



## INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) USAGE IN ENTERPRISES IN 2024

### Access and use of the internet

In 2024, 96.4% of non-financial enterprises with 10 or more persons employed had internet access. Fixed internet connection was available in 89.2% of the enterprises and the maximum download speed was more than 100 Mbps in 54.1% of the enterprises. 77.9% of enterprises with 250 or more persons employed had download speed higher than 100 Mbps, and 18.9% had speed more than 1 Gbps. While all enterprises in sector 'Information and communication' had access to the global network, the relative share in sector 'Accommodation and food service activities' was 87.8%.

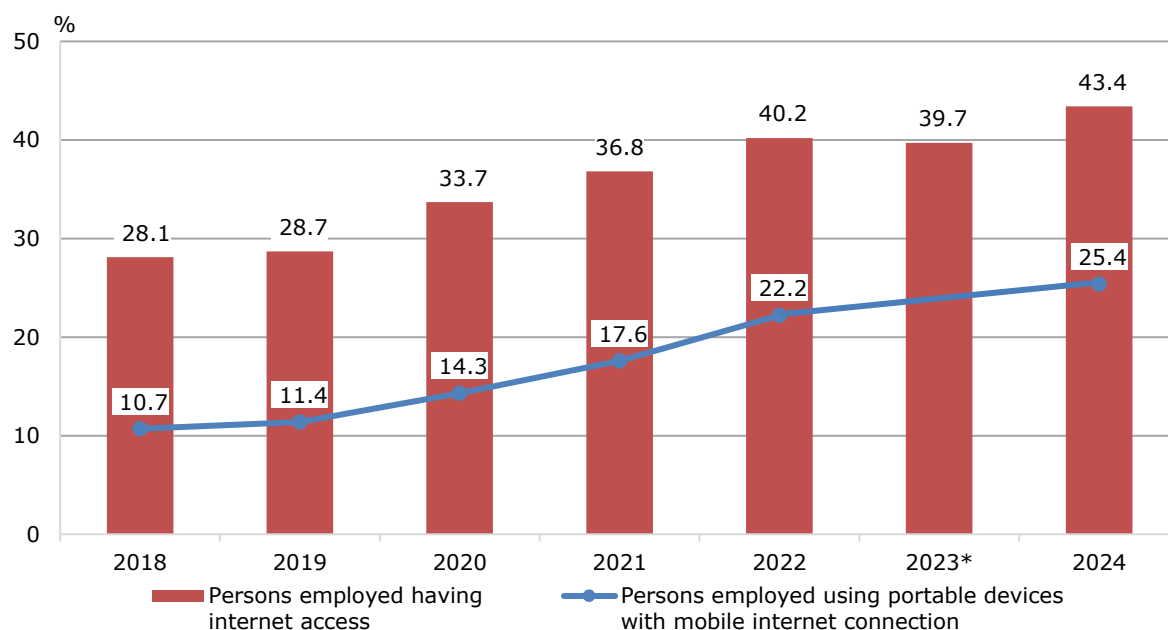
**Table 1. Share of enterprises with internet access by size class and economic activity in 2024**

	Internet	Fixed connection	(Per cent)	
			Download speed	
			≥ 100Mbps	≥ 1Gbps
<b>Total</b>	<b>96.4</b>	<b>89.2</b>	<b>54.1</b>	<b>7.7</b>
<b>By size class</b>				
10 - 49 persons employed	95.7	87.6	51.4	6.5
50 - 249 persons employed	99.3	96.2	65.2	12.5
250 or more persons employed	100.0	99.4	77.9	18.9
<b>By economic activity</b>				
Manufacturing	97.7	91.0	52.1	7.1
Electricity, gas and steam, water supply, sewerage and waste management	95.4	88.6	52.7	4.2
Construction	95.2	83.6	50.7	7.2
Wholesale and retail trade; repair of motor vehicles and motorcycles	97.7	93.1	53.9	4.7
Transportation and storage	97.9	86.8	51.7	7.1
Accommodation and food service activities	87.8	77.8	43.8	6.0
Information and communication	100.0	94.9	82.2	27.9
Real estate activities	97.0	94.1	62.6	5.8
Professional, scientific and technical activities	97.5	95.6	71.8	11.5
Administrative and support activities	96.9	86.4	48.4	8.1

The relative share of persons employed who had access to the internet increased to 43.4%, and 25.4% used portable devices with mobile internet connection for business purposes (Figure 1).

