

Digital economy and society statistics - households and individuals

Statistics Explained

Data extracted in June 2019.

Planned article update: September 2020

This article presents recent statistical data on several different aspects of the [information 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.

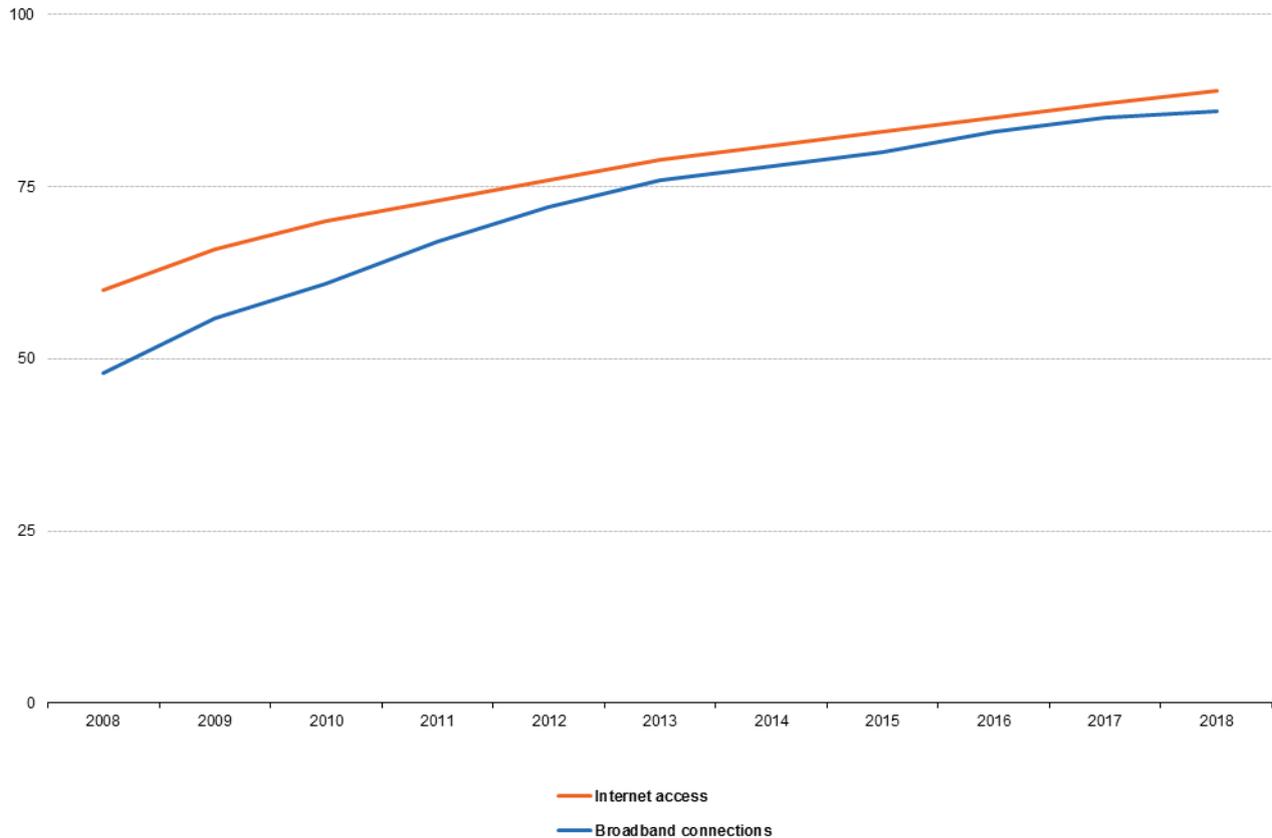
Internet access

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 (55 %) of [households](#) in the [EU-28](#) had [internet access](#). This proportion continued to increase, passing three quarters in 2012 and four fifths in 2014. By 2018, the share of EU-28 households with internet access had risen to 89 %, some 29 [percentage points](#) higher than in 2008.

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 86 % of the households in the EU-28 in 2018, 38 percentage points higher than the share recorded in 2008 (48 %) — see Figure 1.

Internet access and broadband internet connections of households, EU-28, 2008-2018

(% of all households)



