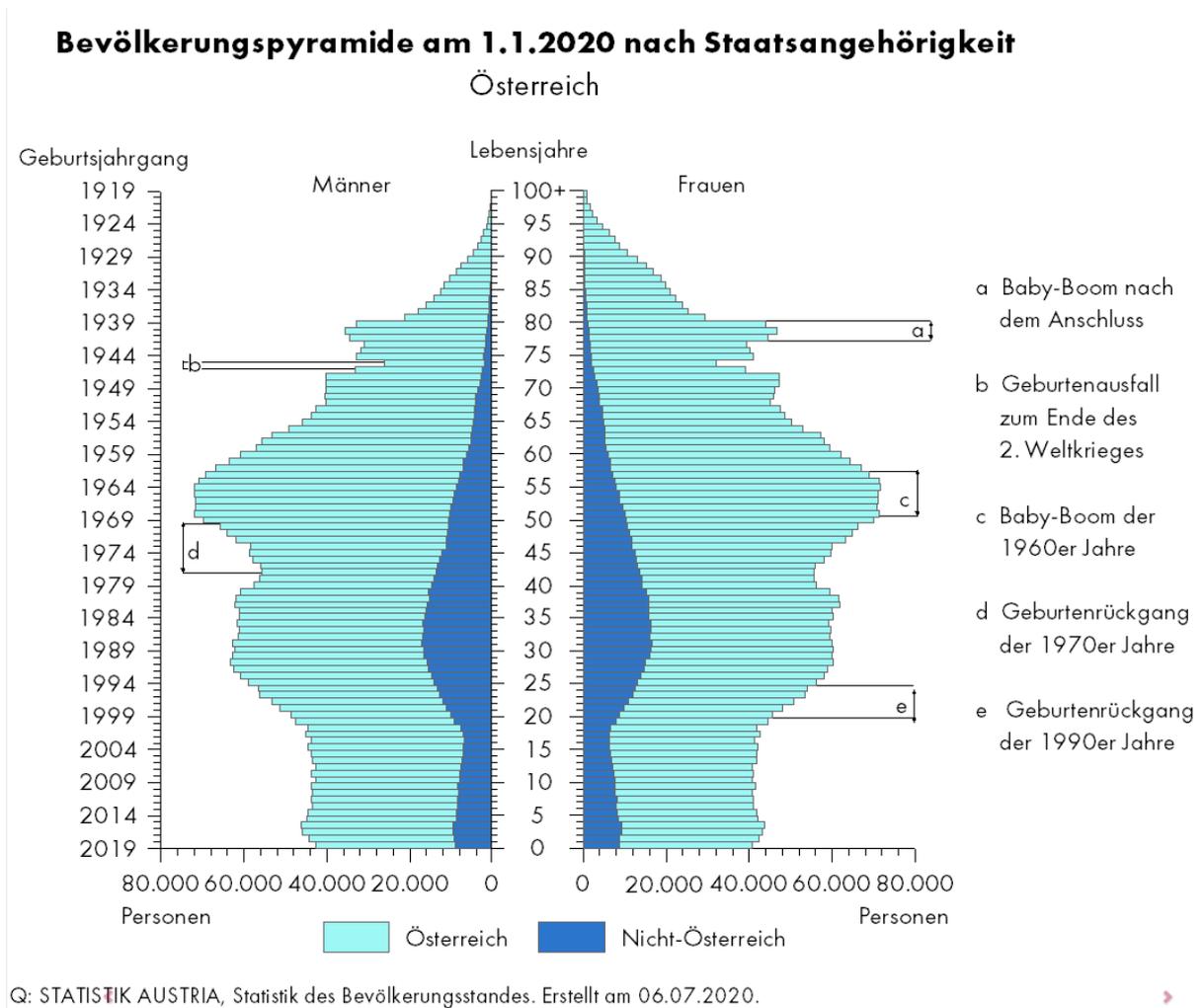


Figure 1. 2020 Austrian population pyramid by age and gender (Statistics Austria, 2020a).