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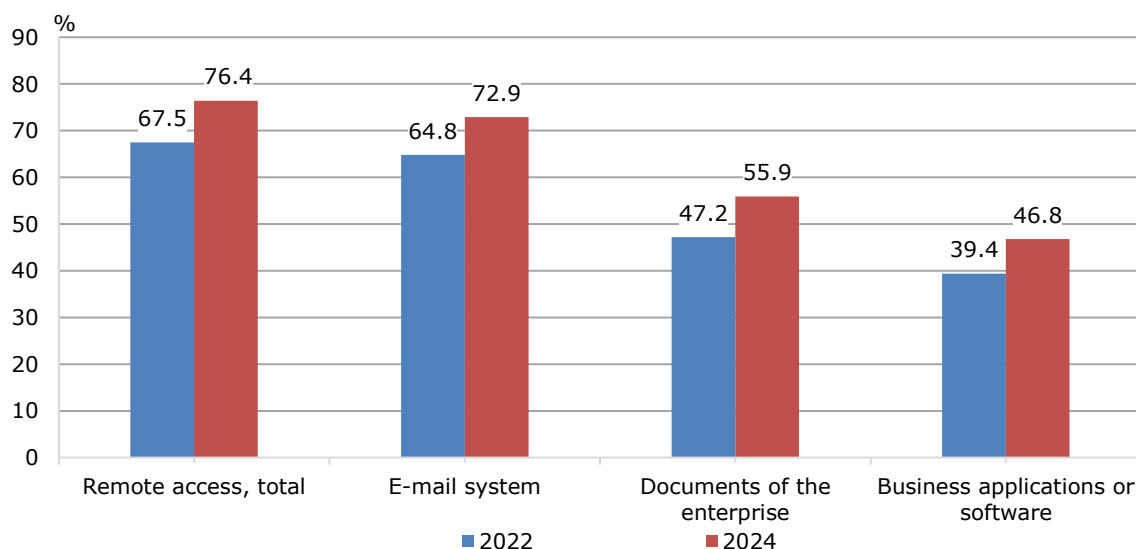
**Figure 1. Share of persons employed having internet access and using portable devices with mobile internet connection**



Most persons employed used the internet and portable devices with mobile connection in sector 'Information and communication' - 91.3% and 64.5%, respectively, and least - in sector 'Manufacturing' - 27.0% and 13.8%, respectively.

In 2024, 76.4% of the companies provided persons employed with remote access to information resources such as e-mail, documents of the enterprise, business applications or software. Compared to 2022 their relative share increased by 8.9 percentage points.