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

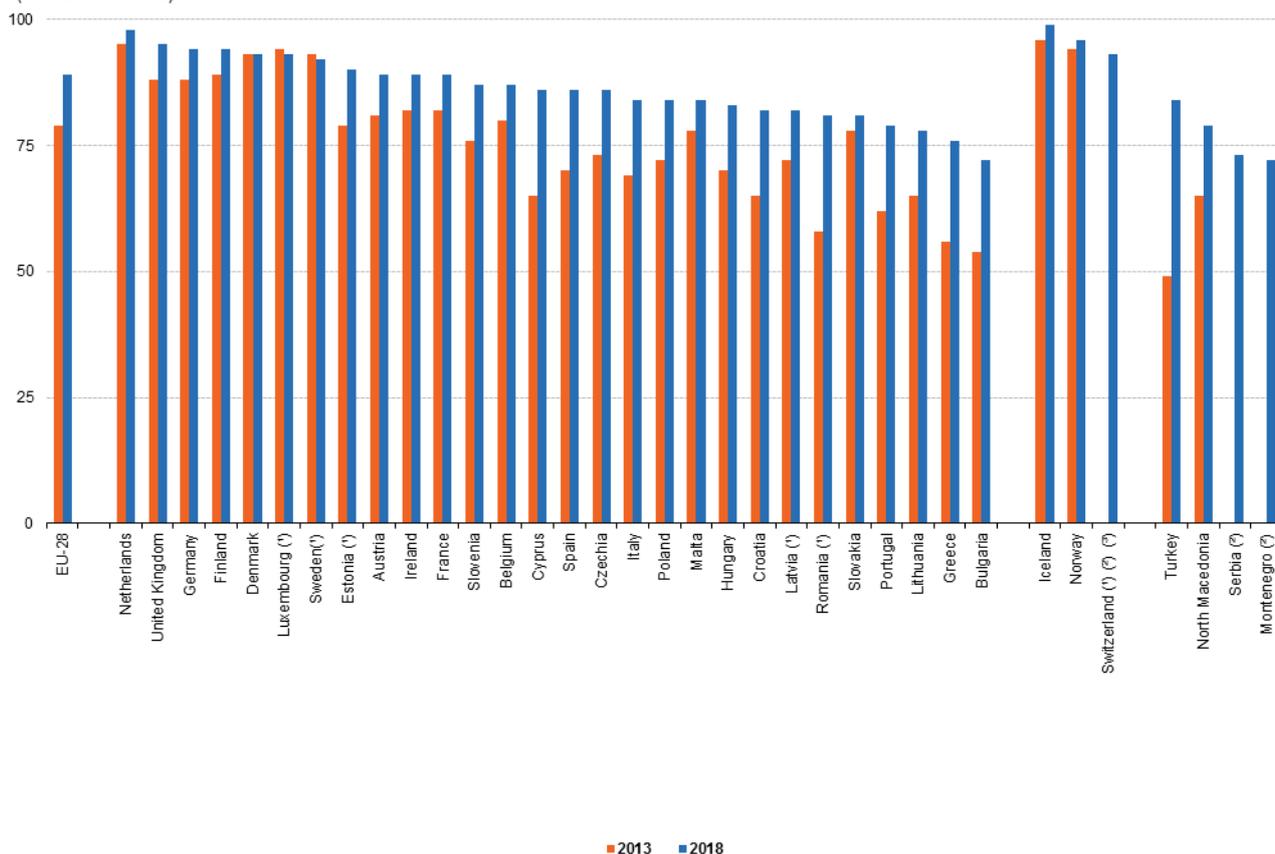
eurostat 

Figure 1: Internet access and broadband internet connections of households, EU-28, 2008-2018
(% of all households) Source: Eurostat (isoc_ci_in_h) and (isoc_ci_it_h)

The highest proportion (98 %) of households with internet access in 2018 was recorded in the Netherlands (see Figure 2), while the United Kingdom, Germany, Finland, Denmark, Luxembourg and Sweden also reported that more than 9 out of every 10 households had internet access. The lowest rate of internet access among the EU Member States was observed in Bulgaria (72 %). However, Bulgaria — together with the Romania, Cyprus, Greece, Portugal and Croatia — recorded a rapid expansion in its proportion of households with internet access, with increases within the range of 17-23 percentage points between 2013 and 2018. Unsurprisingly, relative stability was recorded in several Member States where household internet access was already close to saturation in 2013, such as the Netherlands and Denmark; this was also the case in Iceland and Norway.

Internet access of households, 2013 and 2018

(% of all households)



(*) Break in series.

(*) 2013: not available.

(*) 2017 instead of 2018.

Source: Eurostat (online data code: isoc_ci_in_h)

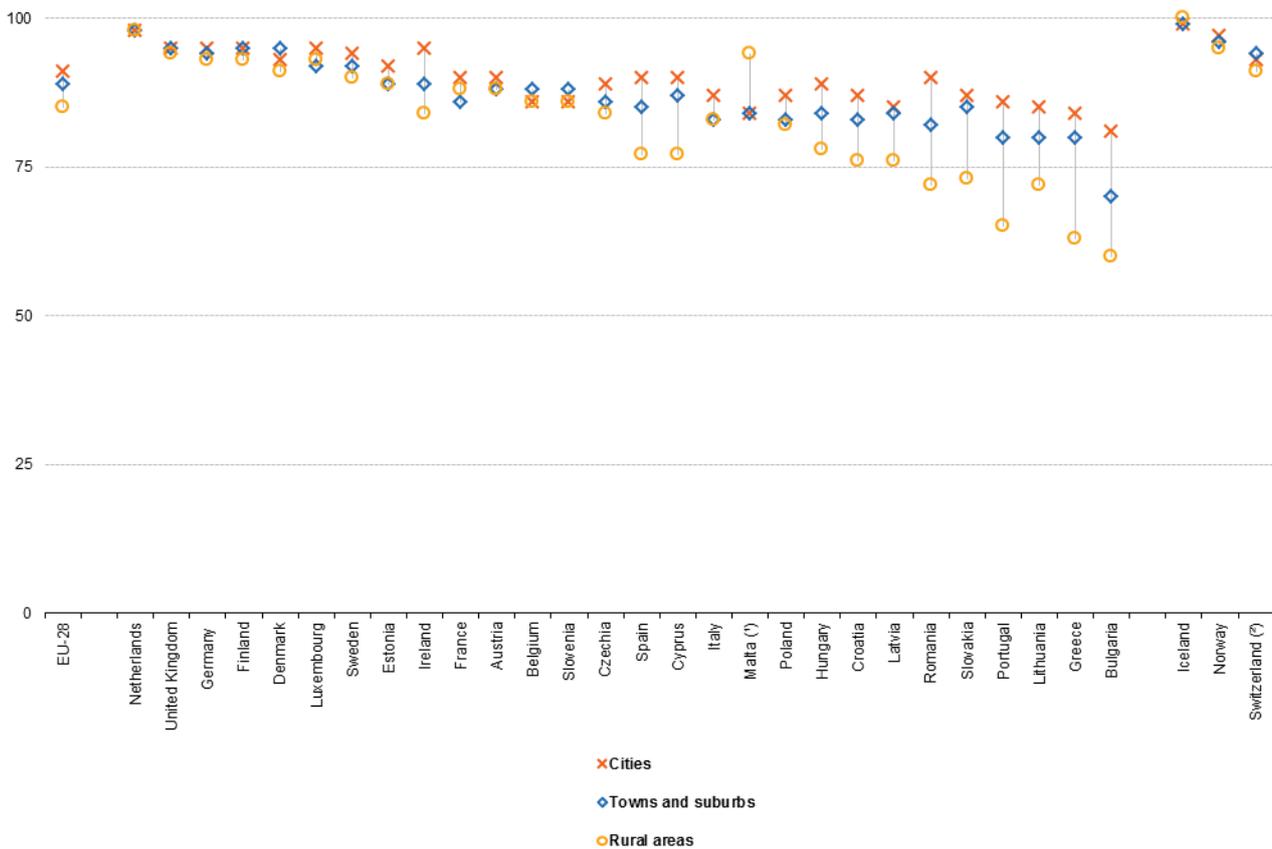


Figure 2: Internet access of households, 2013 and 2018(% of all households)Source: Eurostat (isoc_ci_in_h)

Figure 3 shows that there is, to some extent, an urban–rural divide within the EU-28 in terms of internet access. Whereas households in cities as well as towns and suburbs had comparatively high access rates — 91 % in cities and 89 % in towns and suburbs — internet access was somewhat lower in rural areas (85 %). In 23 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 Greece, Portugal, Bulgaria and Romania, each of which had a lower overall level of internet access than the EU-28 average. In Estonia, Austria and Italy, although internet access was higher in cities, there was no difference in the proportion of households with internet access between those in towns and suburbs and those in rural areas. In the Netherlands, the share of households with internet access was identical across the three different degrees of urbanisation, and for the United Kingdom, almost identical (one percentage point lower in rural areas). In Belgium and Slovenia, towns and suburbs recorded the highest level of internet access, while the proportion of households in cities and rural areas was identical. Other exceptions were France and Luxembourg, 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, 2018

(% of all households)



Note: ranked on overall internet access.

