

Digital economy and society statistics - households and individuals

Statistics Explained

*Data extracted in December 2021.
Planned article update: December 2022.*

This article presents recent statistical data on several different aspects of the [digital economy and society](#) in the [European Union \(EU\)](#), focusing on the availability of [information and communication technologies \(ICTs\)](#) and their use by individuals and within households.

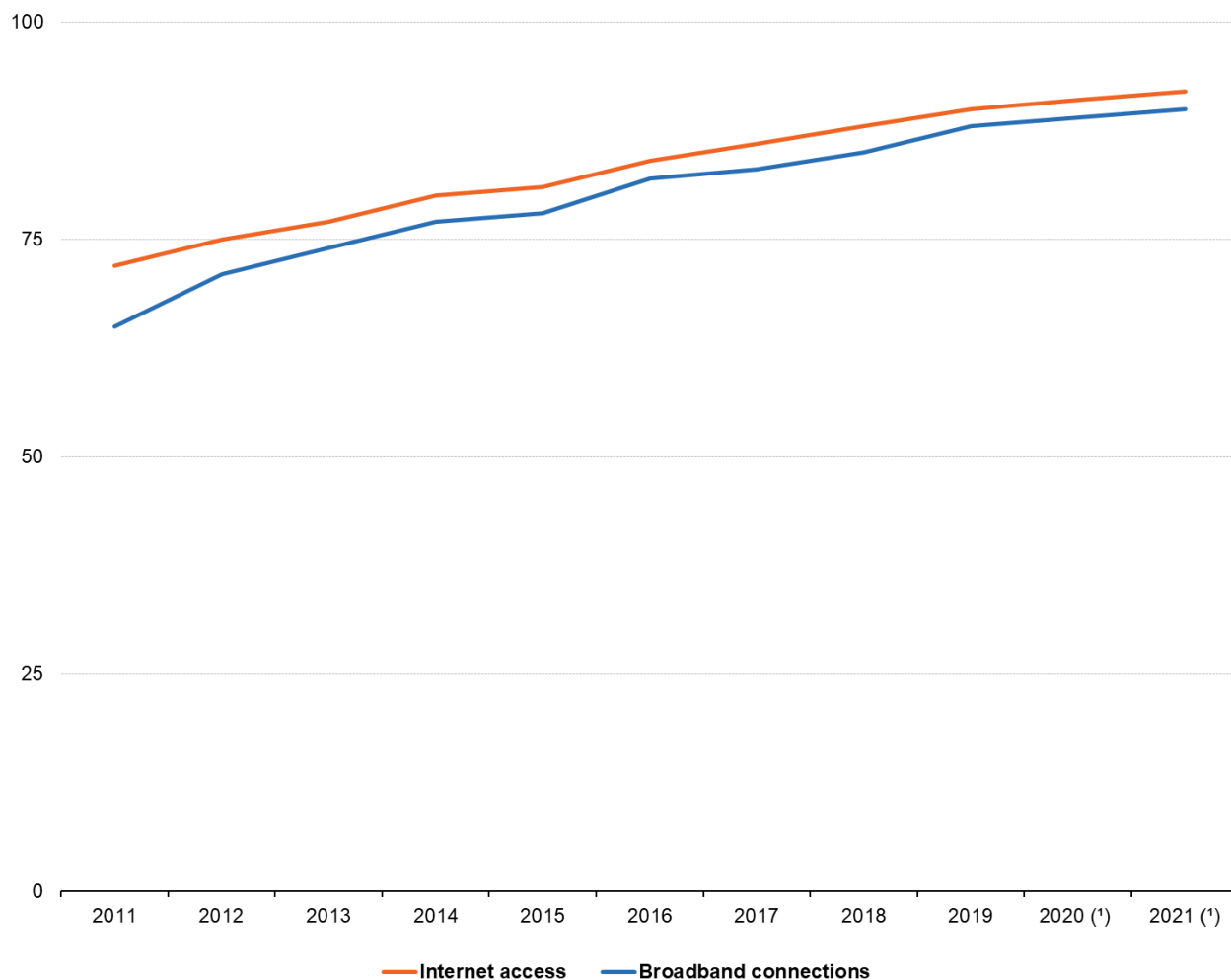
ICTs affect people's everyday lives in many ways, both at work and in the home, for example, when communicating or buying goods or services online. EU policies range from regulating entire areas such as e-commerce to trying to protect an individual's privacy. The development of the information society is therefore regarded by many as critical for providing the necessary conditions to promote a modern and competitive economy.

Internet access

ICTs have become widely available to the general public, both in terms of accessibility as well as cost. A boundary was crossed in 2007, when a majority (53 %) of [households](#) in the [EU-27](#) had [internet access](#). This proportion continued to increase, passing three quarters in 2012 and four fifths in 2014. By 2021, the share of EU households with internet access had risen to 92 %, some 20 [percentage points](#) higher than in 2011.

Widespread and affordable [broadband](#) access is one of the means of promoting a knowledge-based and informed society. Broadband was by far the most common form of internet access in all EU Member States: it was used by 90 % of the households in the EU in 2021, 25 percentage points higher than the share recorded in 2011 (65 %) — see Figure 1.

Internet access and broadband internet connections of households, EU, 2011-2021
(% of all households)



(*) Estimates

Source: Eurostat (online data codes: isoc_ci_in_h and isoc_ci_it_h)

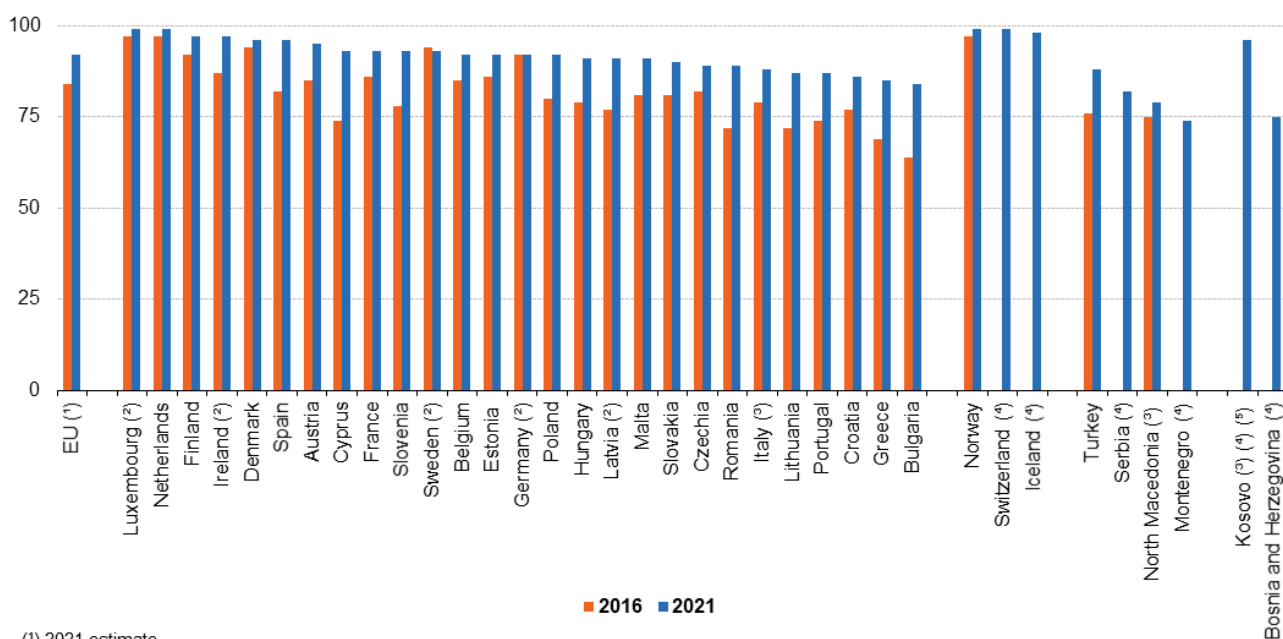
eurostat

Figure 1: Internet access and broadband internet connections of households, EU, 2011-2021 (% of all households) Source: Eurostat (isoc_ci_in_h) and (isoc_ci_it_h)

