INTERACTIVE PUBLICATIONS

Digitalisation in Europe – 2025 edition

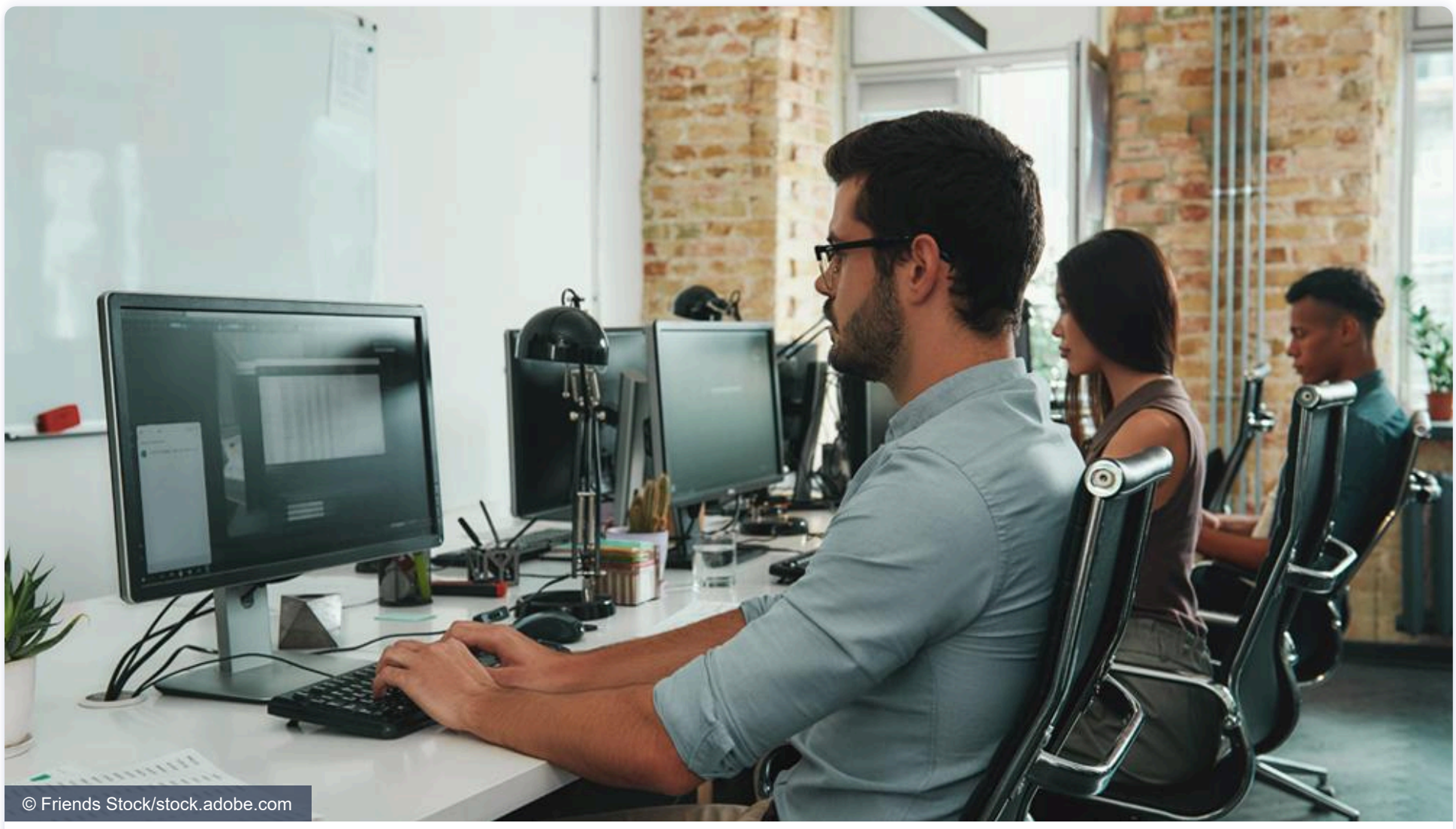
Digital technologies are transforming the world we live and work in. They touch many different aspects of our lives, from everyday tasks like making phone calls and shopping to how businesses and public services operate. Digital transformation is one of the key priorities for the EU. The digital decade initiative sets out the EU targets that will guide digital transformation until 2030.

This publication provides easy to understand statistics on information and communication technologies (ICT) and the way people and businesses use digital technologies.

Before you start reading, why don't you guess how online shopping has changed in the last years? Test your knowledge ()

Digital transformation

Read about what digital transformation is and how it is developing. What are the digital skills of European citizens and professionals? How do businesses adopt digital technologies? How do people use public and other services online?



AI in business

In 2024, 13% of EU businesses used artificial intelligence (AI) technologies

Digital skills

Technological change requires people and businesses to acquire new digital skills and competencies.

According to the EU target, 80% of population should have at least basic digital skills by 2030. To have at least basic overall digital skills, people must know how to do at least 1 activity in each of 5 different competence areas.

44% of EU citizens lack basic digital skills

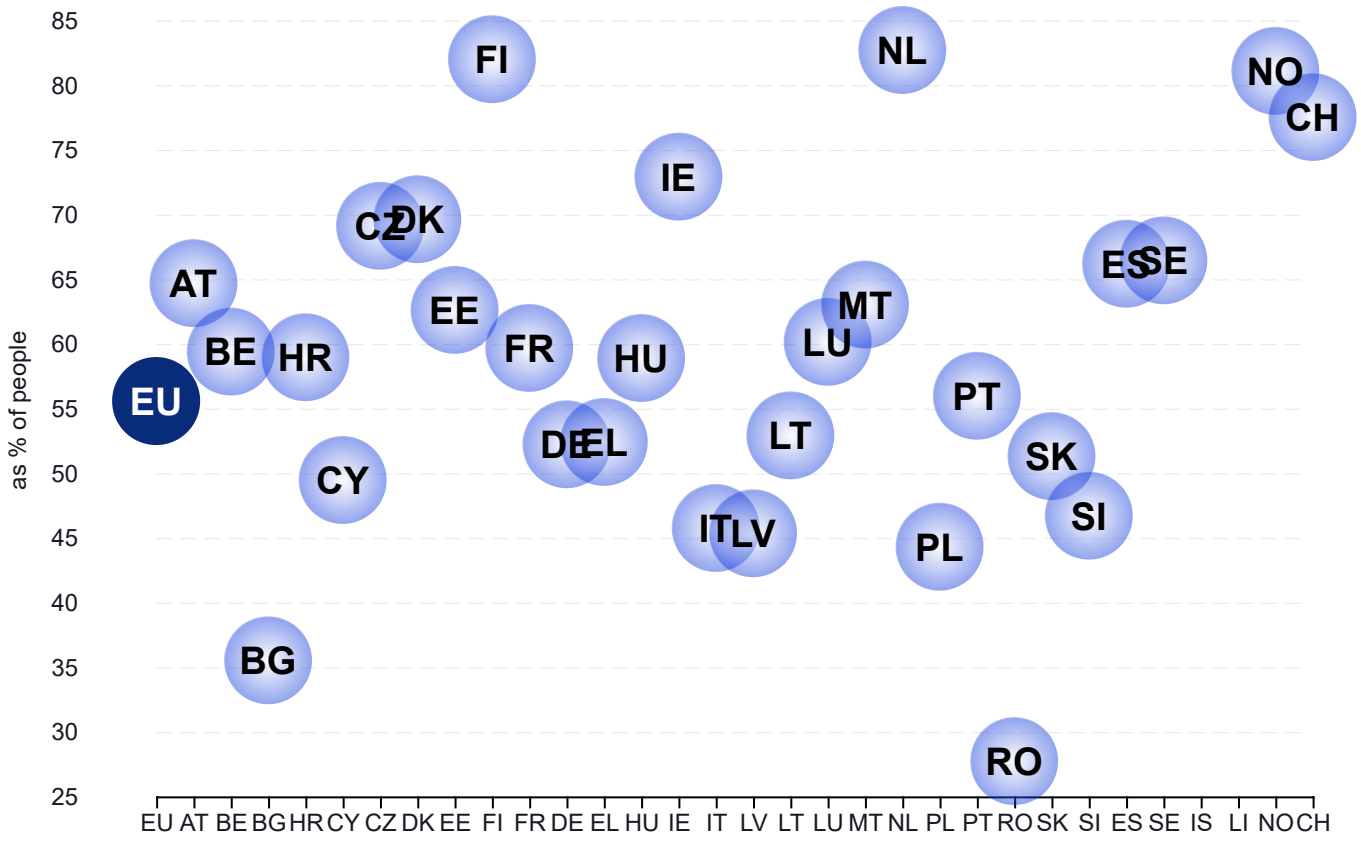
In 2023, over 90% of people in the EU used the internet at least once a week. However, only 56% had basic or above basic digital skills.

Across the EU countries, the share of people with basic or above basic digital skills in 2023 was highest in the Netherlands (83%) and Finland (82%), ahead of Ireland (73%), Denmark (70%), and Czechia (69%).

People with basic or above basic digital skills, 2023

(as % of people)

European Union



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Source: Eurostat - access to dataset

ICT specialists make up 5% of people employed in the EU

According to the EU digital targets, at least 20 million ICT specialists should be employed in the EU by 2030 with a balanced participation between men and women.

In 2024, more than 10 million people in the EU worked as ICT specialists, representing 5% of total employment. The share of ICT specialists in the EU has been increasing over the last decade, and has risen by 1.6 percentage points (pp) since 2014.