(*) Rural areas: low reliability.

(†) 2017 instead of 2018.

Source: Eurostat (online data code: isoc_ci_in_h)

Figure 3: Internet access in households by degree of urbanisation, 2018(% of all households)Source: Eurostat (isoc_ci_in_h)

Internet usage

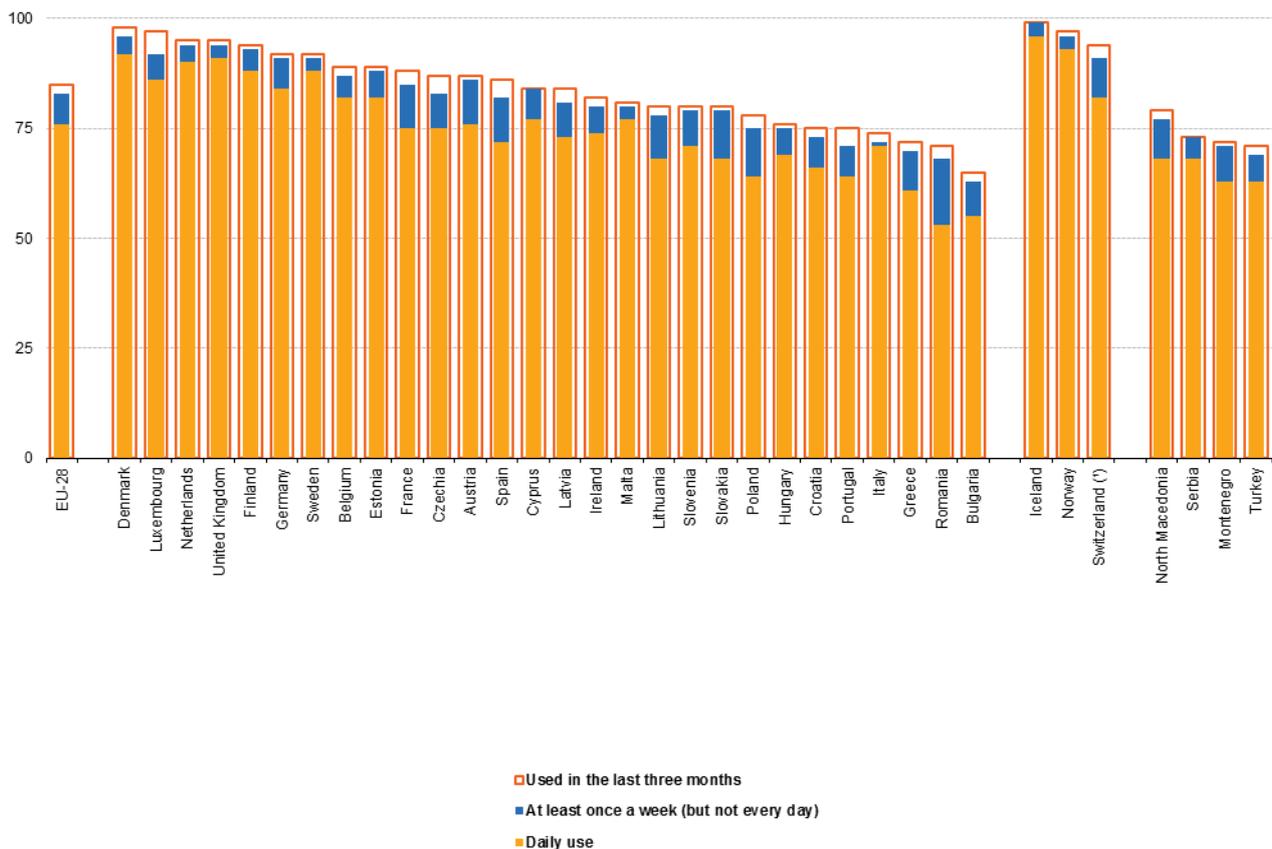
As of the beginning of 2018, more than four fifths (85 %) of all individuals in the EU-28, aged between 16 and 74 years, used the internet (at least once within the three months prior to the survey date). At least 9 out of 10 individuals in Denmark, Luxembourg, the Netherlands, the United Kingdom, Finland, Germany and Sweden used the internet during the three months prior to the survey. By comparison, slightly less than three quarters of all individuals aged 16 to 74 used the internet in Italy (74 %), Greece (72 %) and Romania (71 %), with the lowest share in Bulgaria (65 %).

The proportion of the EU-28's population that had never used the internet was 11 % in 2018 (two percentage points lower than the year before), with this share falling to one third of its level in 2008 (when it had stood at 33 %).

In 2018, more than three quarters (76 %) of individuals in the EU-28 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, 83 % 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 89 % in the EU-28 and ranged across the EU Member States from 76 % in Romania up to more than 90 % in ten Member States, peaking at 96 % in Italy and the United Kingdom. Iceland (97 %) reported an even higher share of daily internet users among all internet users.

Frequency of internet use, 2018

(% of individuals aged 16 to 74)



(*) 2017 instead of 2018.

