

# **INFORMATION SOCIETY IN FIGURES**

**2023**

**CZECHIA AND EU**

Information technologies

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## Introduction

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One year on, the Czech Statistical Office has issued again its flagship publication on digital society titled **Information Society in Figures 2023**.

This summary publication strives to bring to readers information, in an easy to comprehend form, on trends about the development in usage of modern **information and communication technologies (ICT)** in the main areas of our society in the **Czech Republic** and in **Member States of the European Union** by means set of tables and figures outputs.

The publication consists of **seven chapters** as follows:

- A. **ICT Infrastructure** contains basic data on the development of the number of subscribers by citizens and legal entities in the fixed and mobile network within the provided voice (telephone) and data (internet) services.
- B. **Households and digital technologies** provides information on households' access to computers, the internet, mobile phones and smart devices of the Internet of Things broken down by type of household.
- C. **Persons and digital technologies** includes basic information on a mobile phone users, internet users and users of selected smart devices by gender, age or educational attainment. Data on social network users, information on internet banking and online purchases is provided in more detail here. This information is supplemented with data on using the internet for communication, entertainment activities or performing selected security activities on the internet.
- D. **Enterprises and digital technologies** provides an overview on deployment, ways, and level of use of the internet, websites, social networks, e-commerce or remote working by enterprises and their employees. This information is supplemented by detailed data on usage of paid cloud computing services or on the use of Internet of Things, artificial intelligence, 3D printing and use of robotics in enterprises with 10 or more employees.
- E. **Government and digital technologies** informs about selected eGovernment services, such as CzechPoint or data boxes. Data on electronic tax returns are also included in the chapter. This information is supplemented by data on the way in which citizens use the internet in their dealings with the government authorities and public institutions.
- F. **Education and digital skills** gives an overview on ICT equipment of schools. It also contains information on the use of the internet by students aged 16+, on the involvement of people in educational activities or on selected digital skills of students and persons aged 16+.
- G. **Health and digital technologies** gives information on ICT equipment of physicians' surgeries with ICT and an overview of the online services offered on their websites. There is also information on citizens' searching for health related information on the internet.

The data are **broken down** by various criteria, such as type of households, enterprises or physicians' surgeries. In the case of persons aged 16+, data are broken down by gender, age or educational attainment. Thus, readers may learn, how the use of the internet depends on the gender, age or educational attainment of persons or by income of households.

In figures, the **publication uses the Czech decimal comma**, instead of the English decimal point, as decimal separator for internal reasons.

Detailed information on the CZSO surveys can be found at:

[https://www.czso.cz/csu/czso/information\\_technologies](https://www.czso.cz/csu/czso/information_technologies)

Prague, April 2023

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The **telecommunications and internet infrastructure** is the cornerstone of majority of information technologies and thus the information society as a whole, as well. Data on the state and trends in the infrastructure of electronic communications in Czechia and the Member States of the European Union in the chapter have been collected from the **telecommunication and internet services providers**, on the contrary to majority of other chapters.

The **Reference Period** is as at 31 December of the reference year, unless otherwise stated.

Information in the chapter applies to services provided in retail only that means services provided to **end users**.

### Definitions (sorted alphabetically)

- A **subscriber** (or customer) to publicly accessible services of electronic communications shall mean individual or legal entity, which has concluded a contract on the use of such services with a provider and has an access to the public switched telephone network or public mobile telephone network within the contracted services.
- **Domain (internet domain and/or domain name)** shall mean a definite identifier of a computer or a computer network connected to the internet. The domains shall be registered by domain name registrars, which are authorised to administer Top Level Domains.
- **Fixed wired access** to the internet includes connections over following technologies and networks: i) digital subscriber line xDSL (ADSL, VDSL, FTTC) using fixed telephone networks, ii) cable modem using coaxial cable television networks (CATV) and iii) optical fibre networks (FTTH/B).
- **Fixed wireless access (FWA)** to the internet is the description of fixed wireless access by means of a radio connection both in licensed (including fixed LTE/5G) and non-licensed (fixed Wi-Fi) frequency bands. The end-point device is at a fixed place, located in a building, dwelling etc.
- **SIM cards** are **prepaid** ones, in which case the customer does not conclude any contract with the provider and buys a credit, which the provider deducts payments for services provided from; and **post-paid** ones in which case customers have a contract concluded with the provider and pay for contracted services by monthly invoice.
- The **number of fixed broadband subscriptions** is measured on the basis of so-called access points (**active connections**) at which services are provided in a fixed point via **fixed wired** or **wireless access**.
- The **number of mobile broadband subscriptions using cellular phone** is measured by the number of data SIM cards with activated voice and data services together, which are provided based on the contract allows the access to mobile broadband in cellular phone.
- The **number of subscriptions of voice services in a fixed telephone network** is measured as the number of the **public switched telephone network (PSTN) lines** and the number of **phone numbers** used for voice services by means of the **IP telephone** (VoIP technology).
- The **number of subscriptions of voice services in a mobile network** is measured by the number of **active SIM cards**, which were used at least once in the recent three months for voice services.

Data for the **Czechia** are taken from data sources of the Czech Telecommunication Office, except for the number of registered domains (source: cz.nic). Further information: [www.ctu.cz](http://www.ctu.cz) and [www.nic.cz](http://www.nic.cz).

**International comparisons** were worked out by the CZSO using data from the International Telecommunication Union (ITU World Telecommunication/ICT Indicators Database, December 2022), European Commission and OECD (from data source available in February 2023).

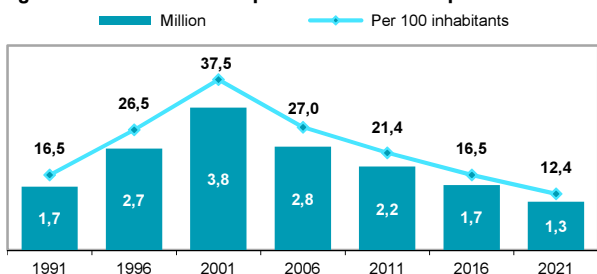
**Further information on this theme can be found at** (in Czech language only): [https://www.czso.cz/csu/czso/telekomunikacni\\_a\\_internetova\\_infrastruktura](https://www.czso.cz/csu/czso/telekomunikacni_a_internetova_infrastruktura)

## A ICT infrastructure

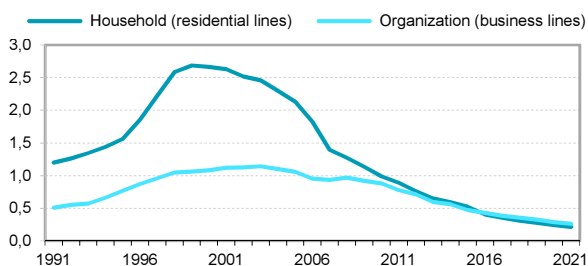
**Table A1 Fixed telephone voice subscriptions in Czechia**

	Thousand		
	2015	2020	2021
<b>Total</b>	<b>1 896</b>	<b>1 334</b>	<b>1 302</b>
<b>Subscriber</b>			
Household - residential subscriptions	831	459	411
Organization - business subscriptions	1 065	875	891
<b>Network technology and subscriber</b>			
<b>Switched network - PSTN lines</b>	<b>994</b>	<b>530</b>	<b>477</b>
Household - residential PSTN lines	523	244	214
Organization - business PSTN lines	471	286	263
<b>Internet network - VoIP lines</b>	<b>902</b>	<b>804</b>	<b>826</b>
Household - residential VoIP lines	309	216	197
Organization - business VoIP lines	594	588	628

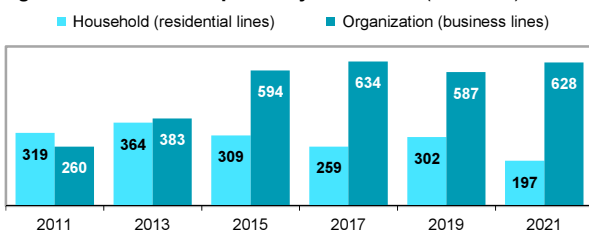
**Figure A1 Active fixed telephone voice subscriptions**



**Figure A2 Active fixed telephone lines to PSTN by subscriber (million)**

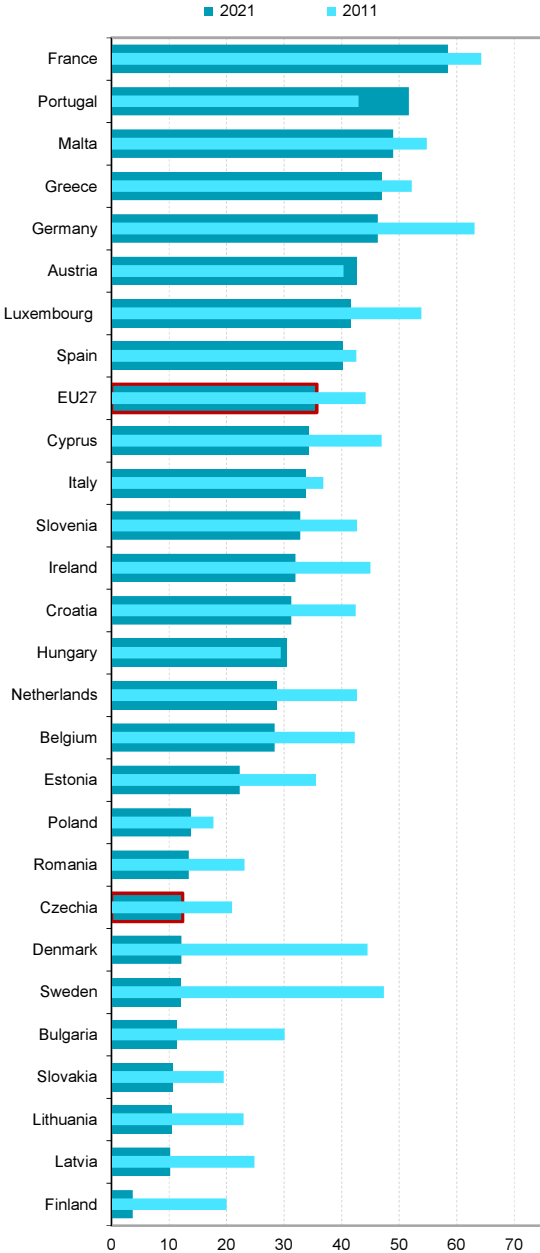


**Figure A3 VoIP subscriptions by subscriber (thousand)**



Source: Czech Telecommunication Office and CZSO own calculations

**Figure A4 Fixed telephone voice subscriptions in EU countries (per 100 inhabitants)**



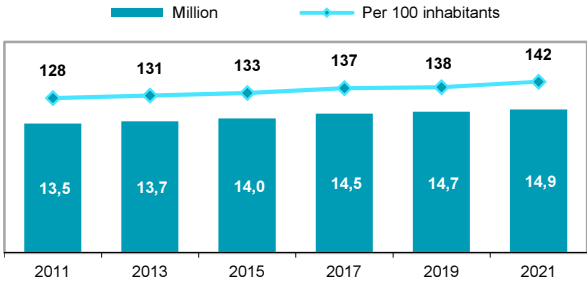
Source: International Telecommunication Union

## A ICT infrastructure

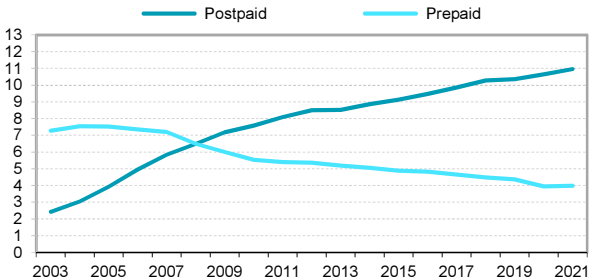
**Table A2 Mobile telephone voice subscriptions in Czechia**

	Thousand		
	2015	2020	2021
<b>Total</b>	14 017	14 600	14 943
<b>Subscriber</b>			
Individual (citizen)	9 222	8 836	9 113
Organization (e.g. enterprise)	4 795	5 764	5 830
<b>Subscription</b>			
Prepaid	4 893	3 947	3 982
Postpaid	9 124	10 653	10 961

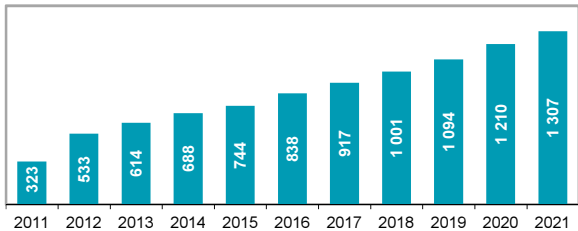
**Figure A5 Mobile telephone voice subscriptions**



**Figure A6 Active SIM cards by subscription (million)**



**Figure A7 M2M subscriptions\* (thousand)**



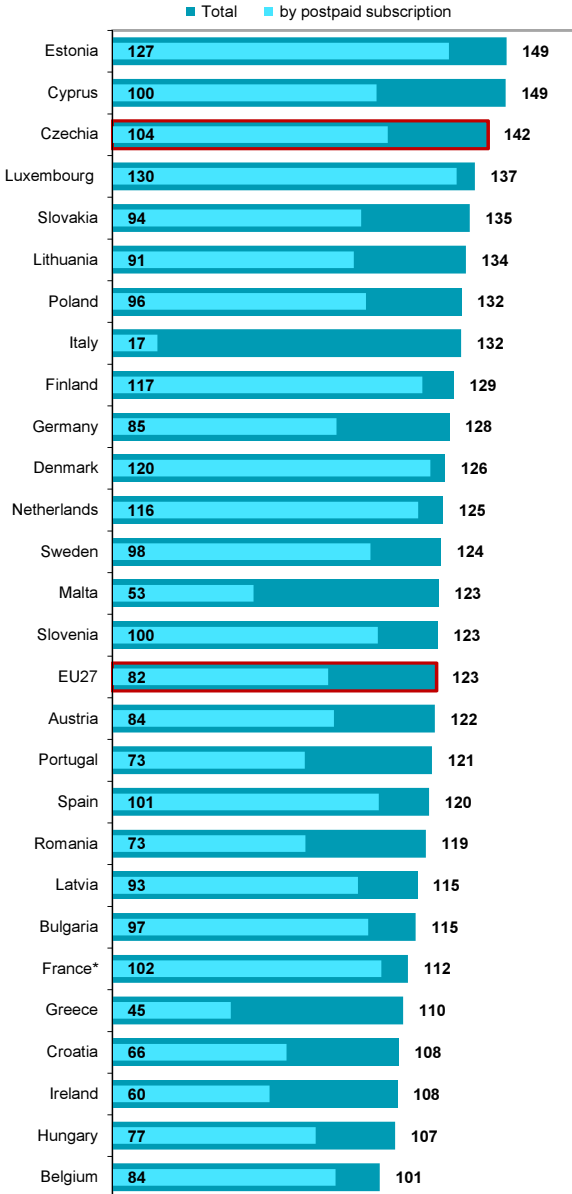
\* Machine-to-Machine (M2M) includes SIM cards designed exclusively for wireless communication among devices and systems without human intervention.

Source: Czech Telecommunication Office and CZSO own calculations



## A ICT infrastructure

**Figure A8 Mobile telephone voice subscriptions in EU countries; 2021 (per 100 inhabitants)**



\* data for 2019

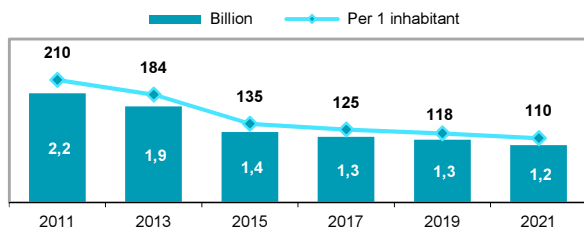
Source: International Telecommunication Union, Czech Telecommunication Office

**Table A3 Fixed telephone traffic in Czechia**

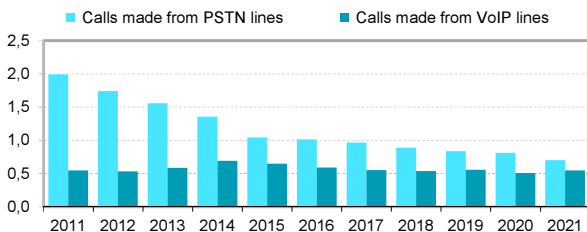
Outgoing calls from the fixed network in million minutes

	2019	2020	2021
<b>Total</b>	<b>1 389</b>	<b>1 318</b>	<b>1 243</b>
<b>Subscriber</b>			
Household - calls from residential lines	651	632	534
Organization - calls from business lines	738	686	709
<b>Technology</b>			
Switched network - calls from PSTN lines	835	812	700
Internet network - calls from VoIP lines	554	506	544
<b>Destination</b>			
<b>Domestic calls, total</b>	<b>1 262</b>	<b>1 202</b>	<b>1 156</b>
Fixed-to-Fixed calls	595	503	472
Fixed-to-Mobile calls	666	699	685
<b>International calls</b>	<b>77</b>	<b>72</b>	<b>51</b>

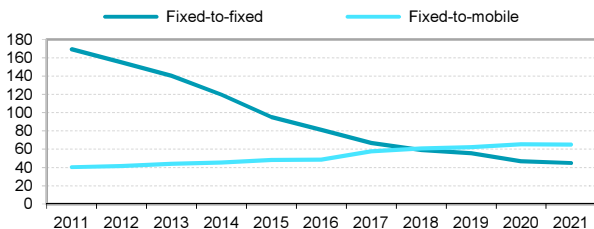
**Figure A9 Domestic fixed telephone traffic (minutes)**



**Figure A10 Fixed telephone traffic by technology**  
(outgoing calls in billion minutes)



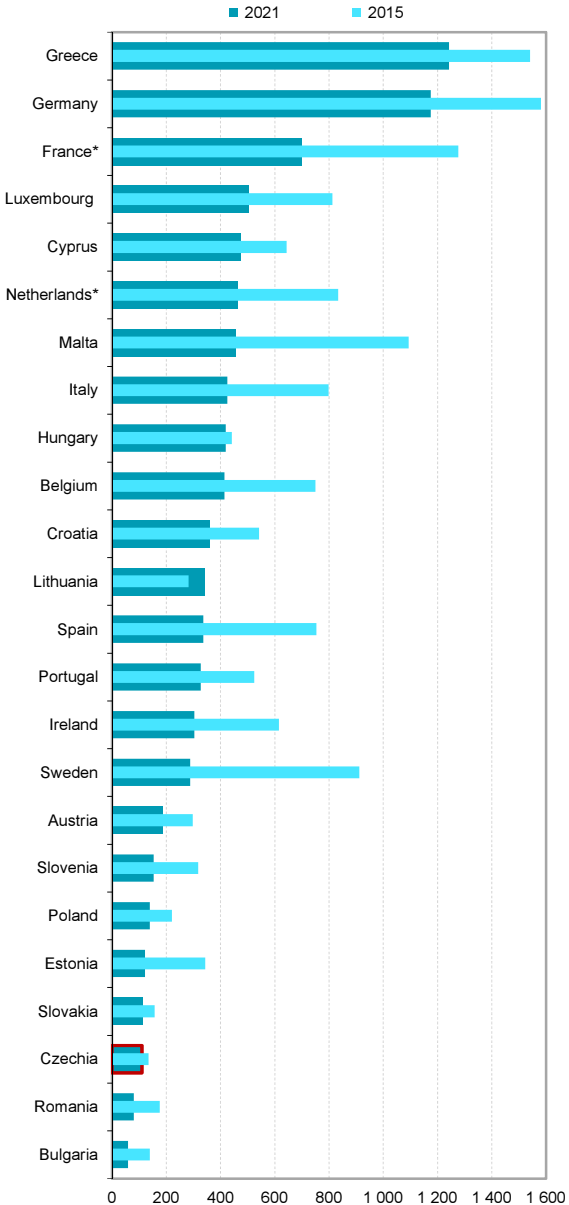
**Figure A11 Domestic fixed telephone traffic by network**  
(outgoing called minutes per one inhabitant)



Source: Czech Telecommunication Office and CZSO own calculations

## A ICT infrastructure

**Figure A12 Domestic fixed telephone traffic in EU countries**  
(outgoing called minutes per one inhabitant)



\* France: data for 2014 and 2019, Netherlands: data for 2019.

Source: International Telecommunication Union and CZSO own calculations

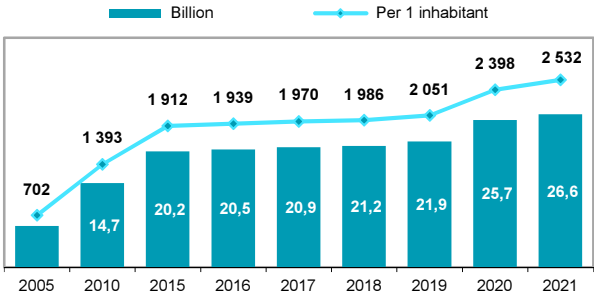
**Table A4 Mobile telephone traffic in Czechia**

Outgoing calls from the mobile network in million minutes

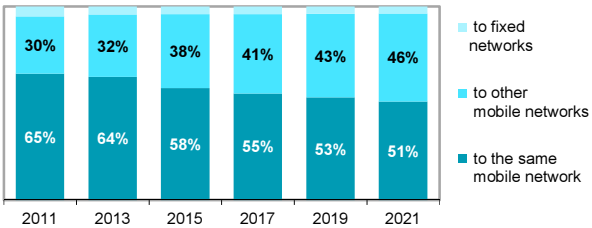
	2019	2020	2021
<b>Total</b>	<b>23 553</b>	<b>27 091</b>	<b>28 096</b>
<b>Subscriber</b>			
Individual (citizen)	12 293	14 372	15 156
Organization (e.g. enterprise)	9 991	11 651	11 813
<b>Destination</b>			
<b>Domestic calls, total</b>	<b>21 931</b>	<b>25 660</b>	<b>26 628</b>
to the same mobile network	11 595	13 244	13 537
to other mobile networks	9 501	11 451	12 125
to fixed networks	836	965	966
<b>International calls*</b>	<b>1 622</b>	<b>1 430</b>	<b>1 468</b>

\* Incl. outbound roaming, which is not included in the breakdown by subscriber type.

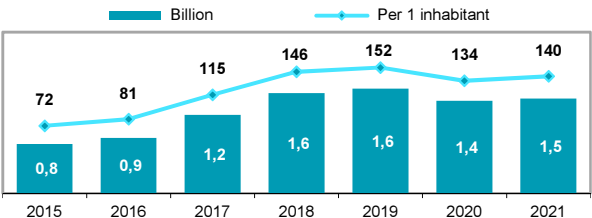
**Figure A13 Domestic mobile telephone traffic (minutes)**



**Figure A14 Domestic mobile telephone traffic by destination**



**Figure A15 International mobile telephone traffic (minutes)**

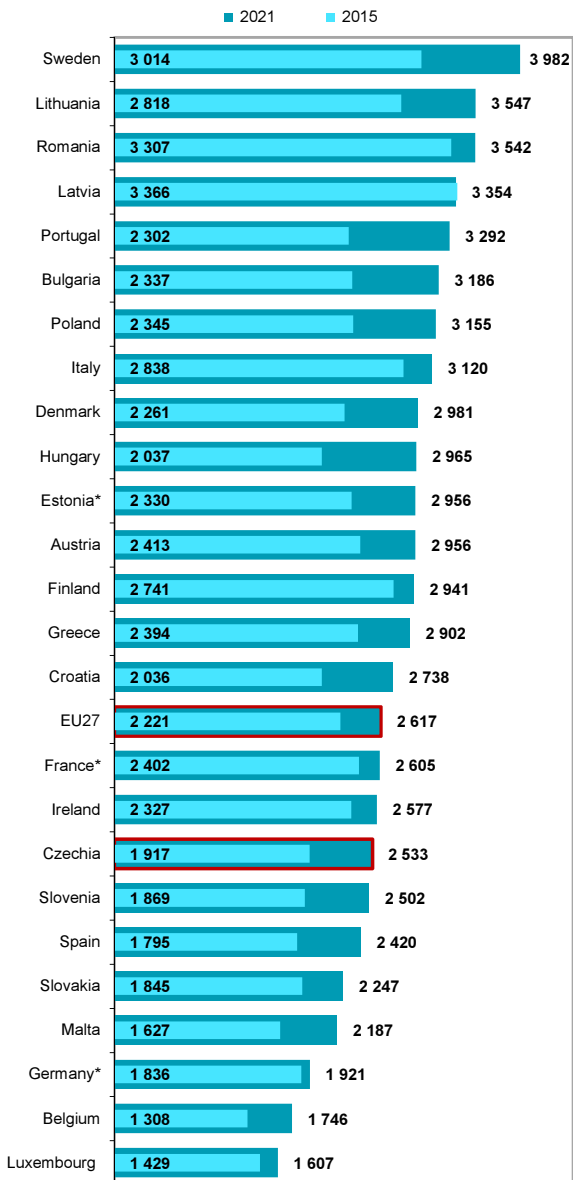


Source: Czech Telecommunication Office and CZSO own calculations



## A ICT infrastructure

**Figure A16 Domestic mobile telephone traffic in EU countries**  
(outgoing called minutes per one inhabitant)



\* Estonia: data for 2020, France: data for 2019, Germany: data for 2014.

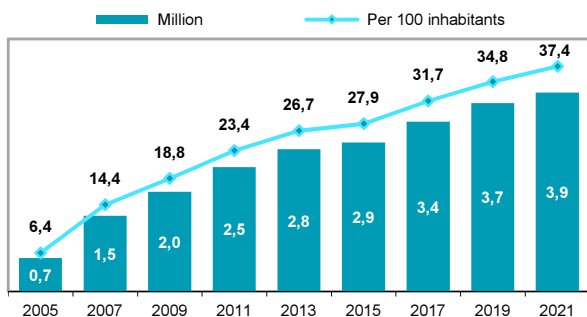
Source: International Telecommunication Union and CZSO own calculations

**Table A5 Fixed broadband subscriptions in Czechia**

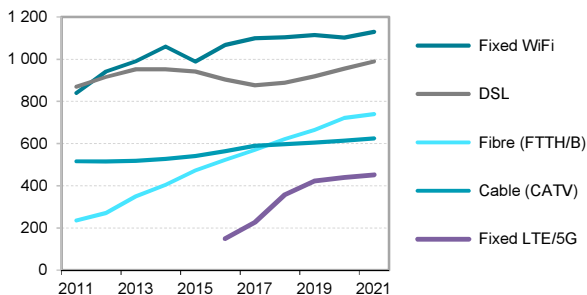
Thousand

	2019	2020	2021
<b>Total</b>	<b>3 726</b>	<b>3 833</b>	<b>3 936</b>
<b>Speed</b>			
< 30 Mbit/s	1 550	1 353	1 161
≥ 30 < 100 Mbit/s	1 101	1 253	1 517
≥ 100 Mbit/s	1 075	1 227	1 258
<b>Subscriber</b>			
Household	3 094	3 182	3 260
Organization	632	651	677
<b>Access and technology</b>			
<b>Wired fixed access, total</b>	<b>2 188</b>	<b>2 291</b>	<b>2 355</b>
DSL incl. FTTC	918	956	990
Fibre (FTTH/B)	664	721	740
Cable (CATV)	606	614	625
<b>Wireless fixed access, total</b>	<b>1 538</b>	<b>1 542</b>	<b>1 582</b>
Fixed WiFi	1 115	1 103	1 130
Fixed LTE/5G	423	440	452

**Figure A17 Fixed broadband subscriptions**



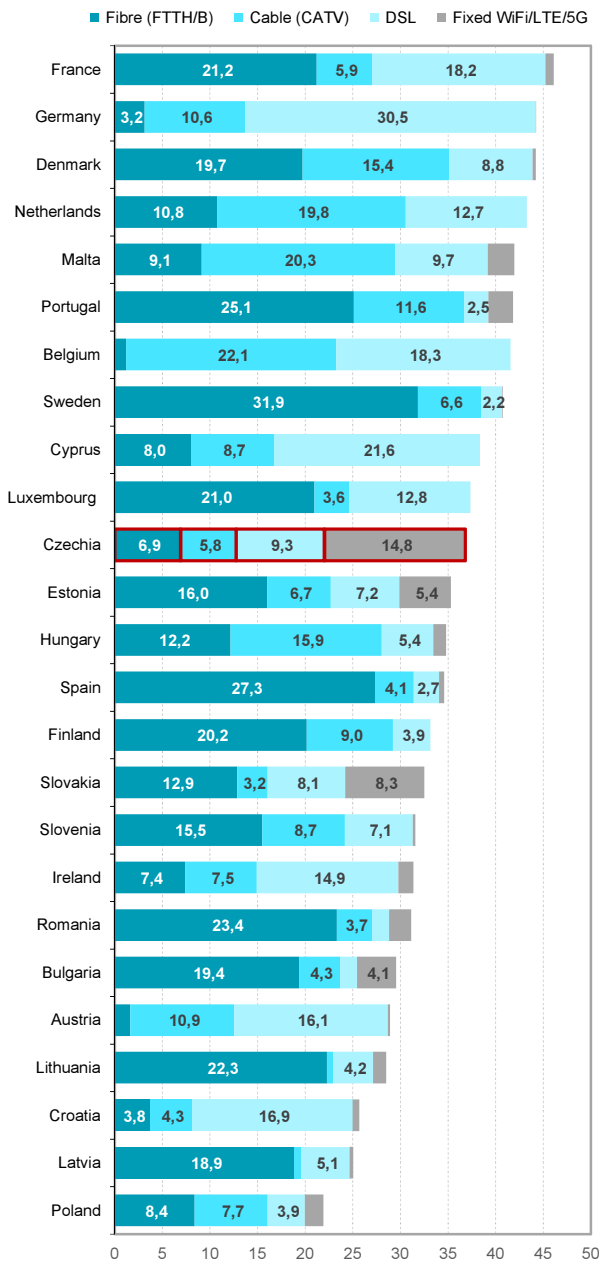
**Figure A18 Fixed broadband subscriptions by technology (thousand)**



Source: Czech Telecommunication Office and CZSO own calculations

## A ICT infrastructure

**Figure A19 Fixed broadband subscriptions in EU countries by technology; 2021 (per 100 inhabitants)**



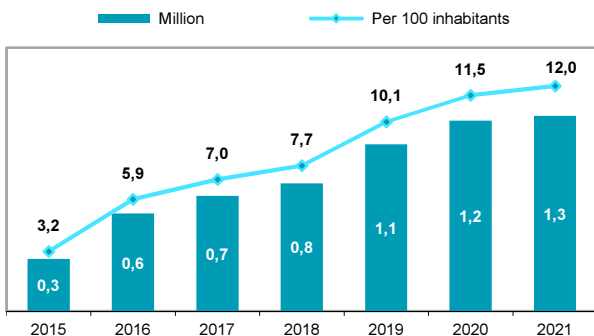
Source: International Telecommunication Union and OECD

## A ICT infrastructure

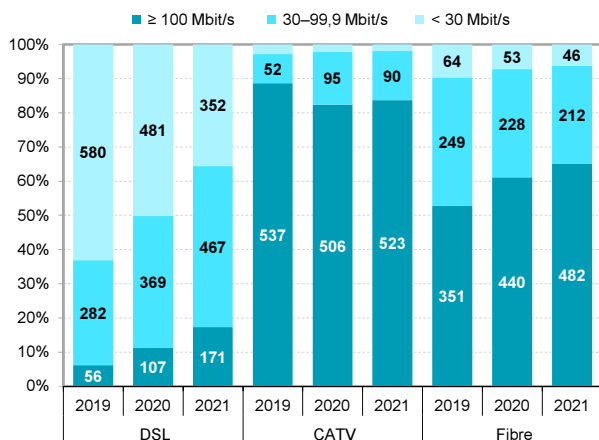
**Table A6 Speed of fixed broadband in Czechia; 2021**

	Thousand subscriptions*		
	< 30 Mbit/s	30–99,9 Mbit/s	≥ 100 Mbit/s
<b>Total</b>	<b>1 161</b>	<b>1 517</b>	<b>1 258</b>
<b>Wired fixed access, total</b>	<b>410</b>	<b>769</b>	<b>1 175</b>
DSL incl. FTTC	352	467	171
Fibre (FTTH/B)	46	212	482
Cable (CATV)	12	90	523
<b>Wireless fixed access, total</b>	<b>750</b>	<b>748</b>	<b>83</b>
Fixed WiFi	415	647	68
Fixed LTE/5G	335	102	15

**Figure A20 Fixed broadband subscriptions 100 Mbit/s+\***



**Figure A21 Speed of fixed broadband technologies (thousand subscriptions; percentage)\***

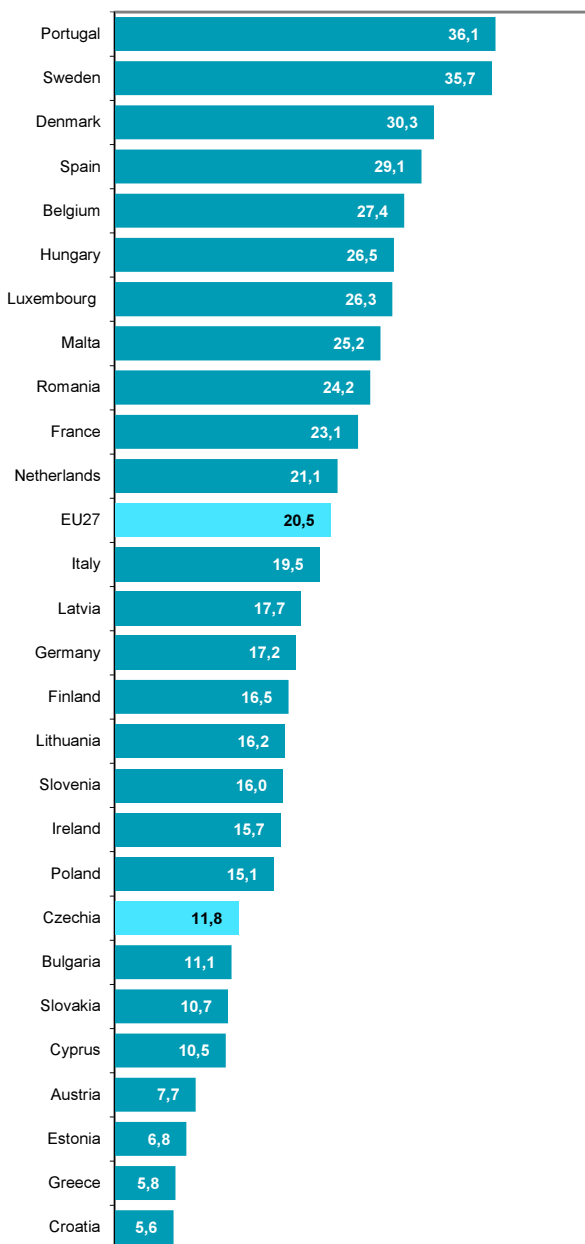


\* Measured based on the number of subscriptions having a contract on the use of internet access within specific interval of advertised download speed.