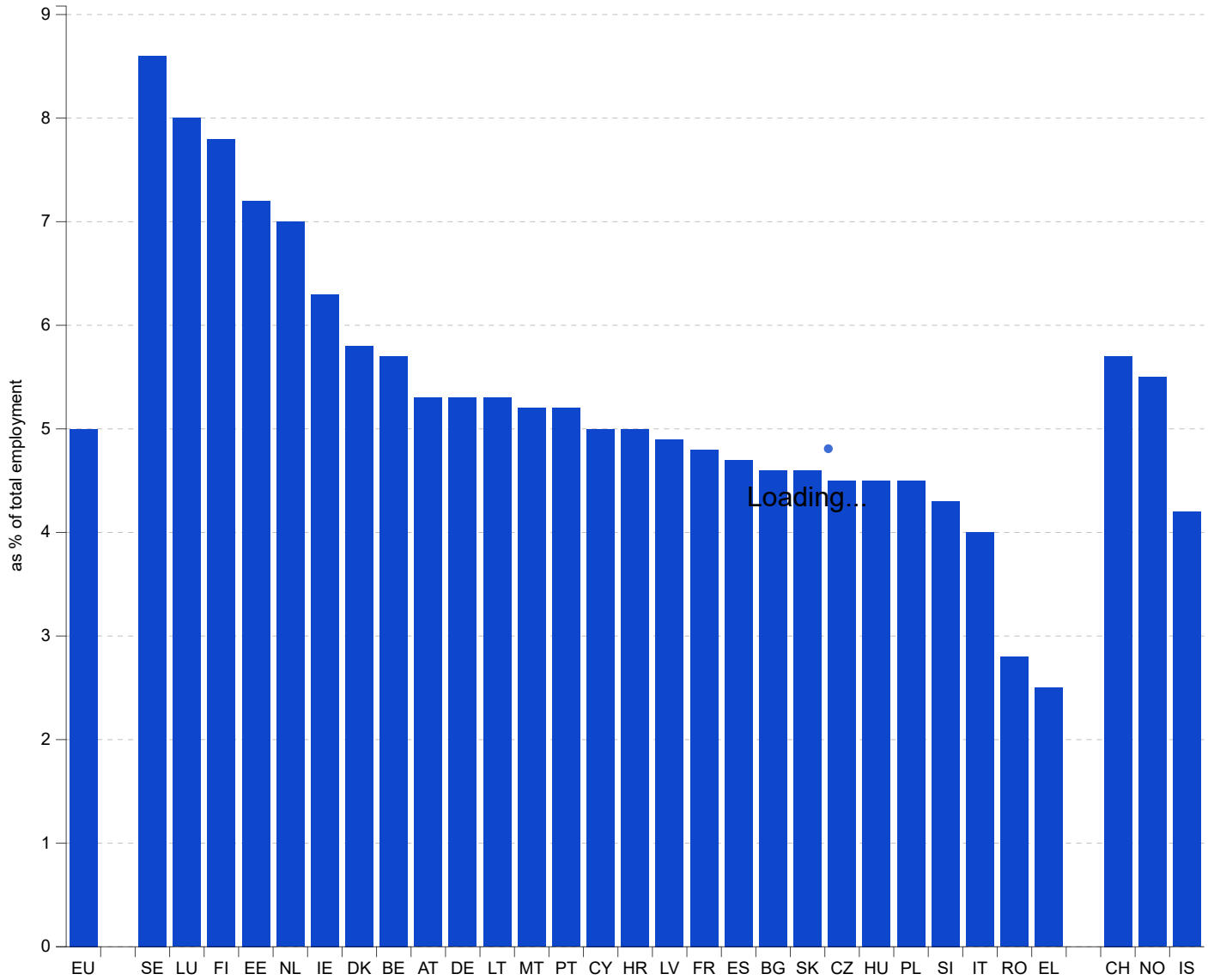
Among the EU countries, the share of employed ICT specialists was the highest in Sweden (9%), Luxembourg and Finland (both 8%). The smallest shares were observed in Greece and Romania (both 3%).

Looking at the share of women in ICT shows that, despite a slight increase of the share of female ICT specialists over the last decade, male ICT specialists largely outnumber their female counterparts (81% of men compared with 19% of women in 2024).

The highest shares of women working in ICT were observed in Estonia (28%), Romania, Bulgaria and Latvia (all 27%), while the smallest shares were found in Czechia (13%), Malta and Hungary (both 15%).

Employed ICT specialists, 2024

(as % of total employment)



Source: Eurostat - access to dataset

1 in 5 EU businesses train their staff to develop ICT skills

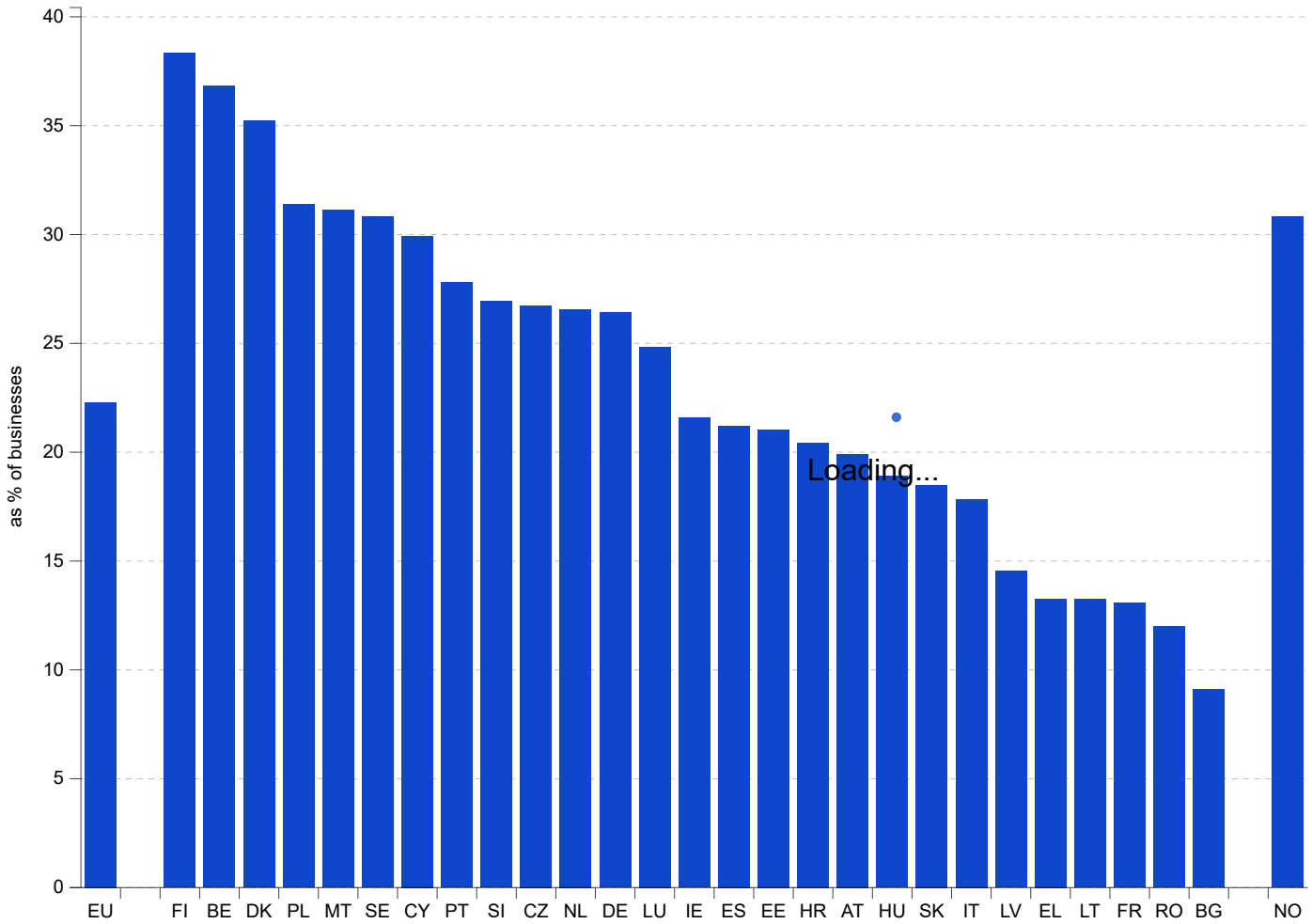
Digital skills can be acquired in different settings, such as in schools, privately or at work. Businesses can play a significant role in enhancing their personnel's ICT skills.

In 2024, 22% of EU businesses provided training to their staff to develop or enhance their ICT skills. Finland (38%), Belgium (37%), Denmark (35%) are the frontrunners in the EU, with the highest shares of enterprises providing ICT training to their staff.

When looking at the business' size, this share reached 73% for large businesses, compared with 21% for small and medium-sized enterprises (SMEs).

Businesses that provide ICT training to their staff, 2024

(as % of businesses)



Source: Eurostat - access to dataset

For more information

Statistics Explained article ‘Towards Digital Decade targets for Europe’ *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Towards_Digital_Decade_targets_for_Europe)*

Statistics Explained article ‘Young people - digital world’ *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Young_people_-_digital_world)*

Statistics Explained article ‘ICT specialists in employment’ *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=ICT_specialists_in_employment)*

Statistics Explained article ‘ICT education - a statistical overview’ *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=ICT_education_-_a_statistical_overview)*

Statistics Explained article ‘Skills for the digital age’ *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Skills_for_the_digital_age)*

Europe’s Digital Decade: digital targets for 2030 *(https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_en)*

Technology uptake in businesses

Integrating digital technologies into all areas of a business enables companies to improve their products and services, and to gain competitiveness, for example by shifting their sales online.

The EU has set itself 2 main goals for the digital transformation of businesses by 2030: more than 90% of SMEs should reach at least a basic level of digital intensity and 75% of EU companies should use cloud computing services, perform big data analysis or use AI.

The digital intensity of businesses is monitored by the Digital Intensity Index (DII), which measures the use of 12 different digital technologies by businesses, for example using AI or making e-sales.

The index scores businesses depending on how many digital technologies they use:

- 0-3: very low
- 4-6: low
- 7-9: high
- 10-12: very high

A minimum score of 4 means that the business has a basic level of digital intensity. Therefore, a basic level includes all businesses with a low, high, and very high level of digital intensity, excluding the very low level.