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



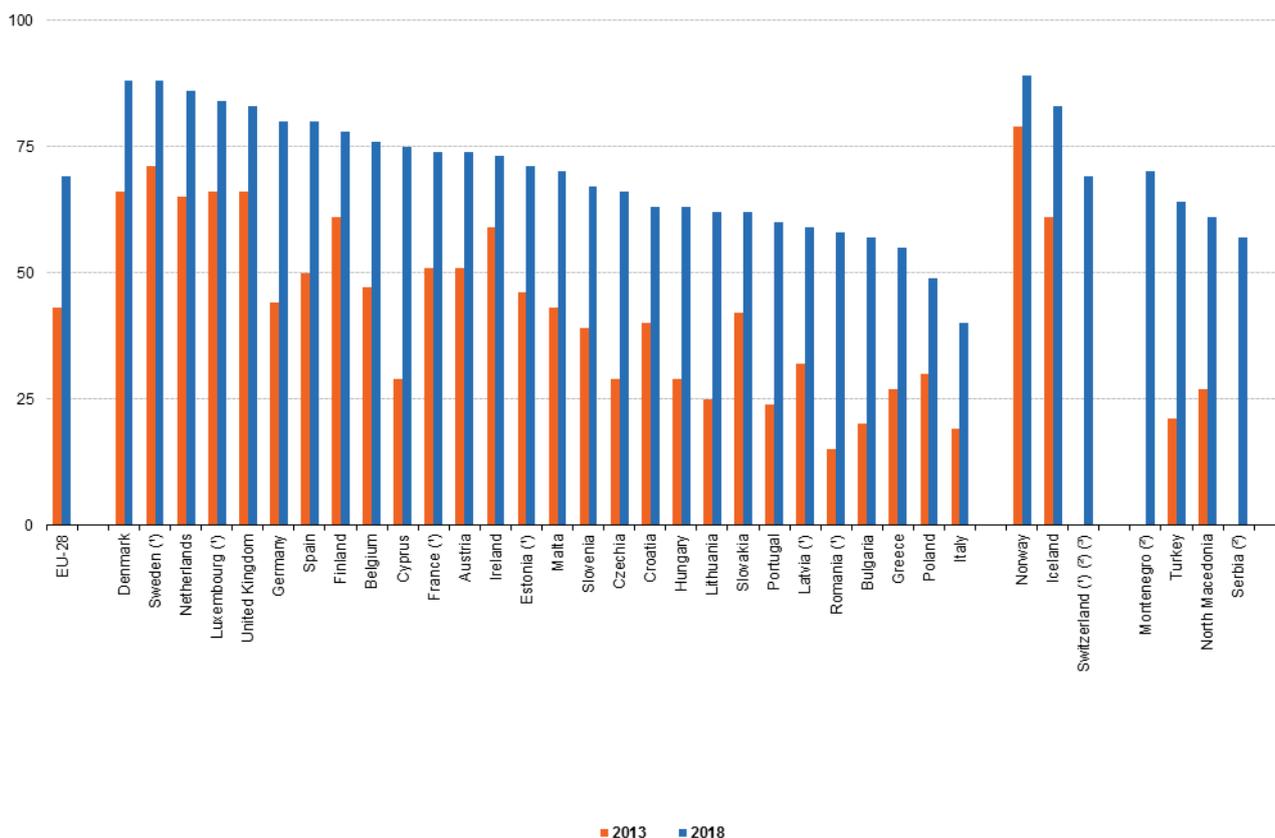
Figure 4: Frequency of internet use, 2018(% of individuals aged 16 to 74)Source: Eurostat (isoc_ci_ifp_iu) and (isoc_ci_ifp_fu)

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 2013 data, when 43 % of individuals aged 16 to 74 within the EU-28 used a mobile device to connect to the internet, with 2018 data, by which time this share had risen to 69 %. The most common mobile devices for internet connections were mobile or smart phones, laptops, and tablet computers.

Denmark, Sweden, the Netherlands, Luxembourg and the United Kingdom recorded the highest proportions of mobile internet use in 2018, with more than four fifths of individuals aged 16 to 74 using the internet while on the move, peaking at 88 % in Denmark and Sweden; with one percentage point more, the maximum share was recorded in Norway (89 %). By comparison, between 50 % and 60 % of individuals aged 16 to 74 in Greece, Bulgaria, Romania, Latvia and Portugal used the internet away from home or work, with this proportion as low as 49 % in Poland and 40 % in Italy.

Individuals who used a portable computer or a handheld device to access the internet away from home or work, 2013 and 2018

(% 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.

(*) Break in series.

(*) 2013: not available.

(*) 2017 instead of 2018.

Source: Eurostat (online data code: isoc_ci_im_i)

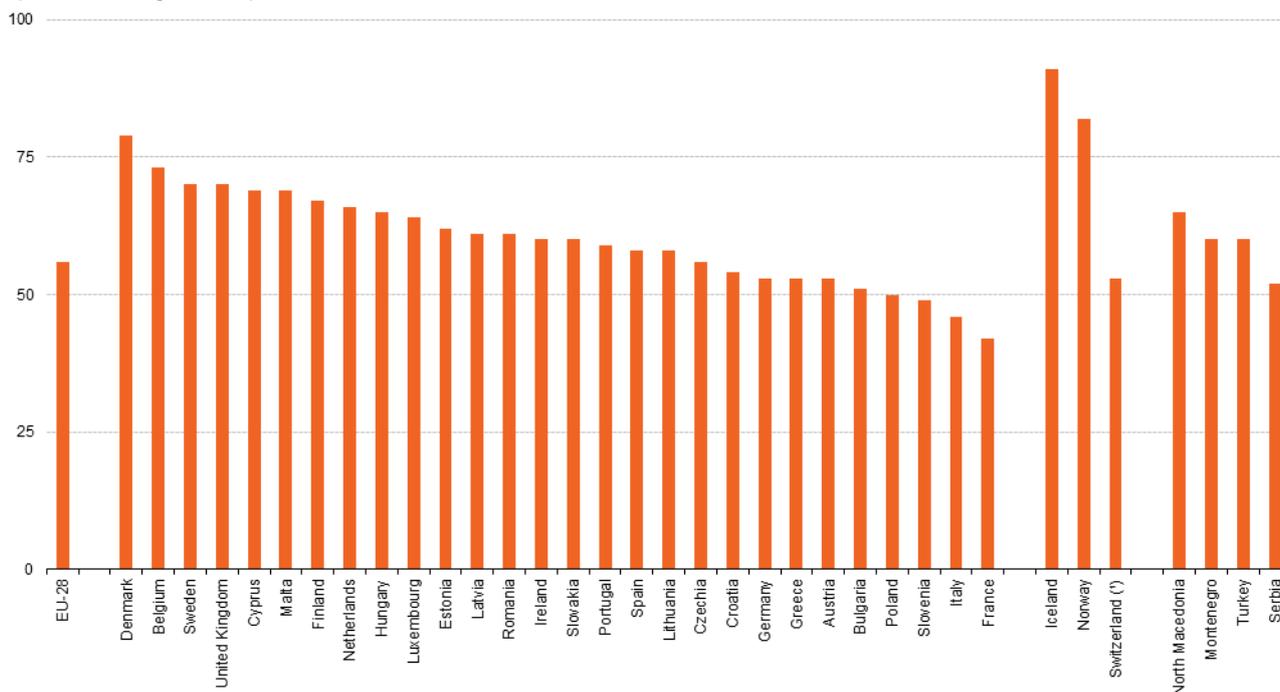


Figure 5: Individuals who used a portable computer or a handheld device to access the internet away from home or work, 2013 and 2018(% of individuals aged 16 to 74)Source: Eurostat (isoc_ci_im_i)

One of the most common online activities in the EU-28 in 2018 was participation in social networking, see Figure 6. More than half (56 %) of individuals aged 16 to 74 used the internet for social networking (for example, using sites such as Facebook, Twitter, Instagram or Snapchat). Between 70 % and 80 % of people in Denmark, Belgium, Sweden and the United Kingdom used social networking sites, this share peaking at 79 % in Denmark, while it rose considerably higher in Iceland (91 %) and Norway (82 %). At the other end of the scale, there were three EU Member States where less than half of people used such sites, namely Slovenia (49 %), Italy (46 %) and France (42 %).