Source: Czech Telecommunication Office and CZSO own calculations

## A ICT infrastructure

**Figure A22 Fixed broadband subscriptions 100 Mbit/s+ in EU countries; 2021 (per 100 inhabitants)**



Source: European Commission, OECD and CZSO own calculations

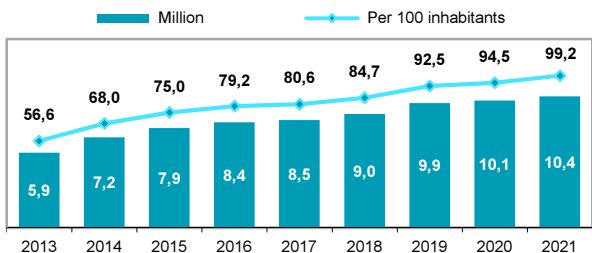
## A ICT infrastructure

**Table A7 Mobile broadband subscriptions in Czechia**

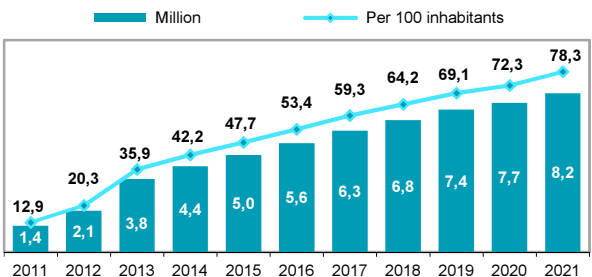
Thousand

	2019	2020	2021
<b>Total</b>	<b>9 888</b>	<b>10 109</b>	<b>10 434</b>
<b>Voice and data subscriptions</b>	<b>9 372</b>	<b>9 718</b>	<b>10 085</b>
Temporary access w/o monthly plans	1 981	1 980	1 845
Postpaid monthly plans	7 391	7 739	8 239
<b>Data-only subscriptions*</b>	<b>517</b>	<b>390</b>	<b>349</b>

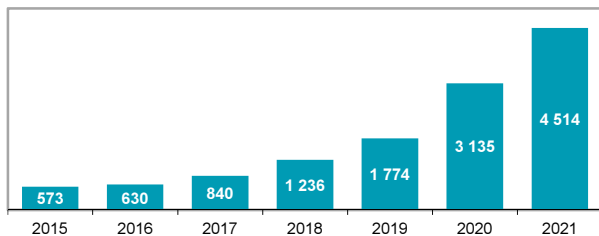
**Figure A23 Mobile broadband subscriptions**



**Figure A24 Active voice and data mobile broadband subscriptions within postpaid monthly plans**



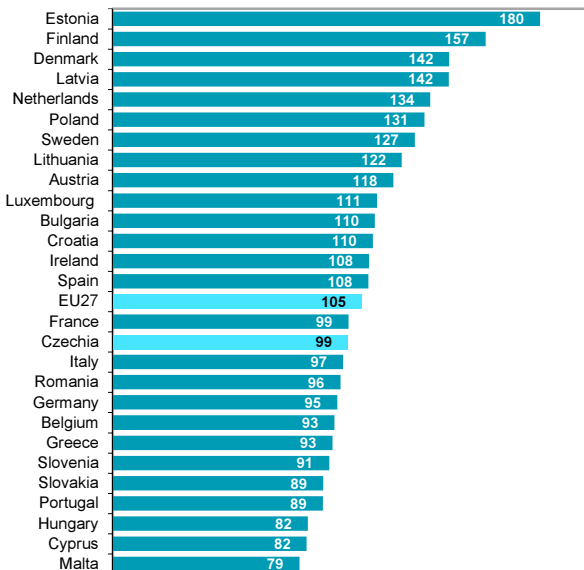
**Figure A25 Average monthly mobile data consumption (MB per active SIM card with data services)**



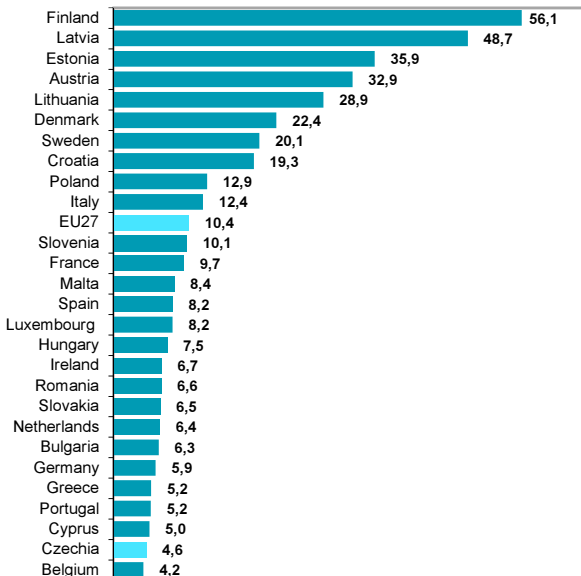
\* Mobile internet for laptops or tablets includes a permanent (dedicated) data services (over a mobile network) that are purchased separately from voice services. For mobile internet access is needed USB modem or data SIM card connection with laptop or tablet.

Source: Czech Telecommunication Office and CZSO own calculations

**Figure A26 Mobile broadband subscriptions in EU countries; 2021 (per 100 inhabitants)**



**Figure A27 Monthly mobile broadband internet traffic in EU countries; 2021 (GB per 1 inhabitant)**



Source: International Telecommunication Union and OECD

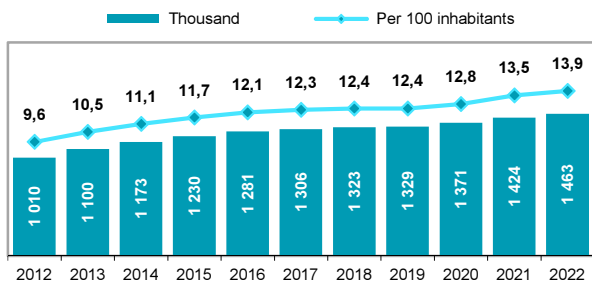
## A ICT infrastructure

**Table A8 Domains under Top Level Domain .CZ in Czechia**

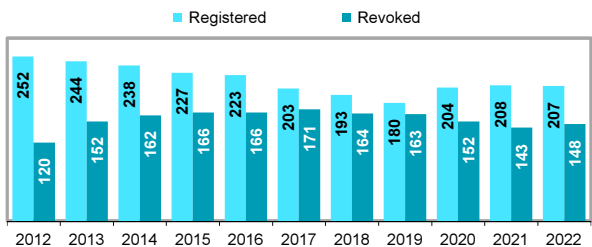
	Thousand		
	2020	2021	2022
<b>Total</b>	<b>1 371</b>	<b>1 424</b>	<b>1 463</b>
domains protected by DNSSEC*	829	848	845
<b>Registrant's country</b>			
Czechia	1 273	1 307	1 322
Slovakia	24	27	27
Germany	15	14	15
United States of America	10	13	29
other countries	49	63	70

\* Further information can be found at: [www.dnssec.cz](http://www.dnssec.cz).

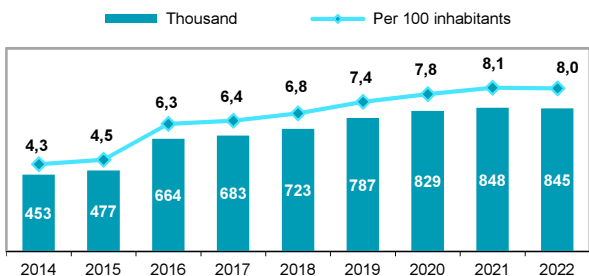
**Figure A28 Domains under Top Level Domain .CZ**



**Figure A29 Registered and revoked .CZ domains (thousand)**



**Figure A30 Domains .CZ protected by DNSSEC**



Source: CZ.NIC and CZSO own calculations





## B Households and digital technologies

The Czech Statistical Office (CZSO) has been monitoring data on penetration of selected information and communication technologies in Czech households by means of a separate annual statistical survey named **Sample Survey on the ICT Use in Households and by Individuals**. The first (pilot) survey was carried out in 2002.

The survey applies the method of personal interviews with the use of personal computer in a sample of around 10 000 individuals aged 16+ years in approx. 6 000 households. The survey has been carried out in accord with the **Regulation (EC) No 2019/1700** of the European Parliament and of the Council. This allows obtaining of internationally comparable data within the EU.

### Notes

The **Reference Period** is the 2<sup>nd</sup> Q of the monitored year for Czechia.

**Income quintiles:** Households were divided into five groups (quintiles) according to the amount of net income per person in the household.

### Comparability of the CZSO and Eurostat Data:

Data published by Eurostat for Czech households slightly differ from data published by the CZSO. This difference is due to the fact that Eurostat includes solely households with at least one person aged 16–74 years. The CZSO publishes data for all households.

**International data and comparisons** of certain indicators are taken from the Eurostat database for digital economy and society, data of which are updated every year. Detail information can be found at:

[https://bit.ly/Comprehensive\\_database](https://bit.ly/Comprehensive_database)

### Definitions (sorted alphabetically)

- A **WiFi router** is a device that enables to distribute the internet signal inside the household's premises, i.e. it enables wireless connection of more devices at the same time and from different places.
- **Households of persons older than 65+ years** shall mean households in which merely persons aged 65+ years live.
- **Households of persons up to 40 years (no children)** mean households where only persons aged up to 40 years without children live.
- **Households with a computer** involve households, which at the time of the survey stated, that at least one of the household members used a computer at home (desktop, laptop, or tablet). *Type of its ownership is not relevant. It could be own one, company one, or borrowed one.*
- **Households with children up to 15 years** shall mean households with at least one child younger than 16 years of age.
- **Households with the internet** shall mean households, which at the time of survey stated, that at least one of the household members used the internet at home, no matter what type is the device used or the way of connection. The internet could be used on a computer, a tablet, a mobile phone, a smart TV, a game console, etc.
- **Smart household appliances** include e.g. smart coffee makers, refrigerators, ovens, vacuum cleaners, washing machines, dryers, but also smart garden equipment such as smart lawn mowers.
- **Smart devices for energy management** include e.g. smart thermostats, consumption meters, lights, electrical outlets, garden irrigation systems, windows or window blinds.
- **Smart home security devices** include, for example, smart home alarms, smoke detectors, security cameras, locks.
- **The Internet of Things (IoT)** refers to devices that are wirelessly connected to other devices and are able to communicate with each other. Users of the IoT devices control them most often via mobile applications or via web interface.

Detailed information on methodology and data from the survey, including international comparison, can be found (in Czech language only) at:

[https://www.czso.cz/csu/czso/domacnosti\\_a\\_jednotlivci](https://www.czso.cz/csu/czso/domacnosti_a_jednotlivci)

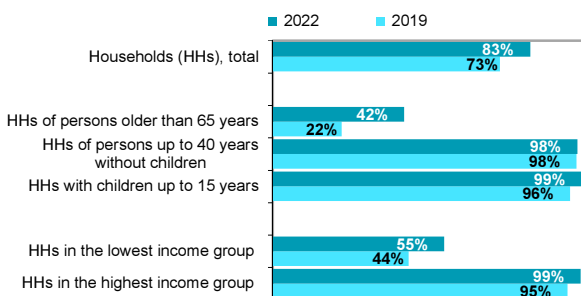
## B Households and digital technologies

**Table B1 Households in Czechia with a mobile phone; 2022**

	Percentage		
	Total	Smart-phone	Mobile phone without operating system
<b>Households (HHs), total</b>	<b>99,5</b>	<b>82,7</b>	<b>28,7</b>
HHs with children up to 15 years	100,0	99,2	6,8
HHs of persons up to 40 years (without children)	100,0	97,9	3,0
HHs of persons older than 65 years	98,5	42,2	67,2
Other households without children	99,8	92,7	25,7
<b>Household income group</b>			
The lowest income group (first quintile)	98,4	55,1	51,6
Second quintile income group	99,6	72,2	41,6
Third quintile income group	99,7	89,6	26,0
Fourth quintile income group	100,0	97,3	16,3
The highest income group (fifth quintile)	100,0	98,9	8,1

as a percentage of all households of a given type

**Figure B1 Households with a smartphone**



**Table B2 Households in Czechia using a Smart TV**

	Percentage	
	2016	2022
<b>Households (HHs), total</b>	<b>11,5</b>	<b>43,8</b>
HHs with children up to 15 years	19,8	61,8
HHs of persons up to 40 years (without children)	14,8	59,6
HHs of persons older than 65 years	0,5	10,7
Other households without children	10,4	48,3
<b>Household income group</b>		
The lowest income group (first quintile)	1,1	19,4
Second quintile income group	4,6	28,7
Third quintile income group	11,3	44,3
Fourth quintile income group	15,3	56,4
The highest income group (fifth quintile)	24,7	70,0

as a percentage of all households of a given type

Source: Czech Statistical Office, ICT use survey in households

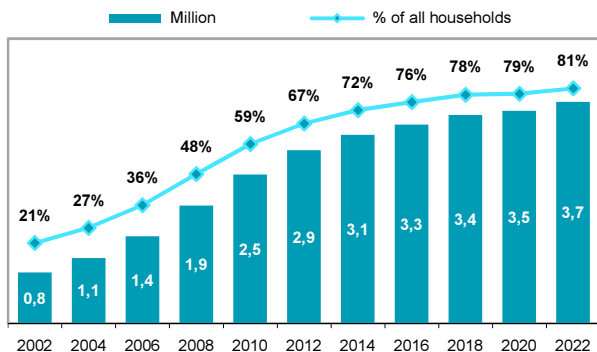
## B Households and digital technologies

**Table B3 Households in Czechia with a computer**

	Percentage		
	2015	2020	2022
<b>Households (HHs), total</b>	<b>73,1</b>	<b>78,7</b>	<b>80,8</b>
HHs with children up to 15 years	93,8	95,8	96,3
HHs of persons up to 40 years (without children)	93,0	94,2	94,1
HHs of persons older than 65 years	24,9	39,9	45,3
Other households without children	76,8	85,7	88,9
<b>Household income group</b>			
The lowest income group (first quintile)	.	44,8	52,4
Second quintile income group	.	69,3	70,6
Third quintile income group	.	87,0	87,9
Fourth quintile income group	.	94,2	94,6
The highest income group (fifth quintile)	.	98,0	98,3

as a percentage of all households of a given type

**Figure B2 Households with a computer**



**Table B4 Computers used by households in Czechia; 2022**

	Percentage		
	Desktop	Laptop	Tablet
<b>Households (HHs), total</b>	<b>32,8</b>	<b>66,5</b>	<b>35,3</b>
HHs with children up to 15 years	37,6	87,7	61,5
HHs of persons up to 40 years (without children)	27,4	82,0	38,5
HHs of persons older than 65 years	21,7	25,9	7,6
Other households without children	37,6	73,5	34,4
<b>Household income group</b>			
The lowest income group (first quintile)	17,8	39,1	17,2
Second quintile income group	30,8	49,9	23,9
Third quintile income group	34,7	73,4	37,0
Fourth quintile income group	38,4	79,7	43,5
The highest income group (fifth quintile)	42,4	90,3	54,8

as a percentage of all households of a given type

Source: Czech Statistical Office, ICT use survey in households

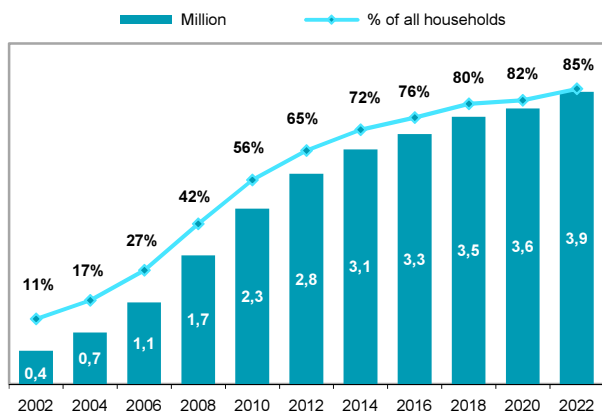
## B Households and digital technologies

**Table B5 Households in Czechia with internet access**

	Percentage		
	2015	2020	2022
<b>Households (HHs), total</b>	<b>73,1</b>	<b>81,7</b>	<b>85,4</b>
HHs with children up to 15 years	93,6	98,5	99,7
HHs of persons up to 40 years (without children)	94,7	97,8	99,7
HHs of persons older than 65 years	24,2	41,3	49,4
Other households without children	77,0	89,7	94,3
<b>Household income group</b>			
The lowest income group (first quintile)	.	50,4	59,1
Second quintile income group	.	72,9	77,3
Third quintile income group	.	90,4	92,5
Fourth quintile income group	.	95,8	98,4
The highest income group (fifth quintile)	.	98,8	99,5

as a percentage of all households of a given type

**Figure B3 Households with internet access**



**Table B6 Households in Czechia using a WiFi router**

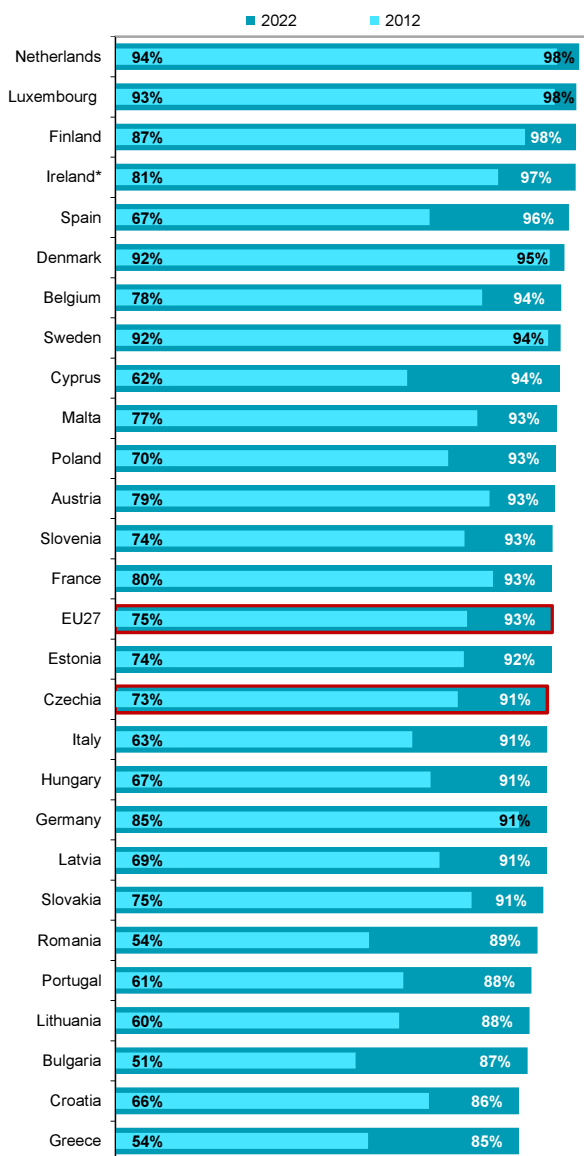
	Percentage		
	2015	2020	2022
<b>Households (HHs), total</b>	<b>47,7</b>	<b>68,3</b>	<b>77,1</b>
HHs with children up to 15 years	68,4	89,2	95,4
HHs of persons up to 40 years (without children)	64,1	82,8	88,6
HHs of persons older than 65 years	8,8	25,9	39,2
Other households without children	48,2	75,2	85,3
<b>Household income group</b>			
The lowest income group (first quintile)	.	35,9	48,6
Second quintile income group	.	55,6	67,3
Third quintile income group	.	75,4	83,5
Fourth quintile income group	.	83,4	90,2
The highest income group (fifth quintile)	.	91,3	96,0

as a percentage of all households of a given type

Source: Czech Statistical Office, ICT use survey in households

## B Households and digital technologies

**Graf B4 Households in EU countries with internet access**



as a percentage of all households in a given country where at least one member is younger than 75 years

\* data for 2021

Source: Eurostat

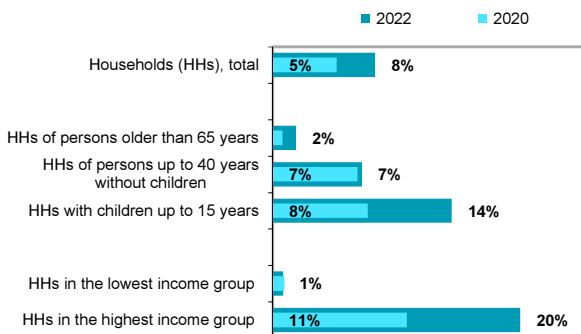
## B Households and digital technologies

**Table B7 Households in Czechia using selected devices of the Internet of Things; 2022**

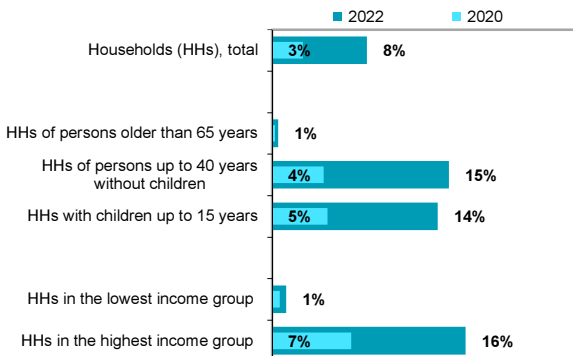
	Percentage		
	Security devices	Energy management devices	Household appliances
<b>Households (HHs), total</b>	<b>8,2</b>	<b>5,8</b>	<b>7,8</b>
HHs with children up to 15 years	14,3	10,7	13,6
HHs of persons up to 40 years (without children)	7,2	8,9	14,6
HHs of persons older than 65 years	1,9	0,9	0,5
Other households without children	8,3	4,9	6,9
<b>Household income group</b>			
The lowest income group (first quintile)	0,8	0,7	1,2
Second quintile income group	2,0	1,7	2,6
Third quintile income group	7,2	3,1	7,2
Fourth quintile income group	11,1	8,9	12,0
The highest income group (fifth quintile)	19,8	14,6	15,9

as a percentage of all households of a given type

**Figure B5 Households using smart home security devices**



**Figure B6 Households using smart home appliances**



Source: Czech Statistical Office, ICT use survey in households

## C Persons and digital technologies

The Czech Statistical Office (CZSO) has been collecting detailed information on individuals using selected information and communication technologies (ICT) by means of a separate annual statistical survey named **Sample Survey on the ICT Use in Households and by Individuals**. The first pilot survey was carried out in 2002. Since 2006, this survey has been mandatory for all EU member states according to the relevant regulation of the European Parliament and the Council.

The survey applies the method of **personal interviews** with the use of personal computer (Computer Assisted Personal Interviewing – CAPI) in a sample of around 10 000 individuals aged 16+ years living in **private households** on the territory of the Czech Republic. This means the survey does not cover individuals living in collective households (penitentiaries, social care establishments, retirement homes, etc.).

The survey results are grossed up to the whole population aged 16+ years. The data found are available broken by a wide spectrum of demographic and social characteristics as, for instance, sex, age, educational attainment, economic activity, income group, region, and residential municipality size.

### Notes

The **reference period** is last 3 months prior to the survey interviews.

**Educational attainment** is published for the aged 25–64 years in graphs and tables. The population of the aged 16–24 years include numerous persons with still unfinished education process in the time of the survey. Therefore their educational attainment is rather determined by their age than educational aspirations. Similarly, the highest educational attainment of persons over 65 is mainly influenced by the time when persons received this education. Among people over 65, there is a significantly higher share of people with basic education than among younger people.

For the purposes of this publication, the highest educational attainment is divided into secondary education without A-level exam and lower, secondary education with A-level exam together with higher vocational education, and tertiary (i.e. university) education.

### Comparability of data published by the CZSO and Eurostat

Data published by Eurostat for the Czech Republic individuals slightly differ from data published by the CZSO. This difference is due to the fact that Eurostat includes solely individuals aged 16 to 74 years. On the other hand, the CZSO provides data for the whole population aged 16+ years.

**International data and comparisons** of certain indicators are taken from the Eurostat database for digital economy and society, data of which are updated every year. Detailed information can be found at: [https://bit.ly/Comprehensive\\_database](https://bit.ly/Comprehensive_database).

### Definitions (sorted alphabetically)

- A **purchase on the internet** shall mean ordering of any goods or services on a website or by means of an application for private purposes. Goods or services ordered this way may not be paid over the internet, they could be paid in cash on delivery, or while delivered in person.
- A **smartphone** is a phone with a built-in operating system. Most smartphones are touch-sensitive, but there are exceptions that can also be controlled by buttons. The user can use the internet on the smartphone, including downloading mobile applications.
- A **social network** shall mean a service enabling to unite, communicate, and share information with other users thereof. Logging in and the use of own profile to browse through contributions of other users, communication with the users, and sharing of own contributions, etc., are considered the participation in social networks.

## C Persons and digital technologies

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- An **individual using the internet on the mobile phone** is a person who gave that he/she had used a mobile phone to access internet services at least once in the last three months prior the survey interviews. It does not matter if the phone was private or employer's one and also it does not matter what type of connection was used to access the internet (mobile networks, WiFi).
- **Cookies** can be used to find out which pages the user has visited. It is also possible to monitor what goods or services the user searched for on the internet. When accessing websites that contain advertisements, the advertisements are then targeted to products that the user has previously searched for.
- **Instant messaging/Exchanging messages** online (e.g. via WhatsApp, Messenger or Viber) allows free sending of text messages, photos or videos to users in the contact list or to other users via the internet, most often on a mobile phone.
- **Listening to music** includes playing any music on the internet (e.g. on YouTube or Spotify), including listening to internet radio.
- The **internet banking** is operated by means of an internet portal enabling remote control and administration of bank accounts through the internet. The portal shall enable, for instance, checking the account remainder, setting up of a payment or permanent payments, setting up limits of cash withdrawing from ATMs, etc. The internet banking can also be accessible through a mobile phone by means of an application of so-called mobile banking.
- **Requests to delete personal data** on the internet include, for example, requests to delete subscriptions to newsletters.
- **Smart devices for health monitoring** include, for example, a smart personal scale that allows to keep the weighing history on the internet or in a mobile application. In addition to body weight itself, it can also measure other parameters such as water volume, fat measurement, calculation of metabolic age, etc. Smart devices also includes a smart blood pressure monitor, a smart toothbrush, etc.
- **Smart TV** is a TV with an option to connect to the internet. Therefore the user can, for example, watch videos from YouTube, Netflix or from the websites of television stations.
- **Using the internet** means performing any activity on the internet, such as browsing websites or downloading files.
- **Virtual assistants** exist either in the form of a speaker (e.g. Alexa) or in the form of an application on a mobile phone. Voice assistants are controlled by voice. They can be connected to other smart equipment in the household.
- **Watching video content (total)** includes watching movies and programs on the websites of regular TV stations, on video-sharing sites (e.g. YouTube) and on internet TV sites (both paid and free).
- **Watching Video on Demand** (e.g. on Netflix or HBO MAX) includes watching movies, series and other programs and videos on specialized sites where users can choose from the movie/series catalogue what and when to watch. To use these services, the user must register on the provider's website and then pay for these services.

Detailed information on methodology of the survey can be found in the CZSO publication **ICT Use in Households and by Individuals in 2022, code 062004-22** (in the Czech language only).

