

INFORMATION AND COMMUNICATION TECHNOLOGIES USAGE IN ENTERPRISES IN 2021

In 2021, 96.1% of the **non-financial enterprises with 10 or more persons employed** had internet access. Fixed internet connection was available in 85.7% of the enterprises and the maximum download speed in 39.8% was more than 100 Mbps. About two thirds (63.4%) of the enterprises with 250 or more persons employed had download speed more than 100 Mbps.

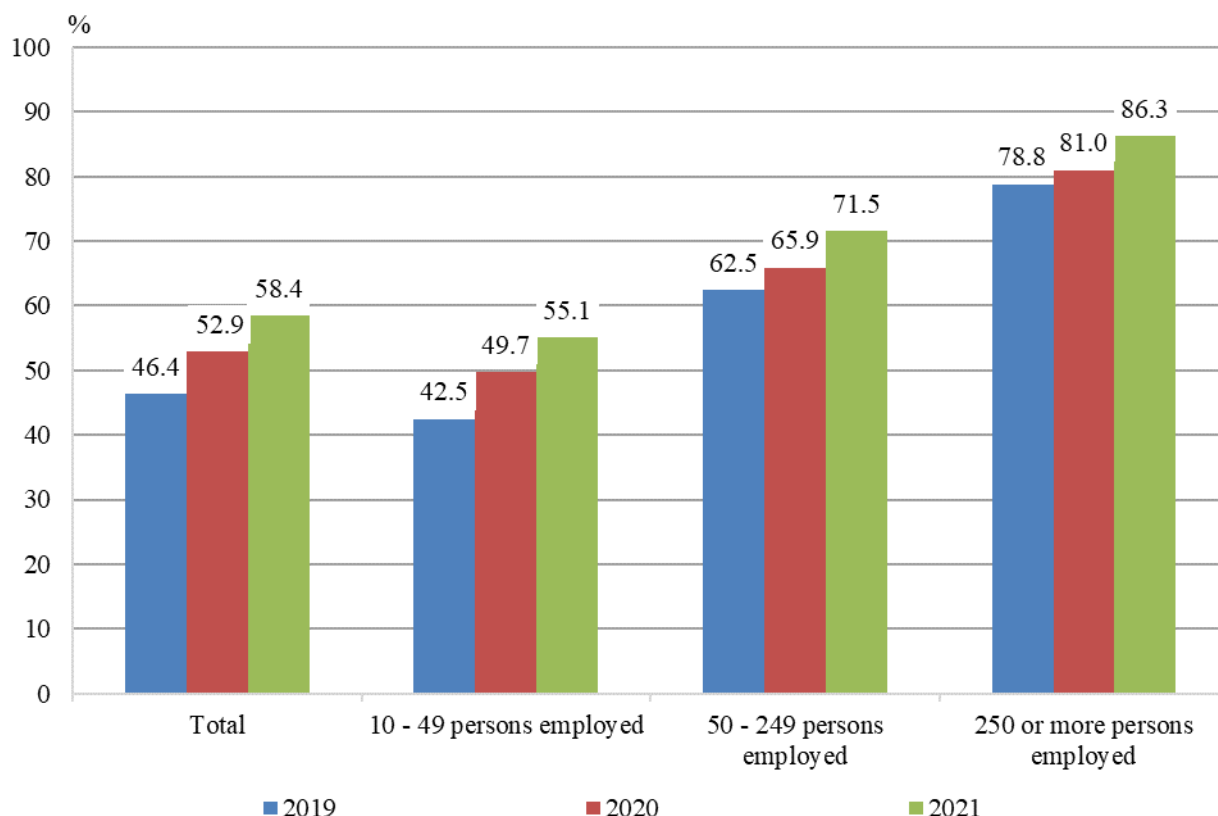
1. Share of enterprises with internet access by size class and economic activity in 2021

(Per cent)