The highest proportion (99 %) of households with internet access in 2021 was recorded in Luxembourg and in the Netherlands (see Figure 2), while also Finland, Ireland, Denmark, Spain and Austria reported that 95 % or more of households had internet access. The lowest rate of internet access among the EU Member States was observed in Bulgaria (84 %). However, Bulgaria — together with Cyprus, Romania, Greece, Slovenia and Lithuania — recorded a rapid expansion in its proportion of households with internet access, with increases within the range of 15-20 percentage points between 2016 and 2021. Unsurprisingly, relative stability was recorded in several Member States where household internet access was already close to saturation in 2016, such as Luxembourg, the Netherlands and Denmark.

Internet access of households, 2016 and 2021

(% of all households)



(¹) 2021 estimate

(²) Break in the time series

(³) 2020 instead of 2021

(⁴) 2016: not available

(⁵) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/99 and the ICJ Opinion on the Kosovo declaration of independence.

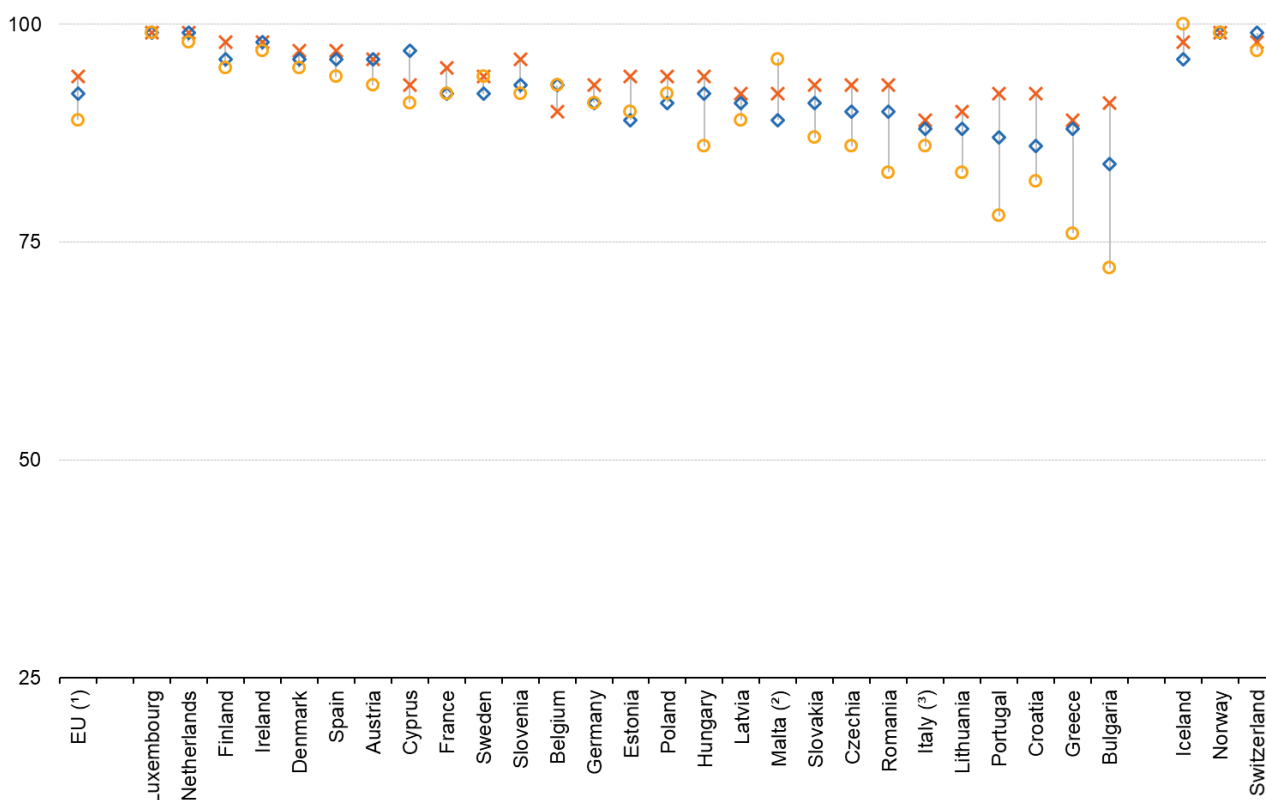
eurostat

Figure 2: Internet access of households, 2016 and 2021 (% of all households) Source: Eurostat (isoc_ci_in_h)

Figure 3 shows that there is, to some extent, an urban–rural divide within the EU in terms of internet access. Whereas households in cities as well as towns and suburbs had comparatively high access rates — 94 % in cities and 92 % in towns and suburbs — internet access was somewhat lower in rural areas (89 %). In 22 EU Member States, the proportion of households in rural areas with internet access was lower than the equivalent proportions of households in cities or in towns and suburbs. The divide between rural areas and the two other types of areas was particularly strong in Bulgaria, Portugal, Greece, Croatia and Romania, each of which had a lower overall level of internet access than the EU average. In Luxembourg, the share of households with internet access was identical across the three different degrees of urbanisation, and for the Netherlands and Ireland almost identical (one percentage point lower in rural areas). In Cyprus, towns and suburbs recorded the highest level of internet access, and also in Belgium, where the proportion of households in towns and suburbs and rural areas was identical. Other exceptions were Estonia, Sweden, and Poland, where the highest level of internet access was recorded in cities, but the lowest was recorded in towns and suburbs (rather than rural areas).