With the exception of Japan, the EU is the world’s most rapidly ageing region (Eurostat, 2015, p.22). The Austrian elderly, aged over 65, comprise 18.5% of the country’s total population, slightly lower than the EU-28 average of 19.2%. Austrian women aged 65 can expect to live another 21.3 years, while men can expect to live another 18.1 years, slightly above to the EU average of another 21.2 and 17.9 years respectively (Eurostat, 2017). An average 35.0% of Austria’s elderly live alone, higher than the EU-28 average of 32.1%



e-protect

(Eurostat, 2017). Only 7.5% of Austria's elderly are economically active, compared to 9.5% of their EU-28 counterparts (Eurostat, 2017). However, 54% of Austria's elderly travel, higher than the EU-28 average of 48.8% (Eurostat, 2017).

## 2. The Use of Internet and Digital Devices Among the Elderly

Prior to presenting data about internet and digital device usage among the elderly, it should be noted that survey results cannot always be generalised and are not necessarily representative of the population due to social inequalities. A review demonstrated that most studies investigating older adults' internet use are not comparable as they employ differing age brackets (Hunsaker and Hargittai, 2018: 3938). This reduces the scope for generalisations, despite researchers coining and employing the term "grey digital divide" (Millward, 2007). Hunsaker and Hargittai also highlighted that most surveys are limited to elderly individuals living at home, excluding those living in residential facilities, thus biasing samples towards the elderly who are less likely to be experiencing physical or cognitive impairments (2018: 3941). Additionally, the European Commission found that 73.9% of people living in high-income households have basic digital skills, compared with only 53.1% of those living in low-income households (2017); an effect which likely transfers to elderly populations.

### 2.1. Households with an Internet Connection

In 2019, 90.0% of Austrian and EU-27 households had internet access (Eurostat, 2021). Statistics Austria, in annual surveys investigating households where at least one member was aged 16-74, found that 90.4% of households have internet connectivity (Statistics Austria, 2020b). As an average 35.0% of Austria's elderly live alone (Eurostat, 2017), this statistic may be excluding elderly over the age of 74 who live alone, as well as the elderly who live in residential facilities and not at home.

Overall, it is evident that most Austrian households have an internet connection, and as approximately one-third of the elderly live alone, improving their digital competence is important.

### 2.2. Daily Internet Users

The percentage of the Austrian and EU-27 elderly population which access the internet daily has increased in recent years, as demonstrated in *Table 1* below (Eurostat, 2021a).

	2011	2012	2013	2014	2015	2016	2017	2018	2019
Austria	19	19	18	23	28	31	30	35	42
EU-27	18	20	23	26	29	32	35	39	43

*Table 1.* Percentage of daily internet users aged over 65 (Eurostat, 2021a).

Since 2012, the percentage of Austrian elderly who use the internet daily has consistently trailed just behind the EU-27 average, suggesting that their elderly are slightly less familiar with the internet than other EU countries.

However, since 2017, the percentage of Austrian elderly who constitute daily internet users is increasing faster than the EU-27 rate. The Austrian percentage increase between 2018 and 2019 was 20%, while the EU-27 percentage increase was only 10.25% in comparison. Between 2017 and 2018, the percentage increase was 16.67% and 11.42% respectively.

Therefore, this indicates that the Austrian elderly are interested in internet usage, highlighting the need for digital competence training and increased awareness of consumer and data protection.

### 2.3. Annual Internet Users

The percentage of the Austrian and EU-27 elderly population which accessed the internet in the past year has increased over the last decade, as demonstrated in *Table 2* below (Eurostat, 2021b). Their data has remained fairly similar through the years, although the percentage of the Austrian elderly population which accessed the internet in the past year at the time of asking was slightly below the EU-27 percentage in 2019 (Eurostat, 2021b).