	Internet access	Fixed connection	Download speed ≥ 100 Mbps
Total	96.1	85.7	39.8
By size class			
10 - 49 persons employed	95.4	83.8	36.6
50 - 249 persons employed	99.3	94.2	53.3
250 or more persons employed	100.0	97.7	63.4
By economic activity			
Manufacturing	96.9	85.1	38.0
Electricity, gas and steam; water supply, sewerage and waste management	99.5	98.5	46.4
Construction	96.4	86.2	36.4
Wholesale and retail trade; repair of motor vehicles and motorcycles	96.0	86.6	36.8
Transportation and storage	96.6	82.6	38.3
Accommodation and food service activities	89.7	77.6	32.1
Information and communication	100.0	96.6	73.7
Real estate activities	100.0	89.8	23.0
Professional, scientific and technical activities	99.8	93.3	58.5
Administrative and support activities	93.9	78.8	44.8

In 2021, 58.4% of the enterprises provided their staff with portable devices that allow a mobile connection to the internet using mobile telephone networks, which was by 5.5 percentage points more compared to the previous year (Figure 1).

Figure 1. Share of enterprises providing persons employed with portable devices with mobile internet connection by size class



The relative share of the persons employed who had access to the internet was 36.8%, and 17.6% used portable devices that allow a mobile connection to the internet for business purposes. Biggest relative share of the persons employed who used the internet and portable devices with mobile connection was observed among the enterprises in sector 'Information and communication' - respectively 92.3% and 54.6%.

2. Share of persons employed in enterprises having internet access and using portable devices with mobile internet connection by size class in 2021

(Per cent)

Size class	Persons employed having internet access	Persons employed using portable devices with mobile connection
Total	36.8	17.6
10 - 49 persons employed	38.0	18.2
50 - 249 persons employed	35.7	17.7
250 or more persons employed	36.6	16.9

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Use of a website

In 2021, 51.9% of the enterprises had their own website. Biggest relative share was observed among enterprises with 250 or more persons employed - 87.7%.

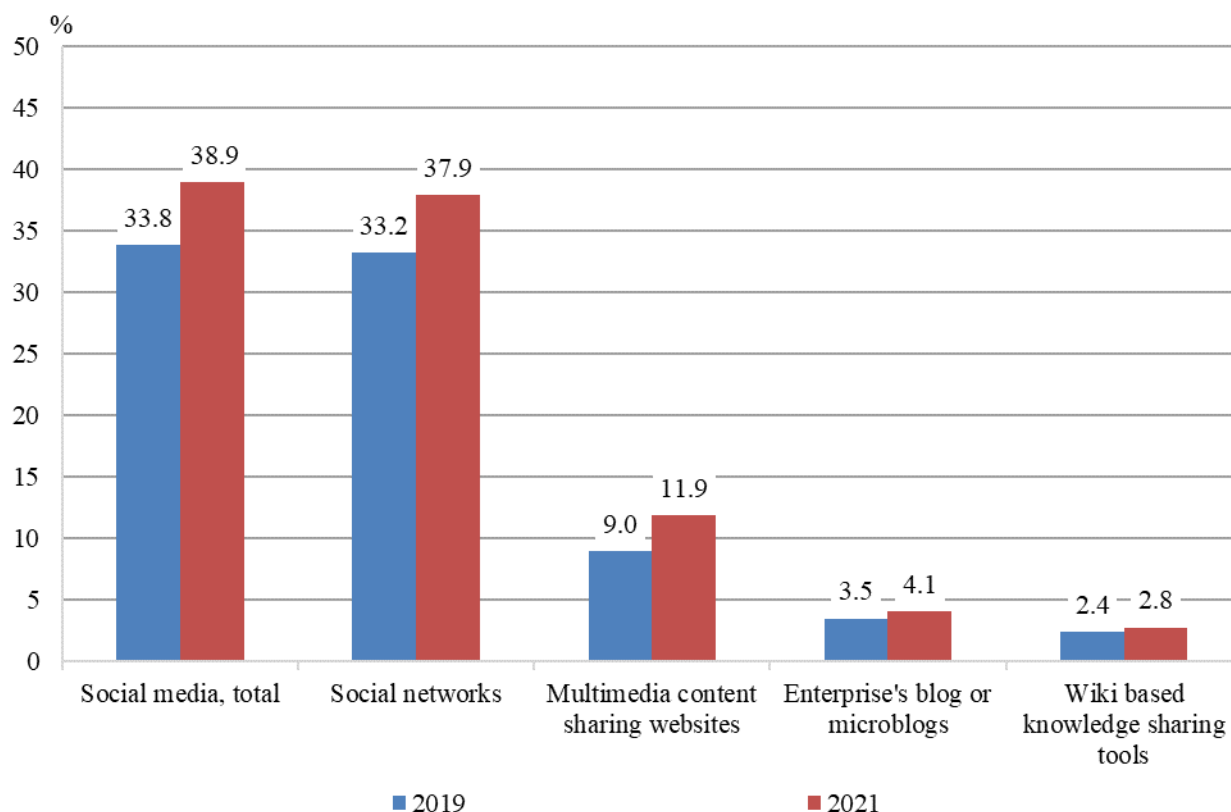
Websites were mainly used for providing:

- description of goods or services - 77.2%¹;
- links or references to the enterprise's social media profiles - 35.0%;
- possibility for online ordering or reservations of goods or services - 24.1%;
- tracking or status of orders placed - 14.9%.

Use of social media

In 2021, 38.9% of the enterprises used social media to develop their business activity and enlarge their internet presence, as the relative share increased by 5.1 percentage points compared to 2019. Most popular were the social networks (Facebook, LinkedIn, Xing, Yammer, Probook.bg, etc.) and 37.9% of the enterprises maintained a profile on a social network, followed by multimedia content sharing websites (YouTube, Instagram, Flickr, SlideShare, Pinterest, Snapchat, etc.) - 11.9%.

Figure 2. Share of enterprises using social media



¹ The relative shares were calculated on the basis of enterprises having a website.

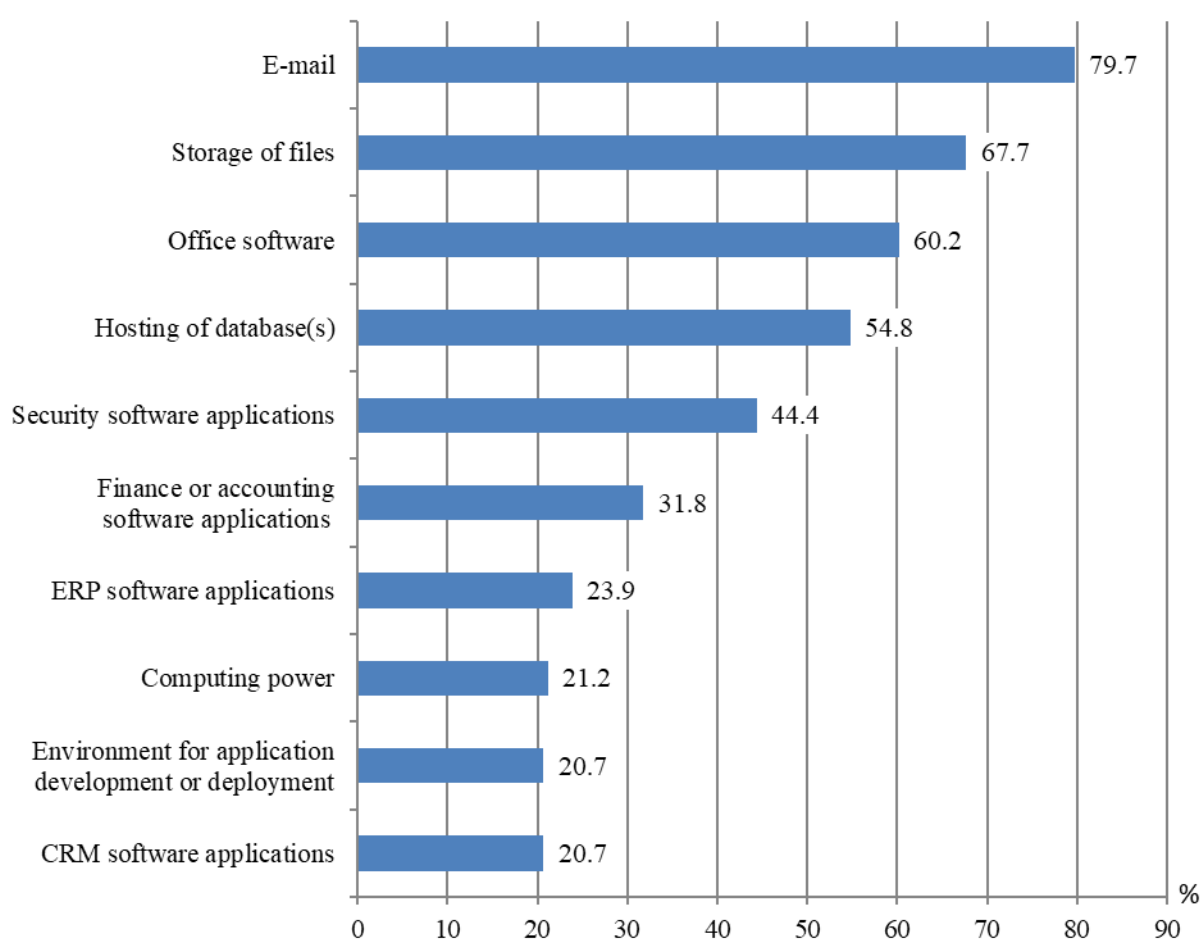
Use of cloud computing services

In 2021, 12.8% of the enterprises used paid cloud computing services to optimize their business processes, as main users were large enterprises with 250 and more persons employed (44.6%).

Main purposes for which the enterprises used the cloud solutions were:

- e-mail - 79.7%¹;
- storage of files - 67.7%;
- office software - 60.2%.

Figure 3. Share of enterprises using cloud computing services by purposes in 2021



Internet of Things

Internet of Things (IoT) refers to interconnected devices, often called 'smart' devices. They collect and exchange data and can be monitored or remotely controlled via the internet. In 2021, 15.0% of the enterprises used different types of interconnected devices or systems in order to optimize their business (Table 3).

¹ The relative shares were calculated on the basis of enterprises using paid cloud computing services.

3. Share of enterprises using interconnected devices by purpose of use and size class in 2021

(Per cent)

Purpose of use	Total	10 - 49 persons employed	50 - 249 persons employed	250 or more persons employed
Total	15.0	13.8	19.8	26.3
Energy consumption management	2.4	1.7	4.6	11.9
Security of premises	11.4	10.5	15.1	18.7
Monitoring and automation of the production process	2.5	1.8	5.1	10.4
Logistics management	4.2	3.5	7.0	9.6
Condition-based maintenance	3.0	2.2	5.8	10.5
Customer service	3.0	2.7	4.6	5.1

Electronic commerce (e-commerce)