Over 70% of EU SMEs reach basic digital intensity

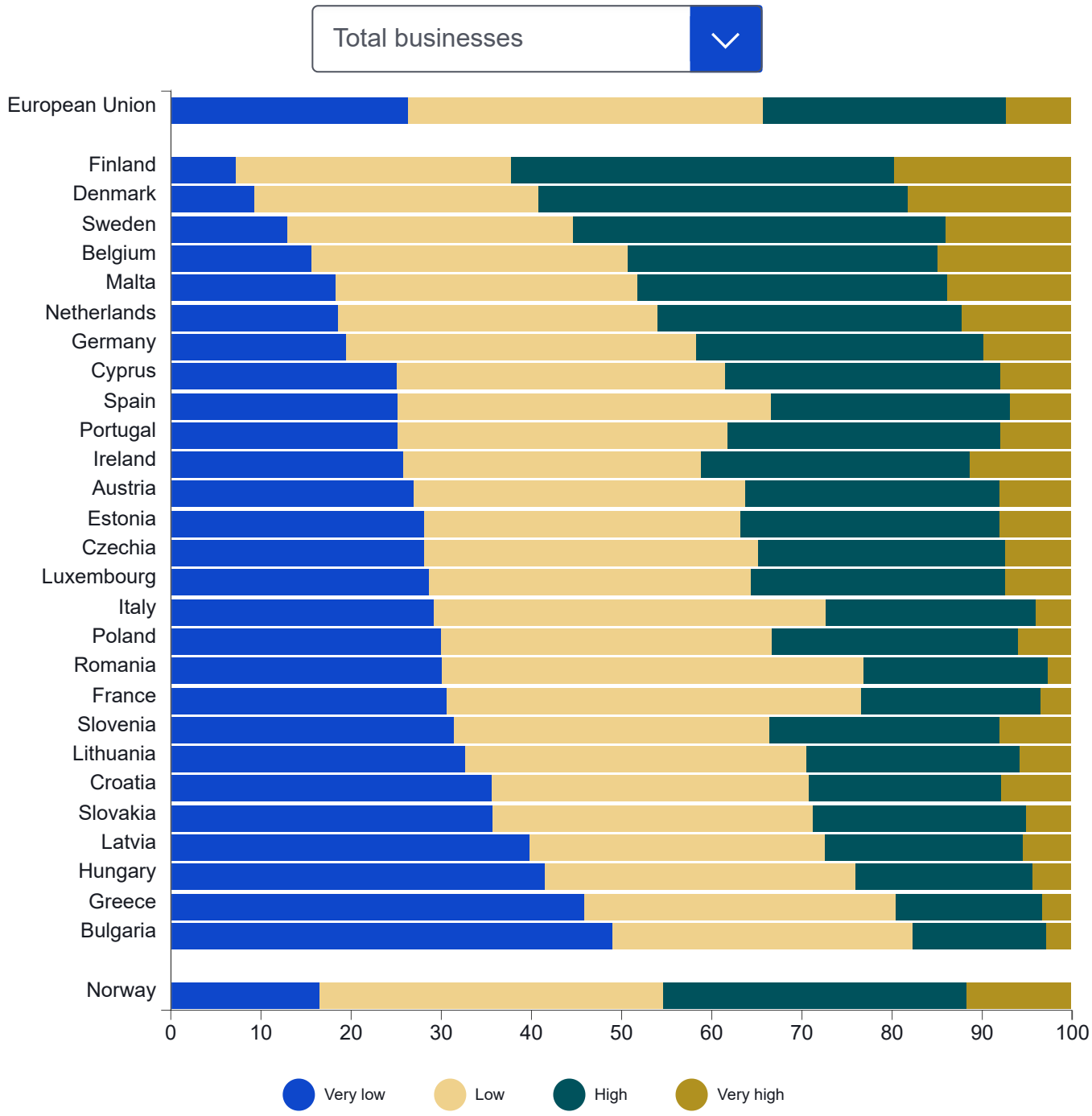
In 2024, 74% of all EU businesses reached a basic level of digital intensity. The share for SMEs was 73%, around 20 percentage points (pp) below the EU 2030 target, while for large businesses it stood at 98%.

Large businesses had a bigger share for very high (41%) and high digital intensity (46%) compared with only 6% of SMEs with a very high level and nearly 27% with a high level of digital intensity. Most of the SMEs recorded low (40%) or very low (27%) digital intensity levels.

The proportion of SMEs with a basic level of digital intensity ranged from 50% in Bulgaria and 53% in Greece to 90% in Denmark and 93% in Finland.

Digital intensity level in businesses, 2024

(as % of total businesses)



Source: Eurostat - access to dataset

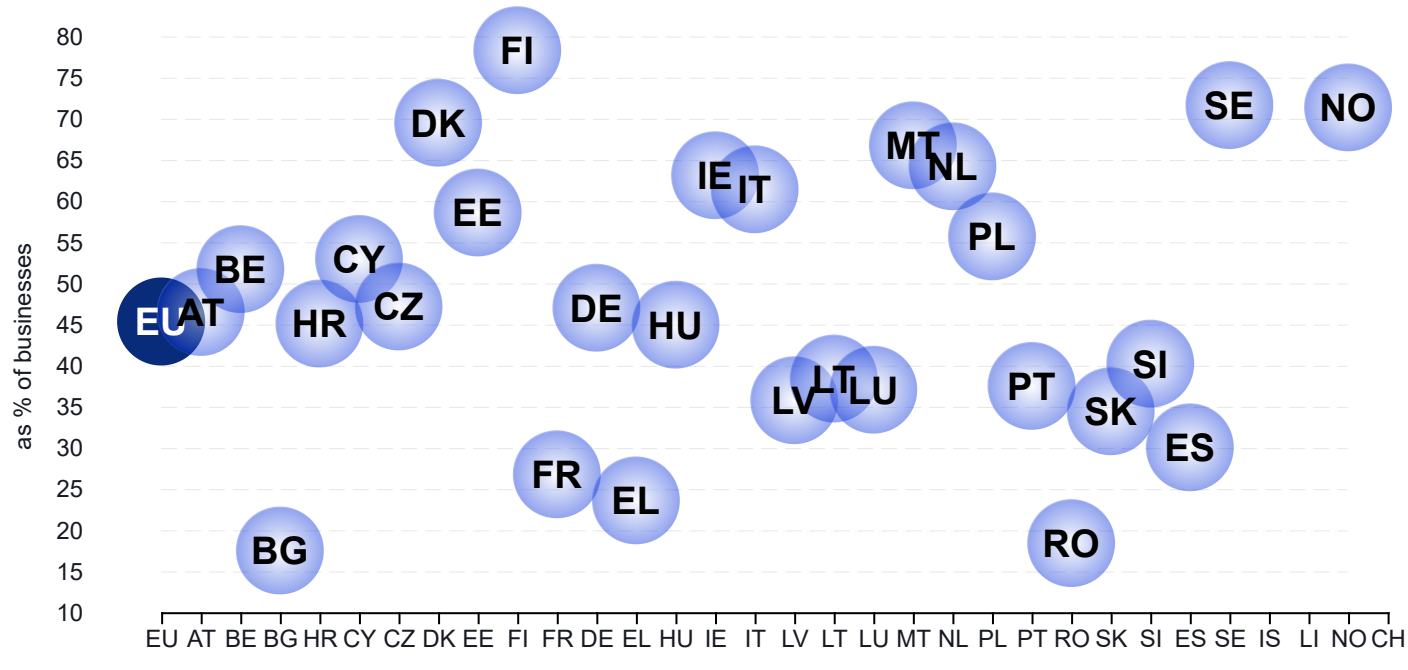
45% of EU businesses buy cloud services, mostly for hosting their email systems

Cloud computing services enable businesses to access computing resources hosted by third parties on the internet, instead of building or expanding their own IT infrastructure. This represents a significant advantage for enterprises, since setting up their own infrastructure would entail hardware and software development.

In 2023, 45% of businesses in the EU bought cloud computing services. Large businesses are more likely to opt for cloud solutions compared with SMEs. In 2023, 78% of large businesses bought cloud services, while SMEs bought 44%.

Of the businesses using cloud computing, the majority (83%) relied on the cloud to host their email systems, 68% used it for storing files and 66% for office software, such as the word processor and spreadsheets.

The uptake of the cloud varies significantly across the EU countries, with the highest shares in Finland (78%), Sweden (72%), and Denmark (69%).



Best viewed in full screen mode

Source: Eurostat - access to dataset

Over 13% of EU businesses use AI technologies

Businesses are increasingly using artificial intelligence (AI) to enhance their operations. AI technology gives machines and systems the capability to learn and make decisions with some degree of autonomy to achieve specific goals.

In 2024, more than 13% of businesses in the EU used AI, an increase compared with 8% in 2023. As with cloud computing, its use was more common in large businesses (41%) than in SMEs (13%).

The most used AI technology was performing analysis of written language (7% of EU businesses), followed by generating written or spoken language (5%) and converting spoken language into machine-readable format (5%).

Among the EU countries, the use of AI technologies was highest in Denmark (28%), followed by Sweden and Belgium (both 25%). In contrast, it was lowest in Romania (3%), Poland and Bulgaria (both 6%).

Businesses using AI technologies, 2024

(as % of businesses)

Source: Eurostat - access to dataset

For more information

Statistics Explained article ‘Cloud computing - statistics on the use by enterprises’ *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Cloud_computing_-_statistics_on_the_use_by_enterprises)*

Statistics Explained article ‘Use of artificial intelligence in enterprises’ *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Use_of_artificial_intelligence_in_enterprises)*

E-government

Today, people rely more and more on the internet also for many administrative procedures. E-government solutions can offer a wide range of benefits for both governments and citizens, including more efficiency and services. One of the advantages, for example, is that it enables citizens to obtain information from public authorities at any moment.