**Further information on the theme can be found at**

[https://www.czso.cz/csu/czso/domacnosti\\_a\\_jednotlivci](https://www.czso.cz/csu/czso/domacnosti_a_jednotlivci)

(in the Czech language only)



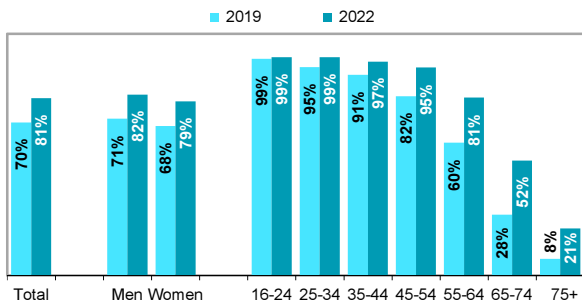


## C Persons and digital technologies

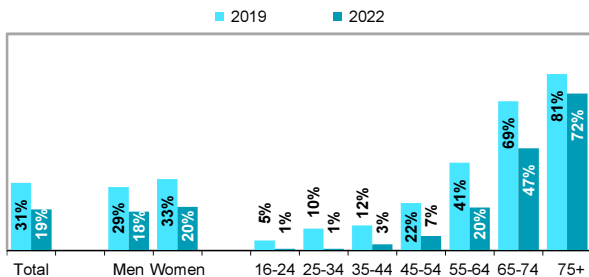
**Table C1 Persons in Czechia using a mobile phone; 2022**

	Percentage		
	Total	Smart-phone	Mobile phone without operating system
<b>Total (aged 16+)</b>	<b>98,8</b>	<b>80,7</b>	<b>19,1</b>
Men	99,1	82,3	17,9
Women	98,6	79,1	20,2
<b>Age group (years)</b>			
16–24	99,7	99,2	0,9
25–34	99,8	99,2	0,9
35–44	99,5	97,3	3,0
45–54	99,9	94,6	6,7
55–64	99,4	80,9	19,9
65–74	98,3	52,3	47,2
75+	93,1	21,3	72,4
<b>Education attainment (aged 25–64)</b>			
Secondary without A-level exam. and lower	99,2	87,2	13,0
Secondary with A-level examination	100,0	96,0	4,8
Tertiary	100,0	98,3	2,9

**Figure C1 Use of a smartphone by gender and age**



**Figure C2 Use of a mobile phone without operating system by gender and age**



as a percentage of all persons in a given socio-demographic group

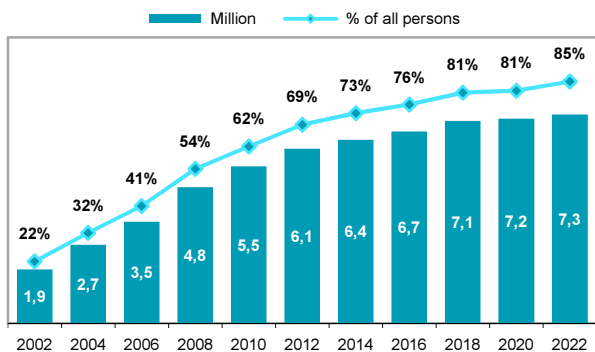
Source: Czech Statistical Office, ICT use survey in households

## C Persons and digital technologies

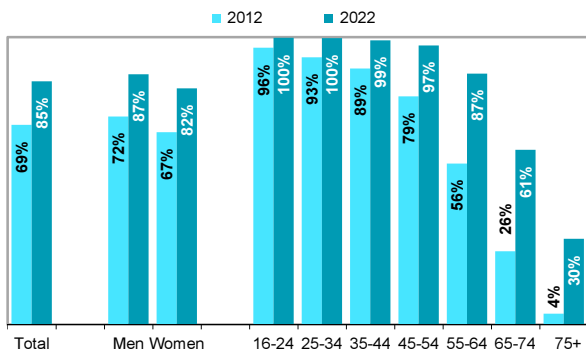
**Table C2 Persons in Czechia using the internet**

	Percentage		
	2015	2020	2022
<b>Total (aged 16+)</b>	<b>75,7</b>	<b>81,3</b>	<b>84,5</b>
Men	77,9	83,1	87,0
Women	73,5	79,7	82,2
<b>Age group (years)</b>			
16–24	97,0	98,6	99,7
25–34	95,4	97,9	99,6
35–44	93,9	98,4	98,9
45–54	86,7	94,7	97,1
55–64	68,0	81,0	87,3
65–74	39,5	53,3	60,8
75+	10,8	19,7	29,9
<b>Education attainment (aged 25–64)</b>			
Secondary without A-level exam. and lower	73,7	86,2	90,7
Secondary with A-level examination	95,0	97,8	98,5
Tertiary	99,4	99,3	99,9

**Figure C3 Persons aged 16+ using the internet**



**Figure C4 Use of the internet by gender and age**

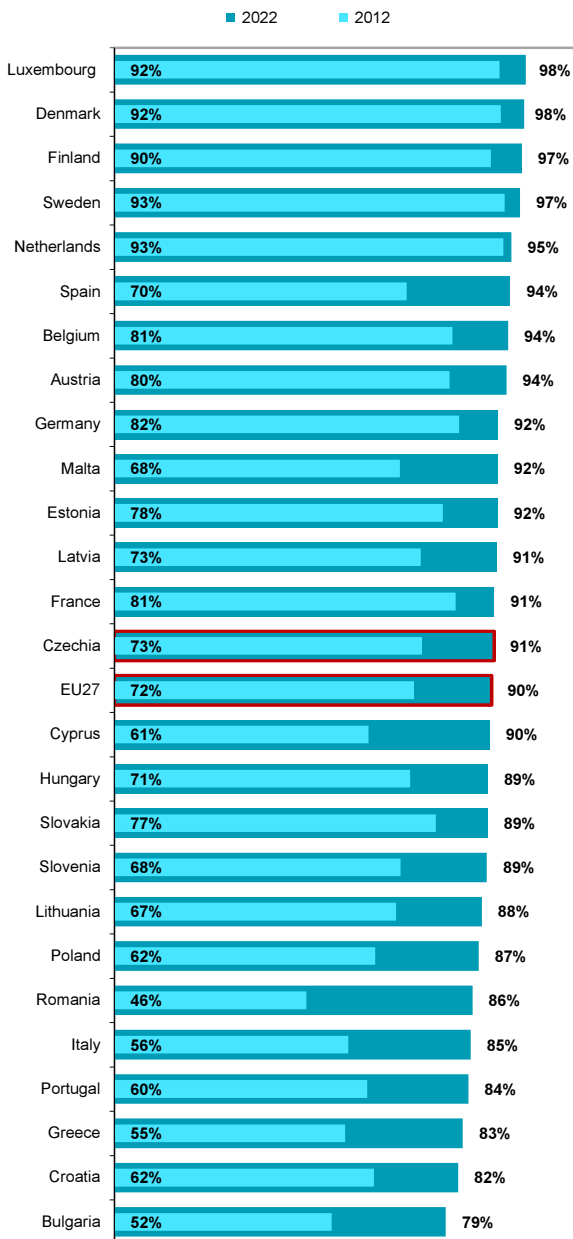


as a percentage of all persons in a given socio-demographic group

Source: Czech Statistical Office, ICT use survey in households

## C Persons and digital technologies

**Figure C5 Persons aged 16–74 years in EU countries using the internet**



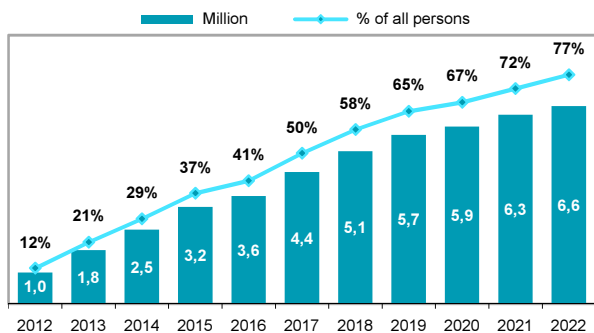
Source: Eurostat

## C Persons and digital technologies

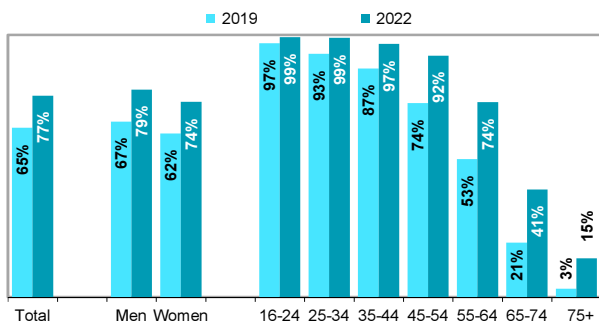
**Tab. C3 Persons in Czechia using a mobile phone to access the internet**

	Percentage		
	2015	2020	2022
<b>Total (aged 16+)</b>	<b>37,0</b>	<b>67,5</b>	<b>76,7</b>
Men	41,7	68,5	79,1
Women	32,5	66,6	74,4
<b>Age group (years)</b>			
16–24	77,1	96,5	99,1
25–34	68,0	94,5	98,8
35–44	48,6	90,2	96,6
45–54	28,1	80,9	92,0
55–64	14,2	57,5	74,3
65–74	4,5	23,5	41,0
75+	0,9	5,0	14,8
<b>Education attainment (aged 25–64)</b>			
Secondary without A-level exam. and lower	25,9	69,9	82,3
Secondary with A-level examination	43,4	87,1	94,5
Tertiary	68,3	93,1	97,9

**Figure C6 Persons aged 16+ using a mobile phone to access the internet**



**Figure C7 Use of a mobile phone to access the internet by gender and age**

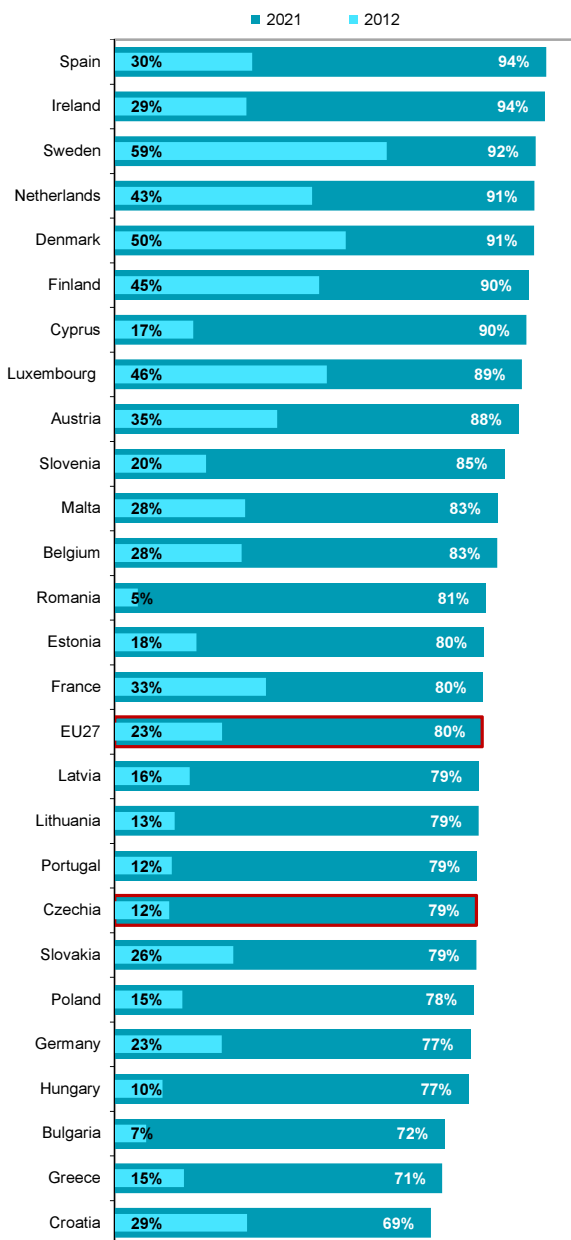


as a percentage of all persons in a given socio-demographic group

Source: Czech Statistical Office, ICT use survey in households

## C Persons and digital technologies

**Figure C8 Persons aged 16–74 years in EU countries using a mobile phone to access the internet**



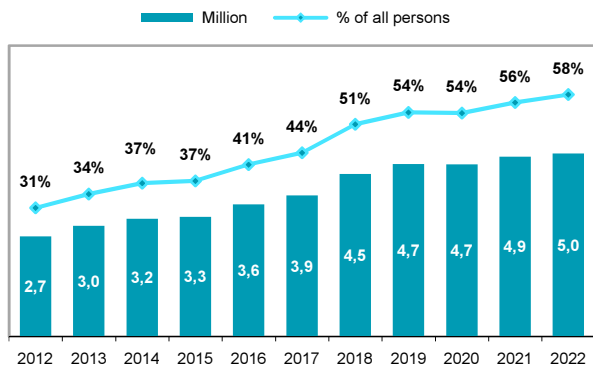
Source: Eurostat

## C Persons and digital technologies

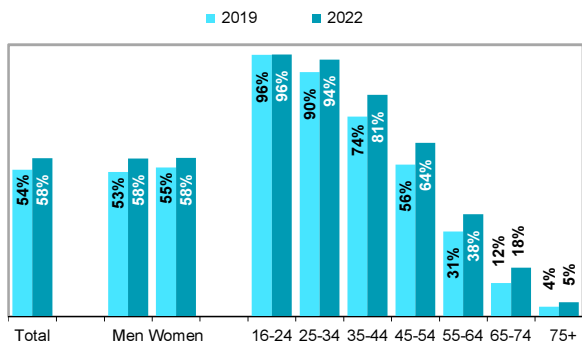
**Table C4 Persons in Czechia using social networks**

	Percentage		
	2015	2020	2022
<b>Total (aged 16+)</b>	<b>37,4</b>	<b>53,8</b>	<b>58,2</b>
Men	37,6	52,6	58,1
Women	37,3	55,0	58,3
<b>Age group (years)</b>			
16–24	88,7	95,1	96,3
25–34	72,3	89,8	94,5
35–44	46,9	74,3	81,5
45–54	23,9	56,1	63,9
55–64	10,1	31,5	37,6
65–74	5,2	13,5	18,0
75+	0,3	2,8	5,2
<b>Education attainment (aged 25–64)</b>			
Secondary without A-level exam. and lower	28,1	53,7	59,2
Secondary with A-level examination	43,9	68,3	74,2
Tertiary	55,3	73,5	78,0

**Figure C9 Persons aged 16+ using social networks**



**Figure C10 Use of social networks by gender and age**

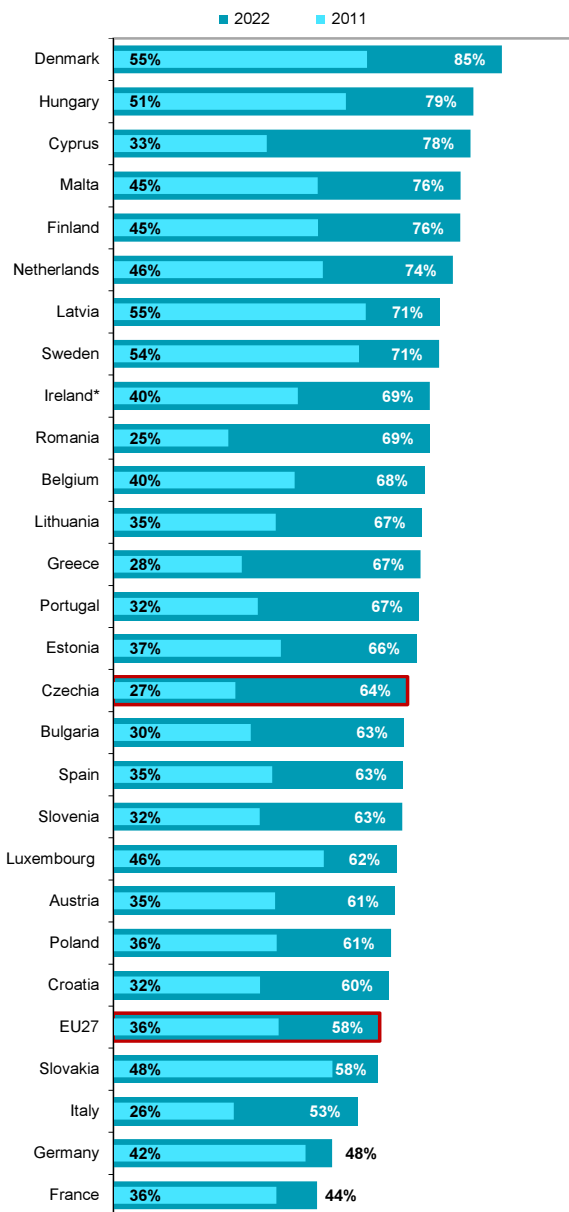


as a percentage of all persons in a given socio-demographic group

Source: Czech Statistical Office, ICT use survey in households

## C Persons and digital technologies

Figure C11 Persons aged 16–74 years in EU countries using social networks



\* data for 2021

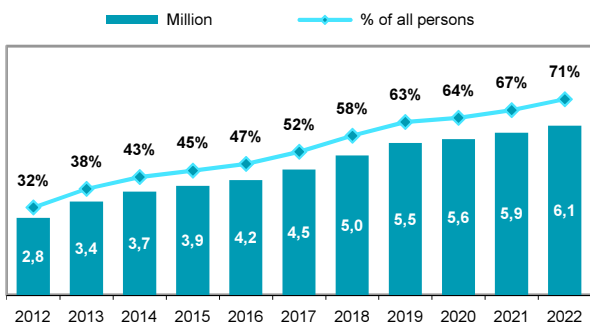
Source: Eurostat

## C Persons and digital technologies

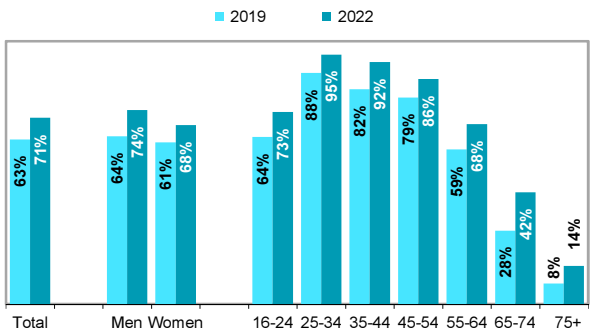
**Table C5 Persons in Czechia using internet banking**

	Percentage		
	2015	2020	2022
<b>Total (aged 16+)</b>	<b>44,9</b>	<b>64,1</b>	<b>70,8</b>
Men	47,0	65,2	73,7
Women	43,0	63,1	68,0
<b>Age group (years)</b>			
16–24	36,1	62,0	73,1
25–34	68,4	88,3	94,9
35–44	68,5	86,7	92,0
45–54	54,8	80,8	85,5
55–64	33,4	58,6	68,4
65–74	14,1	30,7	42,4
75+	4,2	9,2	14,4
<b>Education attainment (aged 25–64)</b>			
Secondary without A-level exam. and lower	35,9	65,5	72,1
Secondary with A-level examination	68,7	86,4	91,3
Tertiary	83,3	92,4	97,1

**Figure C12 Persons aged 16+ using internet banking**



**Figure C13 Use of internet banking by gender and age**



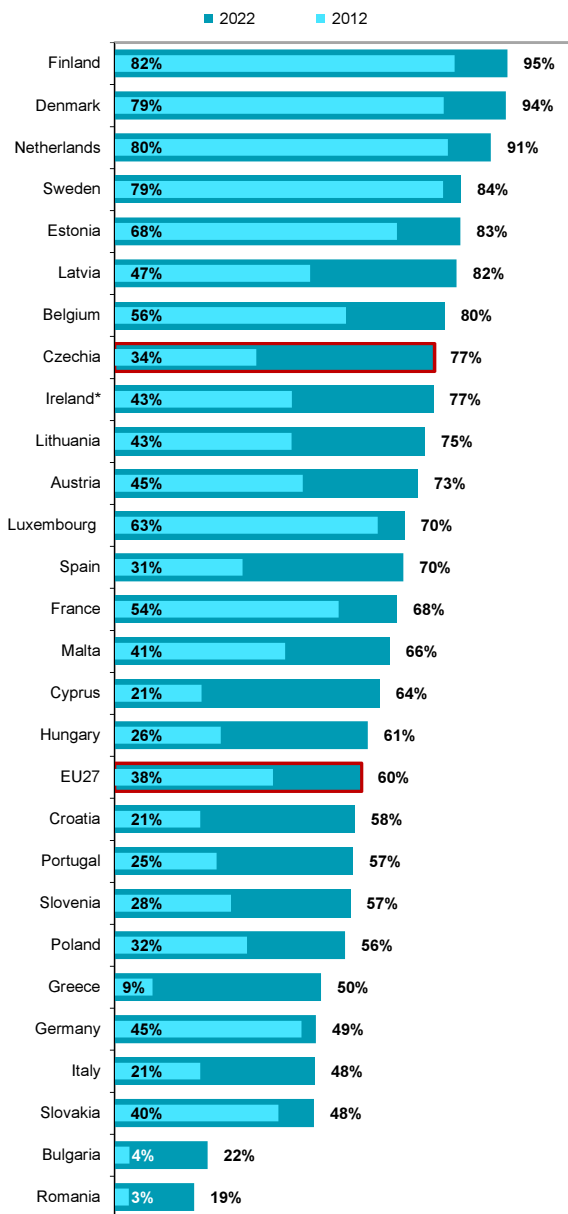
as a percentage of all persons in a given socio-demographic group

Source: Czech Statistical Office, ICT use survey in households



## C Persons and digital technologies

**Figure C14 Persons aged 16–74 years in EU countries using internet banking**



\* data for 2021

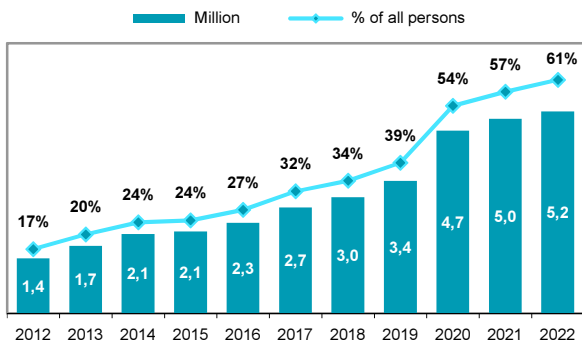
Source: Eurostat

## C Persons and digital technologies

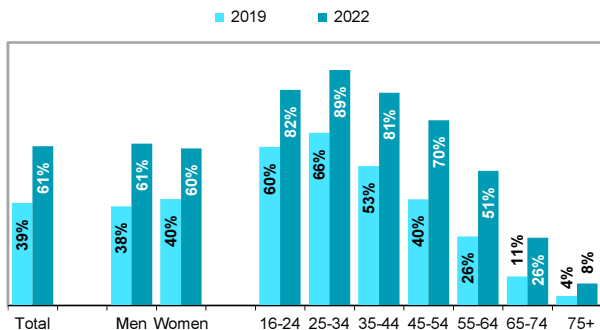
**Table C6 Persons in Czechia purchasing on the internet**

	Percentage		
	2015	2020	2022
<b>Total (aged 16+)</b>	<b>24,3</b>	<b>53,8</b>	<b>60,5</b>
Men	23,5	53,1	61,5
Women	25,0	54,4	59,6
<b>Age group (years)</b>			
16–24	36,3	73,1	81,9
25–34	41,9	82,0	89,4
35–44	34,2	71,3	80,8
45–54	22,4	61,3	70,4
55–64	13,9	42,9	51,1
65–74	5,4	21,1	25,6
75+	1,1	5,1	8,3
<b>Education attainment (aged 25–64)</b>			
Secondary without A-level exam. and lower	16,1	48,6	54,9
Secondary with A-level examination	34,0	71,7	79,8
Tertiary	46,3	82,7	90,5

**Figure C15 Persons aged 16+ purchasing on the internet**



**Figure C16 Online purchases by gender and age**

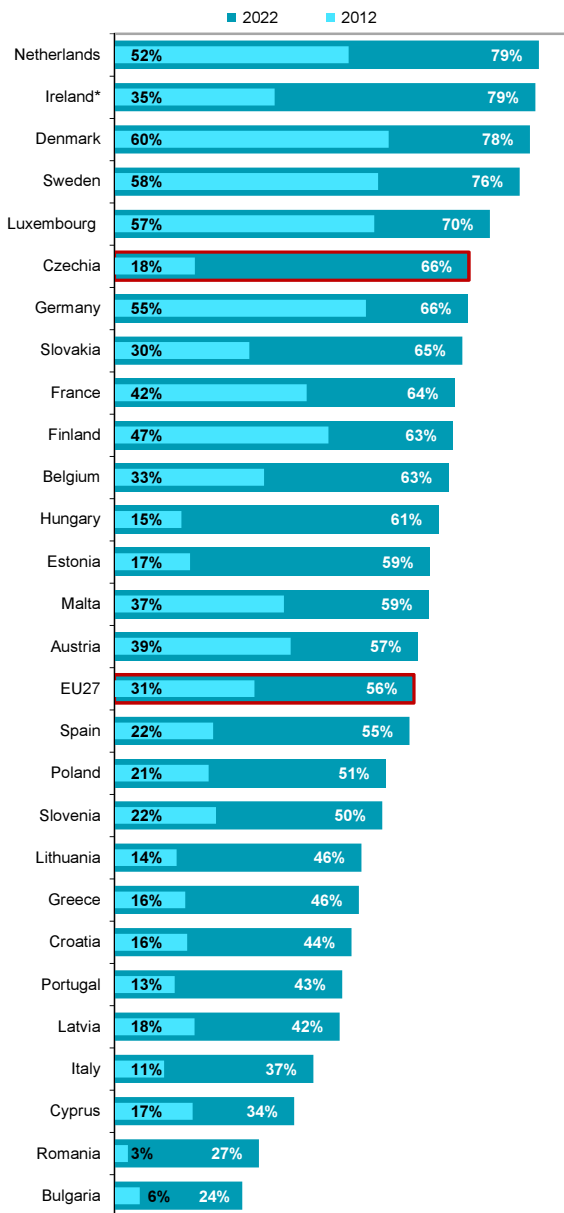


as a percentage of all persons in a given socio-demographic group

Source: Czech Statistical Office, ICT use survey in households

## C Persons and digital technologies

**Figure C17 Persons aged 16–74 in EU countries purchasing on the internet**



\* data for 2021

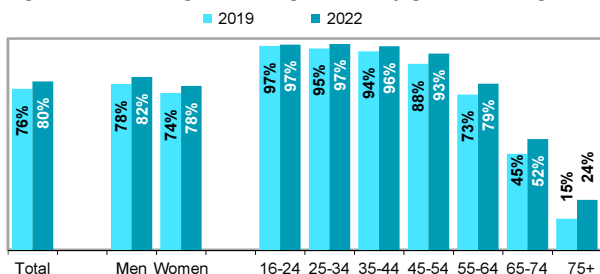
Source: Eurostat

## C Persons and digital technologies

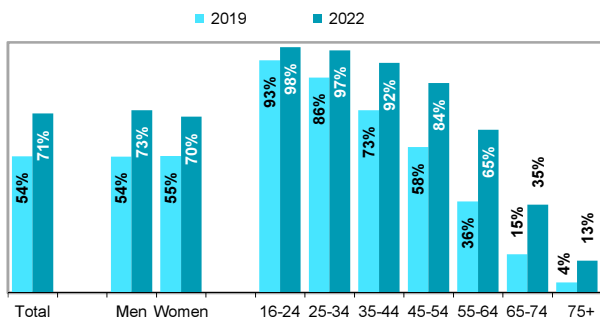
**Table C7 Persons in Czechia using the internet for communication; 2022**

	Percentage		
	E-mails	Instant messaging*	Making calls
<b>Total (aged 16+)</b>	<b>79,6</b>	<b>71,5</b>	<b>56,2</b>
Men	81,8	72,8	55,9
Women	77,5	70,2	56,6
<b>Age group (years)</b>			
16–24	97,1	98,0	82,2
25–34	97,4	96,7	81,8
35–44	96,3	91,7	71,5
45–54	92,8	83,7	60,0
55–64	78,6	65,0	46,9
65–74	52,4	35,2	30,2
75+	23,7	12,8	11,3
<b>Education attainment (aged 25–64)</b>			
Secondary without A-level exam. and lower	80,7	74,3	53,9
Secondary with A-level examination	97,2	89,2	67,9
Tertiary	99,7	92,9	77,4

**Figure C18 Sending / receiving e-mails by gender and age**



**Figure C19 Exchanging messages online\* by gender and age**



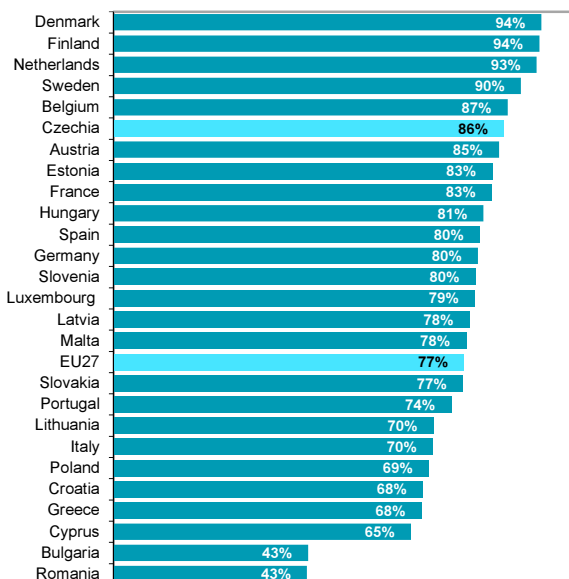
\* Instant messaging/exchanging messages online, e.g. via Messenger or WhatsApp applications.

as a percentage of all persons in a given socio-demographic group

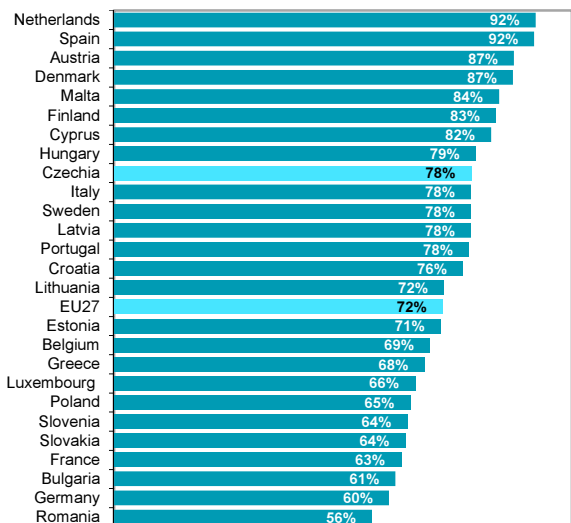
Source: Czech Statistical Office, ICT use survey in households

## C Persons and digital technologies

**Figure C20 Persons aged 16–74 in EU countries sending / receiving e-mails; 2022**



**Figure C21 Persons aged 16–74 in EU countries exchanging messages online\*; 2022**



\* Instant messaging/exchanging messages online, e.g. via Messenger or WhatsApp applications.