Internet access in households by degree of urbanisation, 2021

(% of all households)



Note: ranked on overall internet access. X Cities ◆ Towns and suburbs ○ Rural areas

(¹) Estimates

(²) Rural areas: low reliability

(³) 2020 instead of 2021

Source: Eurostat (online data code: isoc_ci_in_h)

eurostat

Figure 3: Internet access in households by degree of urbanisation, 2021 (% of all households) Source: Eurostat (isoc_ci_in_h)

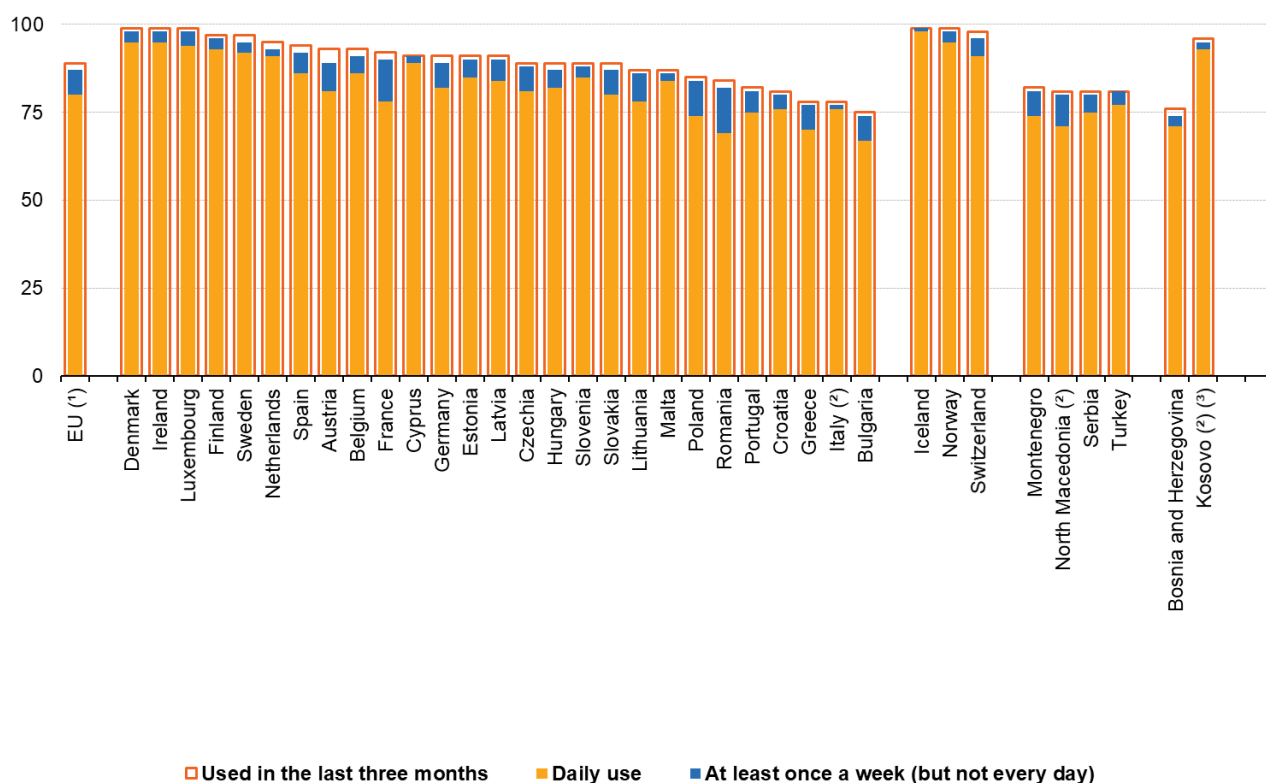
Internet usage

As of the beginning of 2021, almost nine out of ten (89 %) individuals in the EU, aged between 16 and 74 years, used the internet (at least once within the three months prior to the survey date). This share was at least 95 % in six countries, with the highest values recorded in Denmark, Ireland and Luxembourg (all 99 %), followed by Finland and Sweden (both 97 %). The lowest share was recorded in Bulgaria (75 %).

The proportion of the EU's population that had never used the internet was 8 % in 2021 (one percentage point lower than the year before), with this share falling to around one third of its level in 2011 (when it had stood at 26 %).

In 2021, four fifths (80 %) of individuals in the EU accessed the internet on a daily basis — see Figure 4 — with a further 7 % using it at least once a week (but not daily). As such, 87 % of individuals were regular internet users (at least weekly) of the internet. The proportion of daily internet users among all internet users (who had used the internet within the previous three months) averaged 90 % in the EU and ranged across the EU Member States from 82 % in Romania up to more than 90 % in eighteen Member States, peaking at 98 % in Cyprus, followed by the Netherlands (97 %), and Denmark, Ireland, Malta and Finland (all 96 %). Iceland (98 %) reported also a higher share of daily internet users among all internet users.

Frequency of internet use, 2021 (% of individuals aged 16 to 74)



(1) Estimates

(2) 2020 instead of 2021

(3) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/99 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data codes: isoc_ci_ifp_iu and isoc_ci_ifp_fu)

eurostat

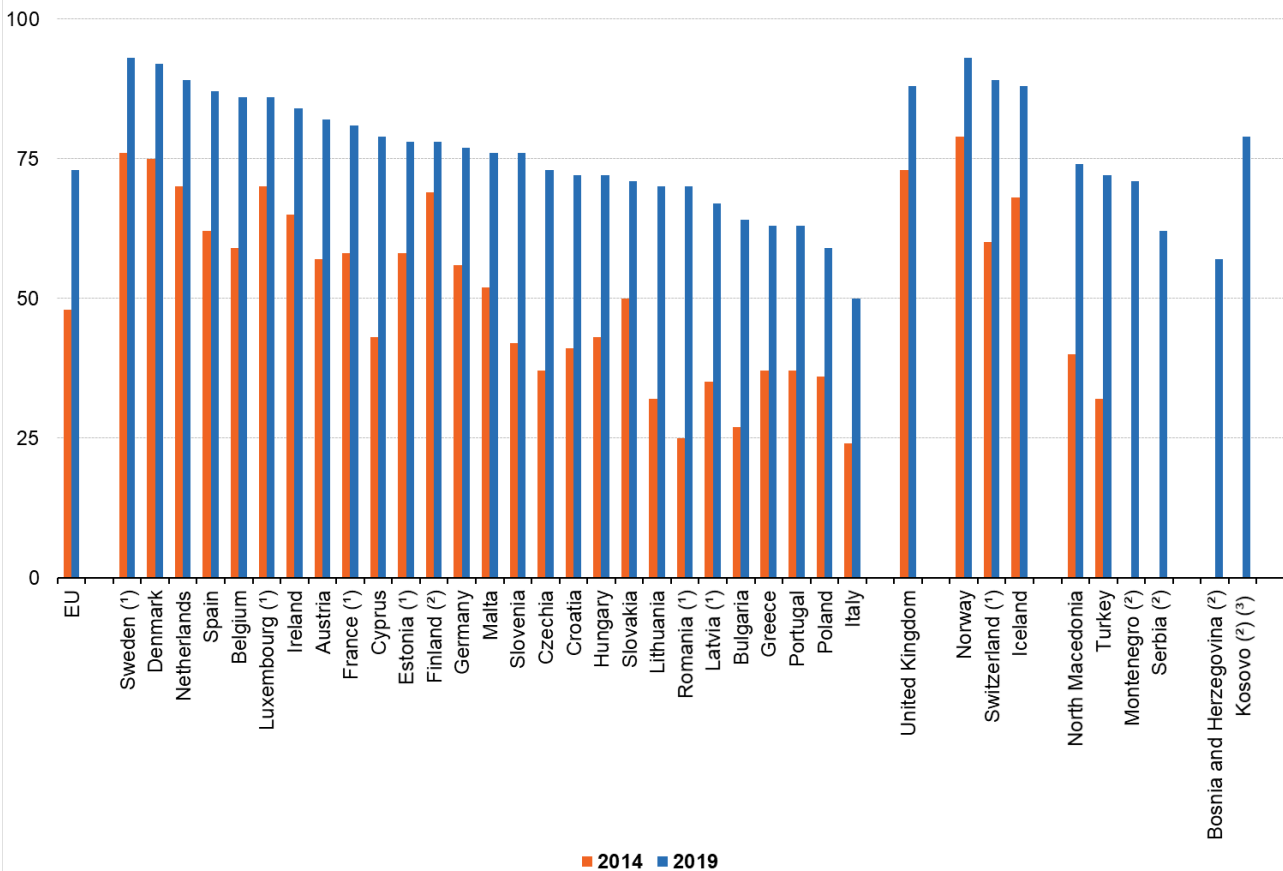
Figure 4: Frequency of internet use, 2021 (% of individuals aged 16 to 74) Source: Eurostat (isoc_ci_ifp_iu) and (isoc_ci_ifp_fu)