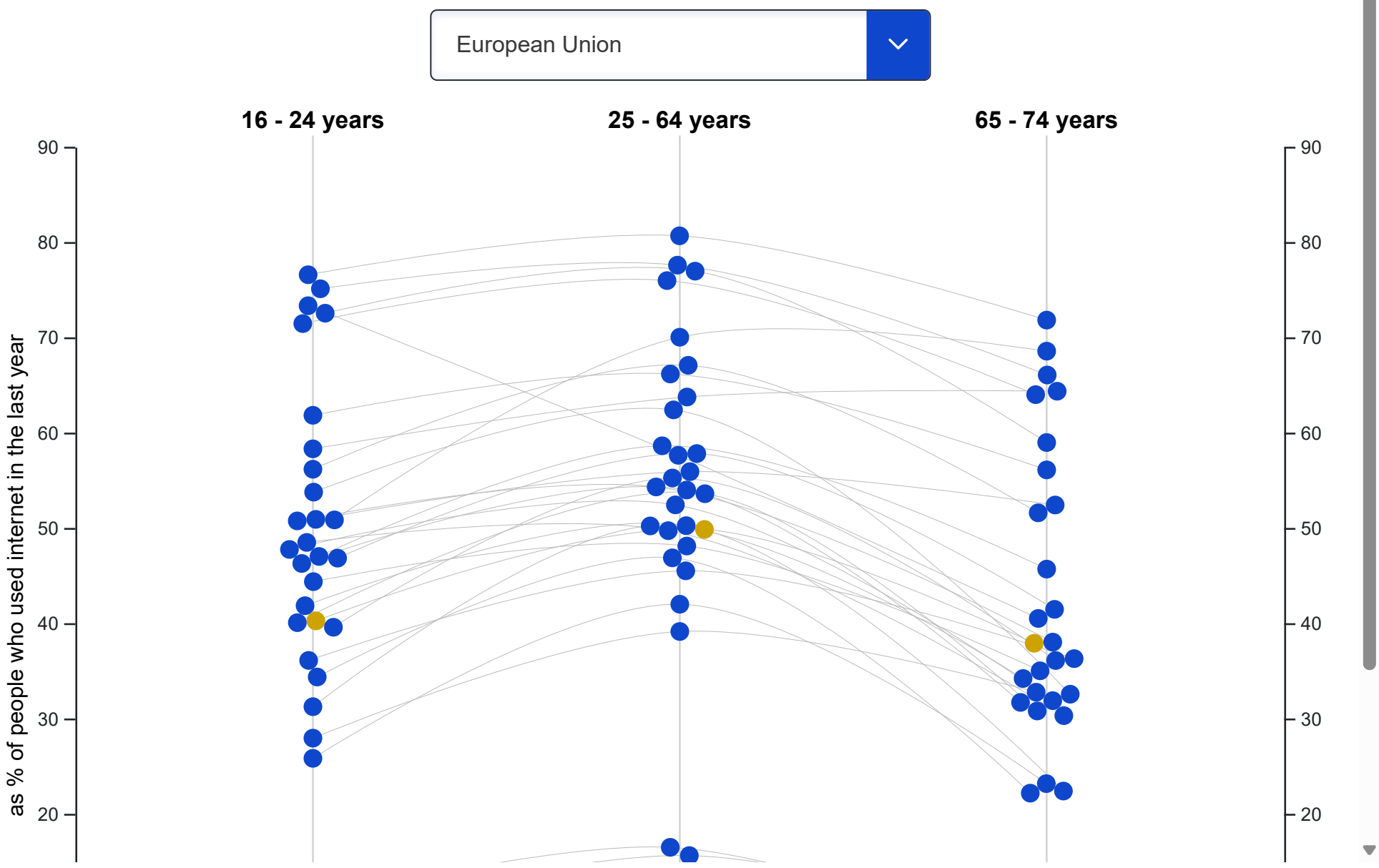
According to the EU digital decade targets, all key public services for businesses and citizens should be fully online by 2030.

In 2024, 47% of EU people who used the internet in the previous 12 months used it to obtain information from public authorities' websites, for example about services, benefits, entitlements, laws, and opening hours. This share varies considerably across the EU countries. In 15 EU countries, over 50% of people used such websites to get information, with Denmark (79%), Finland and Cyprus (both 75%) at the top of the group.

People of all ages use public authorities' websites to obtain information. In the EU, however, the share was highest among those aged 25 to 64 years (50%), followed by 16-24 years old (40%) and 65-74 years old (38%).

People obtaining government information online, 2024

(as % of people who used internet in the last year)



For more information

Statistics Explained article ‘E-government and electronic identification’ *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=E-government_and_electronic_identification)*

People online

As everyday life becomes more and more virtual, people are increasingly using the internet for different types of activities. What are we using the internet for? What are our shopping habits and which internet-connected devices are we using?

Finding health information online

63% of EU internet users searched for health information in 2024, 43% made a medical appointment and 30% accessed their personal health records online

Online activities

In 2024, 93% of people in the EU reported that they had used the internet in the previous 3 months. Taking a closer look at what they did online shows that the internet was mainly used to communicate with others, for example for sending or receiving emails (87% of internet users) and instant messaging (85%).

The following online activities were also very popular amongst internet users:

- Finding information about goods and services (81%)
- Making phone or video calls (79%)
- Online banking (72%)
- Reading online news site or newspapers (70%)
- Participating in social networks (70%)
- Searching for health information online (63%).

Over 70% of internet users do their banking online

Looking more closely at internet banking, 72% of internet users used online banking services in 2024 compared with 56% in 2014. Online banking is mostly popular among people aged 25 to 64 years (76%), compared with 66% of those aged 16 to 24 and 59% of the 65- to 74-year-olds. Among EU countries, internet banking is most used in Denmark (98%), Finland and the Netherlands (both 97%), and Latvia (91%).

Play with the visualisation below to see how your country compares to others in different online activities.

Internet activities, 2024

(as % of people who used internet in the last 3 months)

People participating in social networks

Source: Eurostat - access to dataset

For more information

Statistics Explained article ‘Digital economy and society statistics - households and individuals’ *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Digital_economy_and_society_statistics_-_households_and_individuals)*

Online shopping

People also use the internet to buy goods and services.

Over the last few years internet shopping has become very popular. In 2024, 77% of people in the EU reported that they had bought or ordered goods or services online, up from 59% in 2014.

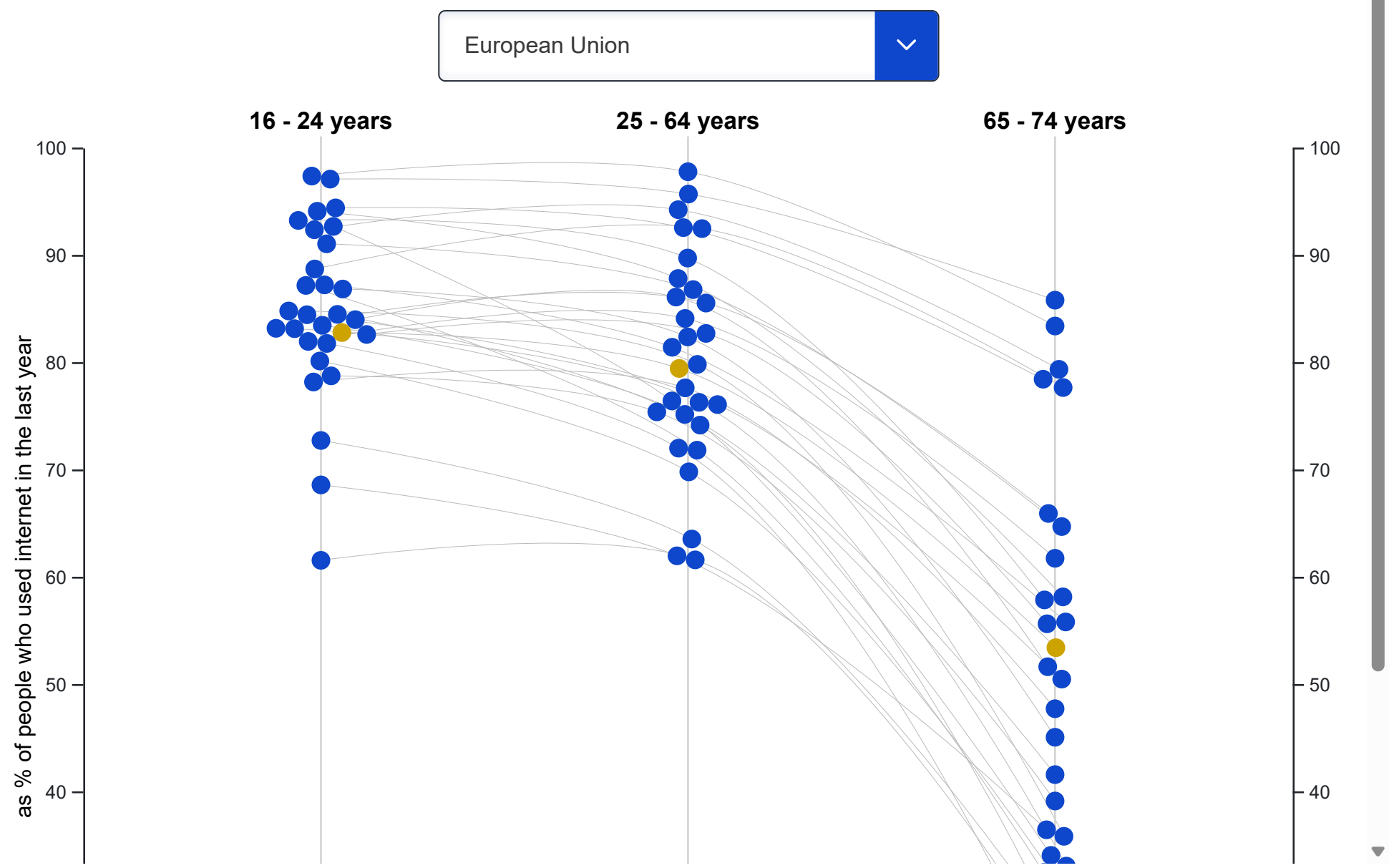
Buying online offers several advantages: the convenience of being able to browse products from the comfort of home, online shops that are open 24/7, a wider range of choice and easier price comparability.