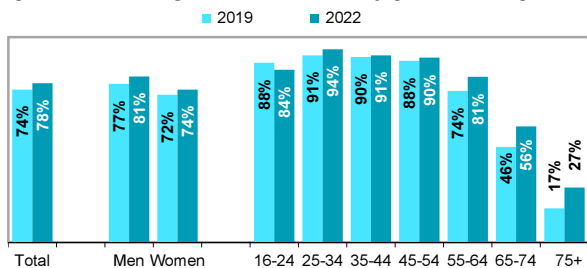
Source: Eurostat

## C Persons and digital technologies

**Table C8 Persons in Czechia reading online news sites or purchasing books online; 2022**

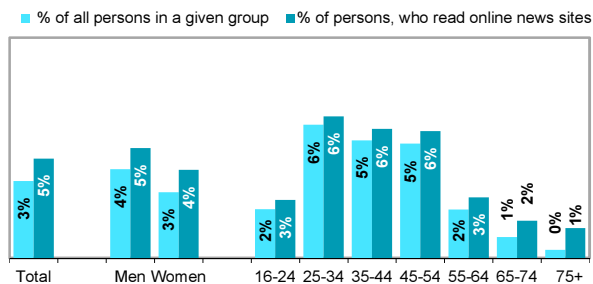
	Percentage		
	Reading online news sites	Reading paid online news sites	Purchasing books online
<b>Total (aged 16+)</b>	<b>77,5</b>	<b>3,5</b>	<b>10,7</b>
Men	80,8	4,0	8,0
Women	74,4	3,0	13,2
<b>Age group (years)</b>			
16–24	84,0	2,2	23,3
25–34	94,1	6,0	16,0
35–44	91,1	5,3	13,6
45–54	89,9	5,2	9,9
55–64	80,5	2,2	7,7
65–74	56,5	0,9	3,4
75+	26,7	0,4	1,7
<b>Education attainment (aged 25–64)</b>			
Secondary without A-level examin. and lower	80,6	1,0	3,6
Secondary with A-level examination	92,6	5,0	12,2
Tertiary	96,5	10,2	23,9

**Figure C22 Reading online news sites by gender and age**



as a percentage of all persons in a given socio-demographic group

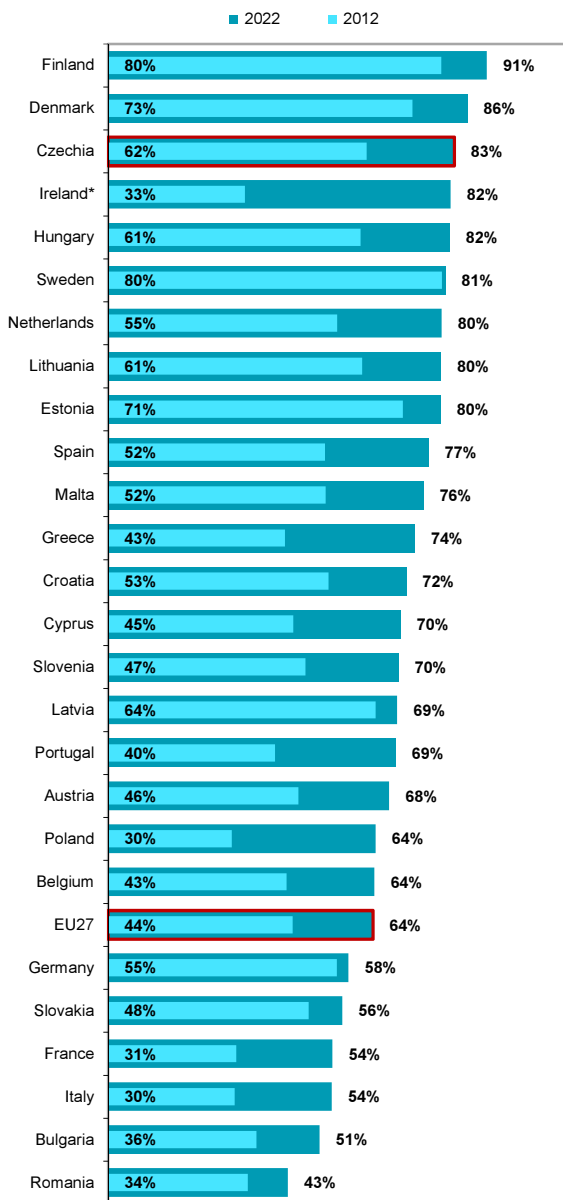
**Figure C23 Reading paid online news sites by gender and age; 2022**



Source: Czech Statistical Office, ICT use survey in households

## C Persons and digital technologies

**Figure C24 Persons aged 16–74 years in EU countries reading online news sites**



\* data for 2021

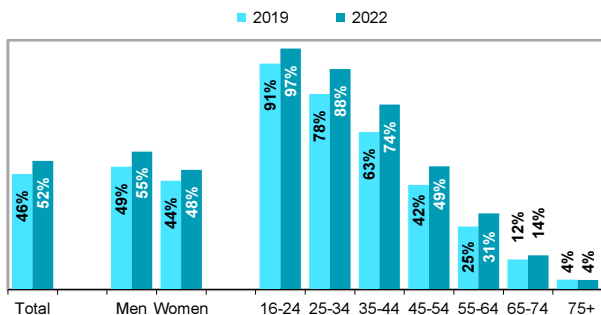
Source: Eurostat

## C Persons and digital technologies

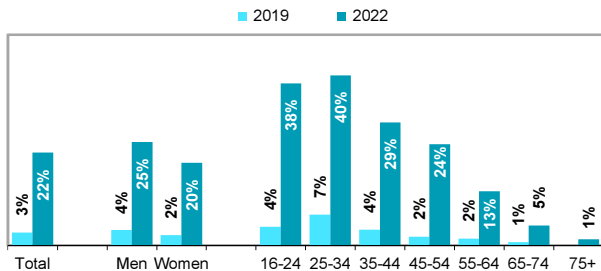
**Table C9 Persons in Czechia using the internet for selected entertainment activities; 2022**

	Percentage		
	Watching video content	Listening to music	Playing games
<b>Total (aged 16+)</b>	<b>66,4</b>	<b>51,6</b>	<b>22,1</b>
Men	70,0	55,3	30,3
Women	62,9	47,9	14,3
<b>Age group (years)</b>			
16–24	95,4	96,5	61,8
25–34	91,5	88,3	39,9
35–44	87,9	74,1	29,8
45–54	75,8	49,4	14,7
55–64	57,4	30,6	9,0
65–74	30,7	13,7	4,7
75+	10,8	3,8	1,9
<b>Education attainment (aged 25–64)</b>			
Secondary without A-level exam. and lower	67,2	45,0	22,2
Secondary with A-level examination	82,7	65,7	25,0
Tertiary	88,9	75,9	21,0

**Figure C25 Listening to music online by gender and age**



**Figure C26 Watching Video on Demand via Netflix, HBO MAX or similar commercial services by gender and age**



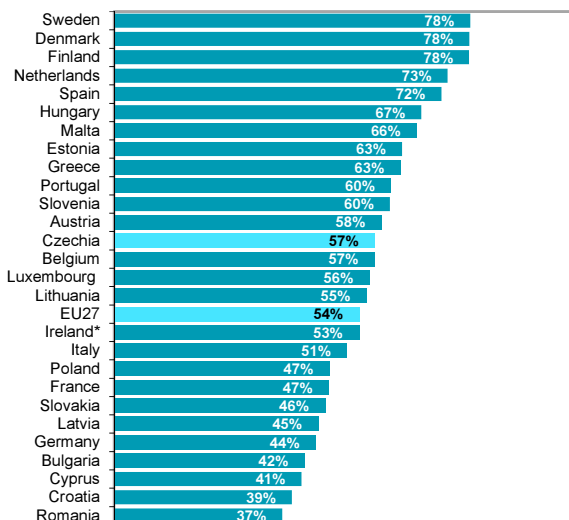
as a percentage of all persons in a given socio-demographic group

Source: Czech Statistical Office, ICT use survey in households

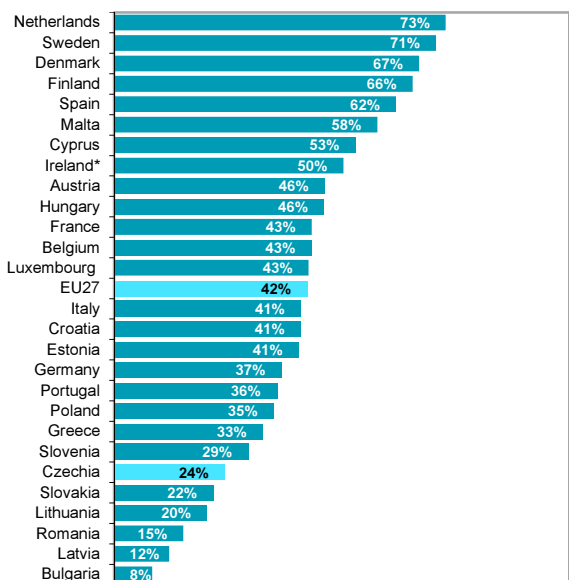


## C Persons and digital technologies

**Figure C27 Persons aged 16–74 years in EU countries listening to music online; 2022**



**Figure C28 Persons aged 16–74 years in EU countries Watching Video on Demand via Netflix, HBO MAX or similiar commercial services; 2022**



\* data for 2020

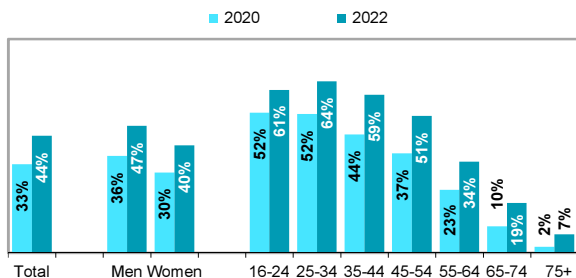
Source: Eurostat

## C Persons and digital technologies

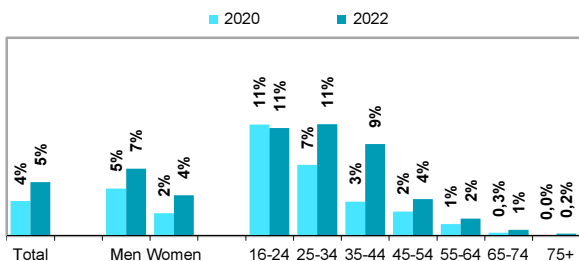
**Table C10 Persons in Czechia using smart devices; 2022**

	Percentage		
	Smart TV	Smart devices for health monitoring*	Virtual assistant (e.g. smart speaker)
<b>Total (aged 16+)</b>	43,7	6,3	5,4
Men	47,4	6,2	6,8
Women	40,2	6,4	4,1
<b>Age group (years)</b>			
16–24	61,0	6,9	10,9
25–34	64,2	9,7	11,3
35–44	59,1	8,9	9,3
45–54	51,2	7,7	3,7
55–64	34,1	4,6	1,7
65–74	18,6	2,5	0,6
75+	6,8	1,4	0,2
<b>Education attainment (aged 25–64)</b>			
Secondary without A-level exam. and lower	39,8	4,5	2,6
Secondary with A-level examination	55,4	7,5	6,8
Tertiary	67,1	13,3	11,9

**Figure C29 Use of a smart TV by gender and age**



**Figure C30 Use of smart devices for health monitoring\* by gender and age**



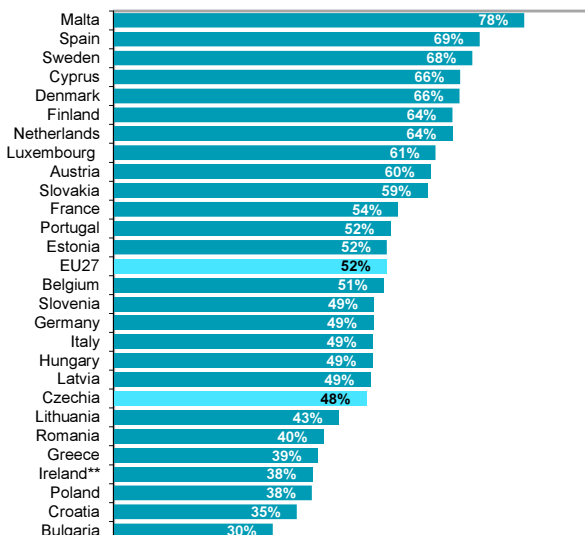
\* e.g. internet-connected devices for monitoring body weight (e.g. smart scales) or blood pressure

as a percentage of all persons in a given socio-demographic group

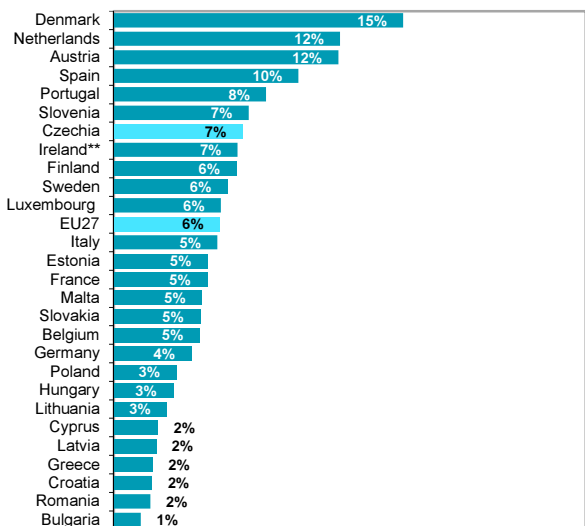
Source: Czech Statistical Office, ICT use survey in households

## C Persons and digital technologies

**Figure C31 Persons aged 16–74 years in EU countries using a smart TV; 2022**



**Figure C32 Persons aged 16–74 years in EU countries using smart devices for health monitoring\*; 2022**



\* e.g. internet-connected devices for monitoring body weight (e.g. smart scales) or blood pressure

\*\* data for 2020

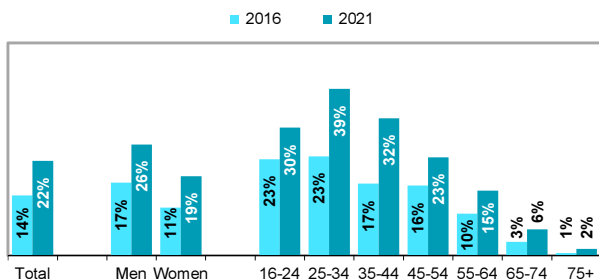
Source: Eurostat

## C Persons and digital technologies

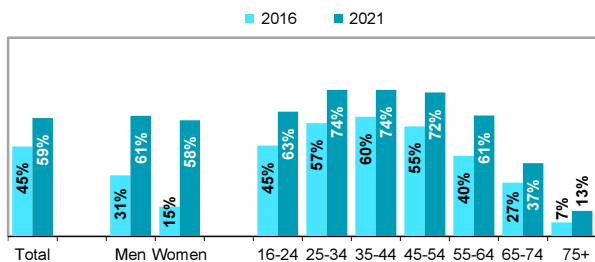
**Table C11 Persons in Czechia performing selected security activities on the internet; 2021**

	Percentage	
	Requests to delete personal data	Change of browser settings to limit cookies
<b>Total (aged 16+)</b>	<b>11,0</b>	<b>22,2</b>
Men	12,0	26,1
Women	10,2	18,6
<b>Age group (years)</b>		
16–24	14,5	30,1
25–34	18,6	39,1
35–44	14,8	32,2
45–54	12,7	23,1
55–64	8,2	15,2
65–74	3,3	6,1
75+	1,1	1,5
<b>Education attainment (aged 25–64)</b>		
Secondary without A-level exam. and lower	7,3	13,2
Secondary with A-level examination	15,1	29,6
Tertiary	21,9	48,2

**Figure C33 Changing internet browser settings to prevent or limit cookies by gender and age**



**Figure C34 Concern about online activities being recorded to provide tailored advertising by gender and age**

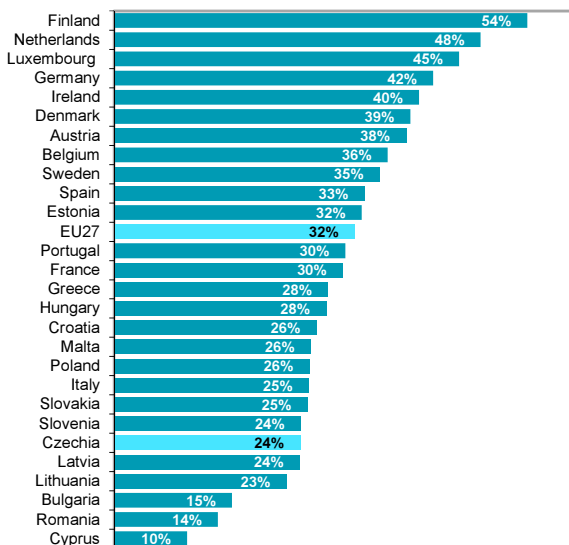


as a percentage of all persons in a given socio-demographic group

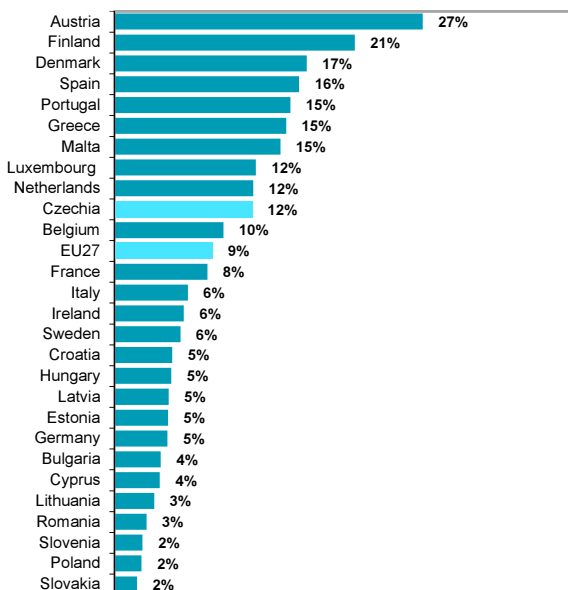
Source: Czech Statistical Office, ICT use survey in households

## C Persons and digital technologies

**Figure C35 Persons aged 16–74 years in EU countries who changed browser settings to limit cookies; 2021**



**Figure C36 Persons aged 16–74 years in EU countries who requested to delete personal data on the internet; 2021**



Source: Eurostat

## C Persons and digital technologies

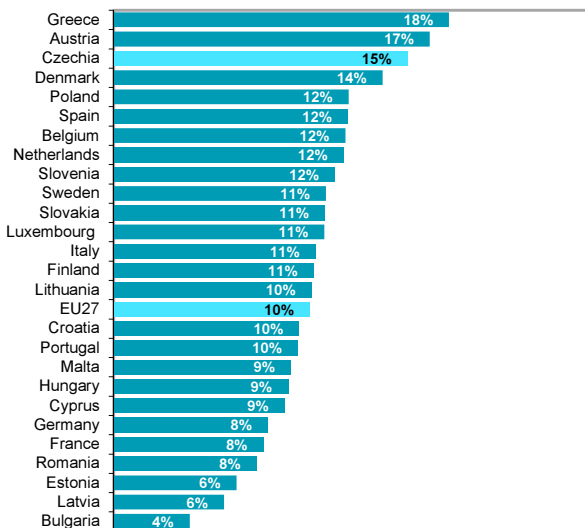
**Table C12 What have done persons in Czechia with their most recent mobile phone which they stopped using; 2022**

	Percentage			
	It is kept at home	It was given away	It was recycled	It was disposed of in mixed waste
<b>Total (aged 16+)</b>	<b>44,6</b>	<b>23,6</b>	<b>16,7</b>	<b>8,6</b>
Men	44,3	24,6	16,8	8,8
Women	45,0	22,6	16,6	8,5
<b>Age group (years)</b>				
16–24	40,0	30,6	16,4	7,3
25–34	40,7	34,2	15,8	6,9
35–44	39,3	32,2	17,2	8,7
45–54	44,9	25,5	17,6	8,4
55–64	51,2	18,4	16,3	9,0
65–74	49,1	11,7	16,4	10,9
75+	47,8	7,2	16,5	8,8
<b>Education attainment (aged 25–64)</b>				
Secondary without A-level examination and lower	45,4	21,7	16,7	11,2
Secondary with A-level examination	43,5	32,2	14,5	7,2
Tertiary	42,1	29,5	20,7	5,6

as a percentage of all persons in a given socio-demographic group

Source: Czech Statistical Office, ICT use survey in households

**Figure C37 Persons aged 16–74 years in EU countries who recycled their most recent mobile phone which they stopped using; 2022**



Source: Eurostat

## D Enterprises and digital technologies

Data given in this chapter are based on results of the **Annual Statistical Survey on the ICT Use in Enterprises (ICT 5-01)**, which has been carried out by the Czech Statistical Office (CZSO) since 2002. Since 2006, this survey has been mandatory for all EU member states according to the relevant regulation of the European Parliament and the Council.

The survey is every year conducted in the first quarter of the reference year in the sample of approximately **8 000 enterprises having 10+ employees** in selected economic activities. The results are then grossed up to the whole population of the measured enterprises, which is around 40 000 enterprises with 10+ employees.

The data obtained are available **broken** by prevailing economic activities by the CZ-NACE classification, by size of enterprises measured, and by their mutual combination.

### Notes

The reference period is, in case of majority of data on equipment or ICT use in enterprises, is the month, in which the enterprise filled in the report (questionnaire), i.e. usually February to April of the relevant year. In case of indicators on e-commerce, ICT security incidents and 3D printing the reference period is the entire relevant year (in this issue it is 2021 although the survey was carried out in 2022).

### Comparability of the CZSO and Eurostat Data

Since 2016 the data published by Eurostat and by the CZSO have been identical. Data for **international comparisons** are taken from the Eurostat database for digital economy and society, data of which are every year updated in January. Detailed information can be found at: [https://bit.ly/Comprehensive\\_database](https://bit.ly/Comprehensive_database)

### Definitions (sorted alphabetically)

- **A virtual private network (VPN)** extends a private network across a public network, and enables users to send and receive data across shared or public networks as if their computing devices were directly connected to the private network. Applications running on a computing device, e.g., a laptop, desktop, smartphone, across a VPN may therefore benefit from the functionality, security, and management of the private network. Encryption is a common, though not an inherent, part of a VPN connection.
- **An Artificial Intelligence (AI)** refers to systems that use technologies such as: text mining, computer vision, speech recognition, natural language generation, machine learning, deep learning to gather and/or use data to predict, recommend or decide, with varying levels of autonomy, the best action to achieve specific goals. Artificial intelligence systems can be purely software based, e.g. chatbots and business virtual assistants based on natural language processing, face recognition systems based on computer vision or speech recognition systems, machine translation software, or embedded in devices, e.g. autonomous robots or drones.
- An **enterprise website** is a location on the World Wide Web identified by a Web address. Collection of Web files on a particular subject that includes a beginning file called a home page. Information on only enterprises' contacts published in internet databases or catalogues of enterprises are excluded.
- **Cloud computing** is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g. networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.
- Enterprises **conducting online meetings** are those whose employees use applications such as Skype, MS Teams, Google Meet, for video calls, chats or online lectures. They are used via the Internet, users can be connected from anywhere and communication can take place internally, but also between the company and its clients or business partners.

## D Enterprises and digital technologies

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- Orders initiated with **EDI-type messages**. EDI (electronic data interchange) is an e-business tool for exchanging different kinds of business messages. EDI is here used as a generic term for sending or receiving business information in an agreed format suitable for automated processing (e.g. EDIFACT, XML, etc.) and without the individual message being manually typed. "EDI e-Commerce" is limited to EDI messages placing an order.
- **Web (e-commerce) sales** are sales made via an online store (web shop), via web forms on a website or extranet, or apps regardless of how the web is accessed (computer, laptop, mobile phone etc.)
- **Fixed Internet connection** includes an external Internet connection supplied by the provider. This includes DSL connection, optical fiber connection, cable modem 'cable TV network connection', leased lines 'frame relay, ATM, digital multiplex' and also fixed wireless connection from a fixed location using WiFi or LTE technology. *This does not include mobile internet connection.*
- **ICT security** means measures, controls and procedures applied on enterprise's ICT systems to ensure integrity, authenticity, availability and confidentiality of enterprise's data and systems.
- **Mobile connection** is an Internet connection via a data plan from mobile operators. Internet access takes place via the mobile telephone network, most often via a data SIM card inserted in a mobile phone / smartphone or tablet. The volume of transmitted data corresponds to the agreed data tariff.
- **Remote access** is the possibility of using the e-mail system of the enterprise, enterprise application or documents for users (employees) located outside the premises of the company, usually in the form of a secure connection via the Internet.
- **Robots/ Robotics:** according to their intended application, robots may be industrial or service robots. An industrial robot is an automatically controlled, reprogrammable, multipurpose manipulator programmable in three or more axes, which may be either fixed in place or mobile for use in industrial automation applications. A service robot is a machine that has a degree of autonomy and is able to operate in complex and dynamic environment that may require interaction with persons, objects or other devices, excluding its use in industrial automation applications.
- Facebook, the professional network LinkedIn or websites sharing multimedia content (e.g. YouTube, Instagram) are considered **social networks** in this survey. An **enterprise using social networks** has its own profile or account based on them.
- **The Internet of Things (IoT)** refers to interconnected devices or systems, often called "smart" devices or "smart" systems. They collect and exchange data and can be monitored or remotely controlled via the Internet, through software on any kind of computers, smartphones or through interfaces like wall-mounted controls.
- The **unavailability of ICT services** is a type of security incident when users cannot get to enterprises' websites or other services connected to them are unavailable. It can be caused by a hardware (e.g. server) failure or software failure (e.g. a faulty update) or an external attack, e.g. ransomware or a Denial of Service attack.
- **3D printing** is the process of creating three-dimensional material objects on a 3D printer. 3D objects are usually created layer by layer, by gradually adding continuous layers of material (most often thermoplastics, metals or resins), according to a digital template.

Detailed information on methodology of the survey can be found in the publication **Information and Communication Technologies in the Business Sphere in 2022** (code 062005-22) accessible on the CZSO website at <https://bit.ly/PodnikyPublikace2022> (in the Czech language only).

**Further information on the ICT use by enterprises can be found at:**

[https://www.czso.cz/csu/czso/podnikatelsky\\_sektor](https://www.czso.cz/csu/czso/podnikatelsky_sektor)

(in the Czech language only).





## D Enterprises and digital technologies

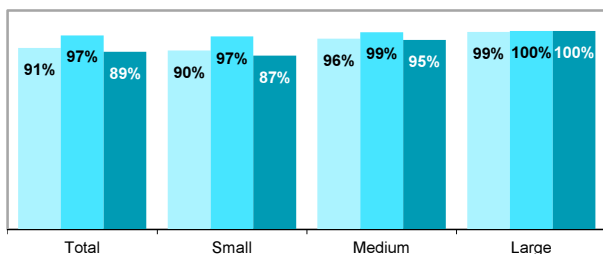
**Table D1 Enterprises in Czechia with internet access; 2022**

Percentage

	Fixed	Mobile, total	Mobile only
<b>Total</b>	<b>89,2</b>	<b>89,6</b>	<b>7,0</b>
Small enterprises (10-49)	87,3	87,8	8,0
Medium enterprises (50-249)	95,2	95,7	3,8
Large enterprises (250+)	99,7	99,3	.
<b>Industry (10+ employees):</b>			
Manufacturing	92,4	90,7	5,3
Electricity, gas and water supply	92,4	92,2	4,6
Construction	79,9	89,4	10,8
Sale and repair of motor vehicles	94,0	94,5	4,1
Wholesale trade	90,6	95,4	7,9
Retail trade	87,2	79,3	8,9
Transport and storage	87,2	92,0	8,7
Accommodation	91,1	89,9	7,1
Food and beverage services	84,5	77,6	8,4
Travel agency and related activities	95,5	95,0	.
Media and information activities	98,2	94,9	.
ICT activities	97,9	95,0	2,0
Professional, S&T activities	94,5	91,3	4,3
Administrative and support service activities	81,2	84,7	9,9

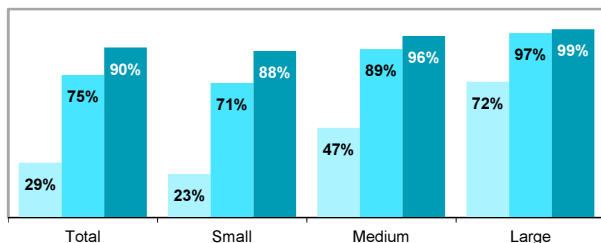
**Figure D1 Enterprises using fixed internet connection**

■ 2012 ■ 2017 ■ 2022



**Figure D2 Enterprises using mobile internet connection**

■ 2012 ■ 2017 ■ 2022



as a percentage of all enterprises with 10+ employees in a given group

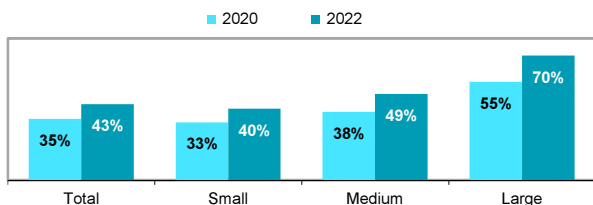
Source: Czech Statistical Office, Survey on ICT usage in enterprises

## D Enterprises and digital technologies

**Table D2 The maximum contracted download speed of fixed internet connection used by enterprises in Czechia; 2022**

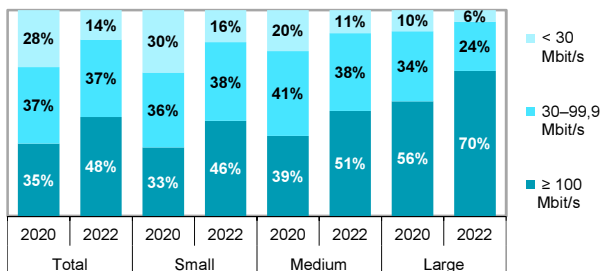
	Percentage		
	< 30 Mbit/s	30–99,9 Mbit/s	≥ 100 Mbit/s
<b>Total</b>	<b>12,9</b>	<b>33,4</b>	<b>42,8</b>
Small enterprises (10-49)	13,7	33,4	40,3
Medium enterprises (50-249)	10,7	35,9	48,6
Large enterprises (250+)	5,7	23,9	70,2
<b>Industry (10+ employees):</b>			
Manufacturing	15,0	35,6	41,9
Electricity, gas and water supply	16,6	36,2	39,7
Construction	12,2	26,9	40,8
Sale and repair of motor vehicles	10,9	40,2	42,9
Wholesale trade	11,1	40,0	39,5
Retail trade	13,6	39,1	34,5
Transport and storage	17,4	33,7	36,1
Accommodation	6,0	34,6	50,5
Food and beverage services	12,8	31,9	39,8
Travel agency and related activities	13,3	37,3	44,9
Media and information activities	9,0	23,9	65,3
ICT activities	2,2	23,1	72,6
Professional, S&T activities	11,3	28,2	55,0
Administrative and support service activities	12,4	28,8	40,0

**Figure D3 Enterprises using fixed internet connection with maximum contracted download speed of at least 100 Mbit/s**



as a percentage of all enterprises with 10+ employees in a given group

**Figure D4 The maximum contracted download speed of fixed internet connection used by enterprises**

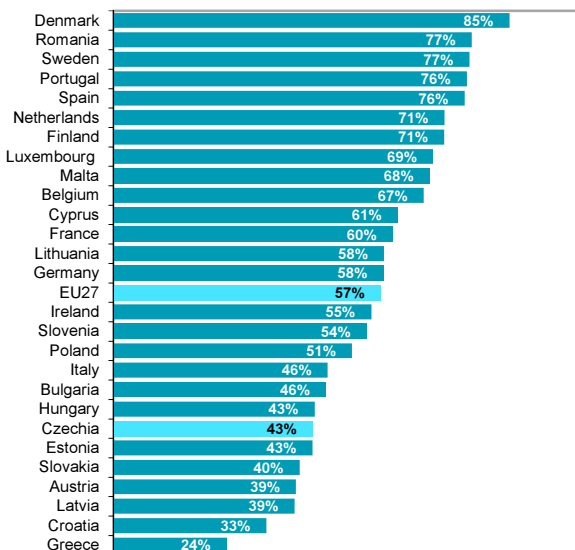


as a percentage of enterprises with fixed internet connection in a given group

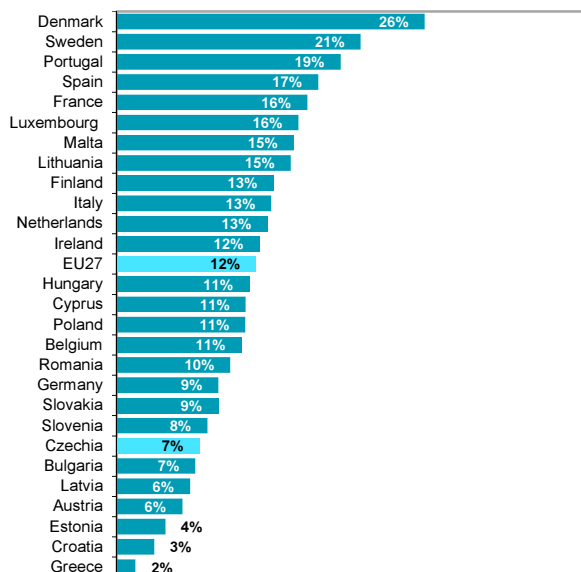
Source: Czech Statistical Office, Survey on ICT usage in enterprises

## D Enterprises and digital technologies

**Figure D5 Enterprises in EU countries using fixed internet connection with the maximum contracted download speed of at least 100 Mbit/s; 2022**



**Figure D6 Enterprises in EU countries using fixed internet connection with the maximum contracted download speed of at least 1 Gbit/s; 2022**



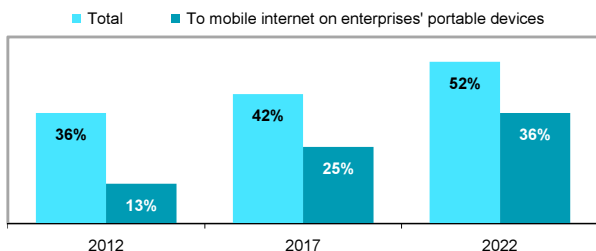
Source: Eurostat

## D Enterprises and digital technologies

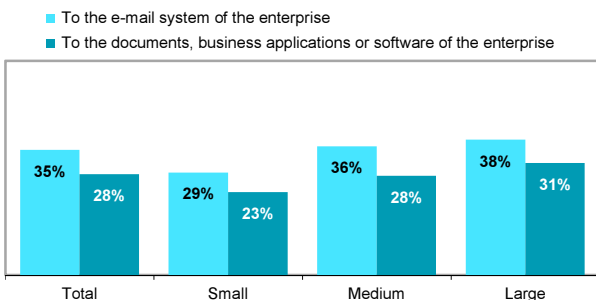
**Table D3 Employees of enterprises in Czechia with internet access at work provided for business purposes; 2022**

	Percentage	
	Total	Via mobile networks
<b>Total</b>	<b>51,9</b>	<b>35,5</b>
Small enterprises (10-49)	50,0	39,2
Medium enterprises (50-249)	51,2	36,0
Large enterprises (250+)	53,5	33,3
<b>Industry (10+ employees):</b>		
Manufacturing	44,9	26,9
Electricity, gas and water supply	61,7	42,0
Construction	49,4	41,6
Sale and repair of motor vehicles	76,0	50,8
Wholesale trade	69,6	55,7
Retail trade	45,7	22,2
Transport and storage	51,7	38,6
Accommodation	48,5	30,9
Food and beverage services	33,2	23,8
Travel agency and related activities	83,2	62,1
Media and information activities	91,8	69,6
ICT activities	95,3	79,2
Professional, S&T activities	87,2	67,0
Administrative and support service activities	28,9	20,3