Figure 5 looks at the use of the [internet while on the move](#), in other words when away from home or work, for example, using the internet on a portable computer or handheld device via a mobile or wireless connection. The figure compares 2014 data, when 48 % of individuals aged 16 to 74 within the EU used a mobile device to connect to the internet, with 2019 data, by which time this share had risen to 73 %. The most common mobile devices for internet connections were mobile or smart phones, laptops, and tablet computers.

Sweden, Denmark, the Netherlands, Spain, Belgium, Luxembourg, Ireland, Austria and France recorded the highest proportions of mobile internet use in 2019, with more than four fifths of individuals aged 16 to 74 using the internet while on the move, peaking at 93 % in Sweden, sharing the top rank with Norway. By comparison, between 63 % and 70 % of individuals aged 16 to 74 in Portugal, Greece, Bulgaria, Latvia, Romania and Lithuania used the internet away from home or work, with this proportion as low as 59 % in Poland and 50 % in Italy.

Individuals who used a portable computer or a handheld device to access the internet away from home or work, 2014 and 2019

(% of individuals aged 16 to 74)



Note: defined as using the internet away from home or work on portable computers or handheld devices via mobile phone networks or wireless connections.

(1) Break in series.

(2) 2014: not available.

(3) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/99 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data code: isoc_ci_im_i)

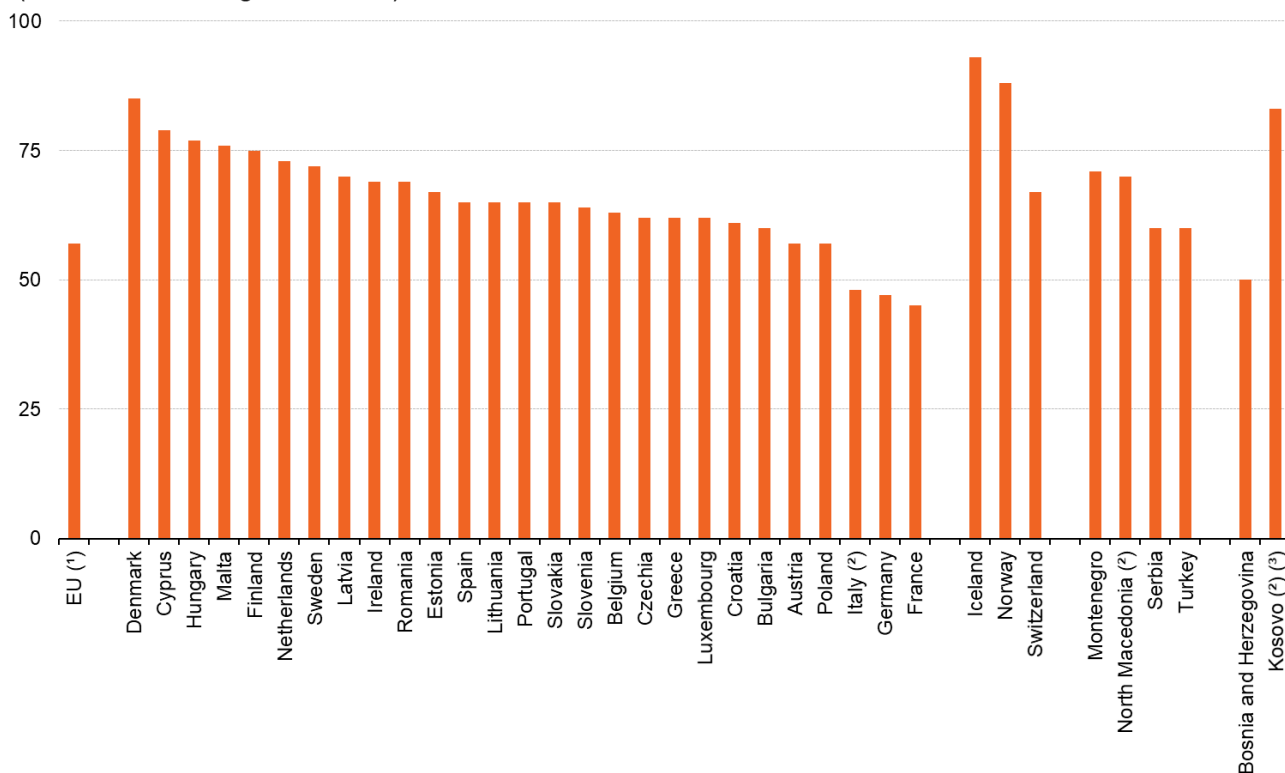
eurostat

Figure 5: Individuals who used a portable computer or a handheld device to access the internet away from home or work, 2014 and 2019 (% of individuals aged 16 to 74) Source: Eurostat (isoc_ci_im_i)

One of the most common online activities in the EU in 2021 was participation in social networking, see Figure 6. More than half (57 %) of individuals aged 16 to 74 used the internet for social networking (for example, using sites such as Facebook, Twitter, Instagram or Snapchat). Between 75 % and 79 % of people in Finland, Malta, Hungary and Cyprus used social networking sites, this share peaking at 85 % in Denmark, while it rose considerably higher in Iceland (93 %) and Norway (88 %). At the other end of the scale, there were two EU Member States where less than half of people used such sites, namely Germany (47 %) and France (45 %).

Individuals who used the internet for participation in social networking, 2021

(% of individuals aged 16 to 74)



(¹) Estimate

(²) 2020 instead of 2021

(³) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/99 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data code: isoc_ci_ac_i)