In 2024, the share of internet users who bought goods or services over the internet in the previous 12 months ranged from 57% in Bulgaria and 60% in both Italy and Romania to 94% in the Netherlands and 96% in Ireland.

E-commerce was most popular among people aged 16 to 24 years (83%), compared with those aged 25-64 (79%). Meanwhile, more than half (53%) of 65- to 74-year-olds also shopped online in 2024.

People buying goods or services online, 2024

(as % of people who used internet in the last year)



Clothes are the most popular online purchases

In 2024, among people who had purchased online in the previous 3 months, 70% bought clothes, shoes or accessories.

Online shoppers also bought the following goods and services:

- Subscriptions to films, series or sports streaming (46%)
- Tickets to events (38%)
- Transport service from an enterprise (38%)
- Deliveries from restaurants (33%)
- Rented accommodation (from an enterprise), such as a room, apartment or house, via a website or app (33%)
- Cosmetics (31%).

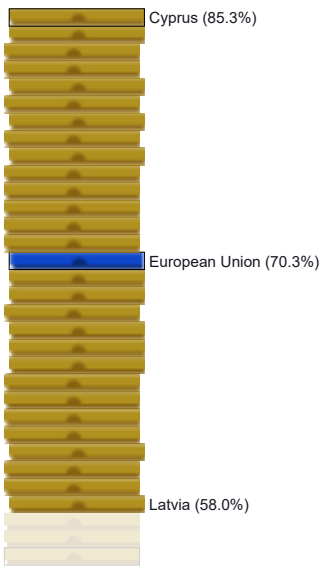
Looking at the purchase of clothes, shoes and accessories, Cyprus recorded the highest share of online shoppers who ordered clothes (85%), ahead of Bulgaria and Romania (both 79%). In contrast, the smallest proportions were found among online shoppers in Latvia and Estonia (both 58%), and Czechia (60%).

Goods and services bought online, 2024

(as % of people who purchased online in the last 3 months)

European Union

Clothes, shoes or ac



Source: Eurostat - access to dataset

1 in 3 online shoppers encountered problems when shopping online

While online shopping comes with several benefits, customers can also face problems when buying online.

In 2023, among people who had purchased online in the previous 3 months, 33% encountered problems when shopping online via a website or app. In the EU countries, the largest shares of online shoppers who experienced problems were recorded in Luxembourg (56%), the Netherlands (55%), and Spain (50%). In contrast, Portugal had the lowest proportion of online shoppers facing problems when buying online (4%), followed by Latvia (14%) and Cyprus (15%).

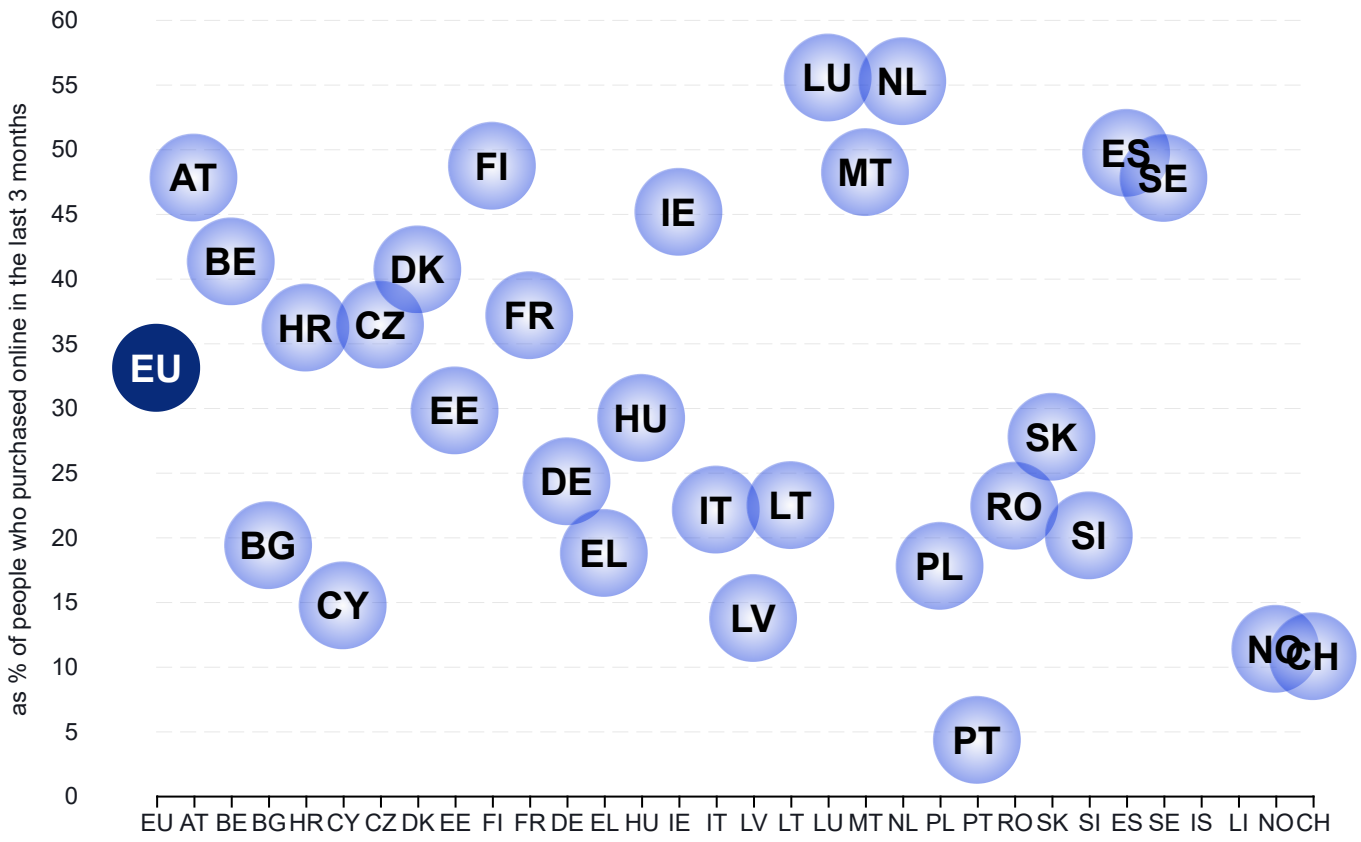
The most common problem experienced by e-buyers in the EU was slower delivery speed than indicated, with 19% of e-buyers reporting this problem. For 11% of online shoppers the website was too difficult to use or did not work satisfactorily, while 9% indicated wrong or damaged goods or services as the main problem encountered.

People encountering problems in buying online, 2023

(as % of people who purchased online in the last 3 months)

European Union

People encountering problems in buying online



Best viewed in full screen mode

Source: Eurostat - access to dataset

For more information

Statistics Explained article ‘E-commerce statistics for individuals’ *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=E-commerce_statistics_for_individuals)*

Internet of Things

We are increasingly using a variety of devices that are connected to the internet. For example, we use smart home appliances such as robot vacuum cleaners and smart gas or electricity meters to manage our energy consumption in the home.

This network of devices, sensors or systems that are interconnected and can communicate with each other via the internet is referred to as the ‘Internet of Things’ (IoT).

67% of internet users use internet-connected home entertainment

In 2024, 76% of internet users in the EU used internet-connected devices or systems. Of these:

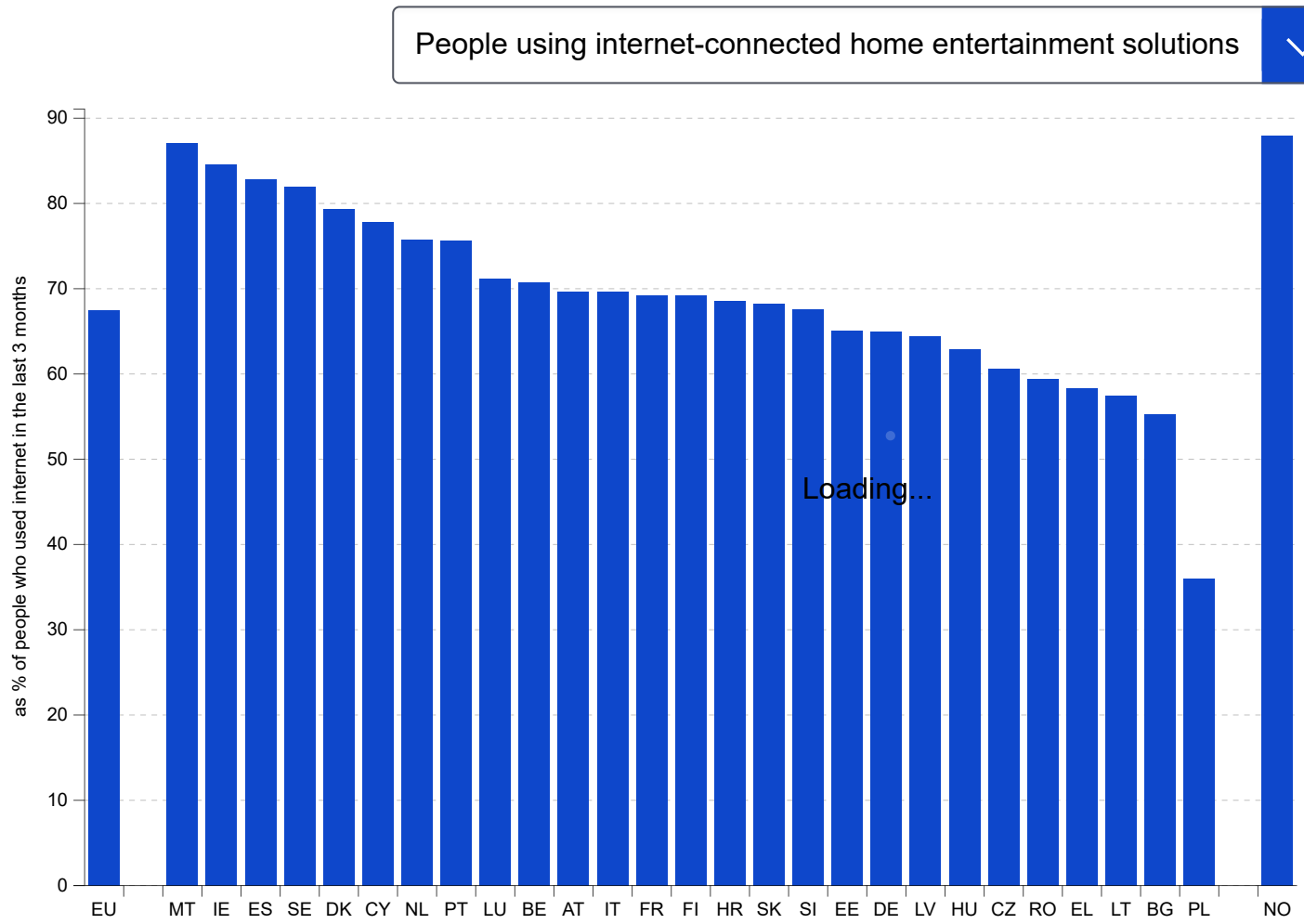
- 67% used smart home entertainment solutions such as internet-connected TV, game consoles, home audio systems and smart speakers
- 32% used a smart watch, a fitness band or a similar wearable
- 15% used smart meters for gas, electricity and smart lights for energy management in the home
- 14% used smart home appliances such as robot vacuums, fridges, ovens and coffee machines
- 13% used internet-connected home alarm systems and other safety and security solutions for their home.