	2011	2012	2013	2014	2015	2016	2017	2018	2019
Austria	31	39	35	41	47	52	52	54	56
EU-27	29	32	36	40	43	47	50	55	60

*Table 2.* Percentage of individuals aged 65-74 who accessed the internet in the last twelve months (Eurostat, 2021b).

These numbers are slightly higher than the number of daily internet users, highlighting that although elderly populations are interested in the internet, they either do not need to or cannot access it every day.

### 2.4. Preferred Devices

Elderly Austrians utilise a variety of technological devices when accessing the internet. Among the elderly who have used the internet in the last three months, most have opted to use a mobile phone or a smartphone, as demonstrated in *Table 3* (Eurostat, 2021c). This is likely testament to the convenience of using a mobile phone in comparison to other devices, as smartphones are the easiest device to transport and are easy to hold.

Device Used to Access Internet	Austria		EU-27	
	2016	2018	2016	2018
Mobile phone or smartphone	47	66	48	62
Desktop computer	47	48	53	45
Laptop or netbook	65	60	54	50
Tablet	20	30	31	32

*Table 3.* Percentage of devices used by internet users aged 65-75 (Eurostat, 2021c).

### 2.5. Reasons for Using the Internet

Although data listing the reasons why elderly Austrians use the internet is incomplete, some conclusions can still be drawn. Elderly Austrians aged 65-75 who have used the internet in the last three months mostly used the internet to answer and receive emails, followed by

finding information about goods and services and reading online news sites (Eurostat, 2021d).