**Figure D7 Employees of enterprises with internet access at work provided for business purposes**



**Figure D8 Employees of enterprises with remote access; 2022**

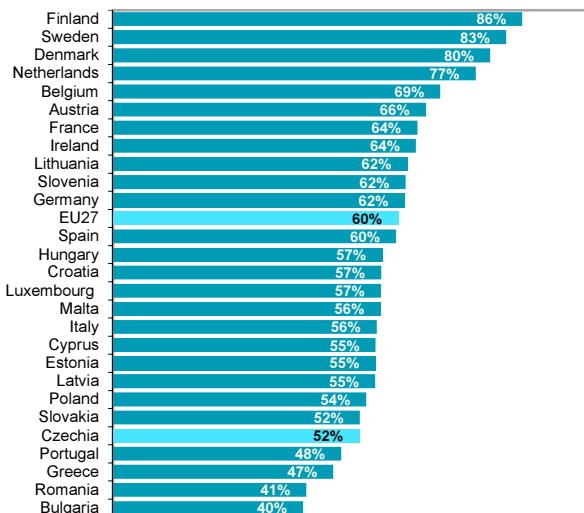


as a percentage of *all employees* in enterprises in a given group

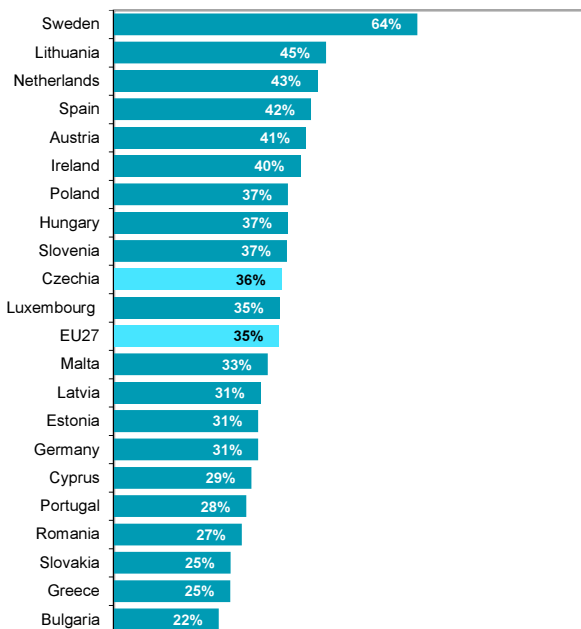
Source: Czech Statistical Office, Survey on ICT usage in enterprises

## D Enterprises and digital technologies

**Figure D9 Employees of enterprises in EU countries with internet access at work provided for business purposes; 2022**



**Figure D10 Employees of enterprises in EU countries which were provided with a portable device that allows mobile internet connection for business purposes; 2022**



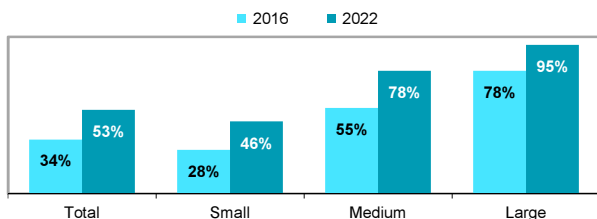
Source: Eurostat

## D Enterprises and digital technologies

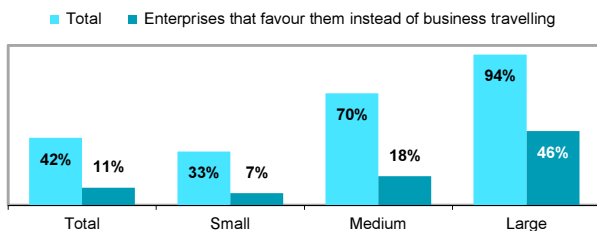
**Table D4 Enterprises in Czechia that allow employees to work remotely; 2022**

	Percentage	
	Allowing remote access to the documents and business applications	Conducting remote meetings via the internet
<b>Total</b>	<b>53,4</b>	<b>42,0</b>
Small enterprises (10-49)	46,0	33,4
Medium enterprises (50-249)	78,3	69,9
Large enterprises (250+)	94,8	94,2
<b>Industry (10+ employees):</b>		
Manufacturing	57,6	45,9
Electricity, gas and water supply	58,9	49,9
Construction	40,0	18,5
Sale and repair of motor vehicles	65,8	48,4
Wholesale trade	64,1	54,3
Retail trade	43,7	29,4
Transport and storage	38,5	23,0
Accommodation	48,4	29,2
Food and beverage services	20,7	9,8
Travel agency and related activities	70,9	68,8
Media and information activities	81,8	78,2
ICT activities	90,5	92,9
Professional, S&T activities	72,8	74,9
Administrative and support service activities	42,7	34,4

**Figure D11 Enterprises with employees having remote access to the enterprises' documents and business applications**



**Figure D12 Enterprises conducting remote meetings via the internet; 2022**

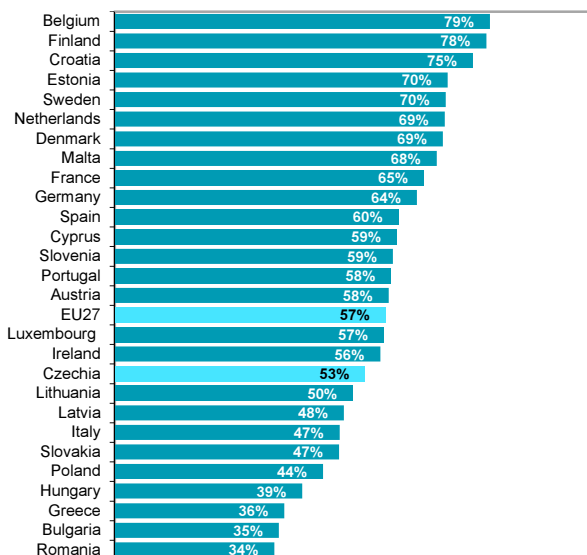


as a percentage of all enterprises with 10+ employees in a given group

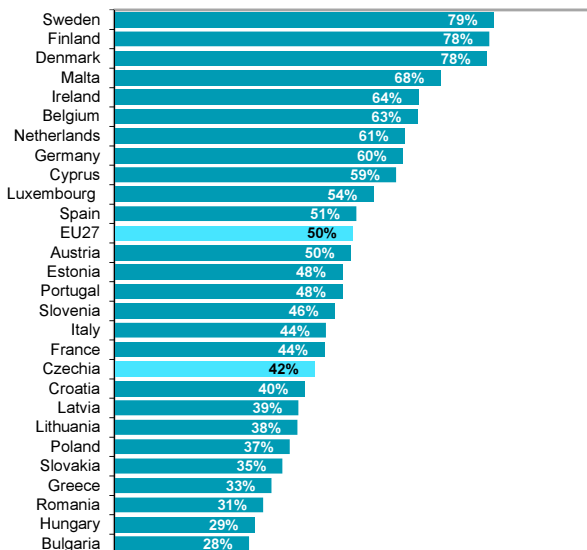
Source: Czech Statistical Office, Survey on ICT usage in enterprises

## D Enterprises and digital technologies

**Figure D13 Enterprises in EU countries with employees having remote access to the e-mail system, documents and business applications of the enterprise; 2022**



**Figure D14 Enterprises in EU countries conducting remote meetings via the internet; 2022**



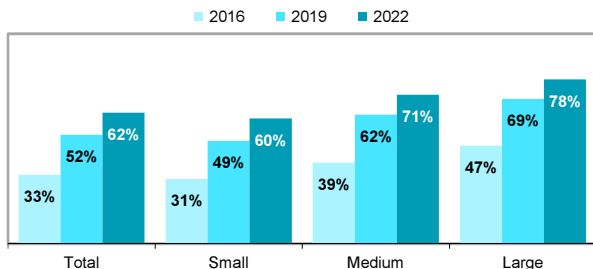
Source: Eurostat

## D Enterprises and digital technologies

**Table D5 Enterprises in Czechia having a website**

	Percentage		
	2012	2017	2022
<b>Total</b>	<b>79,8</b>	<b>82,9</b>	<b>81,4</b>
Small enterprises (10-49)	77,1	80,4	79,3
Medium enterprises (50-249)	89,9	91,8	88,9
Large enterprises (250+)	93,1	94,2	93,1
<b>Industry (10+ employees):</b>			
Manufacturing	80,2	84,4	83,7
Electricity, gas and water supply	81,1	88,2	86,3
Construction	83,8	83,3	76,5
Sale and repair of motor vehicles	94,9	92,2	94,3
Wholesale trade	86,8	89,9	91,7
Retail trade	63,3	63,4	69,0
Transport and storage	63,1	70,9	65,8
Accommodation	93,3	97,3	95,6
Food and beverage services	70,7	72,8	80,0
Travel agency and related activities	93,3	96,6	95,6
Media and information activities	96,9	98,4	96,2
ICT activities	95,1	92,8	91,7
Professional, S&T activities	87,5	88,9	88,6
Administrative and support service activities	69,2	72,9	66,9

**Figure D15 Enterprises having a website customized for mobile devices**



**Figure D16 Enterprises whose websites enabling visitors/customers to carry out selected activities; 2022**



as a percentage of all enterprises with 10+ employees in a given group

Source: Czech Statistical Office, Survey on ICT usage in enterprises



## D Enterprises and digital technologies

Figure D17 Enterprises in EU countries having a website; 2021

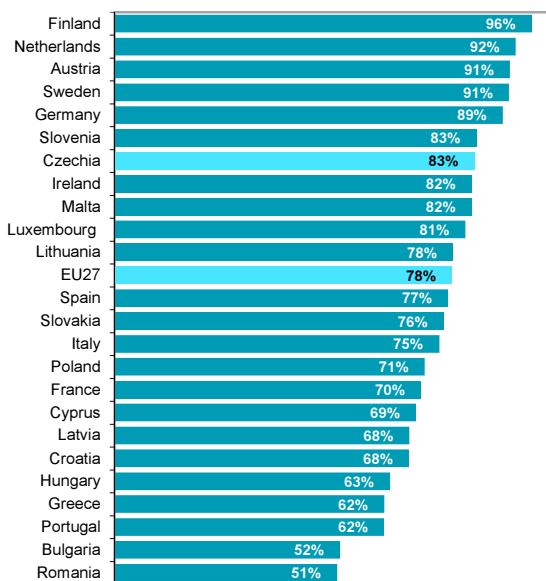
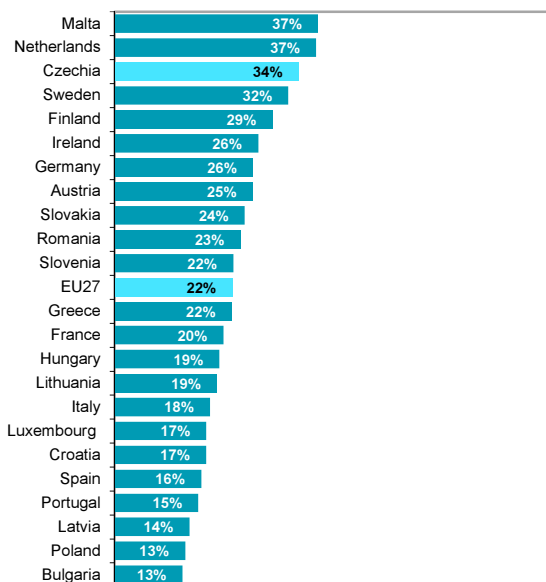


Figure D18 Enterprises in EU countries with websites providing online ordering, reservation or booking (e.g. shopping cart); 2021



Source: Eurostat

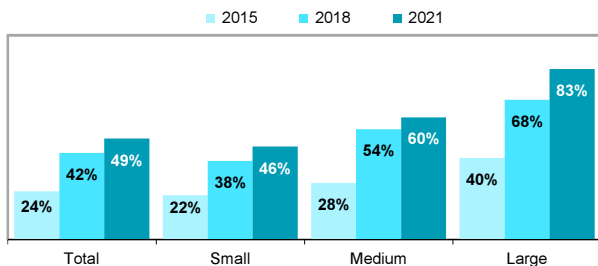
## D Enterprises and digital technologies

**Table D6 Enterprises in Czechia having a user profile on social networks or multimedia content sharing websites; 2021**

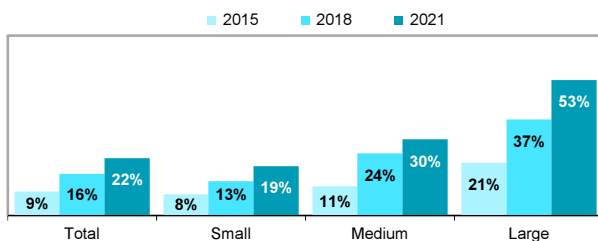
Percentage

	Facebook or LinkedIn	YouTube, Instagram etc.
<b>Total</b>	<b>49,4</b>	<b>22,3</b>
Small enterprises (10-49)	45,5	19,1
Medium enterprises (50-249)	59,8	29,6
Large enterprises (250+)	83,4	52,6
<b>Industry (10+ employees):</b>		
Manufacturing	43,0	17,7
Electricity, gas and water supply	32,3	11,5
Construction	26,7	9,2
Sale and repair of motor vehicles	65,8	28,3
Wholesale trade	64,9	39,4
Retail trade	60,5	30,3
Transport and storage	40,8	9,6
Accommodation	88,7	48,2
Food and beverage services	70,5	25,3
Travel agency and related activities	87,9	57,8
Media and information activities	87,6	71,5
ICT activities	76,5	46,9
Professional, S&T activities	50,3	24,0
Administrative and support service activities	41,9	14,0

**Figure D19 Enterprises having a user profile on social networks like Facebook or LinkedIn**



**Figure D20 Enterprises having a user profile on multimedia content sharing websites or apps like YouTube or Instagram**

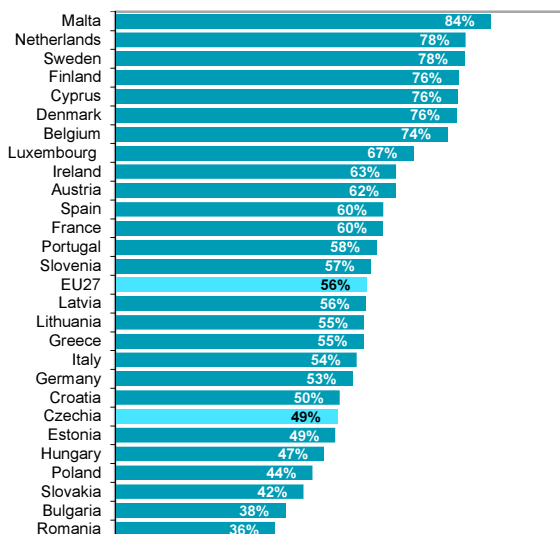


as a percentage of all enterprises with 10+ employees in a given group

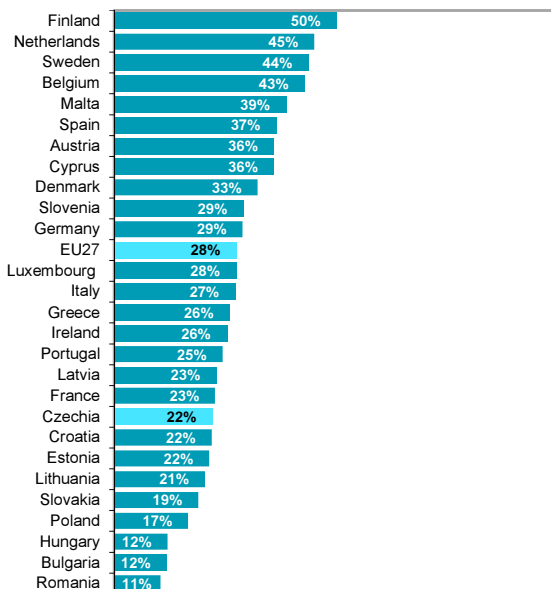
Source: Czech Statistical Office, Survey on ICT usage in enterprises

## D Enterprises and digital technologies

**Figure D21 Enterprises in EU countries having a user profile on social networks like Facebook or LinkedIn; 2021**



**Figure D22 Enterprises in EU countries having a user profile on multimedia content sharing websites or apps like YouTube or Instagram; 2021**



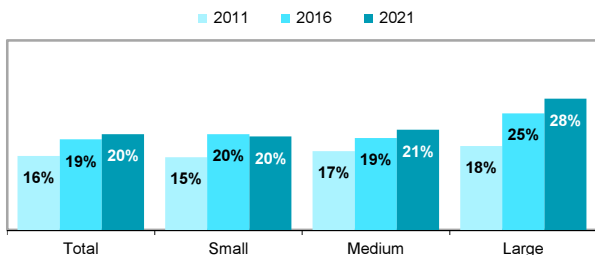
Source: Eurostat

## D Enterprises and digital technologies

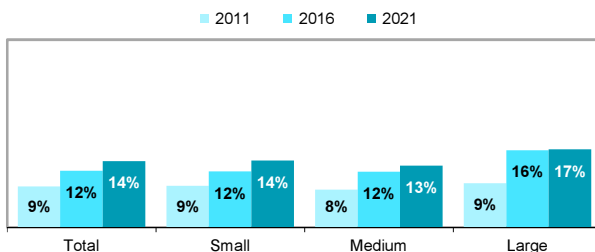
**Table D7 Enterprises in Czechia having web sales; 2021**

	Percentage	
	Total	Web sales generate at least 10 % of turnover
<b>Total</b>	<b>20,2</b>	<b>14,1</b>
Small enterprises (10-49)	19,7	14,2
Medium enterprises (50-249)	21,1	13,1
Large enterprises (250+)	27,7	16,6
<b>Industry (10+ employees):</b>		
Manufacturing	17,7	9,7
Electricity, gas and water supply	4,9	2,6
Construction	3,8	2,8
Sale and repair of motor vehicles	41,4	31,7
Wholesale trade	41,8	30,1
Retail trade	39,4	31,4
Transport and storage	9,6	6,9
Accommodation	61,2	54,0
Food and beverage services	26,0	20,7
Travel agency and related activities	69,9	60,2
Media and information activities	55,8	38,9
ICT activities	20,5	14,5
Professional, S&T activities	10,4	5,8
Administrative and support service activities	6,7	4,8

**Figure D23 Enterprises having web sales**



**Figure D24 Enterprises for which web sales generate at least 10 % of their total turnover**

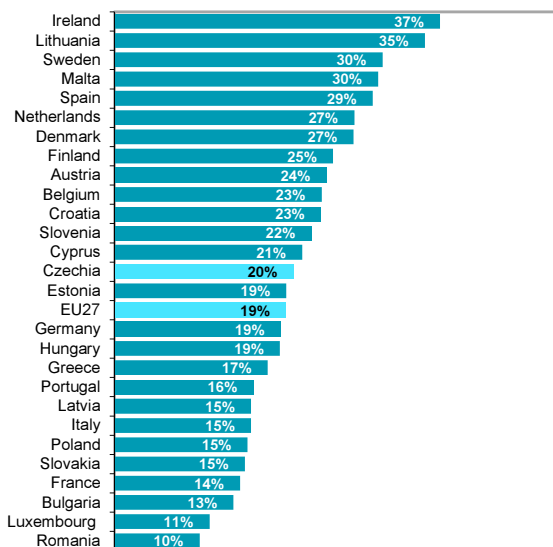


as a percentage of all enterprises with 10+ employees in a given group

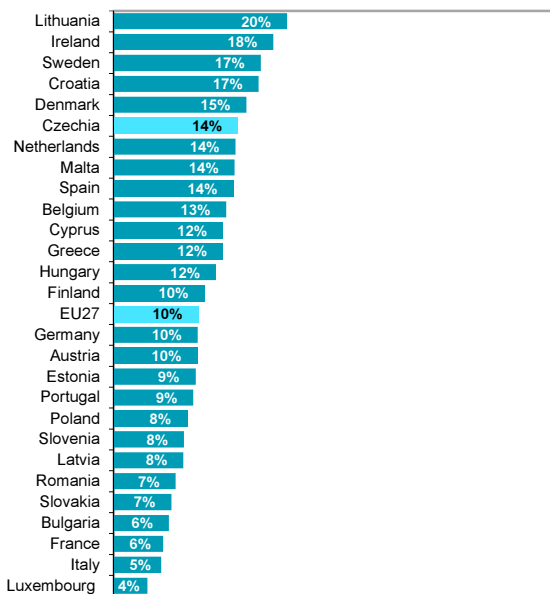
Source: Czech Statistical Office, Survey on ICT usage in enterprises

## D Enterprises and digital technologies

**Figure D25 Enterprises in EU countries having web sales; 2021**



**Figure D26 Enterprises in EU countries for which web sales generate at least 10 % of their total turnover; 2021**



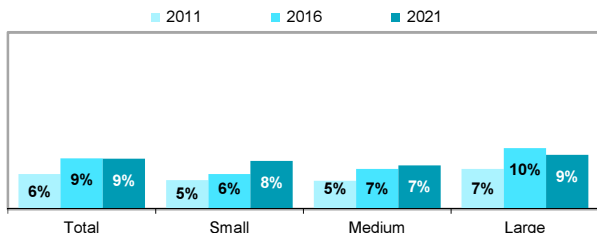
Source: Eurostat

## D Enterprises and digital technologies

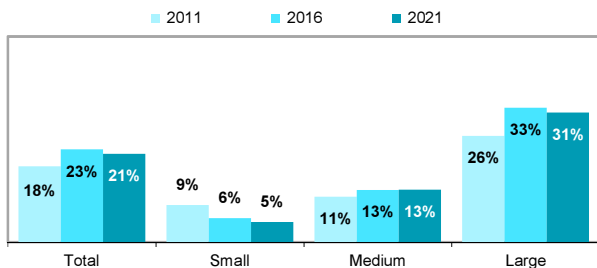
**Table D8 The enterprises' turnover from electronic sales in Czechia; 2021**

	E-sales, total	Percentage carried out via:	
		EDI-type sales*	Web sales
<b>Total</b>	<b>29,9</b>	<b>21,4</b>	<b>8,5</b>
Small enterprises (10-49)	13,0	4,8	8,2
Medium enterprises (50-249)	20,1	12,7	7,4
Large enterprises (250+)	40,6	31,5	9,2
<b>Industry (10+ employees):</b>			
Manufacturing	33,3	30,2	3,1
Electricity, gas and water supply	53,8	44,4	9,5
Construction	4,8	4,2	0,6
Sale and repair of motor vehicles	22,9	9,4	13,5
Wholesale trade	22,0	10,3	11,7
Retail trade	25,9	3,1	22,8
Transport and storage	29,6	21,3	8,2
Accommodation	34,6	3,3	31,2
Food and beverage services	9,1	0,8	8,3
Travel agency and related activities	75,8	3,8	71,9
Media and information activities	46,3	8,2	38,1
ICT activities	14,6	5,2	9,4
Professional, S&T activities	6,4	4,9	1,5
Administrative and support service activities	37,7	23,8	13,8

**Figure D27 The enterprises' turnover from web sales**



**Figure D28 The enterprises' turnover from EDI-type sales\***



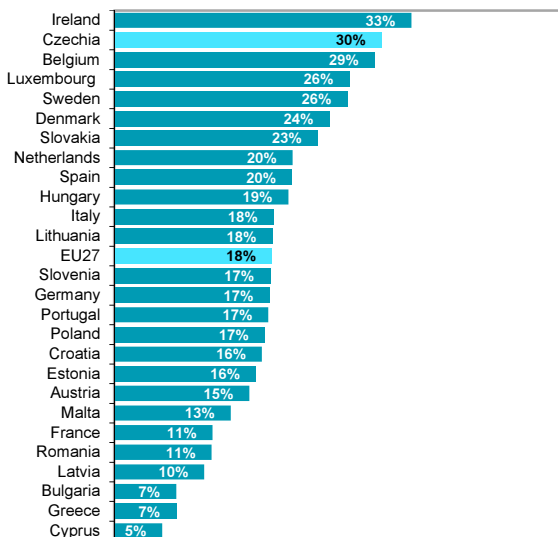
\* EDI = Electronic Data Interchange

as a percentage of total enterprises' turnover in a given group

Source: Czech Statistical Office, Survey on ICT usage in enterprises

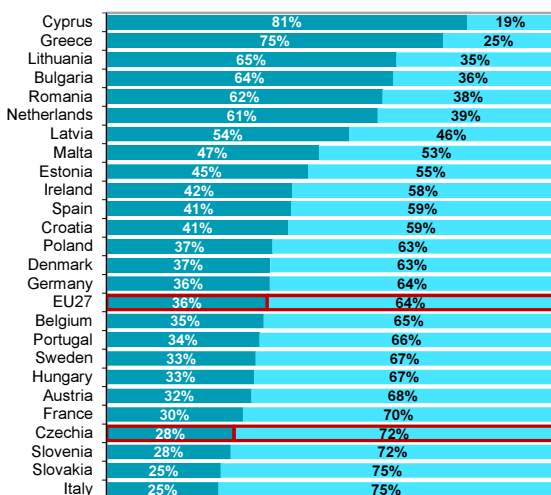
## D Enterprises and digital technologies

**Figure D29 The enterprises' turnover from electronic sales in EU countries; 2021 (as a % of total enterprises' turnover)**



**Figure D30 Enterprises' turnover from electronic sales in EU countries by type of orders; 2021**

- Orders received via a website or apps (Web sales)
- Automated orders received via EDI-type messages (EDI-type sales)\*



\* EDI = Electronic Data Interchange

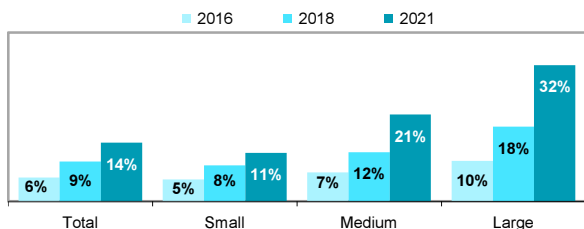
Source: Eurostat

## D Enterprises and digital technologies

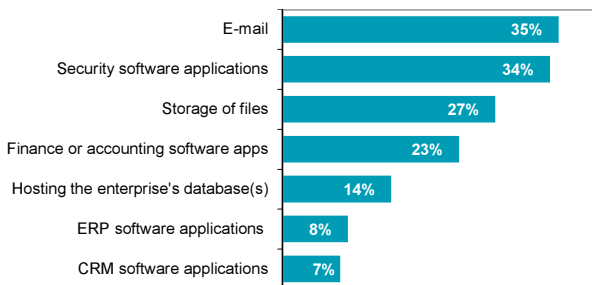
**Table D9 Enterprises in Czechia buying cloud computing services; 2021**

		Percentage	
	Total	Finance or accounting software apps	Hosting the enterprise's database(s)
<b>Total</b>	<b>43,7</b>	<b>22,6</b>	<b>13,9</b>
Small enterprises (10-49)	42,1	23,4	11,5
Medium enterprises (50-249)	47,2	20,7	20,5
Large enterprises (250+)	61,8	15,4	32,2
<b>Industry (10+ employees):</b>			
Manufacturing	39,2	19,7	12,1
Electricity, gas and water supply	34,5	17,4	12,4
Construction	42,9	26,5	7,7
Sale and repair of motor vehicles	49,6	25,8	18,8
Wholesale trade	51,4	24,7	17,9
Retail trade	40,1	21,8	14,9
Transport and storage	41,3	23,6	9,9
Accommodation	57,0	30,3	14,8
Food and beverage services	30,2	20,1	5,9
Travel agency and related activities	56,5	26,7	28,4
Media and information activities	61,0	23,6	28,3
ICT activities	57,8	29,2	42,1
Professional, S&T activities	75,8	22,8	19,1
Administrative and support service act.	53,5	22,2	11,1

**Figure D31 Enterprises buying cloud computing services for hosting databases**



**Figure D32 Enterprises buying cloud computing services; 2021**



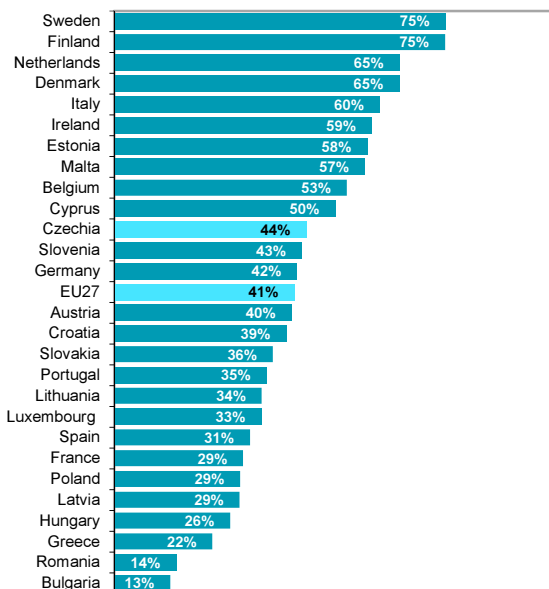
as a percentage of all enterprises with 10+ employees in a given group

Source: Czech Statistical Office, Survey on ICT usage in enterprises

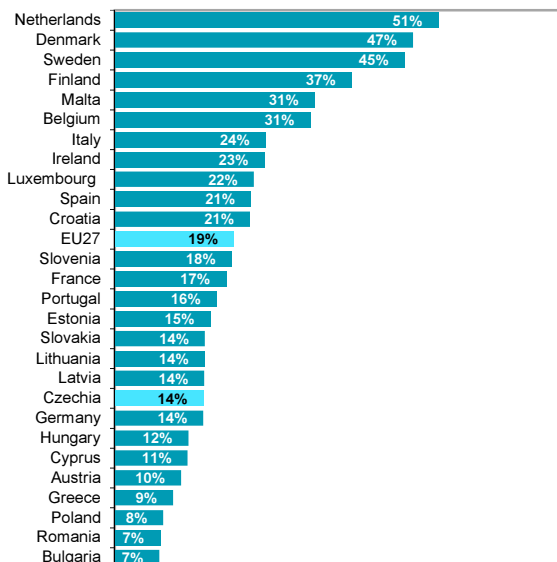


## D Enterprises and digital technologies

**Figure D33 Enterprises in EU countries buying cloud computing services; 2021**



**Figure D34 Enterprises in EU countries buying cloud computing services for hosting databases; 2021**



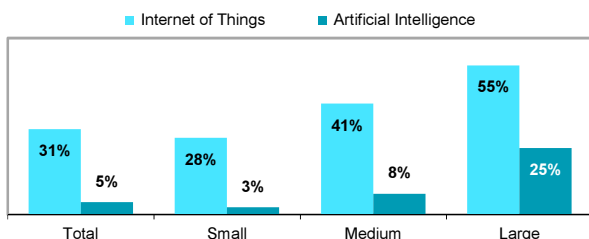
Source: Eurostat

## D Enterprises and digital technologies

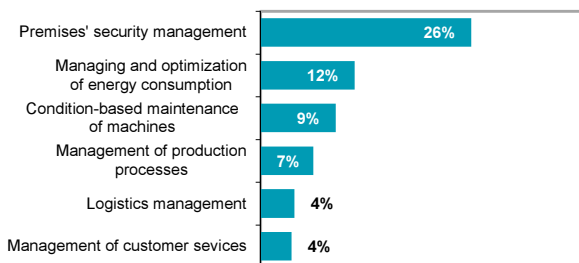
**Table D10 Enterprises in Czechia using the Internet of Things or Artificial Intelligence technologies; 2021**

	Percentage	
	Internet of Things	Artificial Intelligence
<b>Total</b>	<b>31,4</b>	<b>4,5</b>
Small enterprises (10-49)	28,2	2,7
Medium enterprises (50-249)	40,8	7,6
Large enterprises (250+)	54,9	24,5
<b>Industry (10+ employees):</b>		
Manufacturing	36,9	4,2
Electricity, gas and water supply	42,6	4,1
Construction	30,0	0,3
Sale and repair of motor vehicles	38,3	3,9
Wholesale trade	34,1	4,1
Retail trade	21,6	4,5
Transport and storage	36,5	3,3
Accommodation	33,3	1,9
Food and beverage services	22,7	0,6
Travel agency and related activities	18,7	7,9
Media and information activities	26,0	13,6
ICT activities	31,3	23,1
Professional, S&T activities	24,4	9,3
Administrative and support service activities	19,3	2,8

**Figure D35 Enterprises using the Internet of Things or Artificial Intelligence technologies; 2021**



**Figure D36 Enterprises using interconnected devices or systems that can be monitored or remotely controlled via the internet for selected activities; 2021**