Across the EU countries, the proportion of internet users making use of IoT solutions ranged from 52% in Poland and 62% in both Bulgaria and Romania to 92% in Ireland and 95% in the Netherlands.

Smart home entertainment is particularly popular. In 26 EU countries 50% or more of internet users benefited from smart home entertainment solutions in 2024, with Malta (87%), Ireland (85%) and Spain (83%) leading the group.

People using internet-connected devices or systems, 2024

(as % of people who used internet in the last 3 months)



Source: Eurostat - access to dataset

Recycling of ICT equipment

The growing use of ICT equipment results in a growing amount of waste from old devices, such as laptops, tablets, mobile phones, smartphones, and desktop computers. This raises the question of what happens to ICT devices that are no longer in use.

There are environmentally friendly ways of disposing of unused devices, such as taking them to a recycling centre or giving them a second life with another user, instead of simply throwing them away or just keeping them in a drawer.

Expand all

Desktop computers

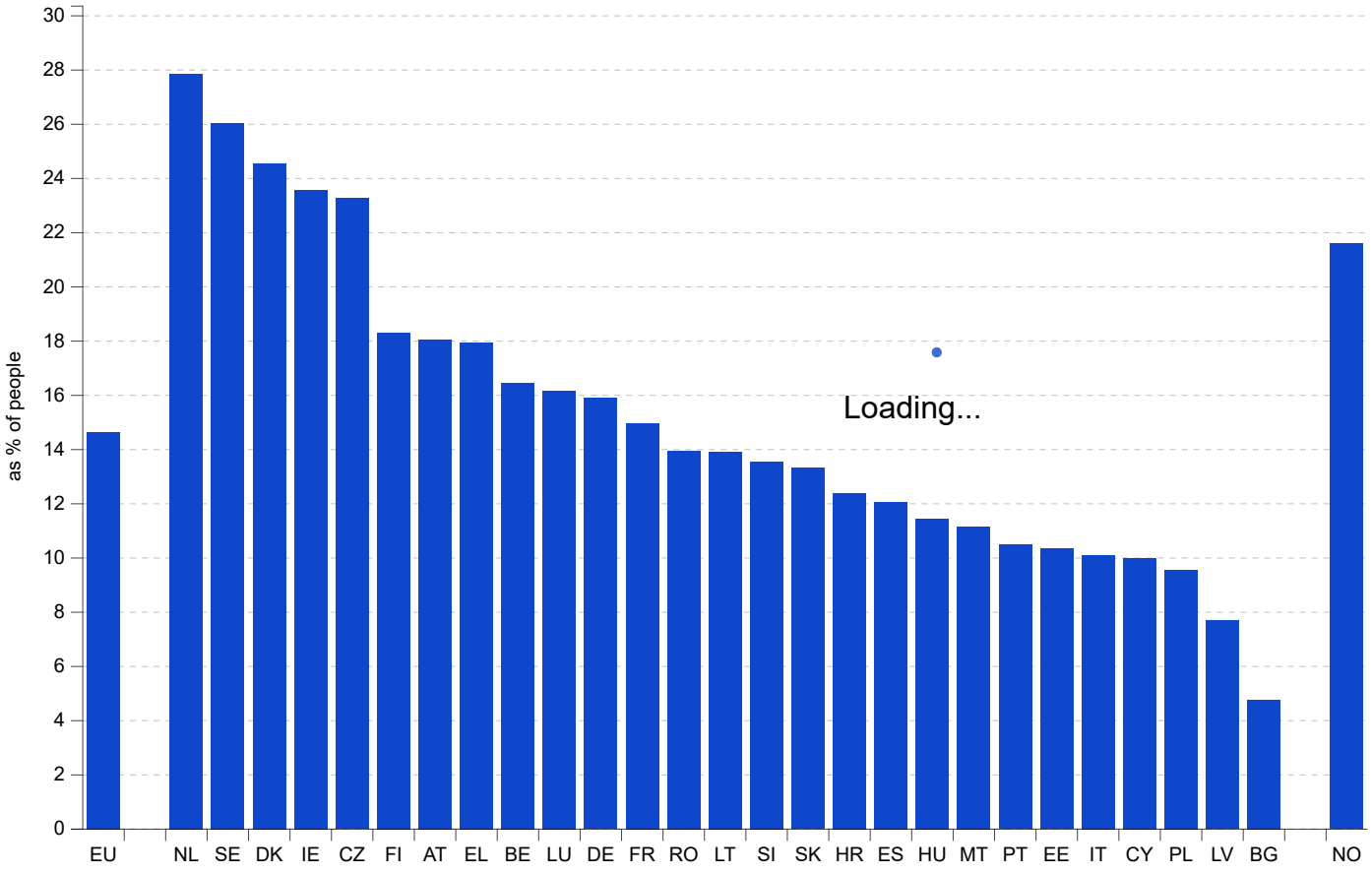
Laptops or tablets

Mobile phones and smart phones

People who recycle ICT devices no longer in use, 2024

(as % of people)

People who recycle their old desktop computer



Source: Eurostat - access to dataset

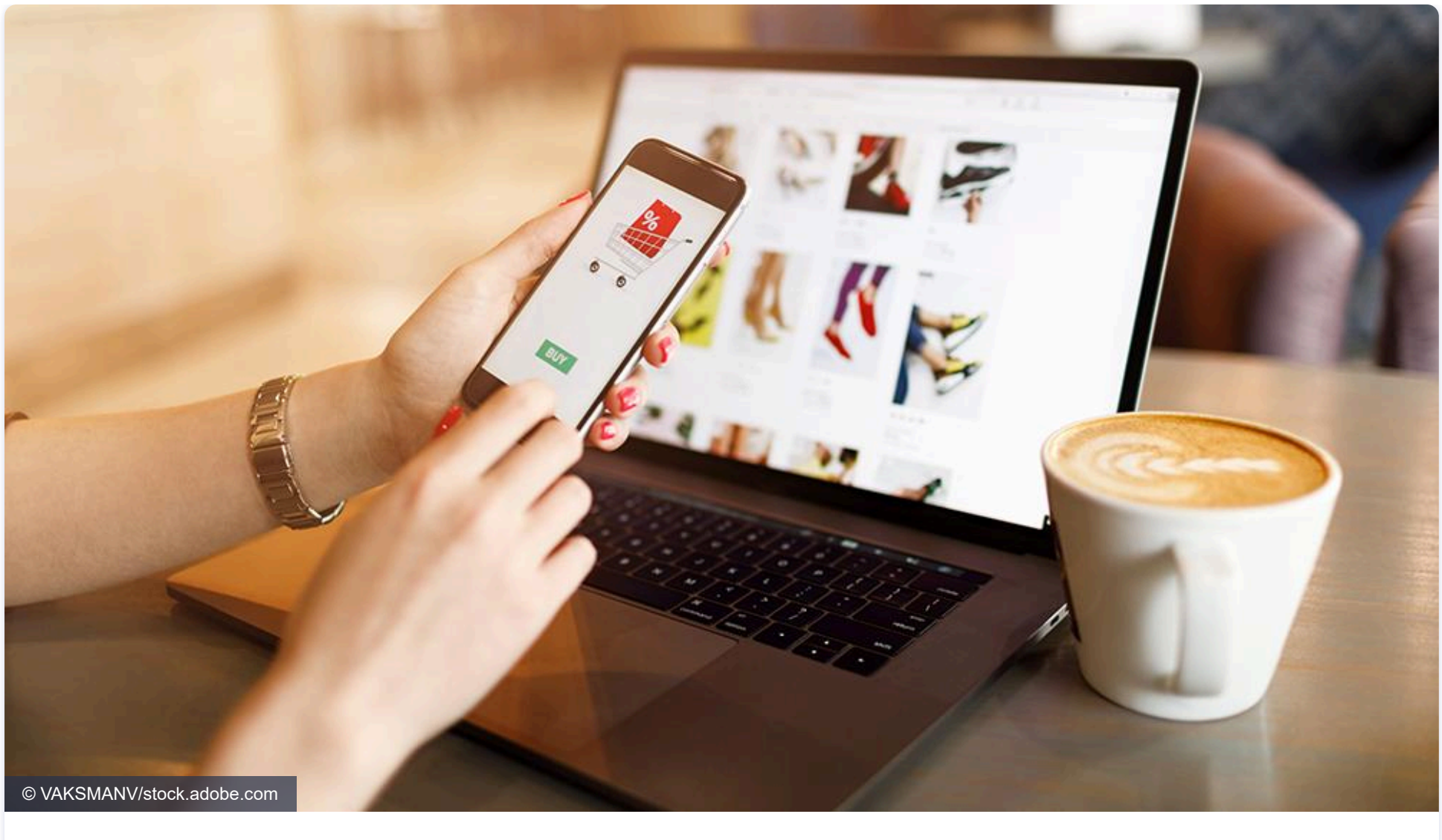
For more information

Statistics Explained article ‘Digital economy and society statistics - households and individuals’ *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Digital_economy_and_society_statistics_-_households_and_individuals)*