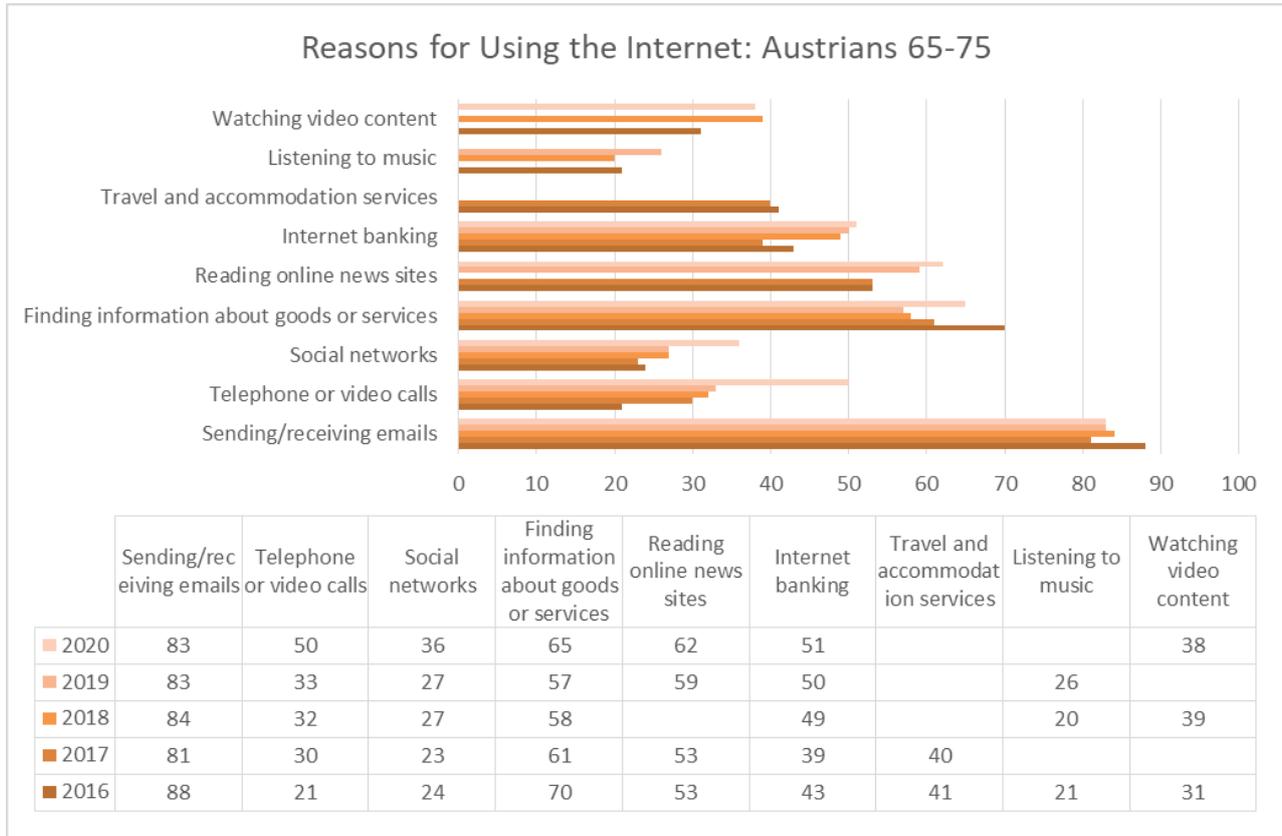


Figure 2. Reasons why elderly Austrians used the internet in the last three months (Eurostat, 2021d).

The increase in the percentage of elderly Austrians using the internet to access social networks and to access internet banking is noteworthy (Eurostat, 2021d). The popular use of the internet to find information about goods or services and use internet banking is expected as many services are moving their businesses online. Additionally, due to the recent and currently ongoing Covid-19 pandemic, the elderly population, which may have previously preferred accessing certain services in their physical forms, has now had to adapt to online access.

As demonstrated by *Table 4* below, there are various differences and similarities between the Austrian elderly and their EU-27 counterparts. The most notable differences are that Austrians are more likely to use the internet to send or receive emails than their counterparts, while the EU-27 elderly use the internet for telephone or video calls and find out about goods and services more than Austrians do (Eurostat, 2021d).

Internet Activities	Austria	EU-27
Sending/receiving emails	83	76
Telephone or video calls	33	42
Social networks	27	32
Finding information about goods or services	57	69
Reading online news sites	59	65
Internet banking	50	54
Travel and accommodation services	NA	NA
Listening to music	26	27
Watching video content	NA	NA

Table 4. Internet activities of elderly Austrians and EU-27 in 2019 (Eurostat, 2021d).

As shown in *Figure 3* below, the most popular internet purchases by the elderly in 2019 were travel and holiday accommodation by 60% of Austrians and 50% of the EU-27 (Eurostat, 2021e). The Austrian elderly are more likely to use the internet to purchase a variety of goods or services and are equally likely to purchase clothes or sports goods and food or groceries. The only purchase type where the Austrian elderly are less likely to use the internet is to purchase household goods. With the exception of travel and holiday accommodation, it is evident that the majority of elderly Austrians prefer to make most of their purchases in the physical rather than the virtual world.