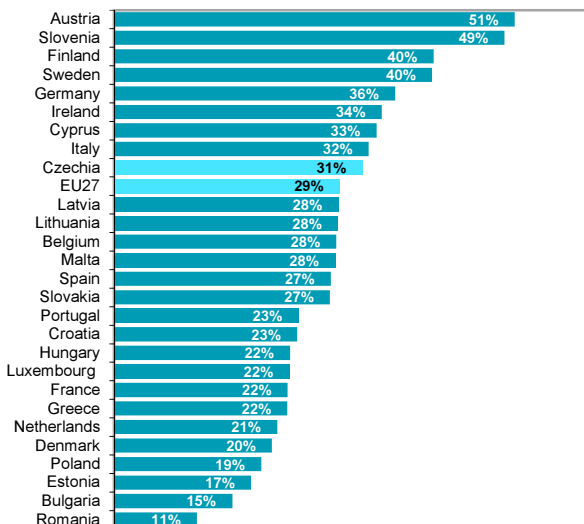


as a percentage of all enterprises with 10+ employees in a given group

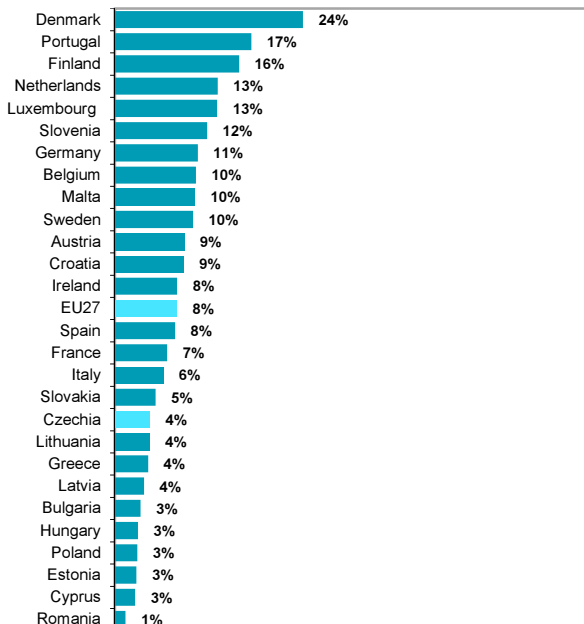
Source: Czech Statistical Office, Survey on ICT usage in enterprises

## D Enterprises and digital technologies

**Figure D37 Enterprises in EU countries using the Internet of Things; 2021**



**Figure D38 Enterprises in EU countries using Artificial Intelligence technologies; 2021**



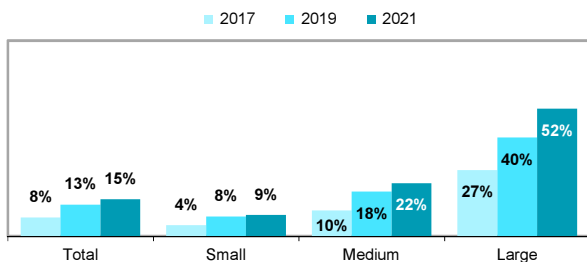
Source: Eurostat

## D Enterprises and digital technologies

**Table D11 Enterprises in Manufacturing in Czechia using 3D printing and robotics**

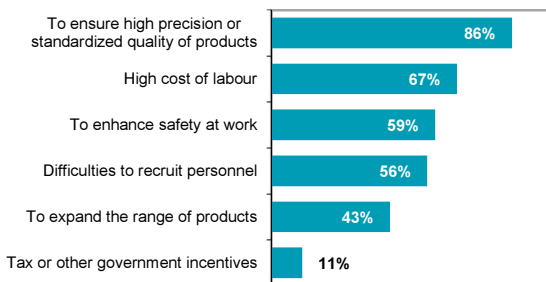
	Percentage	
	3D printing (2021)	Robotics (2022)
<b>Manufacturing, total</b>	<b>15,0</b>	<b>16,6</b>
Small enterprises (10-49)	8,6	7,2
Medium enterprises (50-249)	21,6	28,2
Large enterprises (250+)	52,1	64,3
<b>Manufacturing industry (10+ employees):</b>		
Manuf. of food products	2,9	10,6
Manuf. of textiles and wearing apparel	5,2	3,8
Manuf. of wood and paper	5,6	8,9
Manuf. of chemicals or pharmaceutical products	13,9	12,3
Manuf. of rubber and plastics products	14,6	30,4
Manuf. of glass and building materials	10,6	20,0
Manuf. of basic metals	10,8	18,3
Manuf. of computer and electronic products	48,8	19,7
Manuf. of electrical equipment	30,9	20,2
Manuf. of machinery	27,3	17,0
Manuf. of motor vehicles or other transport equipment	34,7	42,8

**Figure D39 Enterprises in Manufacturing using 3D printing**



as a percentage of all enterprises with 10+ employees in Manufacturing

**Figure D40 Reasons that influenced enterprise's decision to use robotics; 2022**

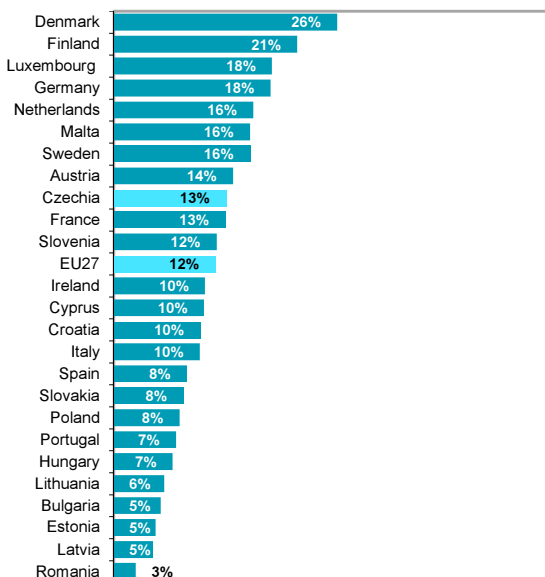


as a percentage of all enterprises in Manufacturing using robotics

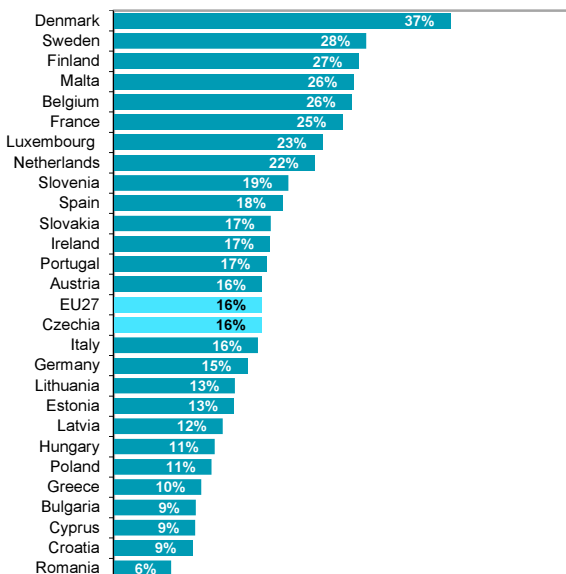
Source: Czech Statistical Office, Survey on ICT usage in enterprises

## D Enterprises and digital technologies

**Figure D41 Enterprises in Manufacturing in EU countries using 3D printing; 2019**



**Figure D42 Enterprises in Manufacturing in EU countries using industrial robots; 2022**



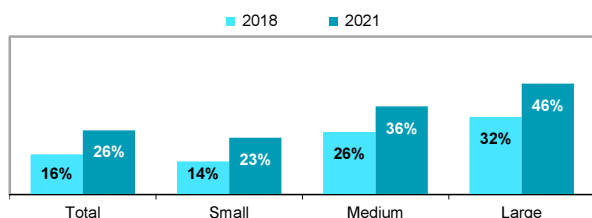
Source: Eurostat

## D Enterprises and digital technologies

**Table D12 Enterprises in Czechia that experienced ICT related security incidents; 2021**

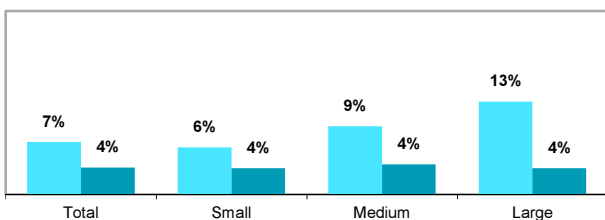
	Percentage	
	Unavailability of ICT services	Destruction or corruption of data
<b>Total</b>	<b>26,4</b>	<b>9,0</b>
Small enterprises (10-49)	23,4	8,2
Medium enterprises (50-249)	36,2	11,5
Large enterprises (250+)	45,7	14,0
<b>Industry (10+ employees):</b>		
Manufacturing	27,5	8,7
Electricity, gas and water supply	28,0	8,0
Construction	18,9	7,8
Sale and repair of motor vehicles	42,1	11,9
Wholesale trade	27,5	10,4
Retail trade	33,5	16,1
Transport and storage	14,8	6,2
Accommodation	26,2	10,5
Food and beverage services	19,2	5,1
Travel agency and related activities	26,3	4,5
Media and information activities	42,5	9,8
ICT activities	41,7	9,5
Professional, S&T activities	33,1	10,7
Administrative and support service activities	20,9	6,5

**Figure D43 Enterprises that experienced unavailability of ICT services**



**Figure D44 Enterprises that experienced destruction or corruption of data; 2021**

- Due to hardware or software failures (internal reasons)
- Due to infection of malicious software or unauthorised intrusion

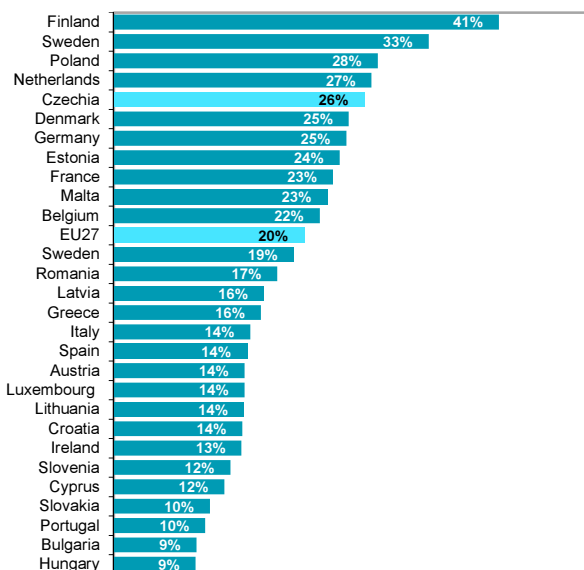


as a percentage of all enterprises with 10+ employees in a given group

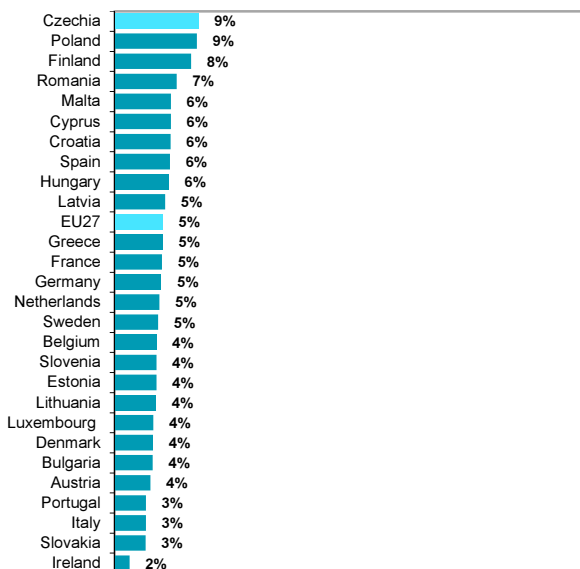
Source: Czech Statistical Office, Survey on ICT usage in enterprises

## D Enterprises and digital technologies

**Figure D45 Enterprises in EU countries that experienced unavailability of ICT services; 2021**



**Figure D46 Enterprises in EU countries that experienced destruction or corruption of data; 2021**



Source: Eurostat

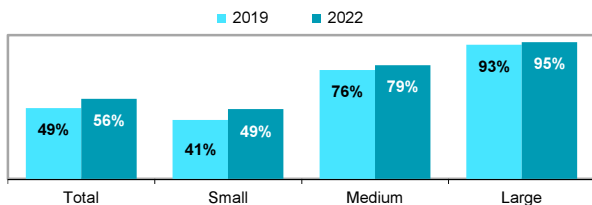
## D Enterprises and digital technologies

**Table D13 ICT security measures used in enterprises in Czechia to ensure the security on their ICT systems; 2022**

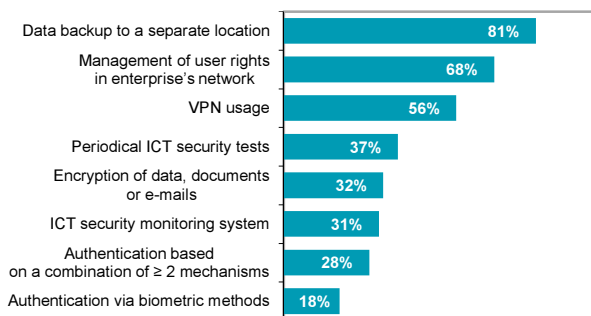
Percentage

	Selected ICT security measures		
	Data backup	VPN usage	Encryption of data
<b>Celkem</b>	<b>81,2</b>	<b>55,6</b>	<b>32,1</b>
Small enterprises (10-49)	78,2	48,6	27,0
Medium enterprises (50-249)	91,4	78,9	46,7
Large enterprises (250+)	97,1	95,0	71,0
<b>Industry (10+ employees):</b>			
Manufacturing	86,2	59,9	30,8
Electricity, gas and water supply	88,0	57,9	36,3
Construction	73,5	38,2	18,9
Sale and repair of motor vehicles	90,6	67,9	35,3
Wholesale trade	88,3	69,2	35,9
Retail trade	78,1	42,7	27,3
Transport and storage	73,9	45,4	21,0
Accommodation	82,0	54,9	32,7
Food and beverage services	49,6	24,0	12,3
Travel agency and related activities	91,4	71,9	34,1
Media and information activities	95,6	82,2	54,0
ICT activities	95,8	92,0	76,4
Professional, S&T activities	92,7	76,4	55,8
Administrative and support service act.	68,1	41,8	30,5

**Figure D47 Enterprises using VPN to ensure ICT security**



**Figure D48 Selected ICT security measures used in enterprises to ensure the security on their ICT systems; 2022**



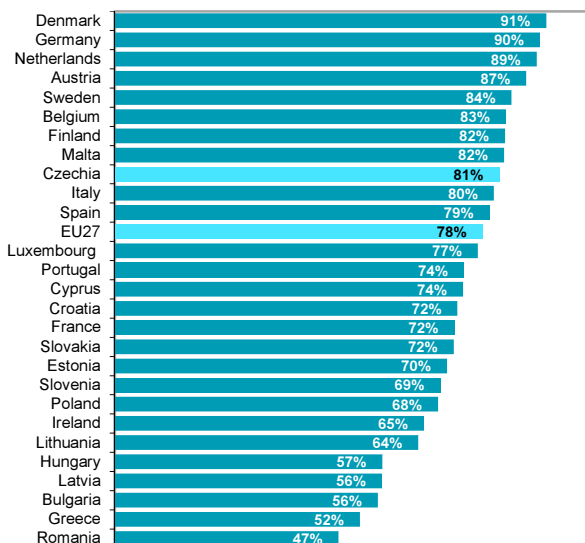
as a percentage of all enterprises with 10+ employees in a given group

Source: Czech Statistical Office, Survey on ICT usage in enterprises

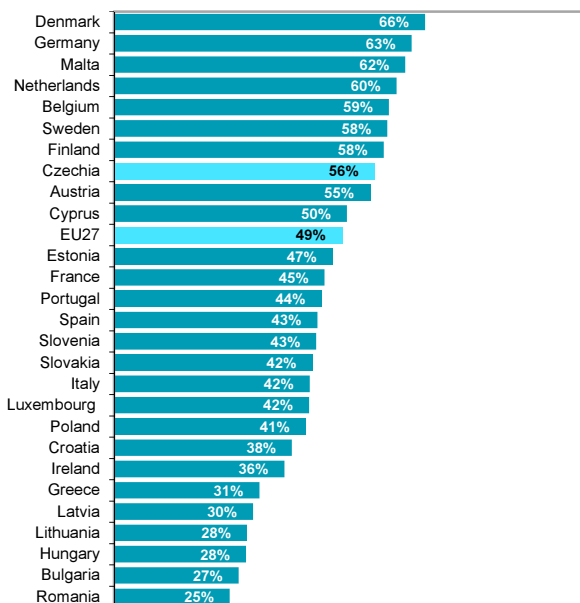


## D Enterprises and digital technologies

**Figure D49 Enterprises in EU countries that backup data to a separate location (including backup to the cloud); 2022**



**Figure D50 Enterprises in EU countries using VPN to ensure ICT security; 2022**



Source: Eurostat

## D Enterprises and digital technologies

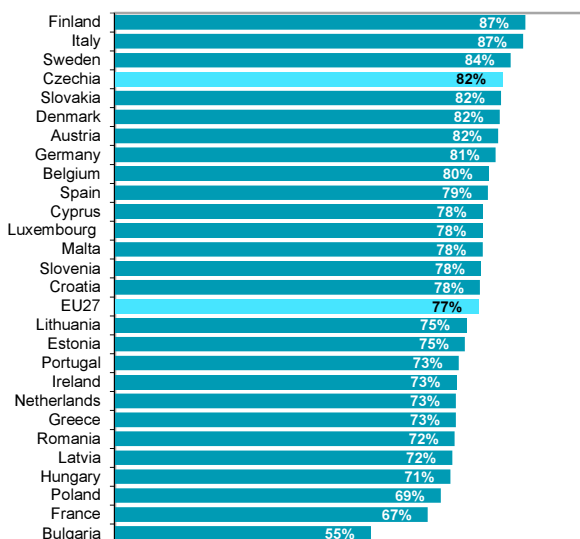
**Table D14 How enterprises in Czechia deal with ICT equipment when it's no longer used; 2022**

	Percentage		
	It is recycled	It is kept in the enterprise	It is sold or donated
<b>Celkem</b>	<b>82,5</b>	<b>40,6</b>	<b>34,5</b>
Small enterprises (10-49)	80,2	37,6	31,0
Medium enterprises (50-249)	89,7	50,3	45,1
Large enterprises (250+)	95,9	59,4	59,0
<b>Industry (10+ employees):</b>			
Manufacturing	85,7	43,0	33,5
Electricity, gas and water supply	90,6	37,7	29,6
Construction	76,8	34,0	28,7
Sale and repair of motor vehicles	86,3	38,6	26,5
Wholesale trade	84,1	42,8	40,9
Retail trade	86,4	39,0	31,4
Transport and storage	76,1	36,3	23,7
Accommodation	82,4	34,3	31,0
Food and beverage services	69,8	26,4	24,4
Travel agency and related activities	90,1	57,5	45,5
Media and information activities	87,1	58,0	57,2
ICT activities	89,9	59,4	65,5
Professional, S&T activities	86,1	48,6	48,2
Administrative and support service activities	74,3	39,8	31,7

as a percentage of all enterprises with 10+ employees in a given group

Source: Czech Statistical Office, Survey on ICT usage in enterprises

**Figure D51 Enterprises in EU countries that recycled ICT equipment when it's no longer used; 2022**



Source: Eurostat

## E Government and digital technologies

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The Czech Statistical Office gathers and processes data on contact points of the **Czech POINT** and their use as the number of the system outputs, on new established data boxes, and on the number of performed transactions by means of the data boxes from open data of the **Ministry of the Interior**.

The CZSO takes data on the number of **tax forms submitted electronically** to the Financial Administration of the Czech Republic by means of the **web application EPO** (electronic tax forms, e-Tax) or through data boxes from open data of the **Financial Administration of the Czech Republic**.

A valuable source of information on the internet use for communication with public administration is also a separate annual statistical survey named **Sample Survey on the ICT Use in Households and by Individuals** carried out by the CZSO.

The **reference period** for data on individuals is **the last 12 months** prior the survey interview. The interviews took place in **Q2 2022**.

### Definitions (sorted alphabetically)

- **Bank identity** is an electronic identity mediated by banks. This is the processing of data for internet banking, which can also be used for logging into public administration services.
- **Citizen Portal** is an access point of the Public administration portal. The portal makes it possible for citizens to manage their registry information or personal documents.
- **Czech POINT** is a system of an assisted platform of public administration where citizens can deal with, dispose off, or settle as many as possible matters related to public administration at a single point.
- **CzechPOINT@office** is a non-public interface of the Czech POINT system. It contains agendas performed by offices, authorities and bodies of public power in order to carry out their scope of authority.
- **CzechPOINT@home** is an interface of the Czech POINT system dedicated to citizens and enabling the data box holders a remote access (from a computer or mobile phone) to selected copies of documents without the need to pay a visit to a contact point of the Czech POINT system.
- A **data box** shall serve for secure electronic delivery of documents in between public administration bodies and a legal or natural person.
- A **Downloadable forms** are most often in doc or pdf format on the website. Citizens or businesses can download them from an authority website, can fill in by hand or in computer, put their handwritten signature on, and deliver to the authority and/or office.
- An **electronic submission** (e-Submission) is a form of a submission delivered in the classic way, yet performed over the internet. Therefore, legal and/or natural persons are not obliged to pay visits to public administration authorities or offices in person anymore.
- **NIA** (National Identity Authority) is a system of electronic identification to government portals and services.
- **Other public institutions** shall mean public educational institutions (schools, universities), public health services or public libraries.

Data for **international comparison** on individuals using the internet for interaction with public administration originate from the **Eurostat** database.

**More information on this theme can be found at:**

[https://www.czso.cz/csu/czso/verejna\\_sprava](https://www.czso.cz/csu/czso/verejna_sprava)

(in the Czech language only).

## E Government and digital technologies

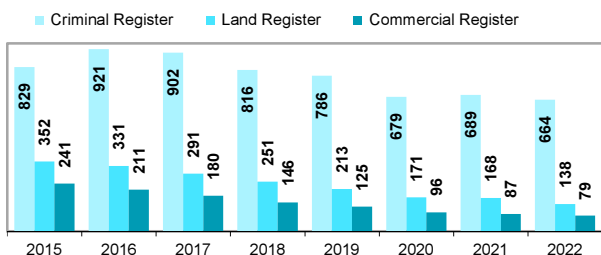
**Table E1 Czech POINT - number of public contact points**

	Number		
	2015	2020	2022
<b>Total</b>	<b>7 942</b>	<b>7 893</b>	<b>7 885</b>
at the municipal authority offices	6 398	6 398	6 398
at post offices	981	949	941
at notary offices	399	435	435
at other places	91	111	111

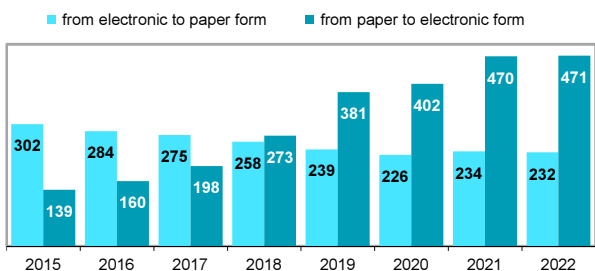
**Table E2 Outputs issued 'at the desk' of the Czech POINT**

	Thousand		
	2015	2020	2022
<b>Total</b>	<b>2 139</b>	<b>1 961</b>	<b>2 524</b>
<b>Verified copies (extracts), total</b>	<b>1 584</b>	<b>1 048</b>	<b>967</b>
from the Criminal Register	829	679	664
from the Land Register	352	171	138
from the Commercial Register	241	96	79
from the Driver Register	91	57	50
from the Trade Register	62	34	29
other verified extracts	9	11	7
<b>Authorized conversion of documents, total</b>	<b>441</b>	<b>628</b>	<b>703</b>
from paper to electronic form	139	402	471
from electronic to paper form	302	226	232
<b>Requests for a Data box registration</b>	<b>35</b>	<b>112</b>	<b>149</b>
<b>Other outputs</b>	<b>79</b>	<b>173</b>	<b>450</b>

**Figure E1 Verified copies issued 'at the desk' of the Czech POINT from selected registers (thousand)**



**Figure E2 Authorized conversions of documents issued 'at the desk' of the Czech POINT (thousand)**



Source: Ministry of the Interior ([www.czechpoint.cz](http://www.czechpoint.cz))



## E Government and digital technologies

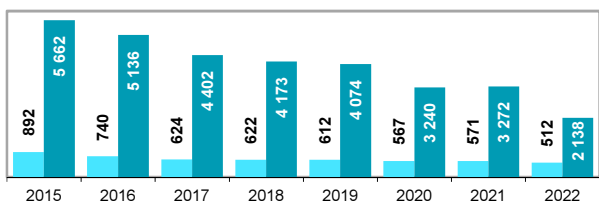
**Table E3 Documents issued via CzechPOINT@office interface**

Thousand

	2015	2020	2022
<b>Total</b>	<b>7 795</b>	<b>5 055</b>	<b>3 947</b>
<b>Verified copies (extracts) ex officio, total</b>	<b>952</b>	<b>1 101</b>	<b>1 117</b>
from the Register of Vital Records (e.g. certificates of birth or death)	420	429	412
from the Register of Residents/Citizens (e.g. certificates of permanent residence)	424	383	380
from the Criminal Register	48	72	76
others	59	217	250
<b>Authorized conversion of documents, total</b>	<b>6 554</b>	<b>3 807</b>	<b>2 650</b>
from paper to electronic form	5 662	3 240	2 138
from electronic to paper form	892	567	512
<b>Verified extracts from Basic registers</b>	<b>289</b>	<b>148</b>	<b>180</b>

**Figure E3 Authorized conversions of documents issued via the CzechPOINT@office interface (thousand)**

■ from electronic to paper form ■ from paper to electronic form



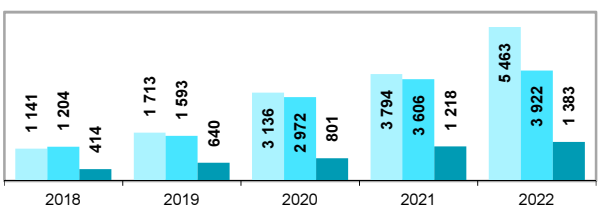
**Table E4 Verified copies (extracts) issued from registries via the CzechPOINT@home interface**

Number

	2020	2021	2022
<b>Total</b>	<b>38 612</b>	<b>54 078</b>	<b>67 474</b>
Driver Register	15 322	20 756	22 755
Criminal Register - individuals	12 587	19 783	27 436
Criminal Register - legal entities	3 508	4 630	5 780
Trade Register	3 136	3 794	5 463
Commercial Register	2 972	3 606	3 922
Insolvency Register	801	1 218	1 383
Register of Qualified Contractors	286	291	735

**Figure E4 Verified copies issued from selected registries via the CzechPOINT@home interface**

■ Trade Register ■ Commercial Register ■ Insolvency Register



Source: Ministry of the Interior ([www.czechpoint.cz](http://www.czechpoint.cz))

## E Government and digital technologies

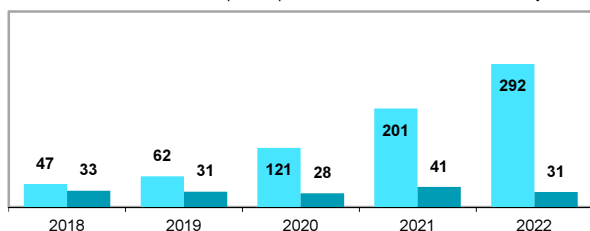
**Table E5 Newly established Data Boxes in Czechia**

Thousand

	2020	2021	2022
<b>Total</b>	<b>148,6</b>	<b>241,8</b>	<b>322,7</b>
Established / activated upon request	120,6	201,0	292,2
Established / activated by law	28,0	40,8	30,5
<b>Owner of newly activated Data Boxes</b>			
Citizen (non-entrepreneur)	67,6	145,4	188,5
Self-employed person (entrepreneur)	48,3	59,0	91,6
Legal person (enterprise)	32,7	37,4	42,5
Public authority body	0,1	0,1	0,2

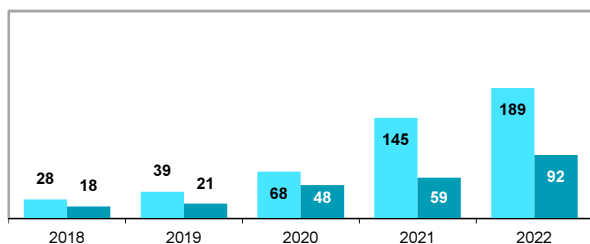
**Figure E5 Method of newly established Data Boxes (thousand)**

■ Established / activated upon request ■ Established / activated by law

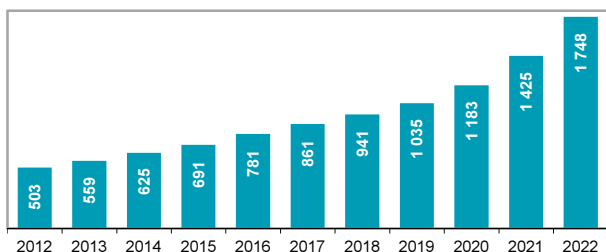


**Figure E6 Owners of newly activated Data Boxes - individuals (thousand)**

■ Citizen (non-entrepreneur) ■ Self-employed person (entrepreneur)



**Figure E7 The total cumulative number of activated Data Boxes as of 31st December (thousand)**



Source: Ministry of the Interior

## E Government and digital technologies

Tab.E6 Electronic transactions made via Data Boxes in Czechia

Thousand

	2020	2021	2022
<b>Total</b>	<b>112 447</b>	<b>121 541</b>	<b>129 640</b>
<b>by Data Box owner</b>			
Public authority body	76 742	83 466	90 325
Legal person (enterprise)	28 837	30 315	31 074
Self-employed person (entrepreneur)	5 750	6 261	6 460
Citizen (non-entrepreneur)	1 117	1 499	1 781

Figure E8 E-transactions made via Data Boxes (million)

■ from Public authorities' Data Boxes ■ from Enterprises' Data Boxes

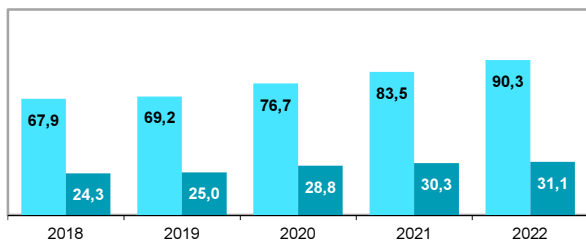


Figure E9 E-transactions made via Data Boxes by type of entities that conducted these transactions (million; %)

■ Public authorities ■ Enterprises ■ Entrepreneurs ■ Citizens

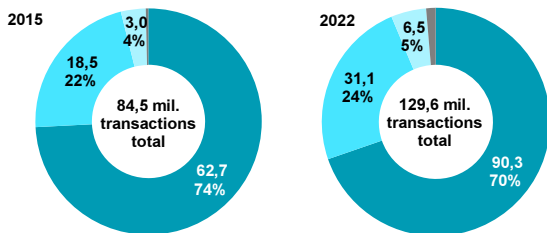
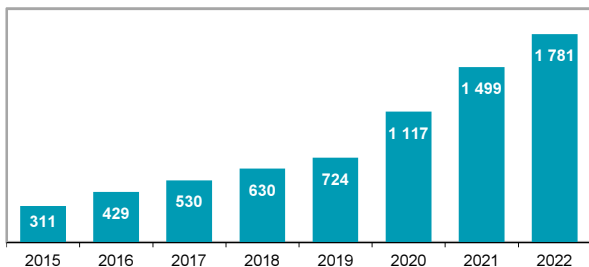


Figure E10 E-transactions made from Citizens' (non-entrepreneur) Data Boxes (thousand)



Source: Ministry of the Interior

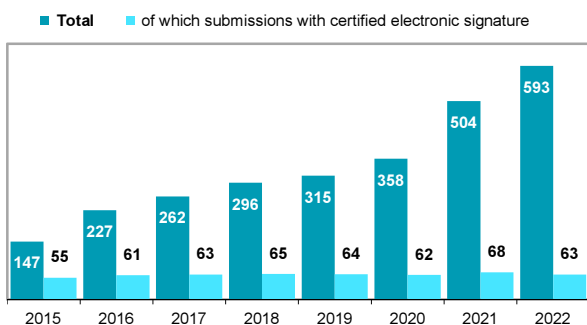
## E Government and digital technologies

**Table E7 Tax forms sent to the Czech Financial Administration electronically via the EPO application**

	Thousand		
	2020	2021	2022
Value Added Tax declaration	2 479	2 539	2 636
Personal Income Tax declaration	358	504	593
Corporate Income Tax declaration	223	232	243
Road Tax declaration	227	224	230
Real Estate Tax declaration	40	59	83

*EPO is a Czech abbreviation used for an electronic filing room (client-oriented web application) of the Czech Financial Administration (CFA) which allows electronic submissions in tax related matters (e.g. e-filing of tax declarations).*