Statistics Explained article ‘Green ICT - digital devices in households’ *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Green_ICT_-_digital_devices_in_households)*

Businesses online

Just as the internet has become a centre point of people's lives, businesses are increasing their online presence and use of ICT solutions to optimise their daily operations. Explore the online activities, e-sales, and ICT security policies among EU businesses.



E-sales

24% of EU businesses do e-sales. The share for large businesses (46%) is more than twice as high as for SMEs (23%).

Online activities

An internet connection is essential for most businesses to operate and carry out their activities online.

In the EU, nearly all businesses (95%) have broadband internet access. This applies regardless of the size of the enterprise, as 95% of small and medium-sized businesses (SMEs) and 99% of large businesses were using broadband in 2024.

Over half of EU businesses use social media and conduct online meetings

More and more businesses are using social media to promote their goods and services or interact with their customers.

In addition, over the past few years, businesses and their staff have been faced with changes in their patterns of work, including working from home and having meetings online.

Expand all

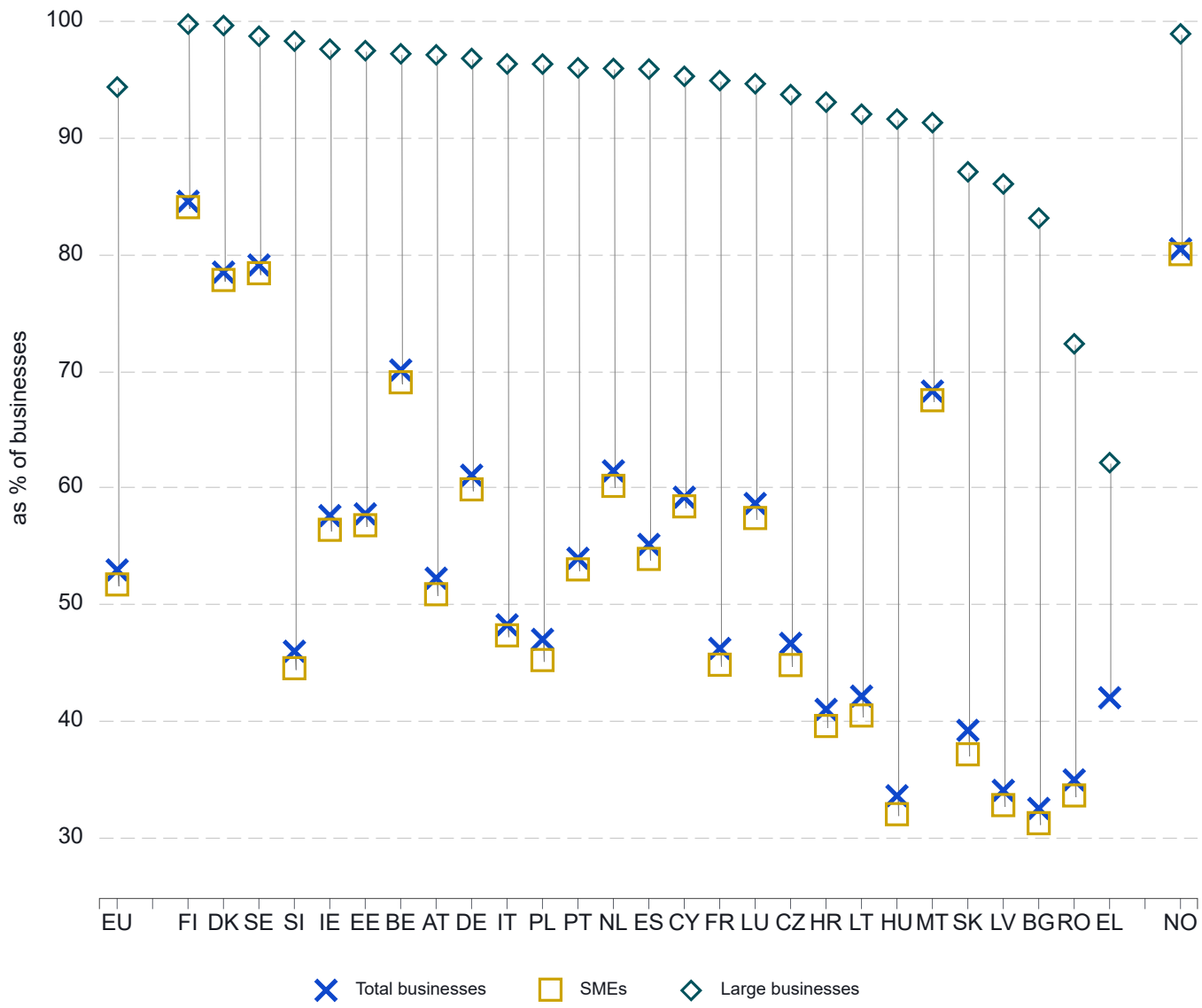
Online meetings

Use of social media

Businesses holding online meetings, 2024

(as % of businesses)

Businesses holding online meetings



Source: Eurostat - access to dataset

For more information

Statistics Explained article ‘Social media - statistics on the use by enterprises’ *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Social_media_-_statistics_on_the_use_by_enterprises)*

Statistics Explained article ‘Digital economy and society statistics - enterprises’ *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Digital_economy_and_society_statistics_-_enterprises)*

Statistics Explained article ‘Online meetings and remote access to enterprise resources - statistics’ *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Online_meetings_and_remote_access_to_enterprise_resources_-_statistics)*

Statistics Explained article 'Internet advertising of businesses - statistics on usage of ads' *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Internet_advertising_of_businesses_-_statistics_on_usage_of_ads)*

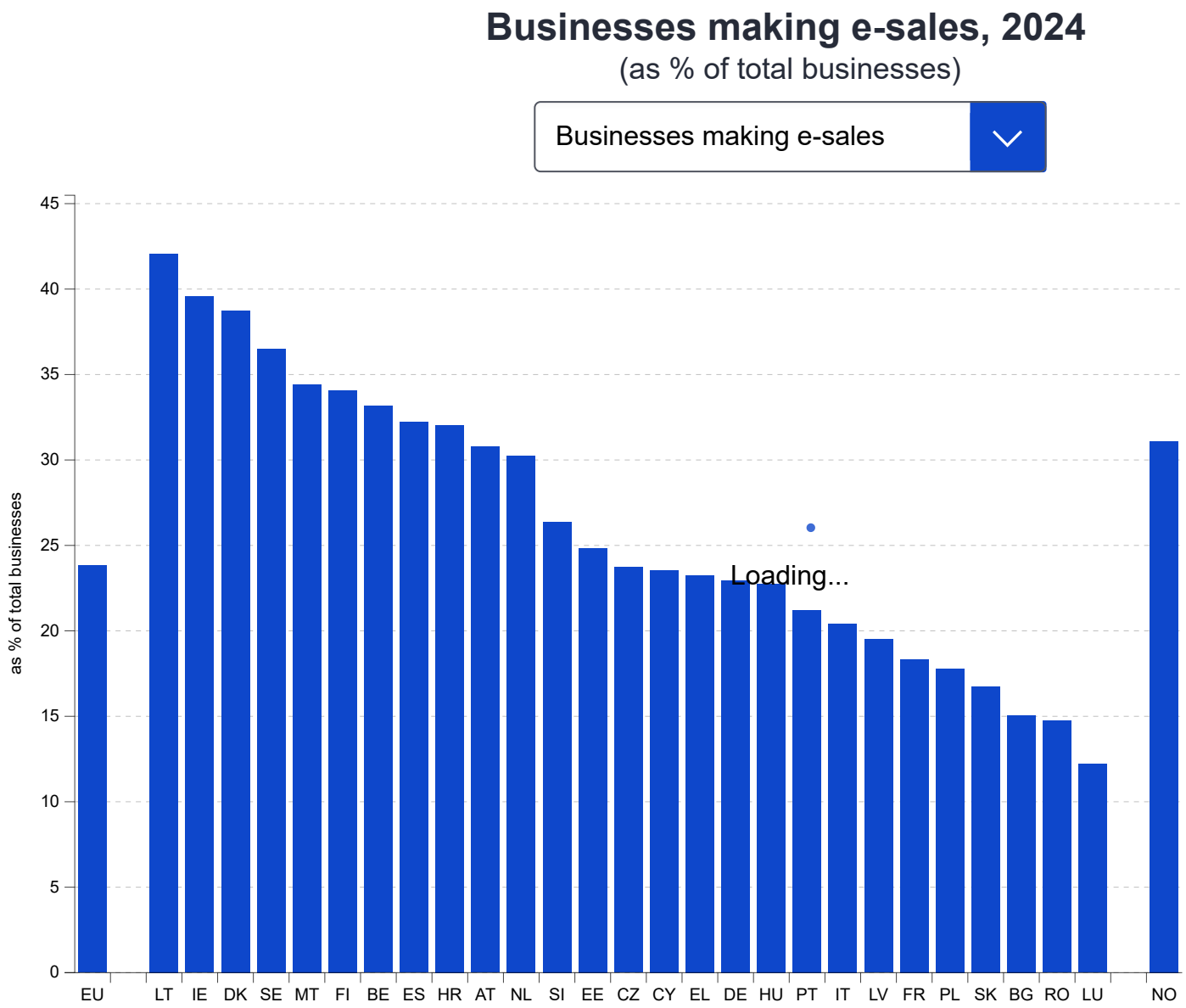
E-commerce

E-commerce offers to businesses the possibility to sell their goods or services via the internet to reach online customers, and thus complement or replace traditional sales channels such as in-store selling.