Individuals who used the internet for participation in social networking, 2018

(% of individuals aged 16 to 74)



(*) 2017 instead of 2018.

Source: Eurostat (online data code: isoc_ci_ac_i)

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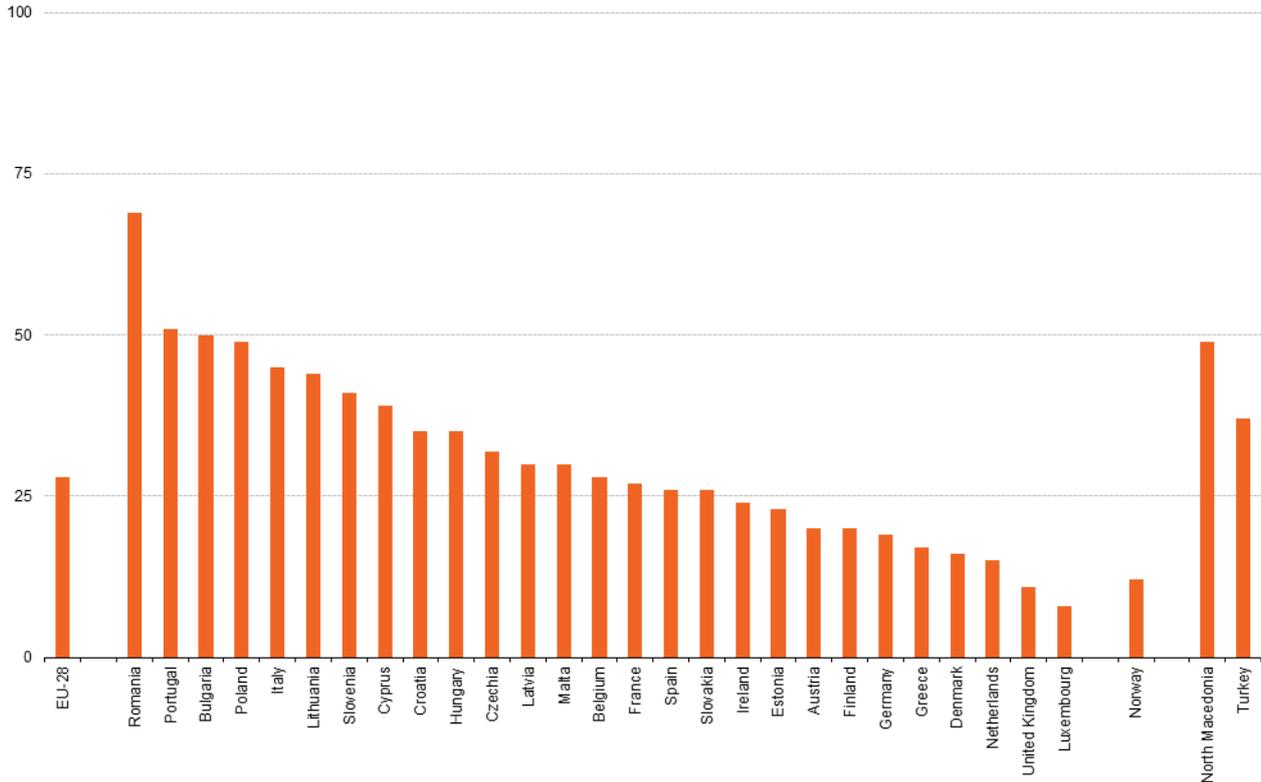
Figure 6: Individuals who used the internet for participation in social networking, 2018(% of individuals aged 16 to 74)Source: Eurostat (isoc_ci_ac_i)

Privacy and protection of personal identity (2016 survey)

Disparities between the EU Member States can be observed in the way internet users managed access to their personal information on the internet in 2016. More than one quarter (28 %) of EU-28 internet users did not provide personal information over the internet, a share that ranged from just 8 % in Luxembourg to half or more in Bulgaria, Portugal and Romania (see Figure 7). As such, more than 70 % of EU-28 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. Almost half (46 %) of all internet users refused to allow the use of personal information for advertising and two fifths (40 %) limited access to their profile or content on social networking sites. In addition, more than one third (37 %) of internet users read privacy policy statements before providing personal information, while just under one third (31 %) restricted access to their geographical location.

Individuals who did not provide any personal information over the internet, 2016

(% of individuals who used internet within the last year)



Note: Sweden, not available.

Source: Eurostat (online data code: isoc_cisci_prv)

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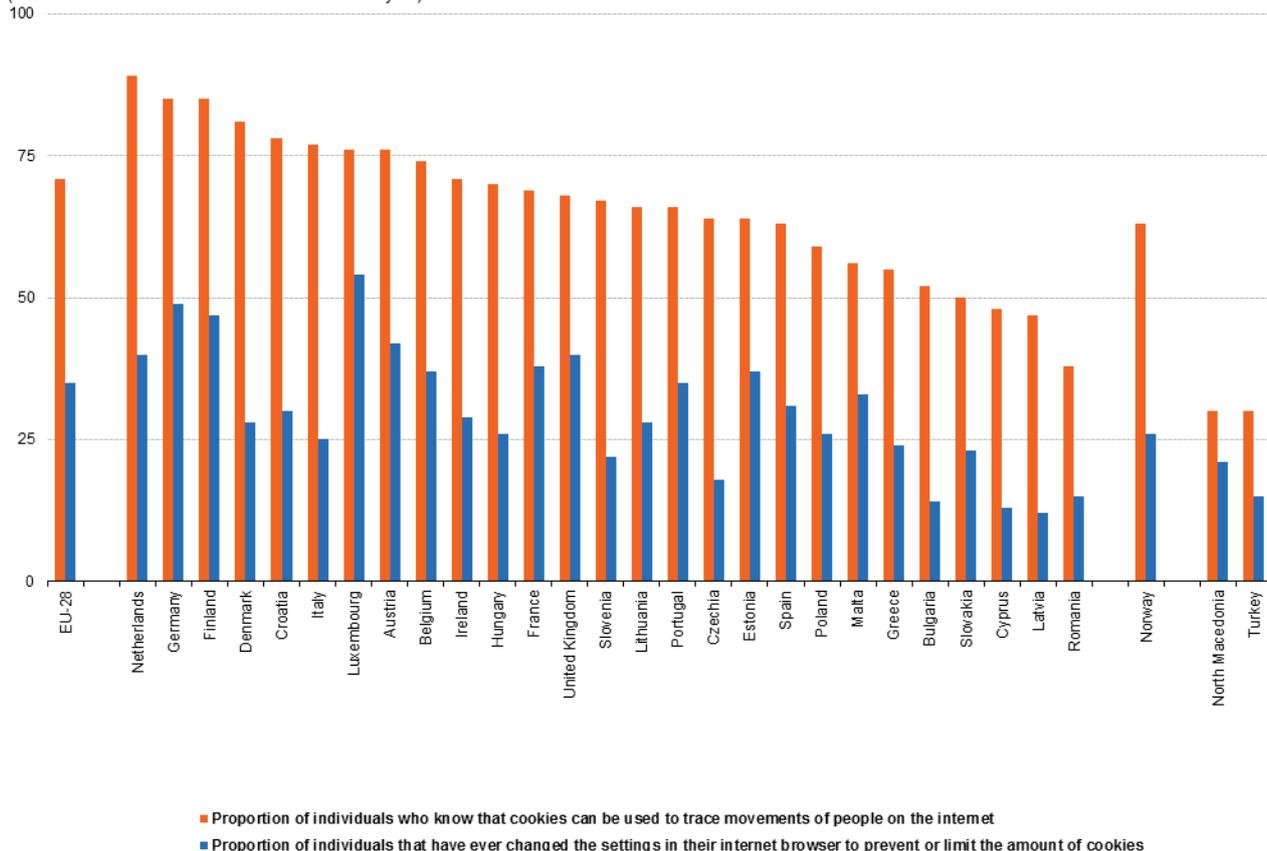
Figure 7: Individuals who did not provide any personal information over the internet, 2016(% of individuals who used internet within the last year)Source: Eurostat (isoc_cisci_prv)