eurostat

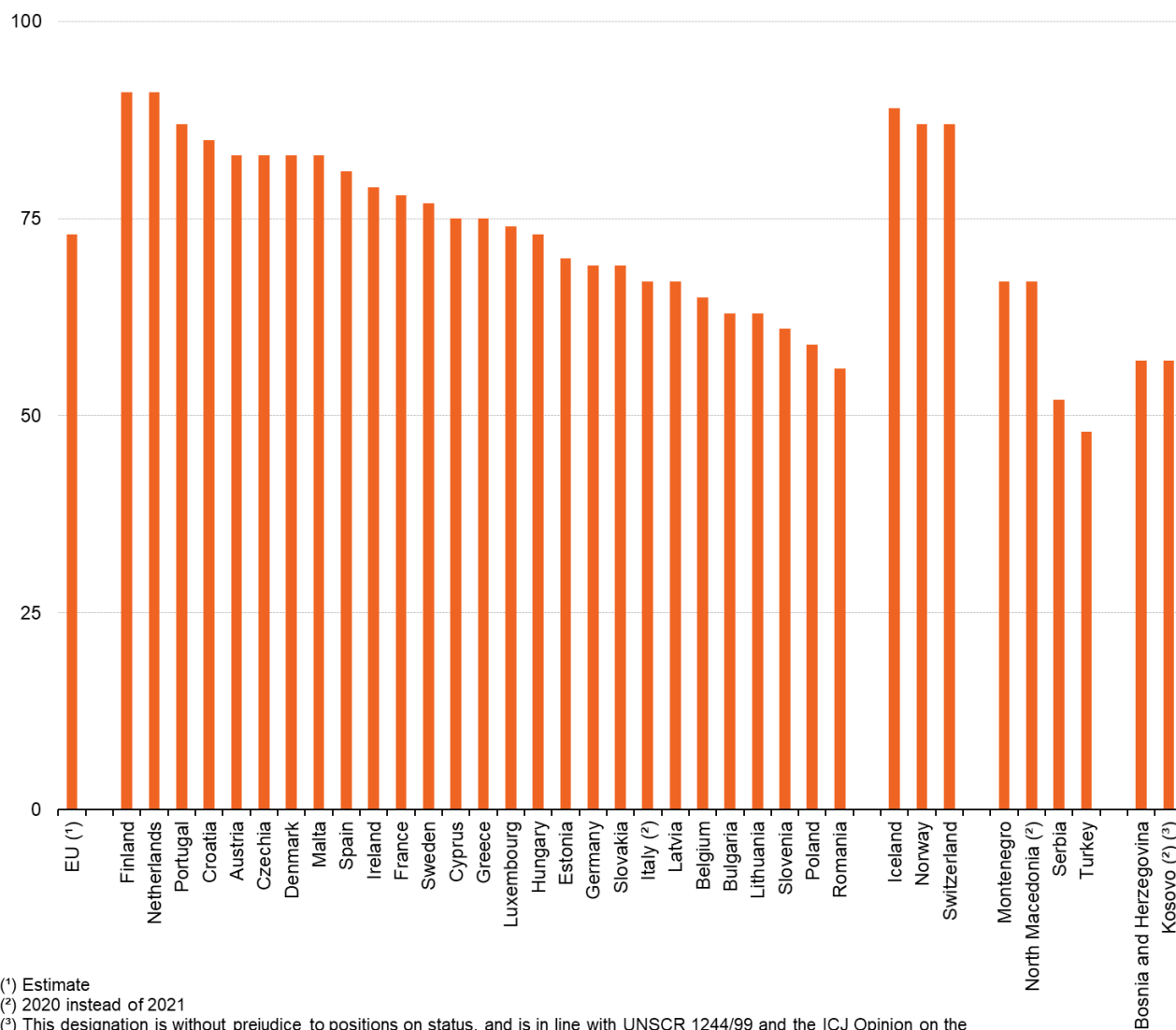
Figure 6: Individuals who used the internet for participation in social networking, 2021 (% of individuals aged 16 to 74) Source: Eurostat (isoc_ci_ac_i)

Privacy and protection of personal identity

Disparities between the EU Member States can be observed in the way internet users managed access to their personal information on the internet in 2021. Slightly less than three quarters (73 %) of EU internet users managed access to personal information over the internet, a share that ranged from just 56 % in Romania to 91 % in both Finland and the Netherlands (see Figure 7). EU internet users did provide some kind of personal information online, many of them undertaking different actions to control access to this personal information on the internet. More than half (53 %) of all internet users refused to allow the use of personal information for advertising and just less than half (48 %) restricted access to their geographical location. Just two fifths (40 %) limited access to their profile or content on social networking sites. In addition, more than one third (39 %) of internet users read privacy policy statements before providing personal information.

Individuals who managed access to any personal information over the internet, 2021

(% of individuals who used internet within the last 3 months)



(¹) Estimate

(²) 2020 instead of 2021

(³) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/99 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data code: isoc_cisci_prv20)

eurostat

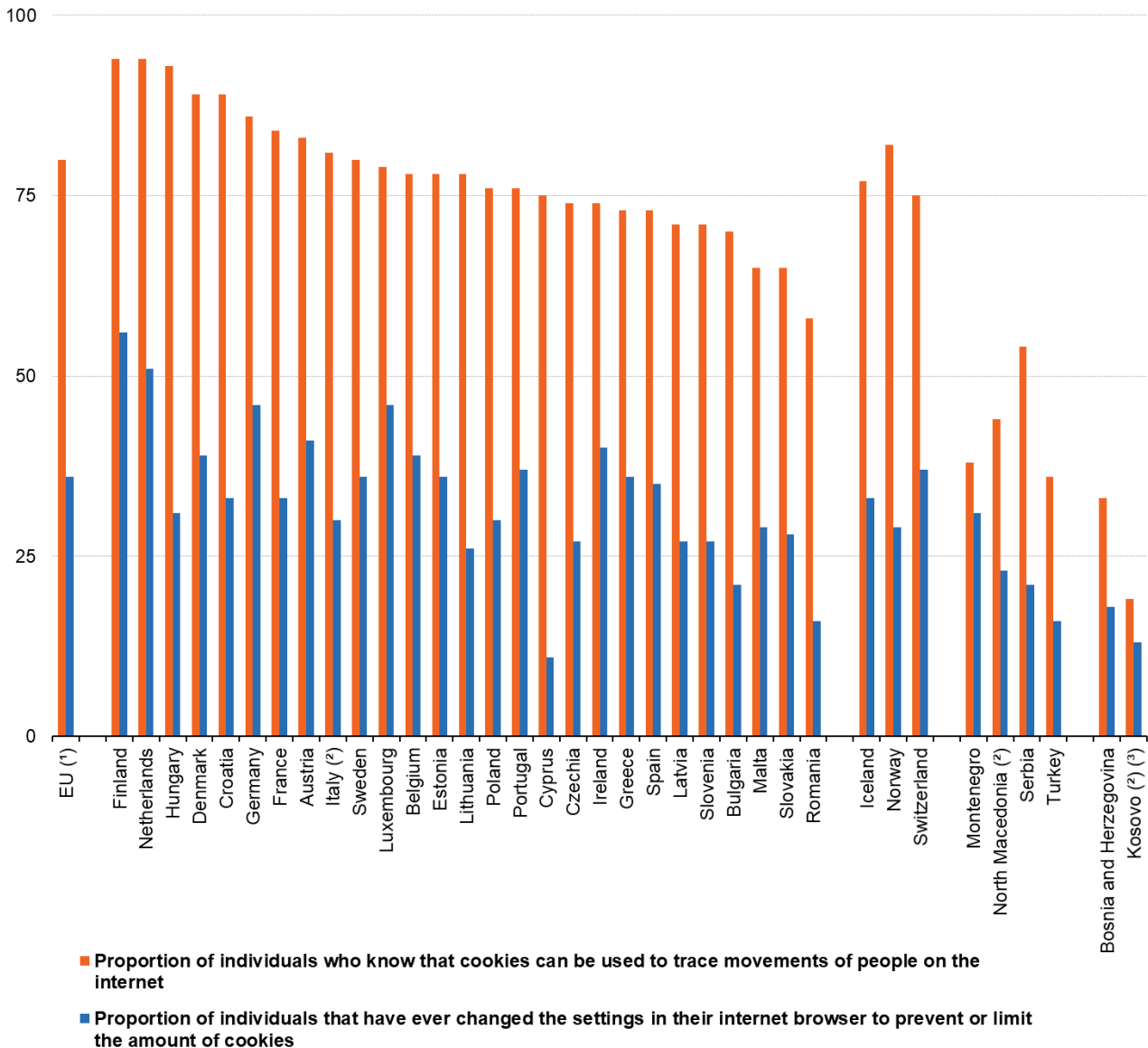
Figure 7: Individuals who managed access to any personal information over the internet, 2021 (% of individuals who used internet within the last 3 months) Source: Eurostat (isoc_cisci_prv20)