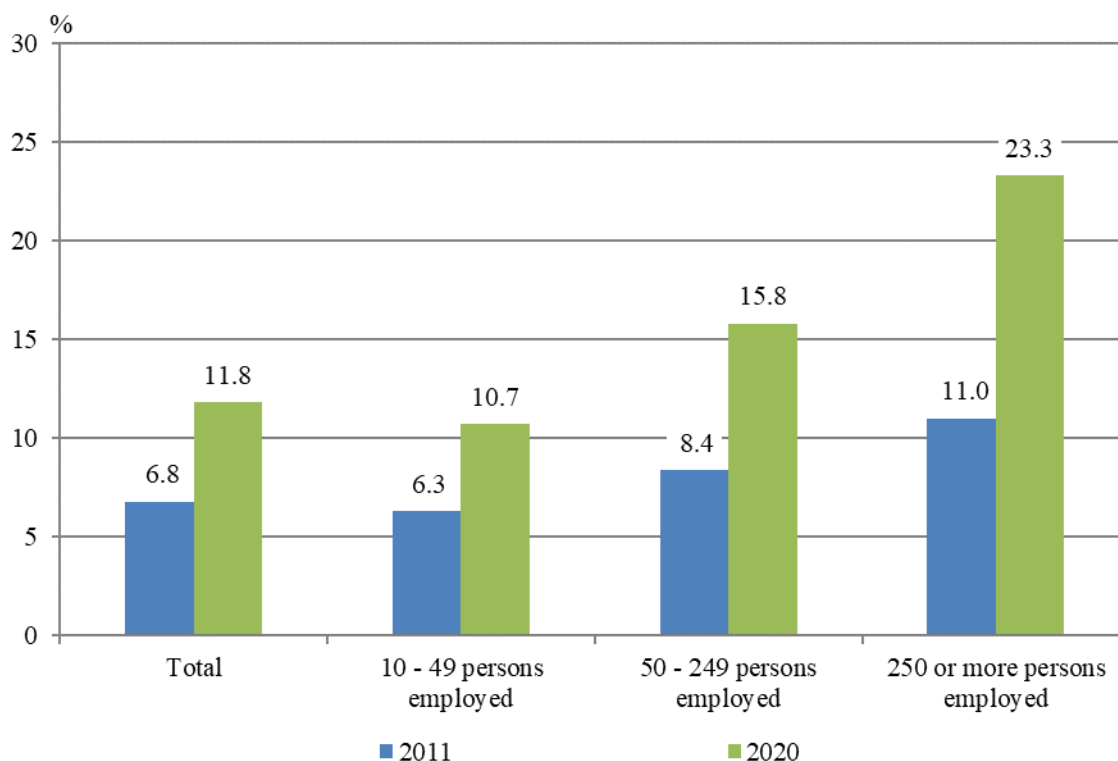
E-commerce is the sale or purchase of goods or services conducted via the internet and includes sales or purchases made via website or apps, or via automated data exchange (EDI-type messages).

In 2020, 11.8% of the enterprises sold goods or services online and the turnover of e-commerce was 6.2% of the total turnover of the enterprises. The relative share of the enterprises, which had web sales via their own website or app, was 8.4% and of those using e-commerce marketplaces for trading goods or services such as eBay, Booking.com, Amazon, Alibaba, eMAG, etc. - 4.4%. EDI-type sales of goods or services had 2.0% of the enterprises.

From the enterprises that had web sales, 97.2% sold goods and services to customers in Bulgaria, 32.5% to customers in EU countries and 21.4% to other countries.

Over a ten-year period, the relative share of the enterprises that had e-commerce sales of goods or services increased nearly two times (Figure 4).

Figure 4. Share of enterprises having online sales of goods or services by size class