In 2016, some 71 % of people aged 16 to 74 in the EU-28 who had used the internet in the previous 12 months knew that cookies can be used to trace people's online activities. Awareness of this issue was slightly higher (74 %) among younger users (aged 16 to 24) and lower (64 %) among older users (aged 55 to 74). Just over one third (35 %) 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 the Netherlands (89 %), Germany and Finland (both 85 %) had the greatest awareness that cookies could be used to trace their online activities. Awareness was also high in Denmark (81 %), Croatia (78 %), Italy (77 %), Luxembourg and Austria (both 76 %). By contrast, less than half of internet users were aware of this in Romania (38 %), Latvia (47 %) and Cyprus (48 %); low awareness was also reported for Turkey and North Macedonia (both 30 %). The proportion of internet users that had changed their internet browser settings to prevent or limit cookie use exceeded half in just one Member State, namely Luxembourg (54 %). By contrast, less than one fifth of internet users had taken such action in Czechia, Romania, Bulgaria, Cyprus and Latvia, as was also the case in Turkey.

Use of cookies and browser settings, 2016

(% of individuals who used internet within the last year)



Note: Sweden, not available.

Source: Eurostat (online data code: isoc_cisci_prv)



Figure 8: Use of cookies and browser settings, 2016(% of individuals who used internet within the last year)Source: Eurostat (isoc_cisci_prv)

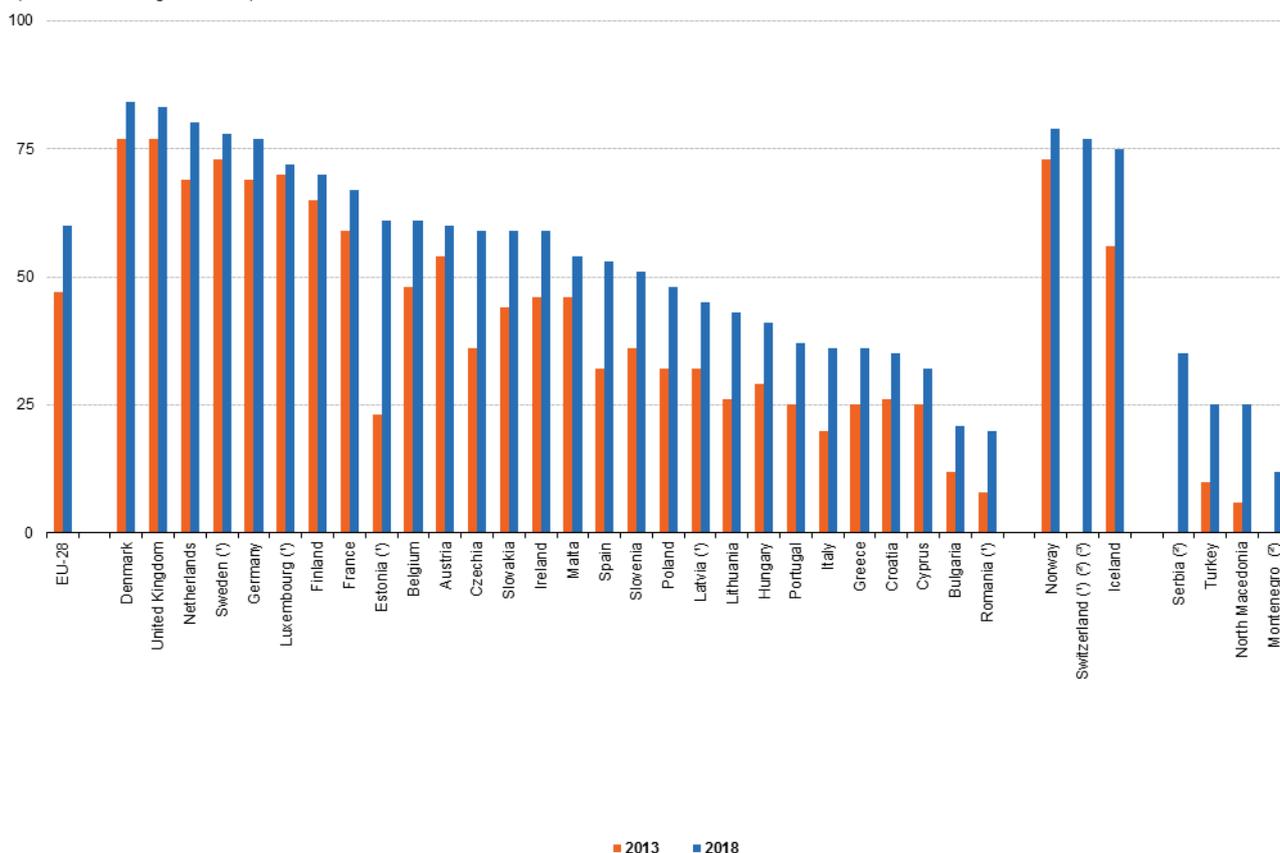
Ordering or buying goods and services

The proportion of individuals aged 16 to 74 in the EU-28 who ordered or bought goods or services over the internet for private use continued to rise: in 2018, it stood at 60 %, an increase of 13 percentage points when compared with 2013 (see Figure 9). Three quarters or more of individuals in Germany and Sweden ordered or bought goods or services over the internet in 2018 and this share reached at least four fifths in the Netherlands (80 %), the United Kingdom (83 %) and Denmark (84 %). By contrast, this proportion was lowest in Cyprus (32 %), Bulgaria (21 %) and Romania (20 %).