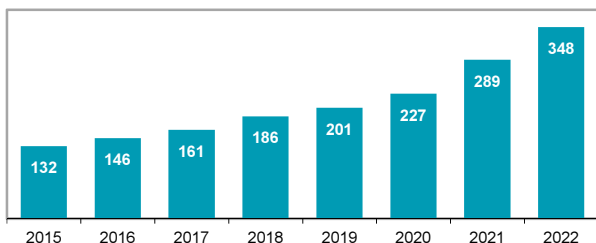
**Figure E11 Personal Income Tax forms sent electronically via the EPO application (thousand)**



**Table E8 Tax forms sent to the Czech Financial Administration electronically via Data Boxes**

	Thousand		
	2020	2021	2022
Value Added Tax declaration	2 411	2 612	2 808
Personal Income Tax declaration	227	289	348
Corporate Income Tax declaration	295	313	317
Road Tax declaration	181	189	196
Real Estate Tax declaration	20	22	28

**Figure E12 Personal Income Tax forms sent electronically via Data Boxes (thousand)**



Source: Czech Financial Administration



## E Government and digital technologies

**Table E9 Citizen Portal in Czechia - selected statistics**

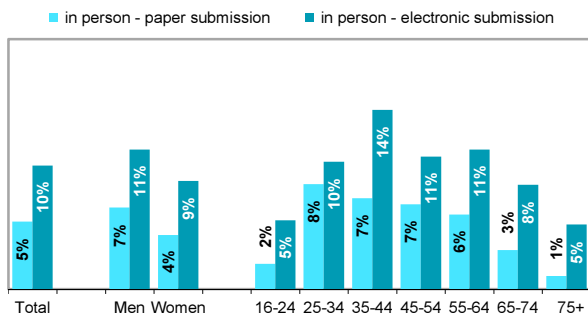
	2021	2022
<b>Number of registered users (as of 31st December)</b>	324 318	600 861
of which via National Identity Authority (NIA)	259 889	524 509
<b>Number of authentications (as of 31st December)</b>	1 583 745	3 533 217
<b>Number of electronic submissions, total</b>	109 000	176 766
of which verified copies issued from selected registers		
Criminal Register - individuals	48 236	85 074
Trade Register	18 642	20 108
Driver Register	16 000	17 480

Source: Ministry of the Interior

**Table E10 Persons in Czechia using their officially recognized electronic identification; 2022**

	Percentage	
	Bank identity	Data Box
<b>Total (aged 16+)</b>	<b>22,9</b>	<b>9,1</b>
Men	24,7	11,9
Women	21,2	6,5
<b>Age group (years)</b>		
16–24	18,8	1,7
25–34	33,1	11,0
35–44	32,3	15,6
45–54	32,2	15,5
55–64	20,8	8,6
65–74	8,6	3,1
75+	2,9	0,6
<b>Education attainment (aged 25–64)</b>		
Secondary without A-level examination and lower	18,7	4,2
Secondary with A-level examination	32,9	13,2
Tertiary	42,4	26,3

**Figure E13 Selected methods of submitting personal income tax declaration by gender and age; 2022**



as a percentage of all persons in a given socio-demographic group

Source: Czech Statistical Office, ICT use survey in households

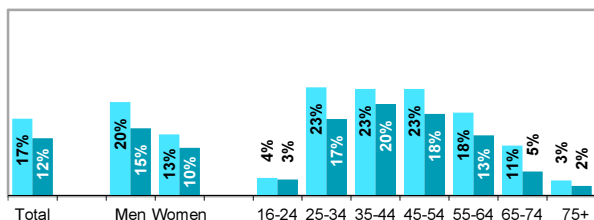
## E Government and digital technologies

**Table E11 Persons in Czechia searching information on websites of public administration; 2022**

	Total	Percentage of which with	
		government authorities	other public institutions*
<b>Total (aged 16+)</b>	<b>51,9</b>	<b>42,2</b>	<b>37,3</b>
Men	51,8	43,5	34,8
Women	52,0	41,0	39,7
<b>Age group (years)</b>			
16–24	55,1	28,4	48,7
25–34	65,8	54,9	47,5
35–44	64,5	55,1	46,9
45–54	62,4	55,0	40,5
55–64	53,0	45,9	35,9
65–74	31,6	24,9	23,2
75+	14,8	11,6	11,1
<b>Education attainment (aged 25–64)</b>			
Secondary without A-level examination and lower	43,8	35,9	26,7
Secondary with A-level examination	67,9	59,2	47,4
Tertiary	79,3	69,6	60,2

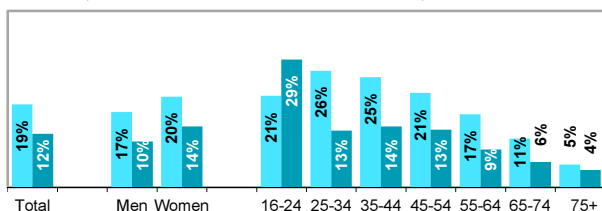
**Figure E14 Persons aged 16+ searching selected types of information on websites of government authorities; 2022**

- personal or property information (e.g. from the Land Register)
- information from public databases (e.g. from the Insolvency Register)



**Figure E15 Persons aged 16+ searching selected types of information on websites of other public institutions\*; 2022**

- personal information
- information from public databases



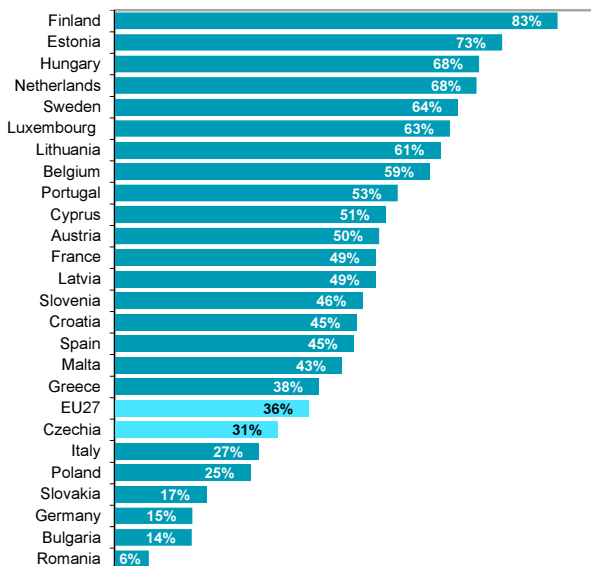
\* Includes public educational institutions, health services or libraries.  
as a percentage of all persons in a given socio-demographic group

Source: Czech Statistical Office, ICT use survey in households

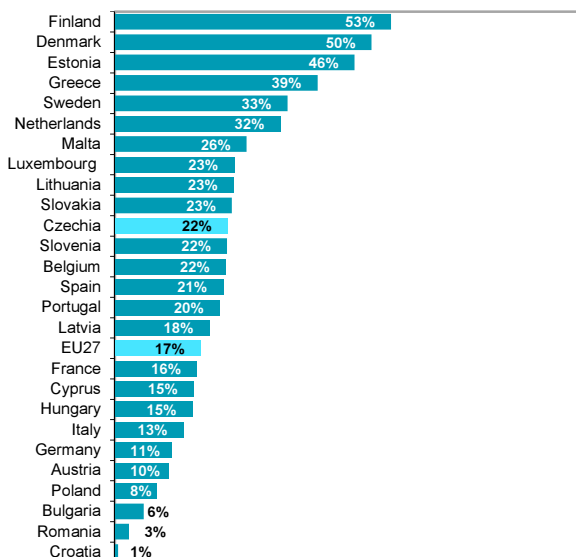


## E Government and digital technologies

**Figure E16 Persons aged 16–74 years in EU countries searching personal or property information on the website of public administration; 2022**



**Figure E17 Persons aged 16–74 years in EU countries searching information from public databases; 2022**



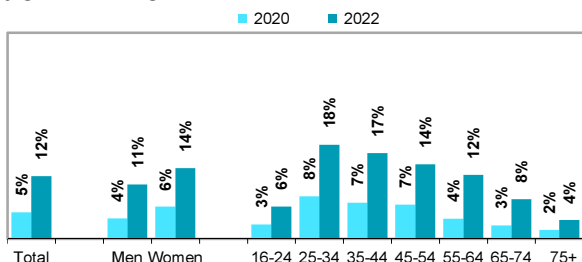
Source: Eurostat

## E Government and digital technologies

**Table E12 Persons in Czechia who conducted selected activities on websites of public administration; 2022**

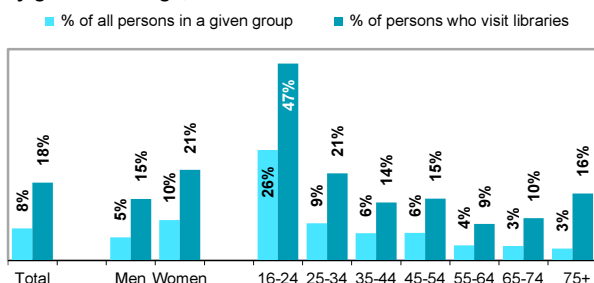
	%		
	Download- ing official documents	Submitting requests or claims	Making an appointment with the
<b>Total (aged 16+)</b>	<b>48,1</b>	<b>28,0</b>	<b>13,2</b>
Men	50,3	26,1	14,3
Women	45,9	29,8	12,2
<b>Age group (years)</b>			
16–24	56,4	19,2	7,0
25–34	61,6	30,4	18,6
35–44	62,5	34,9	22,3
45–54	60,4	35,3	18,5
55–64	47,4	32,7	10,9
65–74	23,3	21,9	5,1
75+	9,1	9,8	1,6
<b>Education attainment (aged 25–64)</b>			
Secondary without A-level examination and lower	43,3	24,2	10,7
Secondary with A-level examination	63,0	36,8	18,6
Tertiary	74,3	42,9	27,8

**Figure E18 Logging into health insurance web account by gender and age**



as a percentage of all persons in a given socio-demographic group

**Figure E19 Online reservation of books in libraries by gender and age; 2022**



Source: Czech Statistical Office, ICT use survey in households



## F Education and digital skills

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Data on **numbers of computers at schools** per 100 pupils/students or 1 teacher of respective school grades, as well as on school equipment with other ICTs in the Czech Republic come from data sources of the **Ministry of Education, Youth and Sports**. The Ministry collect these data at nursery, primary, secondary, and higher professional schools within the annual questionnaire called Report of Schools Headquarters (R 13-01). The data are as at **30 September of the reference year**.

**More information on these fields can be found at:**

[https://www.czso.cz/csu/czso/information\\_technologies\\_in\\_schools](https://www.czso.cz/csu/czso/information_technologies_in_schools)

The independent annual statistical survey called **Sample Survey on the ICT Use in Households and by Individuals** (for details see Chapter C) has been a valuable source of information on how **students aged 16+ years** use information technologies.

The **Sample Survey on the ICT Use in Households and by Individuals** is also a source of data on **online learning activities** over the internet. Within the survey, respondents were asked if they attended an online course, used online learning material or communicated with instructors using educational portals within **the last 3 months** prior the survey.

The indicators on **computer (digital) skills** of people in Czechia are also based on results from the above-mentioned Sample Survey on the ICT Use in Households and by Individuals. Within the survey, respondents were asked if they used selected digital skills in **the last 3 months**.

### Definitions (sorted alphabetically)

- **Copying or moving files** between folders or between two computers (e.g. via USB flash drive) or between computers and other devices (e.g. from/to mobile phone via Bluetooth)
- **Editing photos** means using photo editing software e.g. Adobe Photoshop or GIMP. The software for editing allows to add effects, filters, overlays and use other tools.
- **Presentation software** e.g. Powerpoint or Prezi is used to create slides for presentation integrating text, pictures, tables or charts.
- **Programming** shall include the use of programming languages as Java, C, Python, Pascal, for instance, writing of scripts in PHP or JavaScript, for instance, writing of source codes, formatting and generating of tools, binary tools for compatibility analyses, tools for code checking, generators of documentation, generators of interfaces, etc.
- **School Intranet** uses most of the same technology as the internet but it is restricted only to a limited group of users within an organization, typically to students and staff of given school. The access by outsiders is excluded.
- **School Wireless Network** (school WiFi network) enables students and school staff using portable devices in a school to connect to the school computer network. An example is international roaming service Eduroam.
- **Spreadsheet software** e.g. MS Excel is used to organise and analyse data, such as sorting, filtering, using formulas or creating charts.

## F Education and digital skills

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- **The participation in an online course** shall include a participation in course attended over the internet. Students communicate with lectors over the internet, study materials are also sent online. Online courses may include language courses, personal development courses, computer courses and more. It also includes courses made through the applications such as Duolingo.
- **Using online learning material** includes using audio-visual materials, online learning software or electronic textbooks. Excludes downloading such material for offline use at a later point of time.
- **Word processing software** e.g. MS Word or OpenOffice Writer is used to create a document with text.

**More information on these fields can be found at:**

[https://www.czso.cz/csu/czso/vyuzivani\\_informacnich\\_technologii\\_studenty](https://www.czso.cz/csu/czso/vyuzivani_informacnich_technologii_studenty)  
(in the Czech language only)

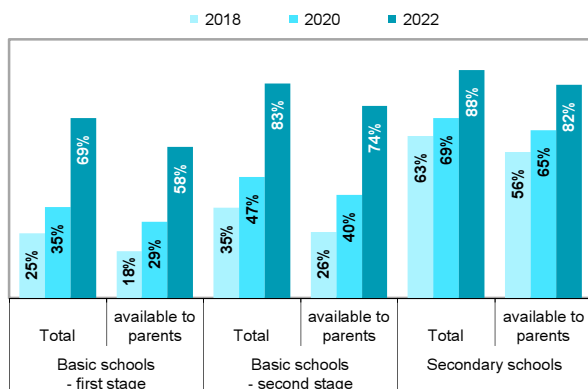


## F Education and digital skills

**Table F1 Schools in Czechia with wireless network and school intranet; 2022**

	Percentage		
	Basic schools - first stage	Basic schools - second stage	Secondary schools
<b>School intranet, total</b>	<b>69,4</b>	<b>83,0</b>	<b>87,9</b>
available to parents	58,5	74,1	82,5
<b>School wireless network</b>	<b>97,9</b>	<b>98,5</b>	<b>97,7</b>

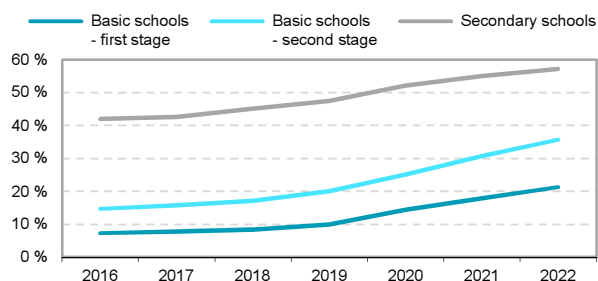
**Figure F1 Schools with school intranet**



**Table F2 Schools in Czechia permitting students to use their personally owned devices during classes**

	Percentage		
	2020	2021	2022
Basic schools - first stage	14,4	17,9	21,2
Basic schools - second stage	25,0	30,8	35,7
Secondary schools	52,1	55,0	57,2

**Figure F2 Schools permitting students to use their personally owned devices during classes**



Source: Ministry of Education, Youth and Sports and CZSO own calculations

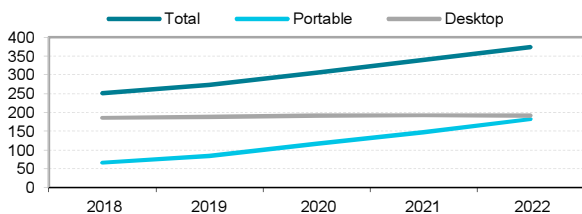
## F Education and digital skills

**Table F3 Computers available to students in schools in Czechia; 2022**

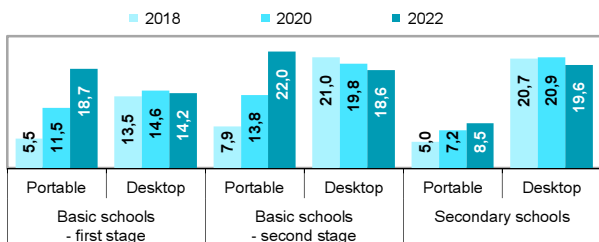
Number of devices per 100 students in a given school type

	Basic schools - first stage	Basic schools - second stage	Secondary schools
<b>Computers, total</b>	<b>32,9</b>	<b>40,6</b>	<b>28,1</b>
of which up to 2 years old	12,1	15,4	8,1
<b>Portable computers</b>	<b>18,7</b>	<b>22,0</b>	<b>8,5</b>
of which up to 2 years old	9,0	10,9	3,7
<b>Desktops</b>	<b>14,2</b>	<b>18,6</b>	<b>19,6</b>
of which up to 2 years old	3,1	4,5	4,4

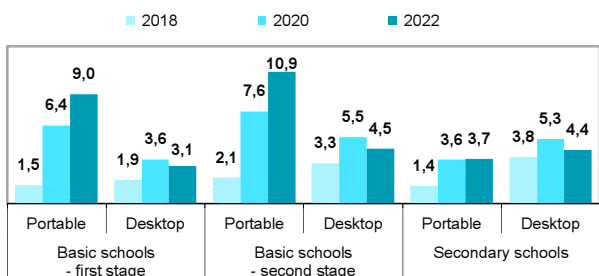
**Figure F3 Computers available to students in schools (thous.)**



**Figure F4 Type of computers available to students in schools (per 100 students in a given school type)**



**Figure F5 Computers up to age of two years available to students in schools (per 100 students in a given school type)**



Source: Ministry of Education, Youth and Sports and CZSO own calculations





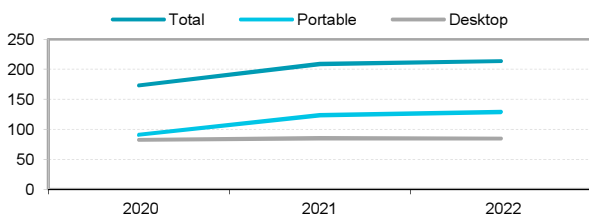
## F Education and digital skills

**Table F4 Computers available to teachers in schools in Czechia; 2022**

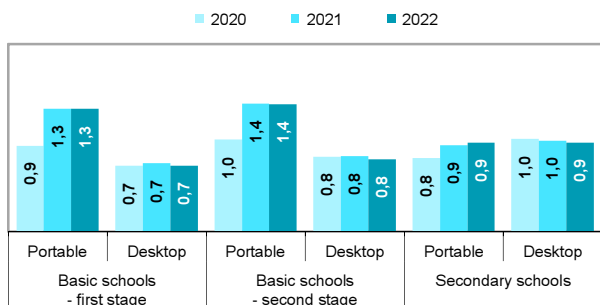
Number of devices per 1 teacher in a given school type

	Basic schools - first stage	Basic schools - second stage	Secondary schools
<b>Computers, total</b>	<b>2,0</b>	<b>2,1</b>	<b>1,9</b>
for individual use (not shared)	1,2	1,3	1,2
<b>Portable computers</b>	<b>1,3</b>	<b>1,4</b>	<b>0,9</b>
for individual use (not shared)	1,0	1,1	0,8
<b>Desktops</b>	<b>0,7</b>	<b>0,8</b>	<b>0,9</b>
for individual use (not shared)	0,1	0,2	0,4

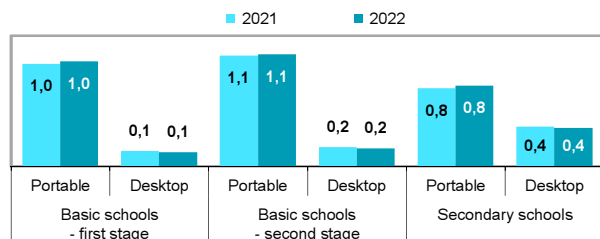
**Figure F6 Computers for teachers in schools (thousand)**



**Figure F7 Computers available to teachers in schools (per 1 teacher in a given school type)**



**Figure F8 Computers intended for individual use by teachers (per 1 teacher in a given school type)**



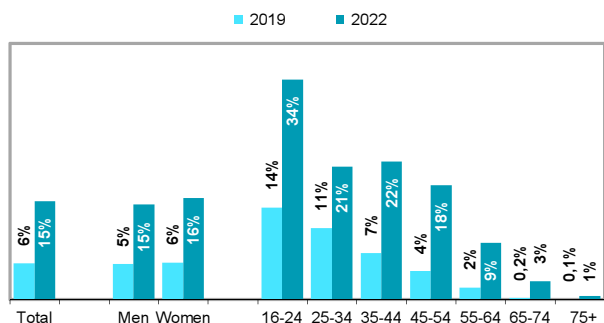
Source: Ministry of Education, Youth and Sports and CZSO own calculations

## F Education and digital skills

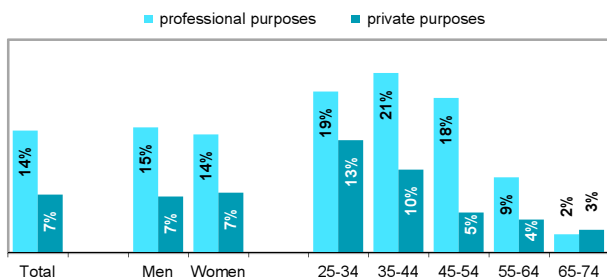
**Table F5 Persons in Czechia using the internet for selected learning activities; 2022**

	Percentage	
	Doing an online course	Using online learning materials
<b>Total (aged 16+)</b>	<b>15,3</b>	<b>14,7</b>
Men	14,8	15,5
Women	15,8	14,0
<b>Age group (years)</b>		
16–24	34,3	41,0
25–34	20,8	20,7
35–44	21,5	18,8
45–54	17,8	14,0
55–64	8,8	7,6
65–74	2,8	3,2
75+	0,5	1,1
<b>Education attainment (aged 25–64)</b>		
Secondary without A-level exam. and lower	2,3	3,5
Secondary with A-level examination	19,6	16,0
Tertiary	37,5	32,6

**Figure F9 Persons aged 16+ doing an online course**



**Figure F10 Persons aged 16–74 years who attended an online course by purposes of learning activities; 2022**

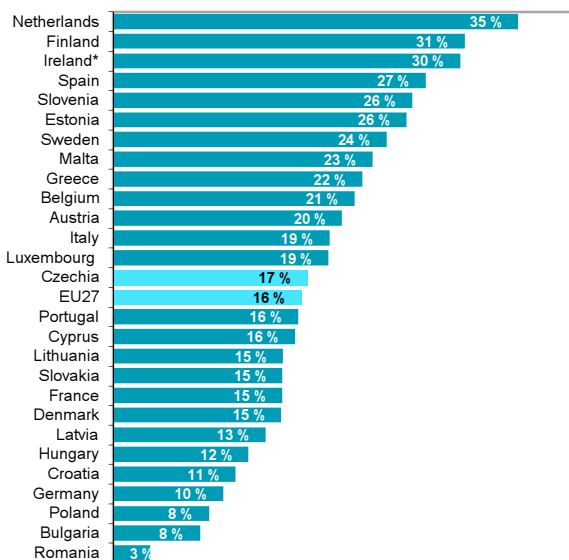


as a percentage of all persons in a given socio-demographic group

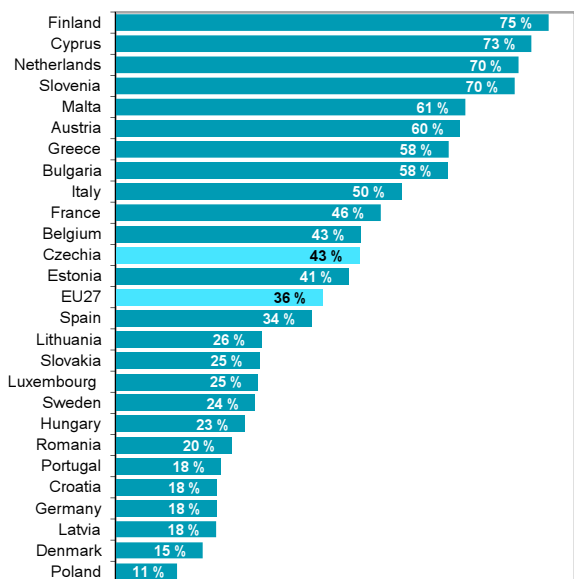
Source: Czech Statistical Office, ICT use survey in households

## F Education and digital skills

**Figure F11 Persons aged 16–74 years in EU countries who attended an online course; 2022**



**Figure F12 Students aged 16+ in EU countries who attended an online course; 2022**



\* data for 2021

Source: Eurostat

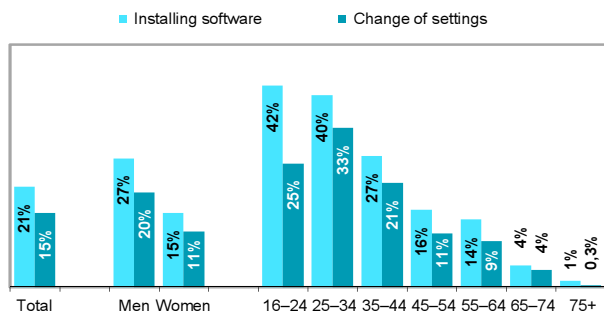
## F Education and digital skills

**Table F6 Persons in Czechia using selected digital skills; 2021**

Percentage

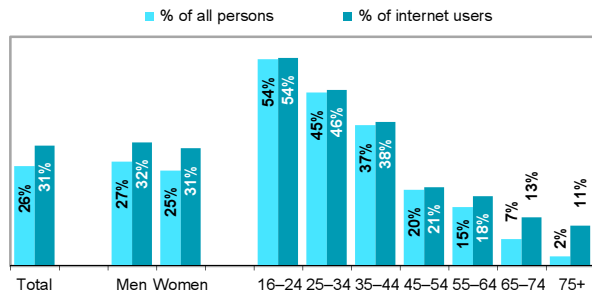
	Copying files	Editing photos	Program-ming
<b>Total (aged 16+)</b>	<b>52,2</b>	<b>26,0</b>	<b>4,9</b>
Men	54,7	27,2	7,8
Women	49,9	24,9	2,1
<b>Age group (years)</b>			
16–24	84,2	54,1	11,9
25–34	76,2	45,4	10,7
35–44	67,5	36,8	6,8
45–54	58,0	19,8	3,0
55–64	43,5	15,3	1,5
65–74	18,1	7,0	0,4
75+	5,2	2,4	
<b>Education attainment (aged 25–64)</b>			
Secondary without A-level exam. and lower	35,6	15,7	0,8
Secondary with A-level examination	70,4	31,0	5,2
Tertiary	90,9	49,5	13,7

**Figure F13 Installing software and change of settings by gender and age; 2021**



as a percentage of all persons in a given socio-demographic group

**Figure F14 Using photo editing software or apps by gender and age; 2021**

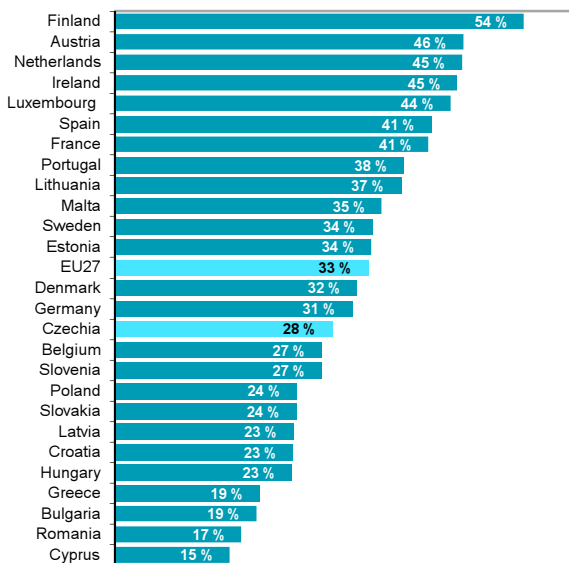


Source: Czech Statistical Office, ICT use survey in households

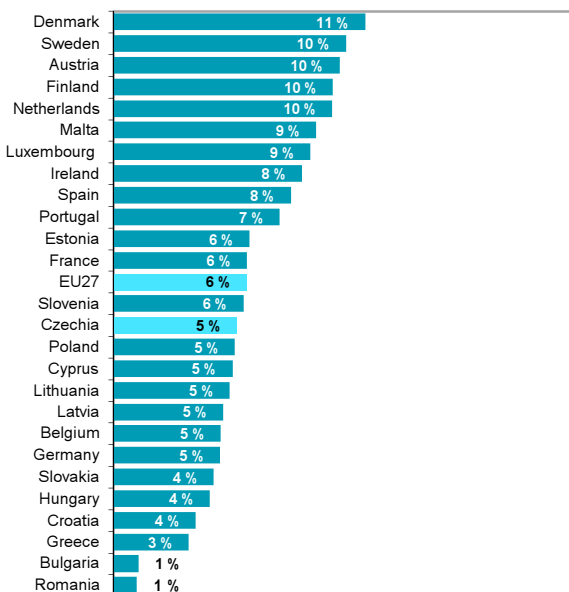


## F Education and digital skills

**Figure F15 Persons aged 16–74 years in EU countries who used photo or video editing software; 2021**



**Figure F16 Persons aged 16–74 years in EU countries who do programming; 2021**



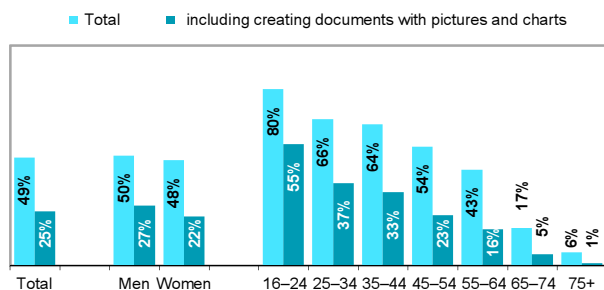
Source: Eurostat

## F Education and digital skills

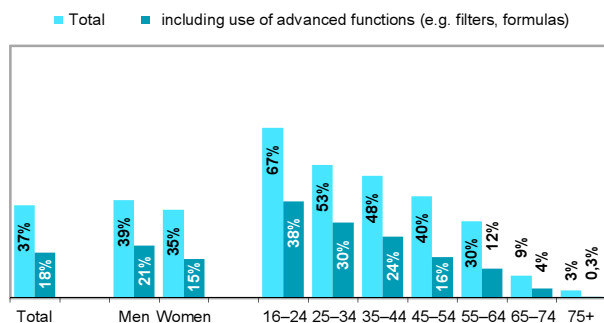
**Table F7 Persons in Czechia using office software; 2021**

	Percentage		
	Word processing software	Spreadsheet software	Presentation software
<b>Total (aged 16+)</b>	<b>48,9</b>	<b>36,8</b>	<b>16,5</b>
Men	49,9	38,8	18,3
Women	47,9	34,9	14,9
<b>Age group (years)</b>			
16–24	80,1	67,5	55,6
25–34	66,4	52,6	22,9
35–44	64,0	48,4	21,8
45–54	53,9	40,2	12,4
55–64	43,5	30,4	7,0
65–74	17,0	8,8	1,7
75+	5,8	2,9	0,3
<b>Education attainment (aged 25–64)</b>			
Secondary without A-level examination and lower	28,0	15,2	3,6
Secondary with A-level examination	67,9	51,7	14,5
Tertiary	89,3	76,2	39,9

**Figure F17 Using word processing software; 2021**



**Figure F18 Using spreadsheet software; 2021**



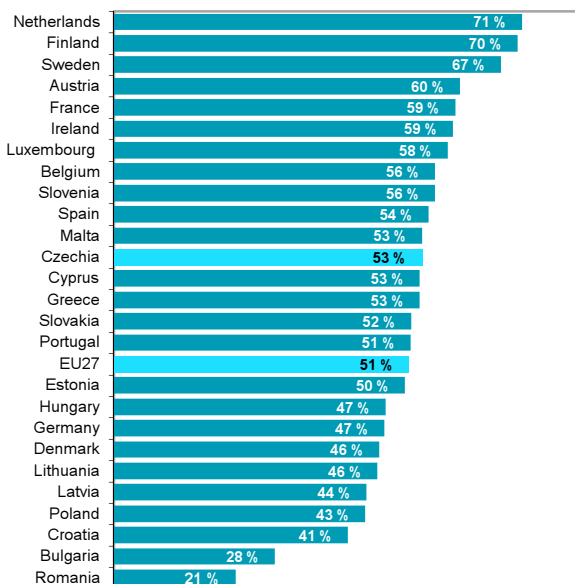
as a percentage of all persons in a given socio-demographic group