In 2021, some 80 % of people aged 16 to 74 in the EU who had used the internet in the previous 3 months knew that cookies can be used to trace people’s online activities. Awareness of this issue was slightly higher (86 %) among younger users (aged 16 to 24) and lower (74 %) among older users (aged 55 to 74). Just over one third (36 %) of users aged 16 to 74 reported that they had changed their internet browser settings to prevent or limit cookie use (see Figure 8).

Among the EU Member States, internet users in Finland and the Netherlands (both 94 %), Hungary (93 %), Denmark and Croatia (both 89 %) had the greatest awareness that cookies could be used to trace their online activities. Awareness was also high in Germany (86 %), France (84 %) and Austria (83 %). By contrast, more than half of internet users were aware of this in Romania (58 %), Slovakia and Malta (both 65 %). The proportion of internet users that had changed their internet browser settings to prevent or limit cookie use exceeded half in just two Member States, namely Finland (56 %) and the Netherlands (51 %). By contrast, a considerably smaller proportion of the

internet users had taken such action in Bulgaria (21 %), Romania (16 %) and Cyprus (11 %).

Use of cookies and browser settings, 2021 (% of individuals who used internet within the last 3 months)



(1) Estimates

(2) 2020 instead of 2021

(3) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/99 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data code: isoc_cisci_prv20)

Figure 8: Use of cookies and browser settings, 2021 (% of individuals who used internet within the 3 months)
Source: Eurostat (isoc_cisci_prv20)

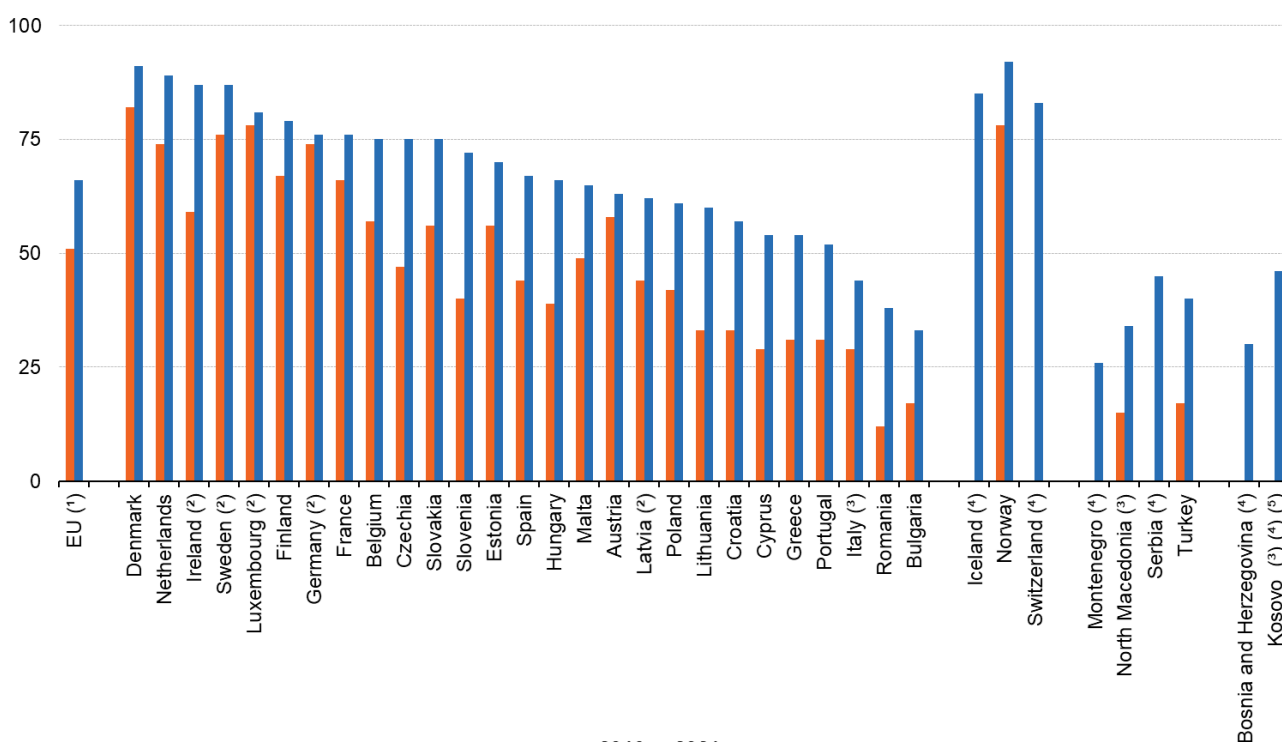
Ordering or buying goods and services

The proportion of individuals aged 16 to 74 in the EU who ordered or bought goods or services over the internet for private use continued to rise: in 2021, it stood at 66 %, an increase of 15 percentage points when compared with 2016 (see Figure 9). More than three quarters of individuals in France, Germany and Finland ordered or bought

goods or services over the internet in 2021 and this share reached at least four fifths in Luxembourg (81 %), Sweden and Ireland (both 87 %), the Netherlands (89 %) and at the top range, Denmark (91 %). By contrast, this proportion was the lowest in Romania (38 %) and Bulgaria (33 %).

Excluding the five EU Member States that reported a break in series — Ireland, Germany, Latvia, Luxembourg and Sweden — seventeen of the EU Member States had an increase of 15 percentage points or more between 2016 and 2021. The largest increase in the proportion of individuals who ordered or bought goods or services over the internet between 2016 and 2021 was observed in Slovenia (up 32 percentage points), Czechia (up 28 percentage points) followed by Hungary and Lithuania (both up 27 percentage points). However, the share of individuals ordering goods or services over the internet also rose at a relatively modest pace in Austria, Denmark and France (10 percentage points or less).