Excluding the five EU Member States that reported a break in series — Estonia, Latvia, Luxembourg, Romania and Sweden — the largest increase in the proportion of individuals who ordered or bought goods or services over the internet between 2013 and 2018 was observed in Czechia (up 23 percentage points), followed by Spain (up 21 percentage points). Unsurprisingly, some of the smallest increases (up 6 or 7 percentage points) were observed in Denmark and the United Kingdom where the percentages of individuals ordering or buying goods or services online were already relatively high in comparison with other Member States; this was also the case in Norway. However, the share of individuals ordering goods or services over the internet also rose at a relatively modest pace in Malta (8 percentage points) and Cyprus (7 percentage points).

Individuals who ordered goods or services over the internet for private use in the 12 months prior to the survey, 2013 and 2018

(% of individuals aged 16 to 74)



(*) Break in series.
 (*) 2013: not available.
 (*) 2017 instead of 2018.
 Source: Eurostat (online data code: isoc_ec_ibuy)

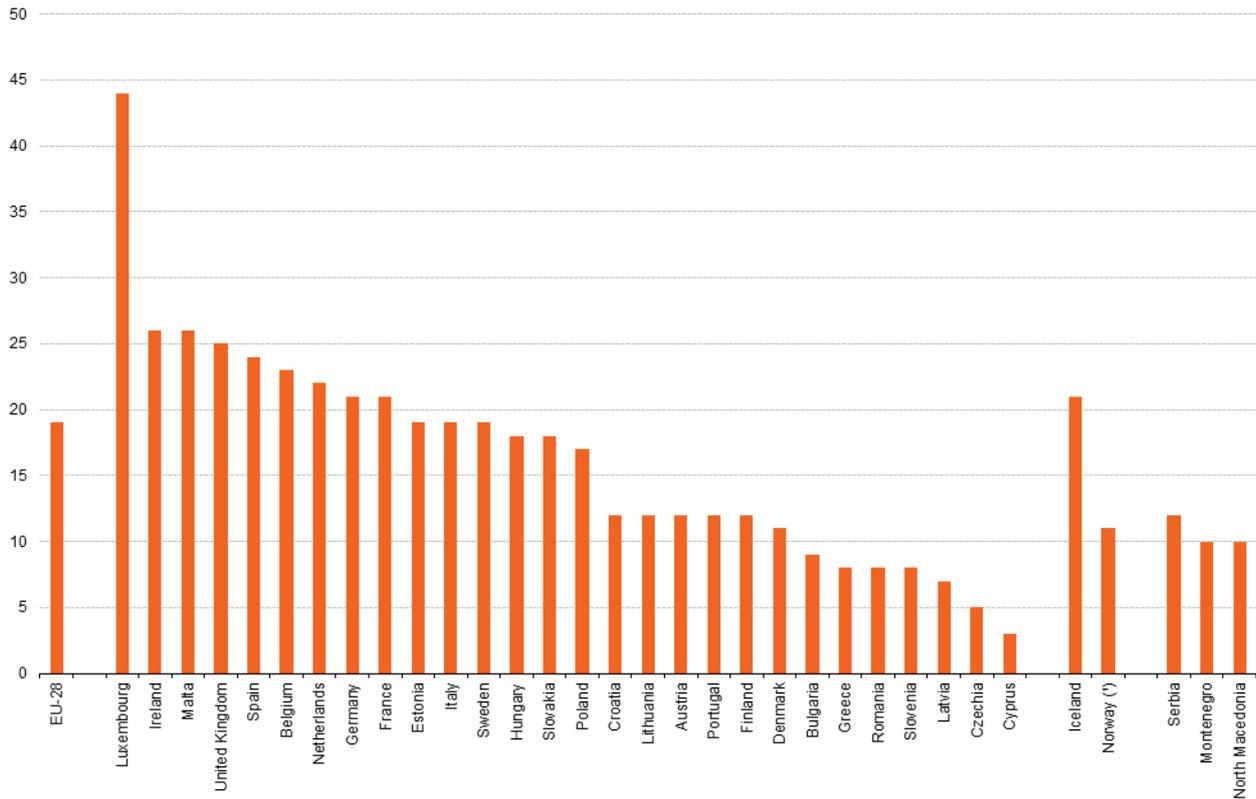


Figure 9: Individuals who ordered goods or services over the internet for private use in the 12 months prior to the survey, 2013 and 2018(% of individuals aged 16 to 74)Source: Eurostat (isoc_ec_ibuy)

Services ordered from other individuals via the internet

In 2018, the share of individuals (aged 16 to 74) in the EU-28 who used any website or app to arrange accommodation from another (private) individual during the preceding 12 months stood at 19 %. This proportion ranged from highs of 44 % in Luxembourg and at least one quarter of the total in Ireland, Malta and the United Kingdom, down to less than 1 in 10 individuals in seven EU Member States, with the lowest shares recorded in Bulgaria (9 %), Greece, Romania and Slovenia (all 8 %), Latvia (7 %), Czechia (5 %) and Cyprus (3 %). Online accommodation booking from other private individuals was more common among middle-aged people (aged 25 to 54) than it was among either younger (aged 16 to 24) or older generations (aged 55 to 74). 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.