Source: Czech Statistical Office, ICT use survey in households

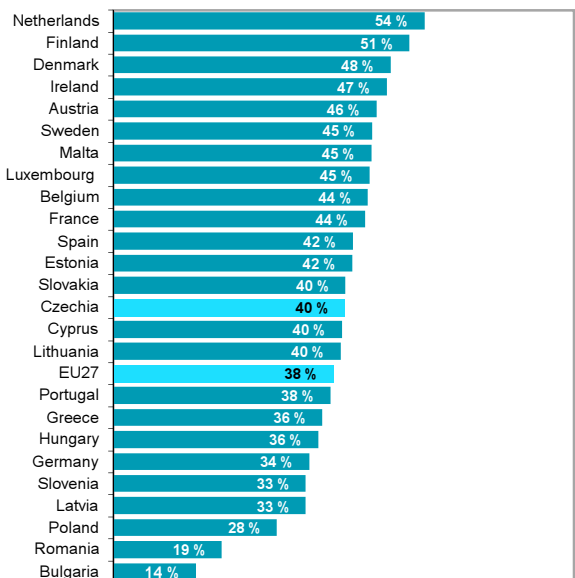


## F Education and digital skills

**Figure F19 Persons aged 16–74 years in EU countries who used word processing software; 2021**



**Figure F20 Persons aged 16–74 years in EU countries who used spreadsheet software; 2021**



Source: Eurostat

## F Education and digital skills

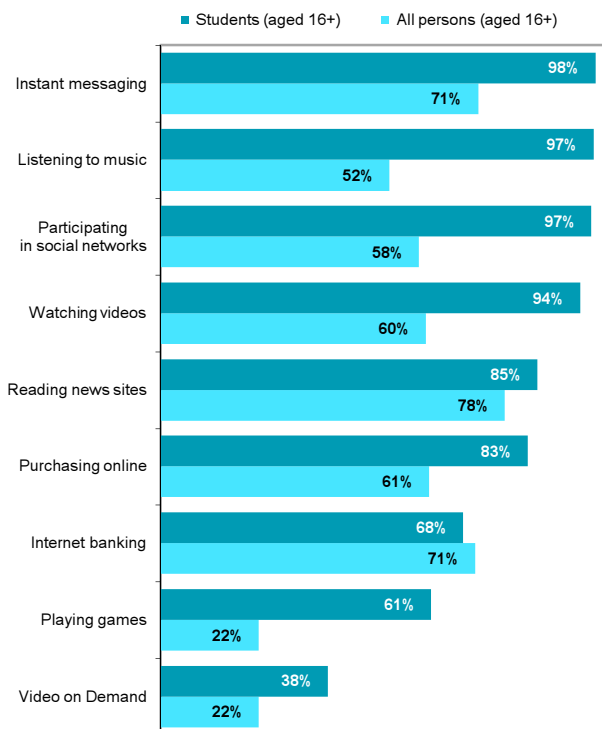
**Table F8 Students aged 16+ in Czechia using the internet; 2022**

Percentage

	Total	Men	Women
<b>Total</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>
Using the internet on a mobile phone	99,4	100,0	98,9
<b>For selected activities</b>			
Instant messaging	97,9	99,4	96,3
Participating in social networks	96,9	98,3	95,5
Reading news sites	84,8	84,8	84,9
Listening to music, total	97,4	97,8	97,1
Listening to music on Demand	25,7	23,6	27,8
Watching videos, total	94,4	96,4	92,4
Watching Video on Demand	37,7	39,7	35,7
Purchasing online	82,7	80,3	85,1
Internet banking	68,1	67,7	68,6
Playing games, total	60,9	76,6	45,1
Playing games on Demand	16,4	25,5	7,1

as a percentage of all students (men/women) aged 16+

**Figure F21 Students and persons aged 16+ using the internet for selected activities; 2022**

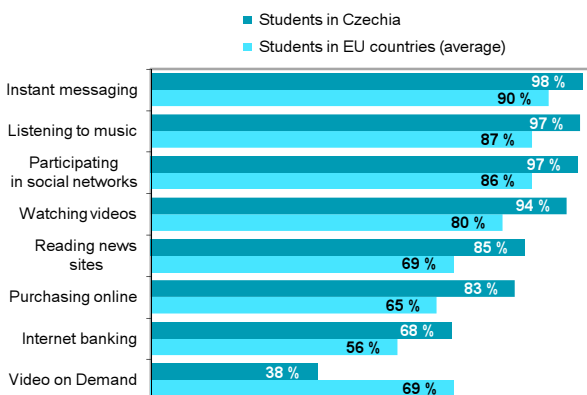


Source: Czech Statistical Office, ICT use survey in households

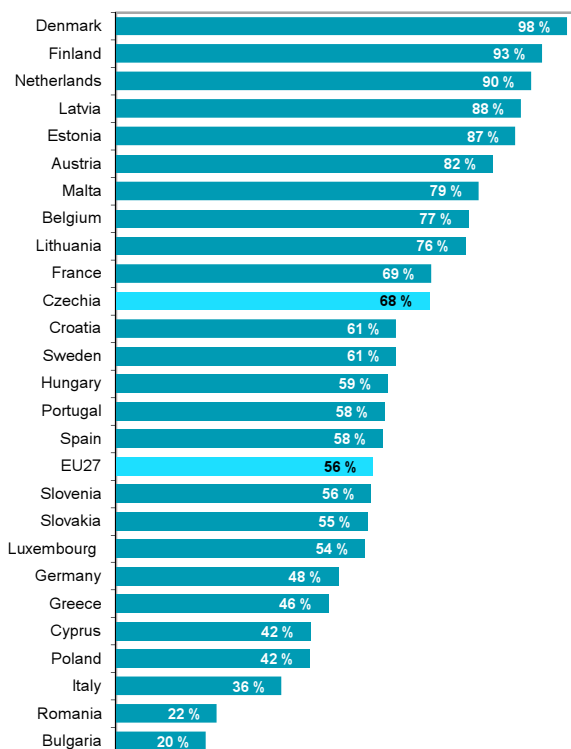


## F Education and digital skills

**Figure F22 Students aged 16+ in Czechia and EU countries using the internet for selected activities; 2022**



**Figure F23 Students aged 16+ in EU countries using internet banking; 2022**



Source: Eurostat

## F Education and digital skills

**Table F9 Students aged 16+ in Czechia using selected software; 2021**

	Percentage		
	Celkem	Men	Women
<b>Word processing software, total</b>	<b>91,0</b>	<b>90,7</b>	<b>91,3</b>
advanced functions (e.g. inserting pictures or charts)	66,0	65,9	66,2
<b>Spreadsheet software, total</b>	<b>79,5</b>	<b>80,6</b>	<b>78,5</b>
advanced functions (e.g. filtering, formulas usage)	47,7	47,7	47,6
<b>Presentation software</b>	67,2	70,7	63,8
<b>Photo/ video editing software and apps</b>	59,9	56,3	63,5
<b>Programming</b>	12,9	17,2	8,5

as a percentage of all students (men/women) aged 16+

Source: Czech Statistical Office, ICT use survey in households

**Figure F24 Students aged 16+ in EU countries who do programming; 2021**



Source: Eurostat

## G Health and digital technologies

Data on e-Health services are processed from the comprehensive annual survey on information on health care services providers E (MZ) 1-01 performed by the **Institute of Health Information and Statistics of the Czech Republic (IHIS CR)**. This survey includes questions on the ICT equipment of practices of **independent physicians**, data on **online services** offered via websites of independent physicians and **keeping health records (documentation) in the electronic form**.

The survey includes also detailed questions on available functionalities and used records of **electronic information healthcare systems** deployed in offices of independent physicians.

**Reference period:** the data are as at 31 November of the reference year for ICT equipment of practices and 3 months prior to the survey for seeking health-related information by individuals.

**Available breakdowns:** Data on the ICT use by independent physicians are available by the type of practice – general practitioner for adults, general practitioner for children, dentist, gynecologist, and specialist.

The independent annual statistical survey called **Sample Survey on the ICT Use in Households and by Individuals** (for details see Chapter C) has been a valuable source of information how many individuals use the internet for seeking health-related information in the last 3 months. The survey results are internationally comparable as a percentage of all individuals aged 16 to 74 years.

**International data and comparisons** of certain indicators are taken from the **Eurostat database** for digital economy and society, data of which are updated every year in December. Detailed information can be found at: [https://bit.ly/Comprehensive\\_database](https://bit.ly/Comprehensive_database).

### Definitions (sorted alphabetically)

- A **specialist physician** shall mean a doctor in a specific field of medicine as a dermatologist or an urologist, etc. This category excludes gynecologists and dentists.
- **Independent physicians** include all independent practices who are not part of another medical facility, e.g. hospital.
- **Lists of patients by diagnosis, laboratory results or for an appointment** for examinations shall mean a list of electronic records of all patients of the health establishment by a given criterion entered.
- **Online appointments to the physician** shall mean that the patients may make appointments for examination and/or medical intervention by means of an online editable form, which is transmitted directly from the website of the surgery. **These do not include making appointments simply by email.**
- **Online consultancies** shall mean the option to send health related queries via a website of the physician's surgery.
- **Online prescribing** allows a physician to use digital prescription software to electronically transmit a prescription to the patient. Patient receives an electronic identification code which then produces to the pharmacist.
- **Online prescription order** mean that the patients fill out an online form and receives their electronic prescription via email or SMS.
- **Seeking health-related information** includes searching for information about injuries, diseases, nutrition, improving health, etc.
- **The drug interaction alerts** shall mean that the system issues a notice to the physician if the patient has been prescribed medicines, which have mutual effects.
- **Laboratory tests ordering** is made from a computer in a physician's office. The result are received in a form of secure protocol.

**For more information see:**

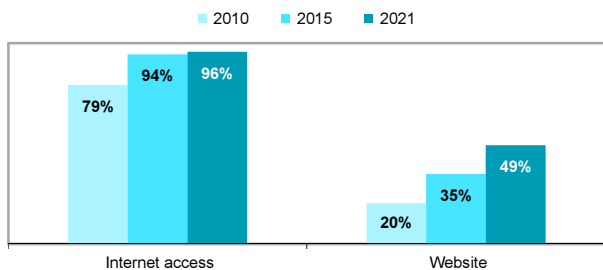
[https://www.czso.cz/csu/czso/information\\_technologies\\_in\\_the\\_czech\\_health\\_sector](https://www.czso.cz/csu/czso/information_technologies_in_the_czech_health_sector)

## G Health and digital technologies

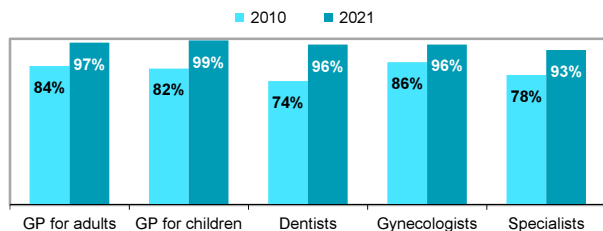
**Table G1 Independent surgeries of physicians in Czechia equipped with selected ICT; 2021**

	Percentage		
	Computer	Internet	Website
<b>Total</b>	<b>96,5</b>	<b>95,7</b>	<b>49,1</b>
General practitioners (GP) for adults	98,4	97,5	53,9
General practitioners (GP) for children	99,0	98,9	68,9
Dentists	97,5	96,3	32,7
Gynecologists	96,8	96,5	65,4
Specialists	94,0	93,2	50,1

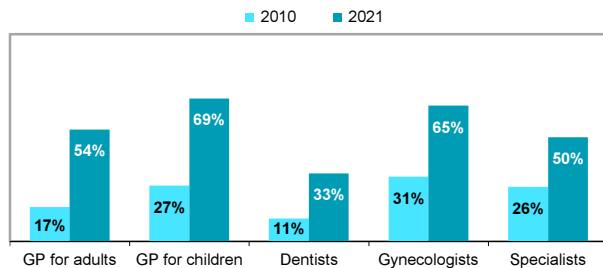
**Figure G1 Independent surgeries of physicians equipped with selected ICT**



**Figure G2 Independent surgeries of physicians with the internet access**



**Figure G3 Independent surgeries of physicians having own website**



as a percentage of all independent surgeries of a given physician practice

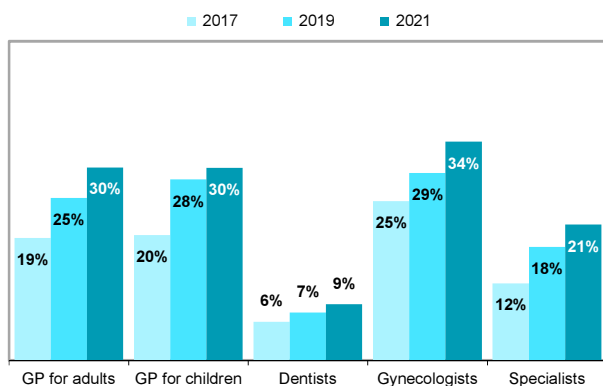
Source: Institute of Health Information and Statistics and CZSO own calculations

## G Health and digital technologies

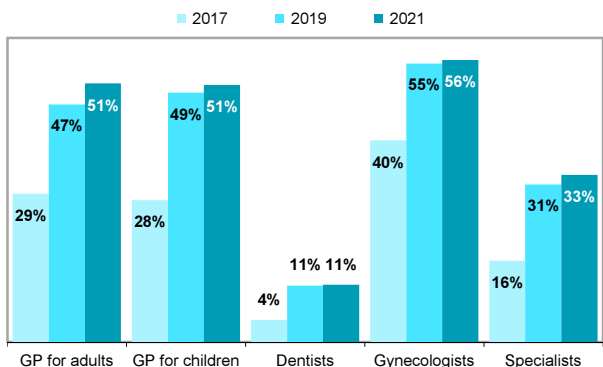
**Table G2 Selected online services available on the websites of independent surgeries of physicians in Czechia; 2021**

	Online appointment	Online consultation	Online prescription
<b>Total</b>	<b>21,6</b>	<b>17,5</b>	<b>34,3</b>
General practitioners (GP) for adults	30,2	22,7	51,0
General practitioners (GP) for children	30,1	32,5	50,7
Dentists	8,8	5,0	11,2
Gynecologists	34,2	31,3	55,6
Specialists	21,3	17,0	32,9

**Figure G4 Independent surgeries of physicians having a website application for making online appointment**



**Figure G5 Independent surgeries of physicians having a website application for online prescriptions**



as a percentage of all independent surgeries of a given physician practice

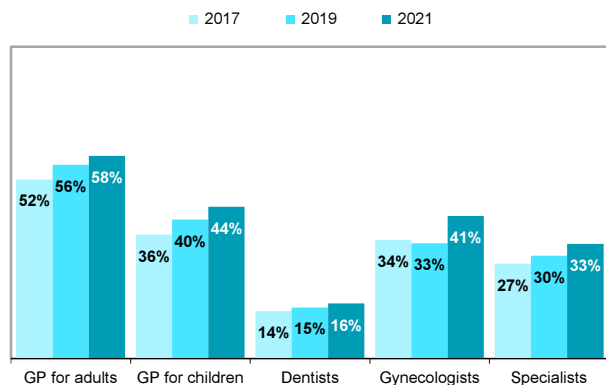
Source: Institute of Health Information and Statistics and CZSO own calculations

## G Health and digital technologies

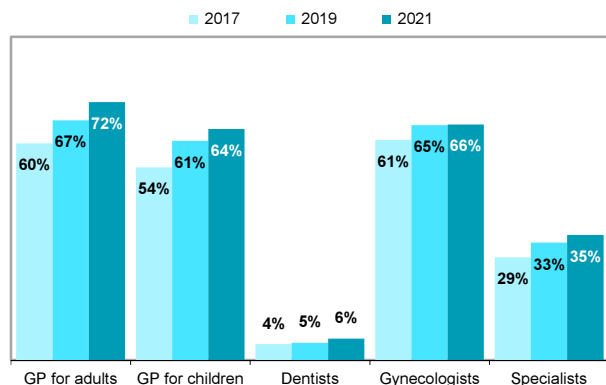
**Table G3 Independent surgeries of physicians in Czechia using selected functions of e-health systems; 2021**

	Percentage		
	Medical prescription	Drug interaction alerts	Laboratory tests ordering
<b>Total</b>	<b>74,3</b>	<b>35,7</b>	<b>40,1</b>
General practitioners for adults	86,1	58,4	71,8
General practitioners for children	79,5	43,8	64,3
Dentists	66,9	15,9	6,0
Gynecologists	82,5	41,1	65,6
Specialists	70,2	33,1	34,8

**Figure G6 Independent surgeries of physicians using e-health systems for drug interaction alerts**



**Figure G7 Independent surgeries of physicians using e-health systems for laboratory tests orderings**



as a percentage of all physicians of a given practice

Source: Institute of Health Information and Statistics and CZSO own calculations

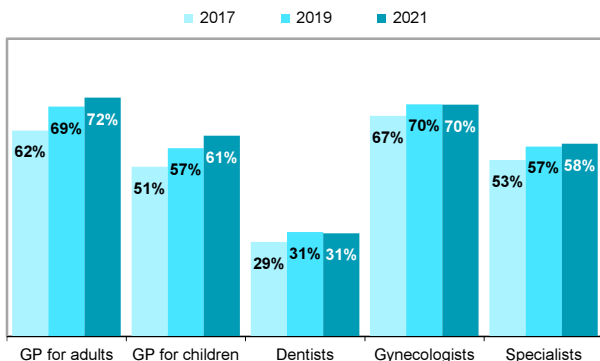
## G Health and digital technologies

**Table G4 Independent surgeries of physicians in Czechia using e-health systems for generating patient extracts; 2021**

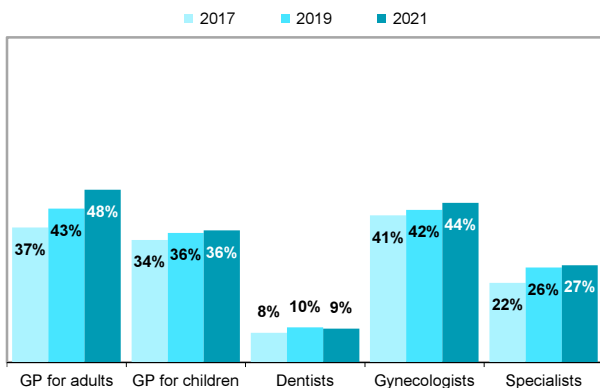
Percentage

	Patients for appointment	Patients by diagnosis	Patients by laboratory results
<b>Total</b>	<b>48,2</b>	<b>55,2</b>	<b>28,9</b>
General practitioners for adults	65,6	72,1	47,7
General practitioners for children	62,5	60,6	36,5
Dentists	37,1	31,2	9,3
Gynecologists	64,7	70,0	44,1
Specialists	39,5	58,2	26,8

**Figure G8 Independent surgeries of physicians using e-health systems for generating patients by diagnosis**



**Figure G9 Independent surgeries of physicians using e-health systems for laboratory results of patients**



as a percentage of all physicians of a given practice

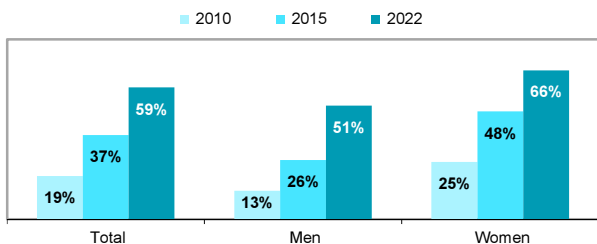
Source: Institute of Health Information and Statistics and CZSO own calculations

## G Health and digital technologies

**Table G5 Persons in Czechia using the internet for seeking health-related information**

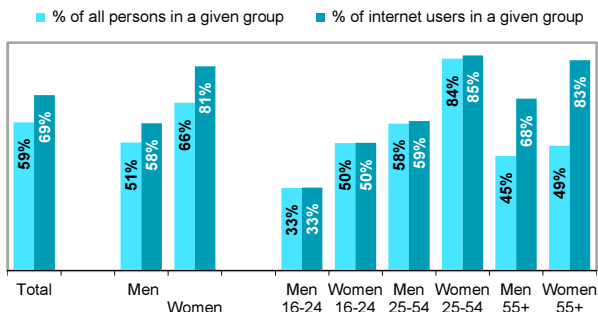
	Percentage		
	2015	2020	2022
<b>Total (aged 16+)</b>	<b>37,3</b>	<b>57,8</b>	<b>58,5</b>
Men	26,4	49,2	50,5
Women	47,9	66,0	66,2
<b>Age group (years)</b>			
16–24	23,3	45,2	40,7
25–34	46,2	69,9	71,0
35–44	48,3	74,7	71,4
45–54	47,5	71,0	69,8
55–64	41,0	59,2	64,6
65–74	24,4	41,1	46,7
75+	8,2	15,8	23,4
<b>Education attainment (aged 25–64)</b>			
Secondary without A-level exam. and lower	32,5	57,4	57,7
Secondary with A-level examination	54,8	74,0	74,0
Tertiary	59,2	82,2	80,1

**Figure G10 Persons aged 16+ using the internet for seeking health-related information by gender**



as a percentage of all persons in a given socio-demographic group

**Figure G11 Use of the internet for seeking health-related information by gender and age; 2022**

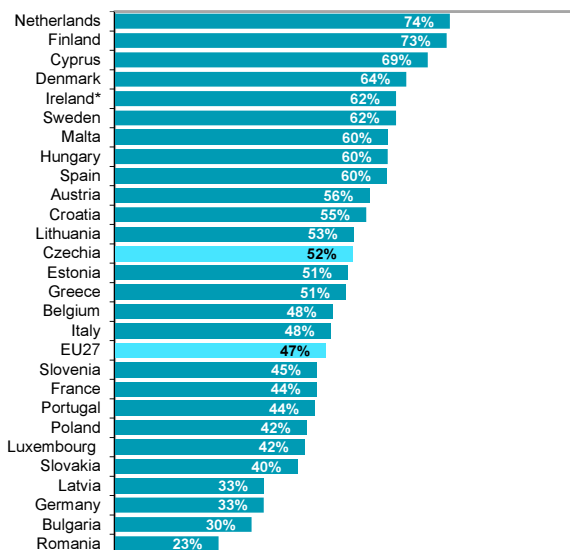


Source: Czech Statistical Office, ICT use survey in households

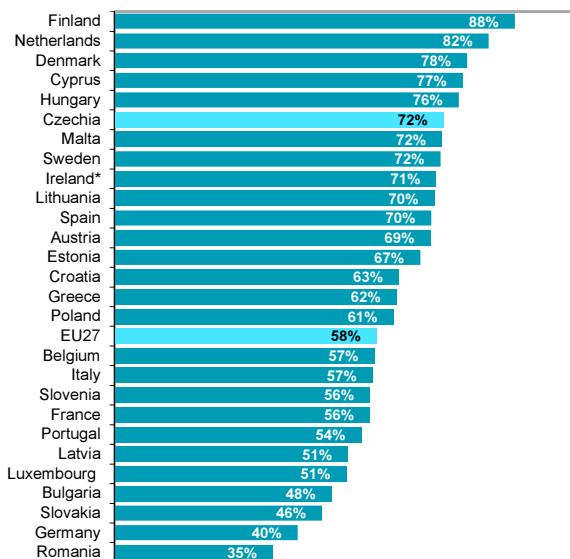


## G Health and digital technologies

**Figure G12 Men aged 16–74 years in EU countries using the internet for seeking health-related information; 2022**



**Figure G13 Women aged 16–74 years in EU countries using the internet for seeking health-related information; 2022**



\* data for 2021

Source: Eurostat

## G Health and digital technologies

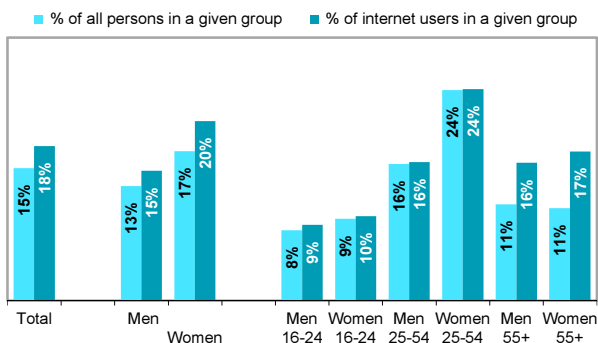
**Table G6 Persons in Czechia using the internet for making an appointment with the physician; 2022**

	Total	Men	Women
Total (aged 16+)	15,1	13,0	17,0
Age group (years)			
16–24	8,6	8,0	9,3
25–34	18,7	13,0	24,8
35–44	21,9	17,3	26,8
45–54	18,5	16,0	20,9
55–64	14,0	13,7	14,3
65–74	11,5	10,8	12,1
75+	4,9	6,5	3,7
Education attainment (aged 25–64)			
Secondary without A-level exam. and lower	12,1	11,1	13,4
Secondary with A-level examination	20,8	17,8	23,4
Tertiary	24,6	18,8	29,5

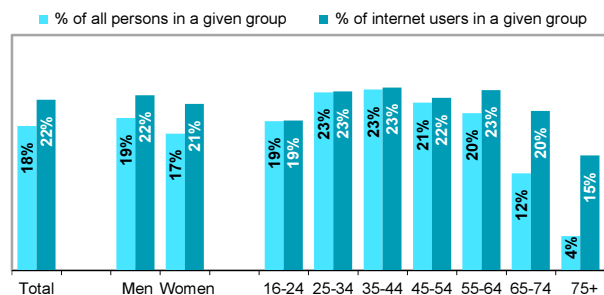
%

as a percentage of all persons in a given socio-demographic group

**Figure G14 Making appointment via the internet with the physician by gender and age; 2022**

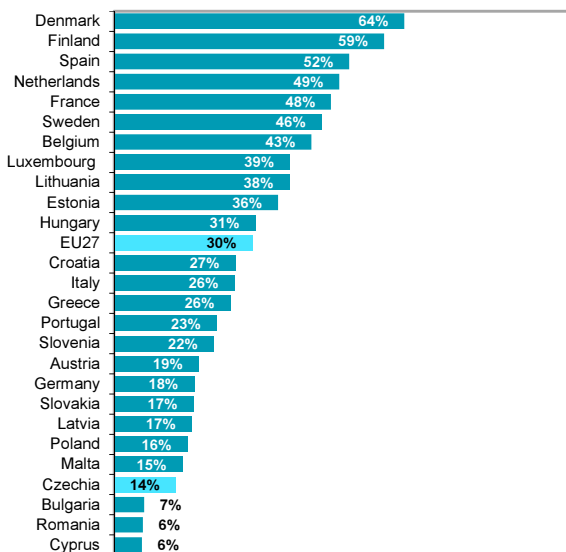


**Figure G15 Making appointment via the internet for covid-19 tests and vaccinations by gender and age; 2022**

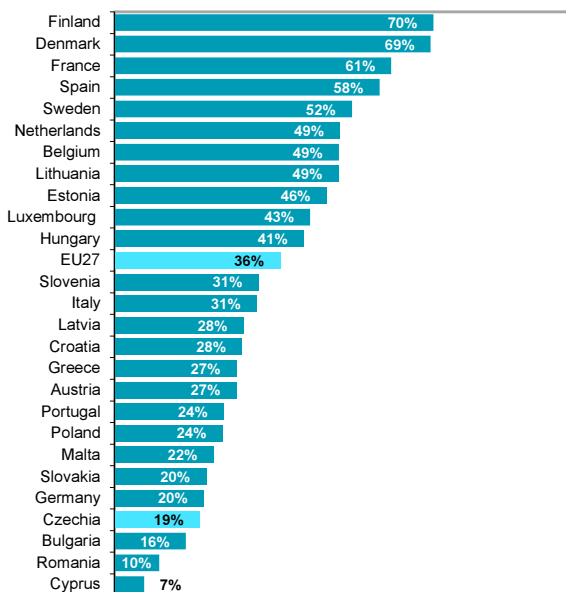


Source: Czech Statistical Office, ICT use survey in households

**Figure G16 Men aged 16–74 years in EU countries making appointment via the internet with the physician; 2022**



**Figure G17 Women aged 16–74 years in EU countries making appointment via the internet with the physician; 2022**



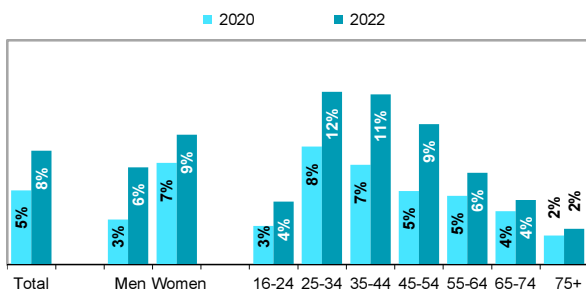
Source: Eurostat

## G Health and digital technologies

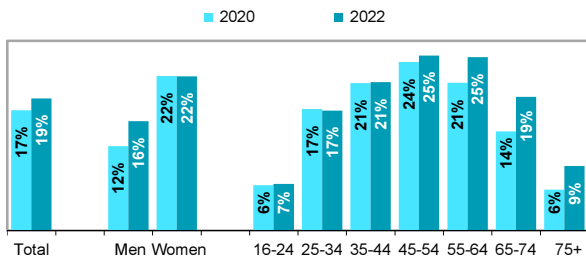
**Table G7 Persons in Czechia using online apps of medical facilities for selected activities; 2022**

	Online consultation	Prescription order
<b>Total (aged 16+)</b>	<b>7,6</b>	<b>18,8</b>
Men	6,5	15,5
Women	8,7	21,9
<b>Age group (years)</b>		
16–24	4,2	6,6
25–34	11,5	17,1
35–44	11,4	21,1
45–54	9,4	24,9
55–64	6,1	24,7
65–74	4,3	19,0
75+	2,4	9,2
<b>Education attainment (aged 25–64)</b>		
Secondary without A-level examination and lower	5,4	19,1
Secondary with A-level examination	10,5	24,7
Tertiary	15,0	22,7

**Figure G18 Persons aged 16+ using apps for online consultation with physician on the website of healthcare facilities**



**Figure G19 Persons aged 16+ using app for order prescription online on the website of healthcare facilities**



as a percentage of all persons in a given socio-demographic group

Source: Czech Statistical Office, ICT use survey in households

## G Health and digital technologies

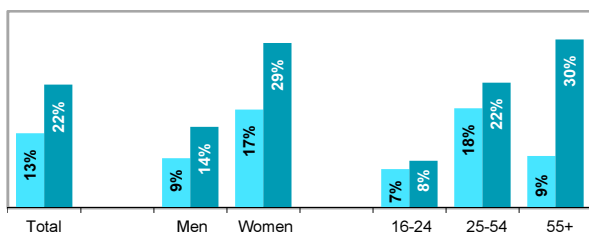
**Table G8 Persons in Czechia purchasing medicine or dietary supplements on the internet; 2022**

	Percentage		
	Total	Men	Women
<b>Total (aged 16+)</b>	13,3	8,9	17,5
16–24 years old	6,9	5,5	8,5
25–54 years old	17,7	10,4	25,1
55 years and more	9,2	7,6	10,5

as a percentage of all persons in a given group

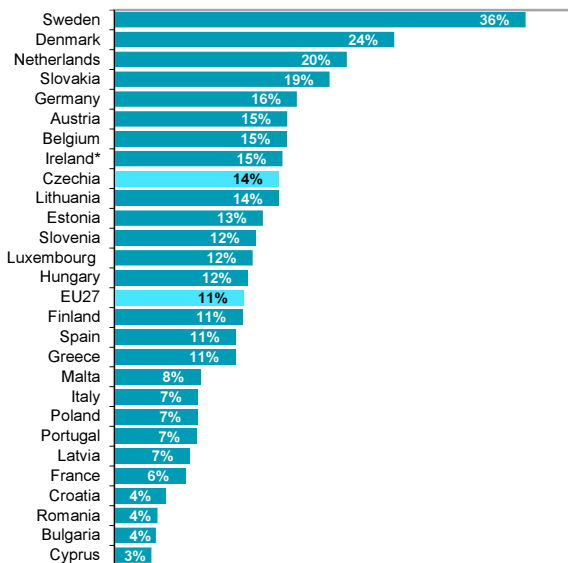
**Figure G20 Persons aged 16+ purchasing medicine or dietary supplements on the internet; 2022**

- % of all persons in a given group
- % of persons purchasing online in a given group



Source: Czech Statistical Office, ICT use survey in households

**Figure G21 Persons aged 16–74 years in EU countries purchasing medicine or dietary supplements online; 2022**



\* data for 2021

Source: Eurostat