In 2024, 24% of EU businesses reported that they had conducted e-sales in the previous year, compared with 17% in 2014.

21% of EU businesses used websites or apps to sell their goods or services, so called web sales, while a small share (6%) used electronic data interchange (EDI). 18% of businesses sold goods and services online through their own website or app, while 9% used an e-commerce marketplace.

Looking at the size of businesses shows that the share of large businesses with e-sales was significantly higher (46%) than that of SMEs (23%). Among the EU countries, Lithuania had the largest share of businesses selling online (42%), ahead of Ireland (40%) and Denmark (39%), while Luxembourg (12%), Bulgaria and Romania (both 15%) had the smallest shares.



Source: Eurostat - access to dataset

E-sales make up 19% of turnover of EU businesses

Looking at the turnover generated by e-sales, in 2024 EU businesses reported that this accounted for 19% of their total turnover, an increase compared with 14% in 2014. This share was higher for large businesses (24%) than for SMEs (12%).

Denmark had the highest share of turnover from e-sales (30%), ahead of Finland and Belgium (both 29%), while the lowest proportions were found in Bulgaria and Greece (both 8%), Latvia, France and Romania (all 12%).

For more information

Statistics Explained article ‘E-commerce statistics’ *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=E-commerce_statistics)*

Statistics Explained article ‘Digital economy and society statistics - enterprises’ *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Digital_economy_and_society_statistics_-_enterprises)*

ICT security

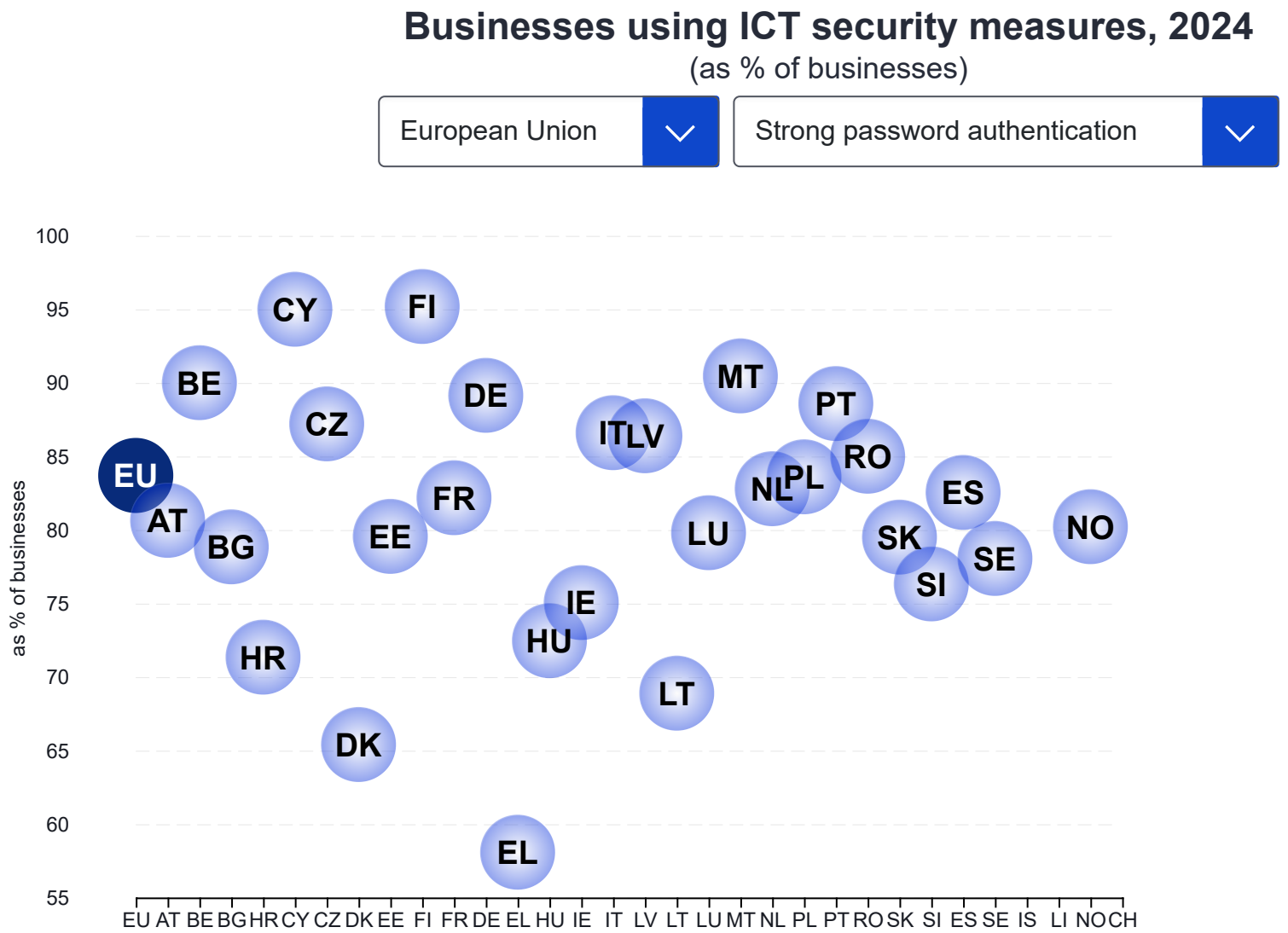
In 2024, 22% of EU businesses experienced ICT security incidents causing, for example, the unavailability of ICT services, destruction or corruption of data or disclosure of confidential data. Finland (42%) had the largest share of businesses reporting ICT security incidents, ahead of the Poland (32%) and Malta (29%), while Austria, Slovenia, Bulgaria and Slovakia (all 12%) recorded the lowest shares.

Businesses can implement a range of ICT security measures, practices and procedures in order to prevent incidents and to ensure integrity, availability and confidentiality of their data and ICT systems.

In 2024, 93% of EU businesses used at least 1 ICT security measure. Among the EU countries, this share ranged from 72% in Greece and 83% in Bulgaria to 98% in Denmark and 99% Finland.

The most common measures used were:

- strong password authentication (84% of EU businesses)
- data backup to a separate location or cloud (79%)
- network access control (65%).



Best viewed in full screen mode

Source: Eurostat - access to dataset

60% of EU businesses inform staff about ICT security obligations

Around 60% of EU businesses made their staff aware of their obligations in ICT security related issues. To achieve this, 43% of enterprises provided voluntary ICT security training, 25% had compulsory ICT security training, and 34% included ICT security obligations in their employees' contracts.

In order to remain effective, security measures and procedures should be documented and updated regularly. In 2024, more than a third (36%) of EU businesses had documents on measures, practices or procedures on ICT security, and nearly a quarter (22%) defined or reviewed those documents within the last year.

For more information

Statistics Explained article 'ICT security in enterprises' *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=ICT_security_in_enterprises)*

Statistics Explained article 'Digital economy and society statistics - enterprises' *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Digital_economy_and_society_statistics_-_enterprises)*

About this publication

Digitalisation in Europe is an interactive publication released by Eurostat, the statistical office of the European Union.

Information on data

The data are based on annual surveys on ICT use in households and by individuals *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:EU_survey_on_the_use_of_ICT_in_households_and_by_individuals)*, and ICT usage and e-commerce in enterprises *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:EU_survey_on_ICT_usage_and_e-commerce_in_enterprises)*, with the exception of ICT specialists in employment, which are collected in the labour force survey *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=EU_labour_force_survey)*.

Data in this publication refer to individuals aged 16-74 except for ICT specialists in employment, which cover persons aged 15-74.

In the survey on ICT usage and e-commerce in enterprises, businesses cover enterprises employing at least 10 persons (employees and self-employed persons). Small and medium-sized enterprises (SMEs) employ between 10 and 249 persons. Large businesses employ 250 persons or more.

The survey on ICT usage and e-commerce in enterprises collects data about different ICT topics with different reference periods. For most topics, the reference period is the current situation (at the time of the survey), for instance 2024 for use of AI technologies, and 2023 for use of social media. For the topic of e-commerce, the reference period is the calendar year (2023) prior to the survey year (2024). The data in Eurostat's database are organised according to the survey year and the results can be found under year 2024 or 2023, depending on the topic and when data were collected.

Data in the visualisations are linked directly to the online database up to the reference year mentioned in the title of each visualisation. Data are shown up to one decimal. The accompanying text was finalised during April 2025 and reflects the data situation at that moment in time. Data in the text are rounded to full digits.

For more information

- Thematic section on digital economy and society *(https://ec.europa.eu/eurostat/web/digital-economy-and-society/overview)*
- Database on digital economy and society statistics *(https://ec.europa.eu/eurostat/web/digital-economy-and-society/database)*
- Statistics Explained articles on digital economy and society *(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Digital_economy_and_society)*
- Digitalisation dashboard *(https://ec.europa.eu/eurostat/cache/dashboard/digitalisation/)*

Contact

If you have questions on the data, please contact the Eurostat user support *(https://ec.europa.eu/eurostat/web/main/contact-us/user-support)*.

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