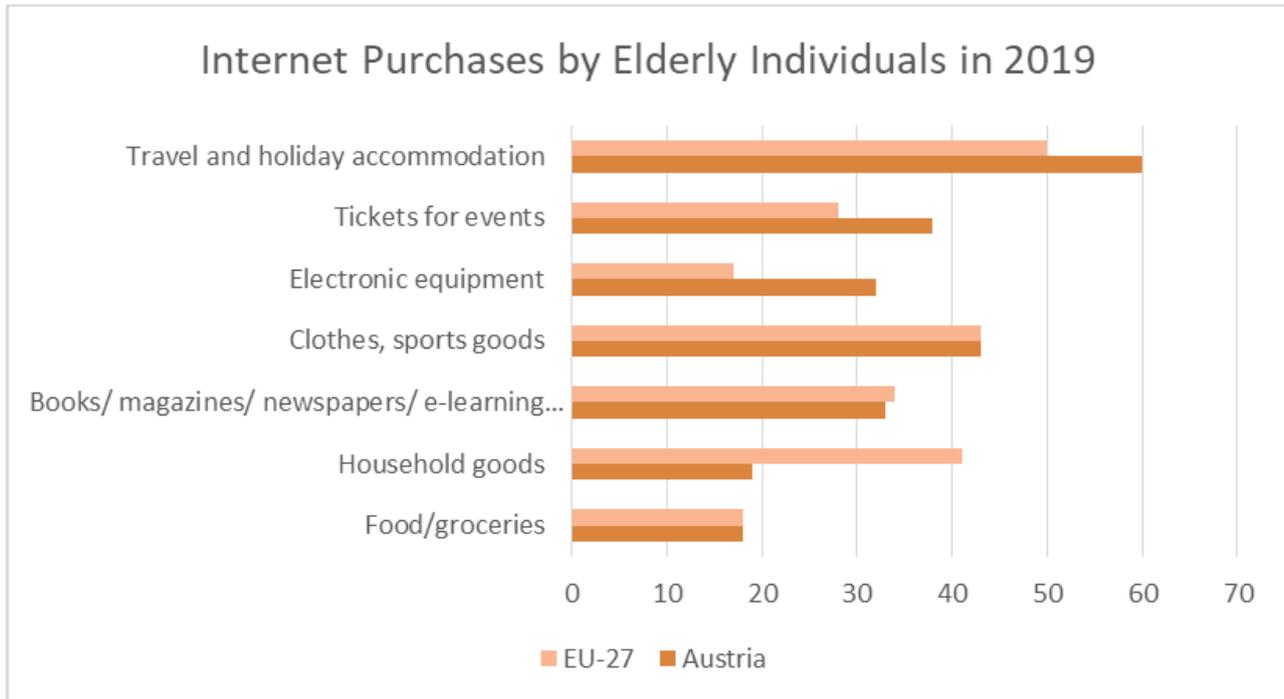


Figure 3. 2019 Internet Purchases by Elderly Individuals in Austria and the EU-27 (Eurostat, 2021e).

## 2.6. Reasons for Not Using Mobile Internet

There are a series of reasons as to why the elderly do not use mobile internet according to 2012 data (Eurostat, 2021f), presented in Figure 4 below.