**Figure 2. Share of enterprises providing remote access to persons employed**



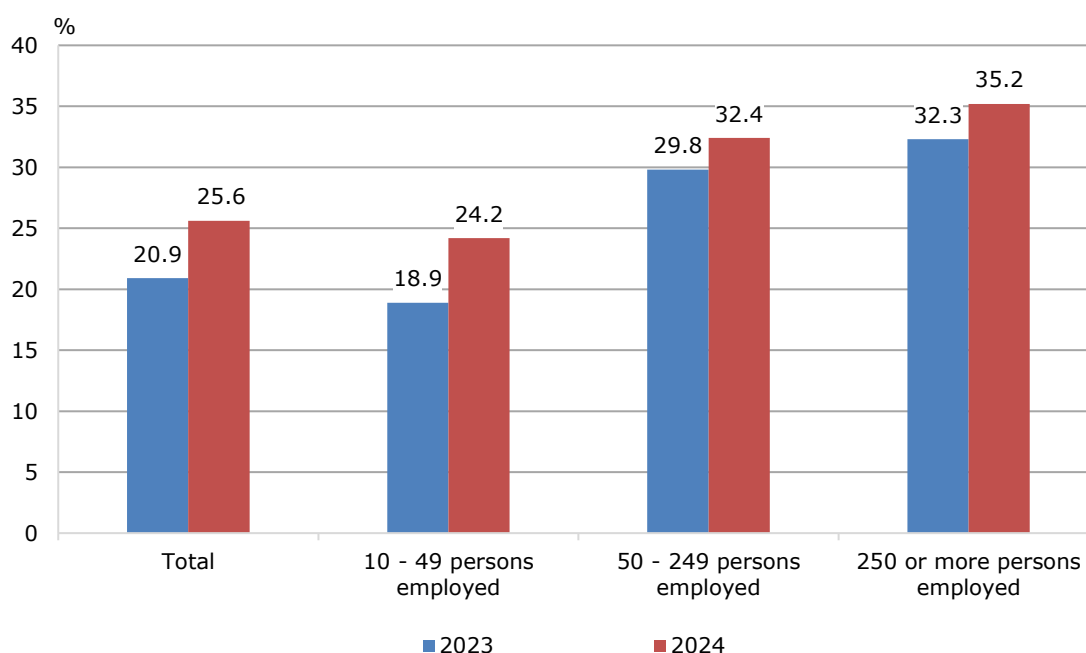
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Remote access was most often provided by large enterprises (with 250 or more persons employed) - 93.0%, followed by medium enterprises (with 50 - 249 persons employed) - 86.2% and small enterprises (with 10 - 49 persons employed) - 74.2%.

Every third enterprise (32.4%) conducted remote meetings via the internet. This practice was most widespread in sectors 'Information and communication' and 'Professional, scientific and technical activities' - 84.8% and 69.1%, respectively, and it was least often applied in sector 'Accommodation and food service activities' - 12.9%.

Advertising was of significant importance for the businesses, and in 2024, 25.6% of the enterprises paid to advertise on the internet (e.g. on search engines, on social media, on other websites or apps). Their relative share increased by 4.7 percentage points compared to the previous year.

**Figure 3. Share of enterprises paying for advertising on the internet  
by size class**



The most commonly used targeted advertising methods by the enterprises were:

- advertisement, based on content or keywords searched by internet users - 81.5%<sup>1</sup>;
- advertisement, based on the geolocation of the users - 44.3%;
- tracing of internet users' past activities - 32.0%.