Individuals who ordered goods or services over the internet for private use in the 12 months prior to the survey, 2016 and 2021 (% of individuals aged 16 to 74)



(¹) 2021 estimate
(²) Break in the time series

(³) 2020 instead of 2021

(⁴) 2016: not available

(⁵) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/99 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data code: isoc_ec_ib20 and isoc_ec_ibuy)

eurostat

Figure 9: Individuals who ordered goods or services over the internet for private use in the 12 months prior to the survey, 2016 and 2021 (% of individuals aged 16 to 74) Source: Eurostat (isoc_ec_ib20) and (isoc_ec_ibuy)

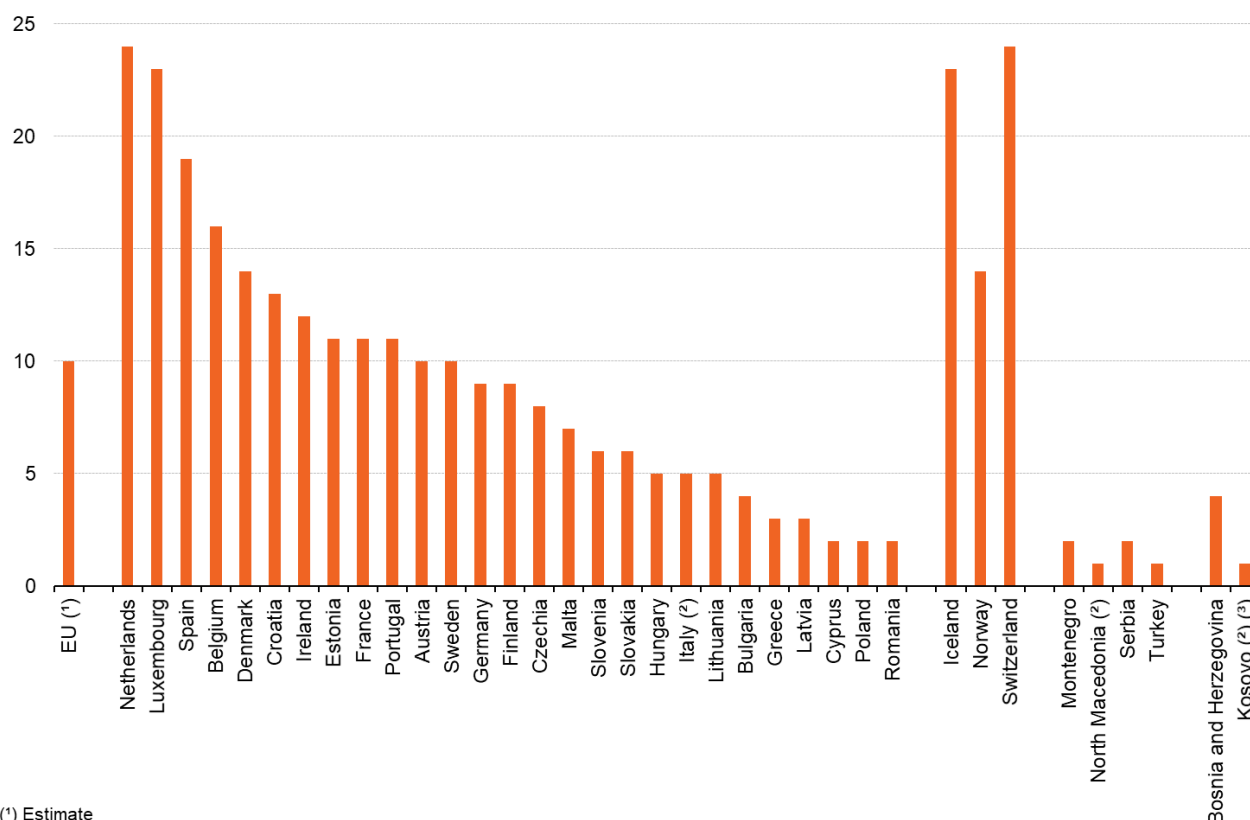
Services ordered via the internet

In 2021, the share of individuals (aged 16 to 74) in the EU who used any website or app for renting accommodation from an enterprise or a private person during the preceding 3 months stood at 10 %. This proportion ranged from highs of 24 % in the Netherlands followed by Luxembourg (23 %) and below one fifth for ten countries like Spain, Belgium and Denmark, down to less than 1 in 10 individuals in fifteen EU Member States, with the lowest shares recorded in Greece and Latvia (3 %) and Cyprus, Poland and Romania (all at 2 %). Online rented accommodation was more common among middle-aged people (aged 25 to 54) with 12 % than it was among either younger (aged

16 to 24) with 9 % or older generations (aged 55 to 74) with 6 %. Most of these services were ordered through dedicated websites or apps, which act as intermediaries, enabling private individuals to share access to accommodation services — examples include Airbnb, Lovehomeswap or Couchsurfing — or through enterprises such as hotels or travel agencies.

Individuals who used any website or app for renting accommodation from an enterprise or a private person in the 3 months prior to the survey, 2021

(% of individuals aged 16 to 74)



(¹) Estimate

(²) 2020 instead of 2021

(³) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/99 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data code: isoc_ec_ibgs)

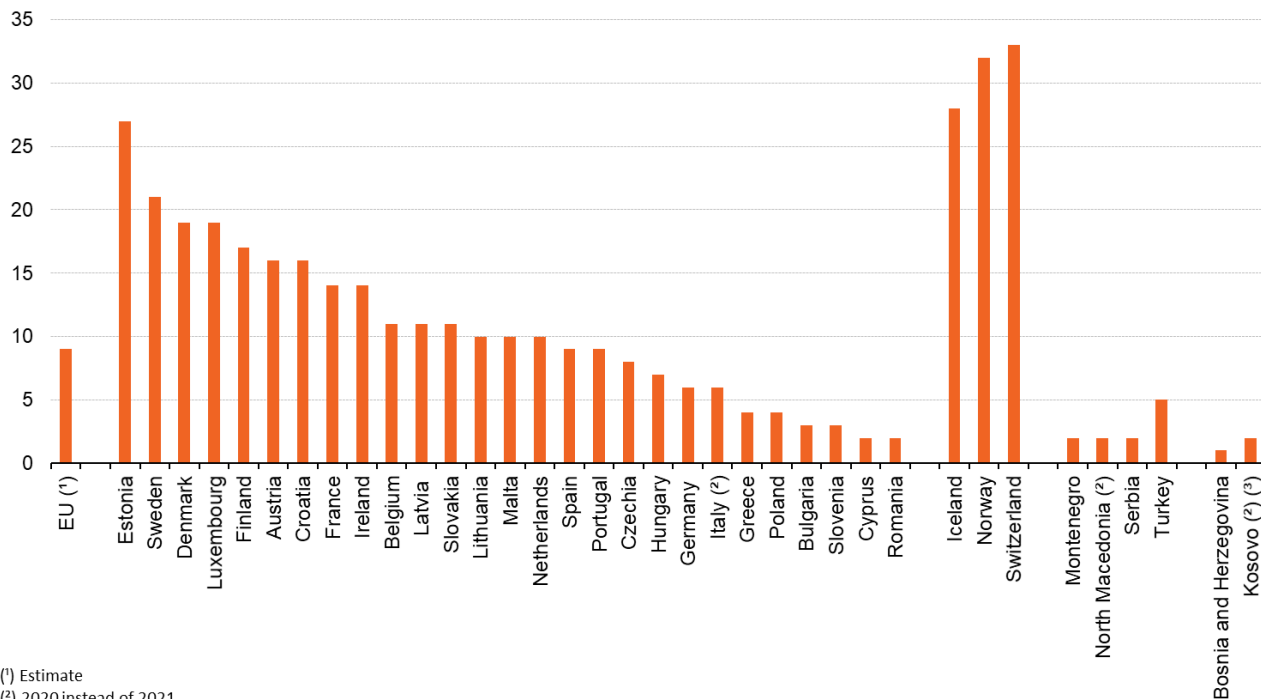
eurostat

Figure 10: Individuals who used any website or app for renting accommodation from an enterprise or a private person in the 3 months prior to the survey, 2021 (% of individuals aged 16 to 74) Source: Eurostat (isoc_ec_ibgs)

A similar analysis is presented in Figure 11, which shows the share of individuals who used any website or app to buy a transport service from another individual or a transport enterprise. This type of service was often conducted via dedicated websites and apps (for example, Liftshare, UberPool or Wundercar) or a transport enterprise (local bus, train, taxi,...); the average use made of these types of service across the EU by individuals (aged 16 to 74) was 9 %. Among the EU Member States, the share of individuals using any website or app to buy a transport service in 2021 peaked in Estonia (27 %) followed by Sweden (21 %). It was commonplace to find that fewer than 1 in 10 individuals used a website or app to arrange transport services; indeed, this situation was observed in twelve Member States. Buying online transport tended to be more common among the younger generations (15 % of individuals aged 16 to 24) than among older people (4 %).