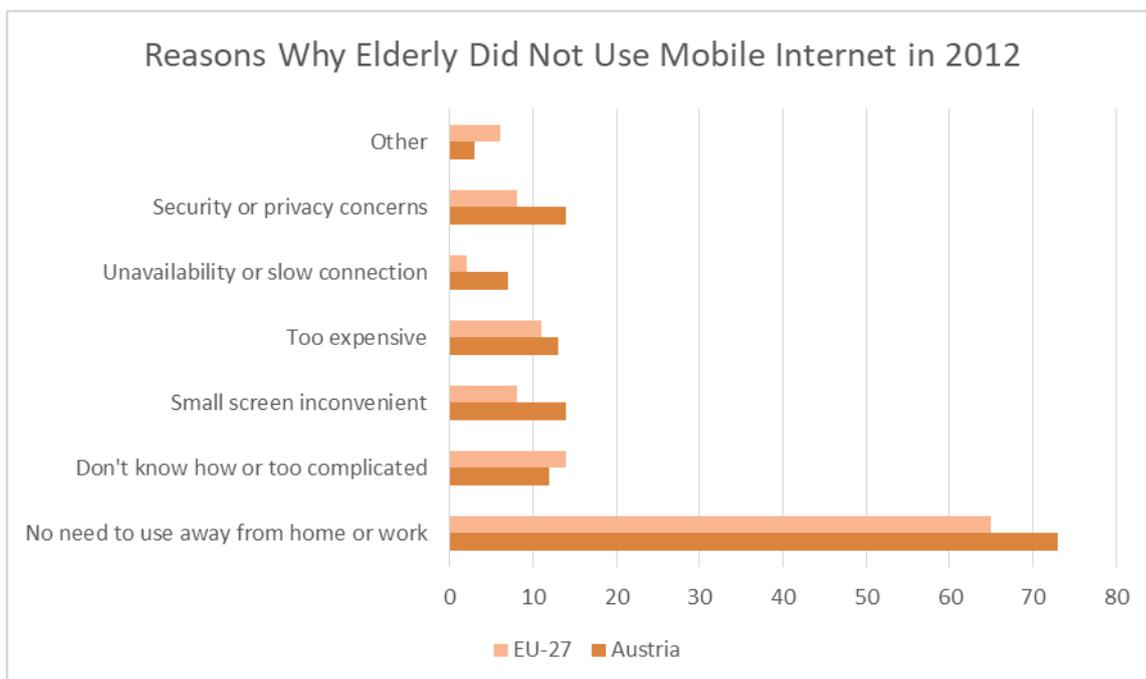


Figure 4. Reasons Why Elderly Did Not Use Mobile Internet in 2012 (Eurostat, 2021f).

Of the elderly who used the internet in the last three months, the majority did not use mobile internet as they feel no need to use the internet away from home or work. This



number was similar both for the Austrian elderly at 73% and for the EU-27 elderly at 65%. However, a small portion of the elderly do not know how to use mobile internet, 12% and 15% for Austria and the EU-27 respectively, and a further 14% and 8% respectively who cited security or privacy concerns (Eurostat, 2021f). Although there have been no updates since this data was published in 2012 and these figures are likely to have changed, the two aforementioned statistics demonstrate the need for digital competence and an increased awareness of consumer and data protection. Additionally, a 2019 study investigating the attitudes of elderly Austrians towards new technologies hypothesised that older age groups may be less positive towards certain devices as during their lifetime they did not achieve familiarity or gain enough experience with technological devices in general; a cohort effect which is likely to dwindle in future (Halmdienst, Radhuber, and Winter-Ebmbner, 2019: 519).

### 3. Common Threats and Problems in Using the Internet

As stated by the European Union Agency for Cybersecurity (ENISA), in today’s hyper-connected world, the internal security of the European Union and the online security of its citizens are both threatened by cybercriminals (ENISA, 2021). Additionally, the Covid-19 pandemic, which has transferred multiple aspects of citizens’ private and personal lives online, has emphasised the increased need for security, as well as capacity building within populations (ENISA, 2021).

Of the elderly who have used the internet within the last year, 2015 data shows that a proportion has no qualms providing personal information online, as listed in *Table 5* (Eurostat, 2021g). This may be a problem depending on how this personal information is used and securely stored.

Information Provided to the Internet	Austria	EU-27
Personal details (name, date of birth, ID card number)	47	30
Contact details	53	44
Payment details	27	24
Other personal information (photos, current location, health information, employment, income)	8	7
Personal information	61	52

*Table 5.* Information Individuals Aged 65-74 provided to the internet in 2016 (Eurostat, 2021g).

## 4. Current Strategies, Policies and Programmes for Providing Relevant Education and Training

### 4.1. National ICT Security Strategy Austria 2012

The 'National ICT Security Strategy Austria 2012' defines Austria's position and commitment to the sustainable development of ICT security within a European context (Digital Austria, 2012: 3). Overall, the strategy seeks to ameliorate Austrian ICT infrastructures and structures to strengthen cybersecurity competence through a network of stakeholders (Digital Austria, 2012: 12) as well as increase awareness among Austrian citizens (Digital Austria, 2012: 25). The Strategy's five key areas are:

- Stakeholders and structures
- Critical infrastructures
- Risk management and status quo
- Education and research
- Awareness

'Education and Research' includes ICT education at school and considers ICT security an important element of adult education (Digital Austria, 2012: 22). The elderly populations as defined in the e-protect project are also listed as a key target group: "the 65+ generation" (Digital Austria, 2012: 22).