Individuals who used any website or app to arrange accommodation from another individual in the 12 months prior to the survey, 2018
 (% of individuals aged 16 to 74)



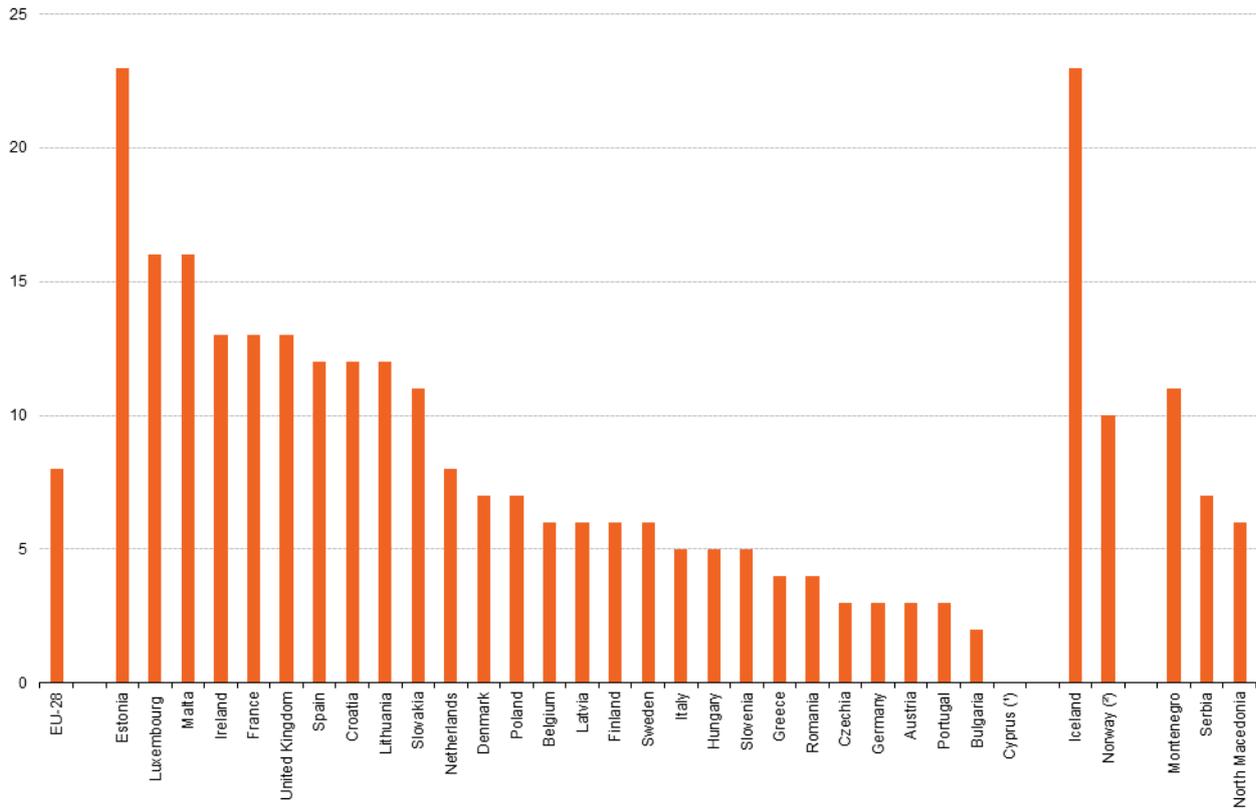
(*) 2017 instead of 2018.
 Source: Eurostat (online data code: isoc_ci_ce_i)



Figure 10: Individuals who used any website or app to arrange accommodation from another individual in the 12 months prior to the survey, 2018(% of individuals aged 16 to 74)Source: Eurostat (isoc_ci_ce_i)

A similar analysis is presented in Figure 11, which shows the share of individuals who used any website or app to arrange a transport service from another individual. This type of service was generally less common than arranging accommodation, but was again often conducted via dedicated websites and apps (for example, Liftshare, UberPool or Wundercar); the average use made of these types of service across the EU-28 by individuals (aged 16 to 74) was 8 %. Among the EU Member States, the share of individuals using any website or app to arrange a transport service in 2018 peaked in Estonia (at 23 %). 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 18 Member States. Online transport booking from other individuals tended to be more common among the younger generations (aged 16 to 24) than for older people.

Individuals who used any website or app to arrange a transport service from another individual in the 12 months prior to the survey, 2018
 (% of individuals aged 16 to 74)



(*) n: close to 0.
 (†) 2017 instead of 2018.
 Source: Eurostat (online data code: isoc_ci_ce_i)

Figure 11: Individuals who used any website or app to arrange a transport service from another individual in the 12 months prior to the survey, 2018(% of individuals aged 16 to 74)Source: Eurostat (isoc_ci_ce_i)

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. Note that the module on privacy and the protection of personal identity formed part of the 2016 survey (but was not repeated in 2017 and 2018).

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 handheld devices via mobile phone networks or wireless connections.

The ordering of goods and services by individuals refers to the 12-month period prior to the survey and includes confirmed reservations for accommodation or travel, 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 May 2015, the European Commission adopted a **digital single market strategy** ([COM\(2015\) 192 final](#)) as one of its top 10 political **priorities** . The strategy had 16 initiatives that covered three broad pillars: promoting better online access to goods and services across Europe; designing an optimal environment for digital networks and services to develop; ensuring that the European economy and industry takes full advantage of the digital economy as a potential driver for growth. In the [European Commission's work programme for 2017 *Delivering a Europe that protects, empowers and defends*](#) (COM(2016) 710), the European Commission proposed to advance swiftly on proposals that had already been put forward and to undertake a review of the progress made towards completing the digital single market.

Broadband technologies are considered to be important when measuring access to and use of the internet, as they offer users the possibility to rapidly transfer large volumes of data and keep access lines open. Indeed, the take-up of high-speed and superfast broadband are considered as key indicators within the domain of ICT policymaking. While digital subscriber lines (DSL) remain the main form of delivery for broadband technology in the EU, alternatives such as cable, satellite, fibre optics and wireless local loops are becoming more widespread.

The European Commission is working on a number of initiatives to boost ICT skills in the workforce, as part of a broader agenda for better skills upgrading, anticipating skills demand and matching skills supply to demand. In order to increase the supply of ICT specialists, the European Commission has launched a **Grand Coalition for Digital Jobs** , an EU-wide partnership that seeks to use European structural and investment funds to alleviate difficulties related to the recruitment of ICT specialists.

On 10 June 2016, the European Commission adopted a new **Skills Agenda for Europe** which seeks to promote a number of actions to ensure that the right training, the right skills and the right support is available to people in the EU so that they are equipped with skills that are needed in a modern working environment, including the promotion of digital skills.

Other articles

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

Publications

- [Digital economy and society in the EU — 2017 edition — Digital publication](#)
- [Science, technology and innovation in Europe — 2013 edition — Pocketbook](#)
- [Science, technology and innovation in Europe — 2008 edition — Statistical book](#)
- [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)

 Individuals - collaborative economy (isoc_ci_ce_i)

E-commerce (isoc_iec)

 Internet purchases by individuals (isoc_ec_ibuy)

ICT trust, security and privacy (isoc_ci_sci)

 Privacy and protection of personal information (isoc_cisci_prv)

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](#)

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](#)

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