Individuals who used any website or app for buying a transport service from an enterprise or a private person in the 3 months prior to the survey, 2021

(% of individuals aged 16 to 74)



(¹) Estimate

(²) 2020 instead of 2021

(³) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/99 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data code: isoc_ec_ibgs)

eurostat

Figure 11: Individuals who used any website or app for buying a transport service from an enterprise or a private person in the 3 months prior to the survey, 2021 (% of individuals aged 16 to 74) Source: Eurostat (isoc_ec_ibgs)

Source data for tables and figures (MS Excel)

- [Digital economy and society - households and individuals: tables and figures](#)

Data sources

Rapid technological change in areas related to the internet and other new applications of ICTs pose challenges for statistics. As such, there has been a considerable degree of development in this area, with statistical tools being adapted to satisfy new demands for data. Indeed, statistics within this domain are reassessed on an annual basis in order to meet user needs and reflect the rapid pace of change.

This approach is replicated in Eurostat's [survey on ICT usage in households and by individuals](#). This annual survey is used to benchmark ICT-driven developments, both by following developments for core variables over time and by looking in greater depth at other aspects at a specific point in time. While the survey initially concentrated on access and connectivity issues, its scope has subsequently been extended to cover a variety of subjects (for example, [e-government](#) and [e-commerce](#)) and socioeconomic analysis (such as regional diversity, gender specificity, differences in age, education and the [employment](#) situation). The scope of the survey with respect to different technologies is also adapted so as to cover new product groups and means of delivering communication technologies to end-users (such as introducing new questions about online peer-to-peer accommodation or transport services in 2017).

The reference period for the survey on ICT usage in households and by individuals is in most cases the first quarter of each year; in most countries the survey is conducted in the second quarter of each year.

Coverage and definitions The household ICT survey covers those households having at least one member in the age group 16 to 74 years old. Internet access of households refers to the percentage of households that have an internet access, so that anyone in the household could use the internet at home, if so desired, even simply to send an e-mail.

Internet users are defined as all individuals aged 16 to 74 who had used the internet in the three months prior to the survey. Regular internet users are individuals who used the internet, on average, at least once a week in the three months prior to the survey.

The wired technologies most commonly used to access the internet are divided between broadband and dial-up access over a normal or an ISDN telephone line. Broadband includes **digital subscriber lines (DSL)** and uses technology that transports data at high speeds. Broadband lines are defined as having a capacity higher than ISDN, meaning equal to or higher than 144 kbit/s. Popular devices to access the internet at home include desktop and portable computers, while more recently there has been an expansion in other internet-enabled technologies.

Mobile internet usage is defined as using the internet away from home or work on portable computers or hand-held devices via mobile phone networks or wireless connections.

The ordering of goods and services by individuals refers to the 3-month period prior to the survey and includes rented accommodation or transport services, purchasing financial investments, telecommunication services, video games or software, as well as information services from the internet that are directly paid for. Goods and services that are obtained via the internet for free are excluded. Orders made by manually typed e-mails, SMS or MMS are also excluded.

Context

In 2019, the new European Commission President, Ursula von der Leyen, described how she wanted the EU to grasp the opportunities presented by the digital age. Such a digital transformation is based on the premise that digital technologies and solutions should: open up new opportunities for businesses; boost the development of trustworthy technology; foster an open and democratic society; enable a vibrant and sustainable economy; help fight climate change.

Data from this survey supports measuring the implementation of one of the six priorities for the period 2019-2024 of the von der Leyen European Commission – **A Europe fit for the digital age** . The strategy is built on three pillars: (1) Technology that works for the people; (2) A fair and competitive digital economy; (3) An open, democratic and sustainable society. Furthermore, it facilitates the monitoring of the EU's digital targets for 2030, set by the Digital Compass for the EU's **Digital Decade** , evolving around four cardinal points: skills, digital transformation of businesses, secure and sustainable digital infrastructures, and digitalization of public services. Data on the use of ICT in households and by individuals appears as well among the monitoring indicators of the **Consumer Conditions Scoreboard** and the **European Skills Agenda** .

Other links:

- [A Digital Single Market Strategy for Europe COM\(2015\) 192 final](#)
- [Monitoring the Digital Economy & Society 2016-2021](#) , European Commission, Directorate-General Communications Networks, Content & Technology

External links

- [A Digital Single Market Strategy for Europe COM\(2015\) 192 final](#)
- [Monitoring the Digital Economy & Society 2016-2021](#) , European Commission, Directorate-General Communications Networks, Content & Technology
- [OECD — Internet](#)

Other articles

- [E-commerce statistics for individuals](#)
- [Enlargement countries - information and communication technology statistics](#)
- [Digital economy and society statistics - enterprises](#)
- [Digital society statistics at regional level](#)

Publications

- [Digital economy and society in the EU — 2017 edition — Digital publication](#)
- [Press releases and other publications](#)
- [Statistical articles](#)

Main tables

- [Digital economy and society \(t_isoc\)](#)

ICT usage in households and by individuals (t_isoc_i)

Database

- [Digital economy and society \(isoc\)](#), see:

ICT usage in households and by individuals (isoc_i)

 Connection to the internet and computer use (isoc_ici)

 Households - level of internet access (isoc_ci_in_h)

 Households - type of connection to the internet (isoc_ci_it_h)

 Individuals - mobile internet access (isoc_ci_im_i)

Internet use (isoc_iiu)

 Individuals - internet use (isoc_ci_ifp_iu)

 Individuals - frequency of internet use (isoc_ci_ifp_fu)

E-commerce (isoc_iec)

 Internet purchases by individuals (2020 onwards) (isoc_ec_ib20)

 Internet purchases: goods or services (2020 onwards) (isoc_ec_ibgs)

 Internet purchases by individuals (until 2019) (isoc_ec_ibuy)

ICT trust, security and privacy (isoc_ci_sci)

 Privacy and protection of personal information (2020 onwards) (isoc_cisci_prv20)

Dedicated section

- [Digital economy and society](#)

Methodology

- [ICT usage in households and by individuals](#) (ESMS metadata file — isoc_i)
- [Methodological manuals for statistics on the information society](#)

View this article online at http://ec.europa.eu/eurostat/statistics-explained/index.php/Digital_economy_and_society_statistics_-_households_and_individuals