Specific measures listed are:

- ICT security in adult education
- Continuous target-group-specific further training programmes

### 4.2. Consumer and Data Protection

The 'Awareness' section of the 'National ICT Security Strategy Austria 2012' proposed campaigns using the following themes:

- Safe online banking
- Internet guide for senior citizens
- Consumer protection on the Internet
- Data protection provisions for customers (Digital Austria, 2012: 28)

The Strategy also seeks to standardise minimum security standards for ICT security and data protection to ensure effective security and establish that present requirements are mutually understood by relevant stakeholders (Digital Austria, 2012: 29).

### 4.3. Best Practices and Good Examples

- The "Digitalisation Strategy for Austria" has specific priorities, a timetable, a monitoring system, and key indicators (OECD, 2019: 60).

- Several public and private sector organisations signed a “Digital Competence Pact” to foster the digital skills of numerous target groups including “seniors above 60” (OECD, 2019: 60).
- Austria’s electronic identification systems “comply with high technical and legal security standards” (OECD, 2019: 60).
- Various projects beneficial to building ICT competencies within the elderly population have taken place, such as:
  - training courses for tablet computer use (Vorarlberg)
  - “Aktion Dialog”, free Internet courses (Upper Austria) for senior citizens
  - computerias, meeting points where secondary school students offer Internet courses to senior citizens
  - intergenerational ICT courses known as “4everyoung” as well as “Grandma’s surfing, Grandpa’s googling” (Winkler and Spreitzer, 2017: 9)
- The Ministry for Transport, Innovation and Technology has pursued a “broadband campaign” to make ultrafast broadband internet access available across Austria, aiming to overcome the urban-rural digital divide and ensure digital inclusion, particularly for senior citizens (Winkler and Spreitzer, 2017: 10).
- The Federal Chancellery’s project “Seniorkom.at – connecting generations” supports free courses which facilitate internet use by older persons (Winkler and Spreitzer, 2017: 10).
- The Federal Senior Citizens Advisory Council in Austria (Österreichischen Seniorenrat)

## 5. Challenges in addressing the gaps

### 5.1. Challenges and Main Areas with Difficulties

The biggest challenge may lie in uncovering why elderly individuals do not use the internet, as Eurostat (2021f) only provides data for why they did not use *mobile* internet. That data will be the foundation of this section, but it must be recognised that more research is required to present a comprehensive picture.

In 2019, 42% of the Austrian elderly population used the internet every day (Eurostat, 2021a), while 56% used the internet in the past year (Eurostat, 2021b). Although this disparity may be purely down to personal preference and need, this provides a further avenue for investigation. Identifying the problem can lead to a solution for individuals would like to use the internet every day but cannot.

Economic barriers to accessing mobile internet should also be considered, as 14% of Austrian elders did not use mobile internet in 2012 due to its expense (Eurostat, 2021f). This is particularly relevant to recent arguments that internet access should be considered a human right (see Pettrachin, 2018).

### 5.2. Critique of the Effectiveness of Existing Programmes

Although the number of daily and annual internet users has increased within the elderly Austrian population, it is unclear whether this is due to natural progression as previously younger adults enter this age category, or because existing programmes are effective. The fairly rapid percentage increases would suggest the latter.

Austria has invested in its infrastructures and stakeholder networks and education and research, including for its elderly population. Numerous initiatives mentioned in section 4.3. *Best Practices and Good Examples* are praiseworthy, and it is evident that Austria is trying to make the internet more accessible to its elderly.

However, it is unclear to what extent this population is also being taught consumer and data protection skills.

### 5.3 Identified Gaps in Consumer and Data Protection Skills

14% of the Austrian elderly did not use mobile internet in 2012 due to security or privacy concerns. This is a percentage of the population who could benefit from consumer and data protection skills.

## 6. Skills validation systems and processes

### 6.1. National Qualification Framework

The European Qualifications Framework (EQF) was launched in 2008 to create a common reference for Europeans to compare their qualifications, enhancing transparency, comparability, and portability (Cedefop, 2018: 10). Since 2009, countries have been supported in developing their own National Qualification Frameworks (NQFs) (Cedefop, 2018: 5).