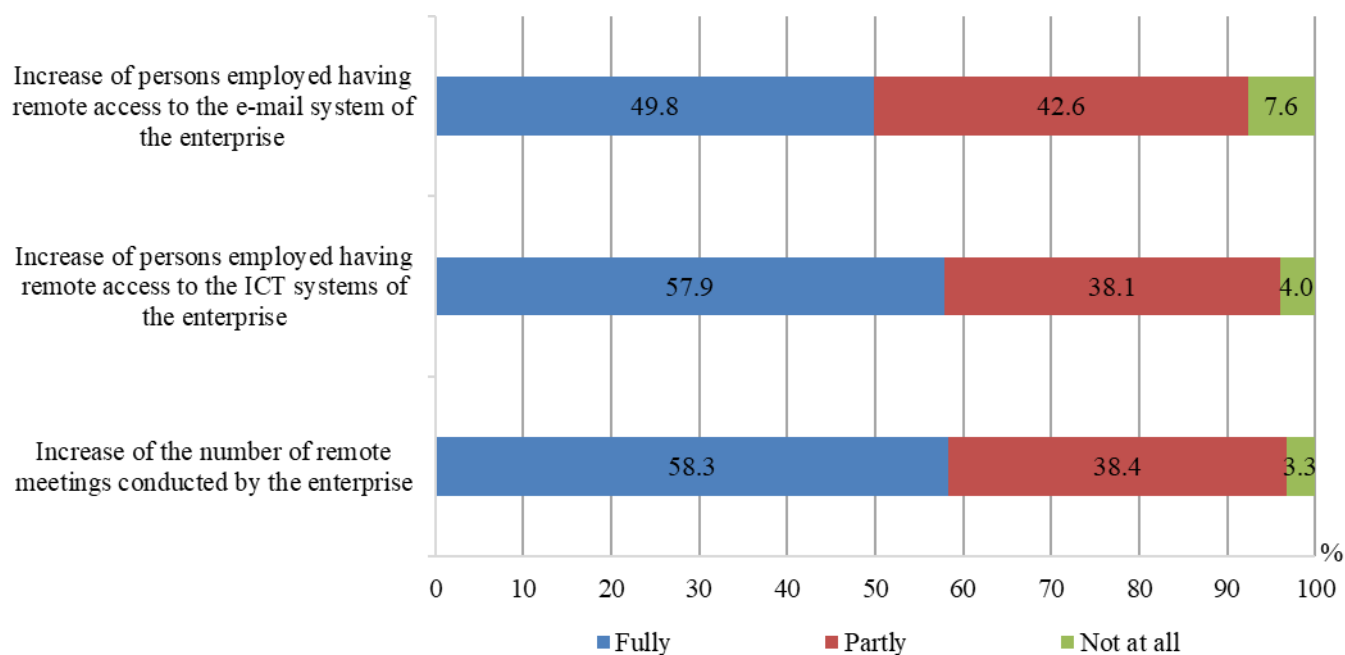
COVID-19 impact

The COVID-19 pandemic posed serious challenges to businesses and required implementing of measures to increase the flexibility of the work process. In 2020, the following changes were implemented in the enterprises with regard to the remote access:

- in 17.2% of them, there was an increase in persons employed having remote access to the e-mail system of the enterprise;
- in 14.7%, there was an increase in persons employed having remote access to the ICT systems of the enterprise (other than e-mail);
- in 23.3%, there was an increase in the number of remote meetings conducted by the enterprise.

In most of the enterprises, these changes were entirely due to the COVID-19 pandemic (Figure 5).

Figure 5. Structure of enterprises according to the degree of impact of COVID-19 on the work process organization in 2020



Methodological notes

The survey on Information and Communication Technologies (ICT) usage and e-commerce in enterprises is a part of the European statistical programme and has been carried out in Bulgaria according to the Commission implementing Regulation (EU) 2020/1030. The survey was jointly financed by the NSI and by the European Commission under a signed agreement between the two institutions. The main purpose of the survey was to obtain reliable and comparable data, which reflect the dissemination and usage of ICT at national and European level. The survey was representative as a stratified random sample of enterprises from **the non-financial sector with 10 or more persons employed** was used. The survey was conducted by means of online questionnaire, sent to the respondents by e-mail. The 2021 questionnaire comprised several topics like availability of access to the internet in the enterprises, use of a website, social media, cloud computing services, Internet of Things (IoT), e-commerce, etc.

Fixed internet connection includes ADSL, SDSL, VDSL, fibre optics technology (FTTH), cable technology, LAN, high capacity leased lines, fixed wireless access connections (e.g. satellite connection, public Wi-Fi connection, WiMax), etc.

A **mobile internet connection** to the internet means the usage of portable devices (portable computers, tablets or other portable devices such as smartphones) connecting to the internet through mobile telephone networks (at least 3G).

The **Internet of Things** (IoT) refers to interconnected devices, often called ‘smart’ devices. They collect and exchange data and can be monitored or remotely controlled via the internet.

EDI-type e-commerce are sales or purchases made via **EDI-type messages** in agreed or standard format suitable for automated processing (e.g. EDIFACT, XML, UBL). Usually EDI-type e-commerce is operated between enterprises.

More information and data from surveys on Information and Communications Technologies usage in enterprises can be found on the NSI’s website (<https://nsi.bg/en/content/2841/ict-usage-enterprises>) and in Information System ‘Infostat’ (https://infostat.nsi.bg/infostat/pages/module.jsf?x_2=241).