### Artificial intelligence (AI)

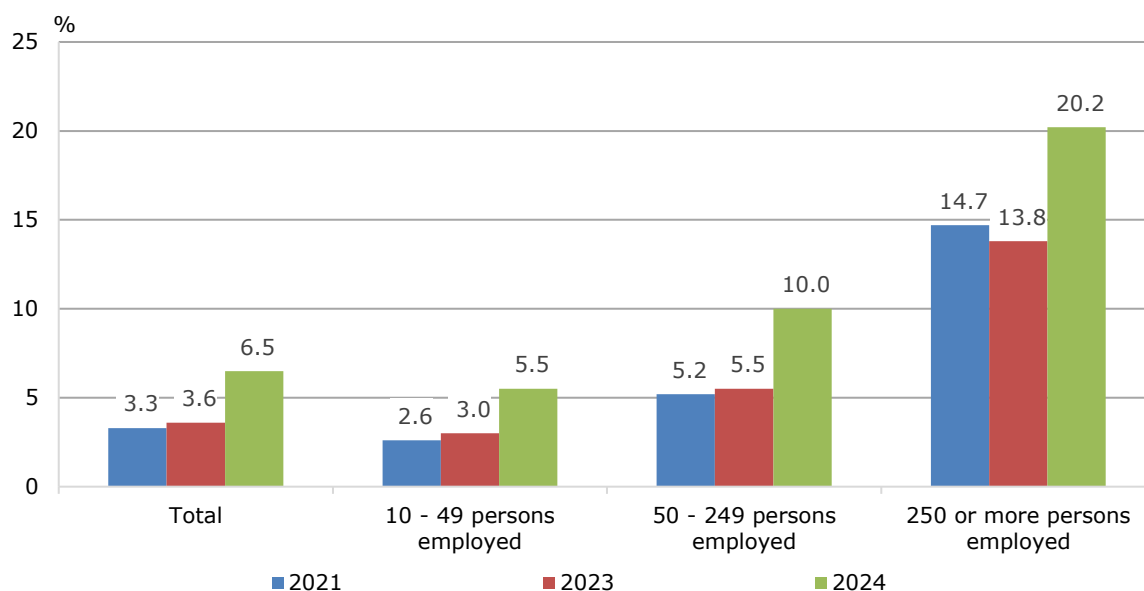
In 2024, enterprises using any Artificial Intelligence (AI) technology were 6.5%, with their relative share almost doubled compared to the previous year. The use of these

<sup>1</sup> The relative shares were calculated on the basis of enterprises paying to advertise on the internet.

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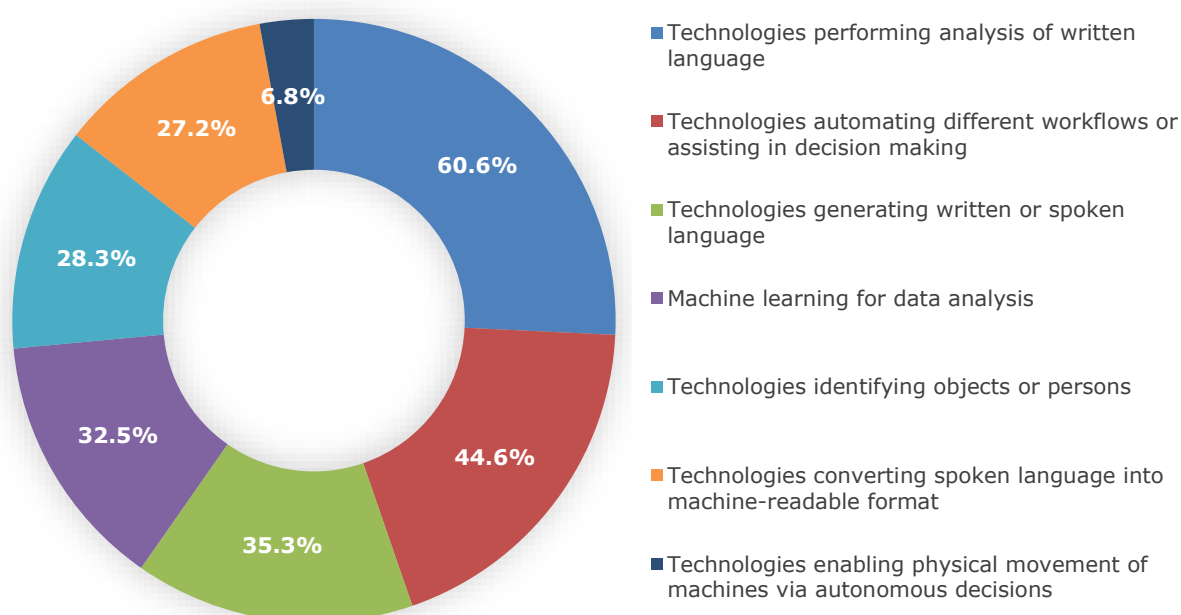
technologies was most common among the companies with 250 or more persons employed - 20.2%.