Austria decided to launch an NQF in 2007, although it was not until 2017 that qualifications were officially referenced to the Austrian NQF (Eyridice, 2020). The Austrian National Qualifications Framework places qualifications as presented in *Figure 5* below and translated in *Figure 6*.



Figure 5. Austrian National Qualifications Framework (Austrian NQF register, 2017).

NQF levels	Qualification types		EQF levels
8	Doctorate ( <i>Doktorgrade</i> )		8
7	Master degree ( <i>Master- bzw. Diplomgrade</i> )		7
6	Bachelor degree ( <i>Bachelorgrade</i> )	Engineer ( <i>Ingenieur</i> )	6
5	VET college school leaving certificate ( <i>Reife- und Diplomprüfung der berufsbildenden höheren Schulen</i> )		5
4	VET school qualification ( <i>Abschluss der berufsbildenden mittleren Schule</i> )  Apprenticeship diploma ( <i>Lehrabschluss</i> )		4
3			3
2			2
1			1

Figure 6. Austrian National Qualifications Framework (Cedefop, 2018: 25).

Austria has also implemented NQF service points to support and facilitate the referencing of non-formal qualifications (Austrian NQF register, 2017).

## 6.2. How can such skills be validated?

There seems to be no specific Austrian NQF for consumer and data protection skills as envisioned by this project, and no qualifications for basic digital literacy.

At an initial level, individuals can rate their own skills when filling in questionnaires or applying to jobs. However, perceived and actual computer skills have been known to differ, particularly with younger generations perceiving themselves and being perceived as more computer literate than they are (Grant, Malloy, and Murphy, 2009). Therefore, official scales and validation measures are necessary.

One example relevant to this project is the Online Privacy Literacy Scale (OPLIS), defined as “a 20-item instrument designed to measure people’s online privacy literacy” (OPLIS, 2020a). The project developers note the difference between individuals being concerned about disclosing personal data on the internet and their willingness to actually do so (OPLIS, 2020b), which is why the scale investigates individuals’ knowledge of:

- Knowledge about institutional practices
- Knowledge about technical aspects of data protection
- Knowledge about data protection law
- Knowledge about data protection strategies (OPLIS, 2020a).

A certificate of course completion could validate certain skills, although a skills certificate following a test could provide better validation. Open Badges are a further option to consider, as they are a flexible and portable way of recognising learning and can easily contain information of importance (IMS Global Learning Consortium, 2021).

## 7. Recommendations

An initial recommendation for the project would be to identify why elderly individuals do not use the internet, particularly when it comes to broadband, but also obtaining more recent data than 2012 concerning why they do not use mobile internet.

### 7.1. Key Areas that can be Transferred and Adapted to the Project

- Adapt existing courses from within the education system to cater for elderly populations
- Develop a course following an OPLIS-style assessment (OPLIS, 2020a) to improve individuals' consumer and data protection skills.
- The course developed could allow individuals to take the entire course or only certain modules of their choosing.
- Any course developed should give individuals the option of completing a skills test to validate their skills and gain a skills validation certificate. If individuals do not complete a skills test, they will still gain a course completion certificate.
- Consider using Open Badges instead of paper or online certificates.

### 7.2. Key Skills that need to be involved in the Competency Scale

- The project competency scale could be developed from various internet safety guides which provide recommendations directly tailored to seniors, covering topics such as:
  - Protecting Your Computer
  - Avoiding Common Scams
  - Tax Scams and Banking Scams
  - Recognising Legitimate Purchases
  - Secure Online Banking
  - Protecting Your Identity
  - Safe Social Networking (Eric, 2018)
- The European Commission's 2016 Digital Competence Reference Framework for Consumers or DigCompConsumers could serve as a basis for the competency scale developed for this project (see Brečko and Ferrari, 2016).

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