**Figure 4. Share of enterprises using AI technologies by size class**



Artificial Intelligence technologies that most of the enterprises used, were technologies performing analysis of written language (60.6%<sup>1</sup>) and technologies automating different workflows or assisting in decision making - 44.6%.

**Figure 5. Share of enterprises using artificial intelligence technologies by type of technology in 2024**



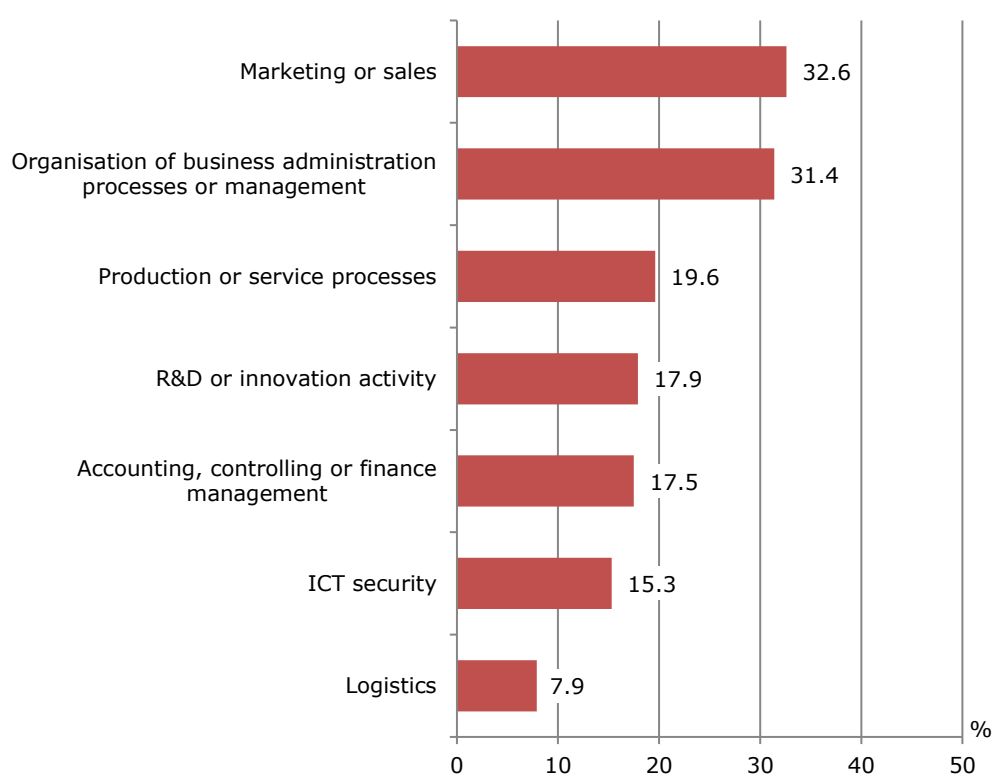
<sup>1</sup> The relative shares were calculated on the basis of enterprises using AI technologies.

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Enterprises that most frequently applied AI technologies were those in sectors 'Information and communication' and 'Professional, scientific and technical activities' with relative shares of 33.9% and 14.2%, respectively. Least enterprises used such technologies in sector 'Construction' - 1.6%.

The main purposes for which enterprises used Artificial Intelligence software or systems were related to marketing or sales (32.6%<sup>1</sup>) and organization of business administration processes or management - 31.4%.

**Figure 6. Share of enterprises using AI technologies by purpose of use in 2024**



Only 3.5% of Bulgarian enterprises indicated that they have ever considered implementing of AI in their business. The majority of them (61.6%<sup>2</sup>) did not implemented these technologies due to a lack of relevant expertise and 53.5% were concerned about the lack of clarity about the legal consequences. For 48.1% there was incompatibility with existing equipment, software or systems, while for 44.2% the costs seemed too high.

### Electronic commerce (e-commerce)

In 2023, 15.1% of the enterprises sold goods or services online and the turnover of e-commerce was 7.9% of the total turnover of the enterprises. Relative share of the enterprises, which had web sales via their own website or app, was 11.2% and of those

<sup>1</sup> The relative shares were calculated on the basis of enterprises using AI technologies.

<sup>2</sup> The relative shares were calculated on the basis of enterprises considering the use of AI technologies.

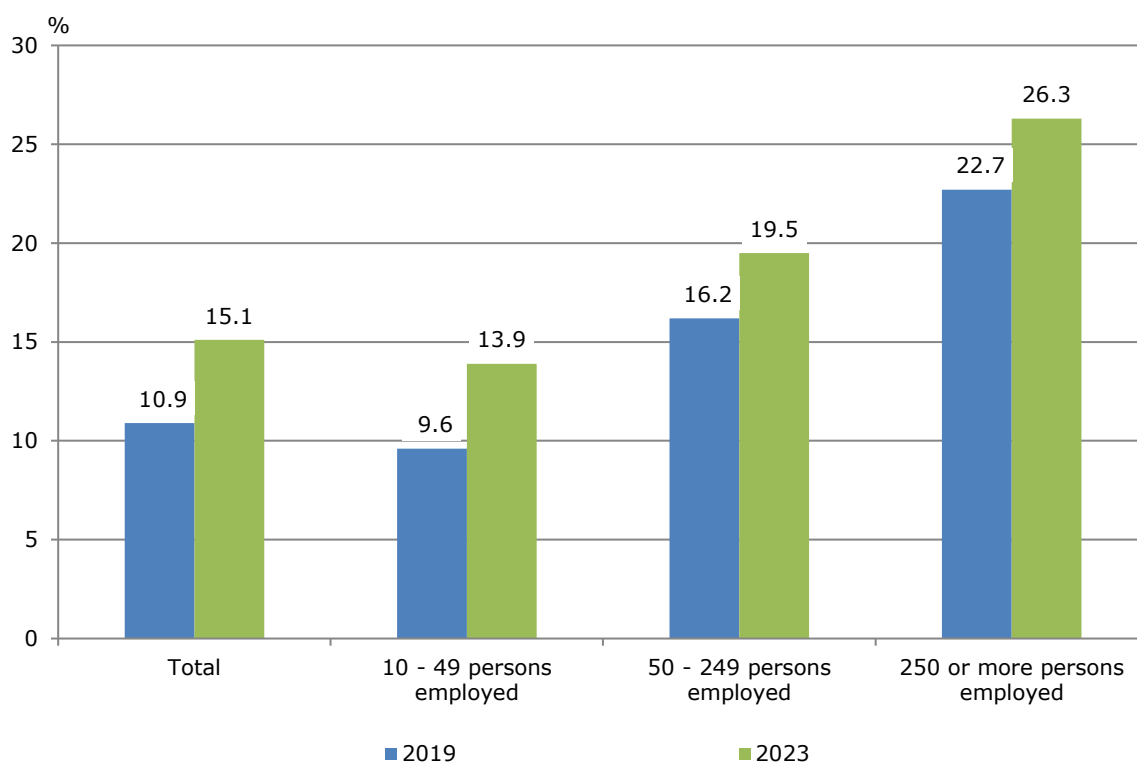
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using e-commerce marketplaces for trading goods or services such as eBay, Booking.com, Amazon, Alibaba, eMAG, TimoCom, Glovo, Takeaway, Pop Up etc. - 6.7%. EDI-type sales of goods or services had 1.9% of the enterprises.

97.0% of the enterprises that had web sales, sold goods and services to customers in Bulgaria, 32.2% to customers in EU countries and 22.3% to other countries.

Over a five-year period, the relative share of the enterprises that had e-commerce sales of goods or services increased by 4.2 percentage points.

**Figure 7. Share of enterprises having online sales of goods or services by size class**

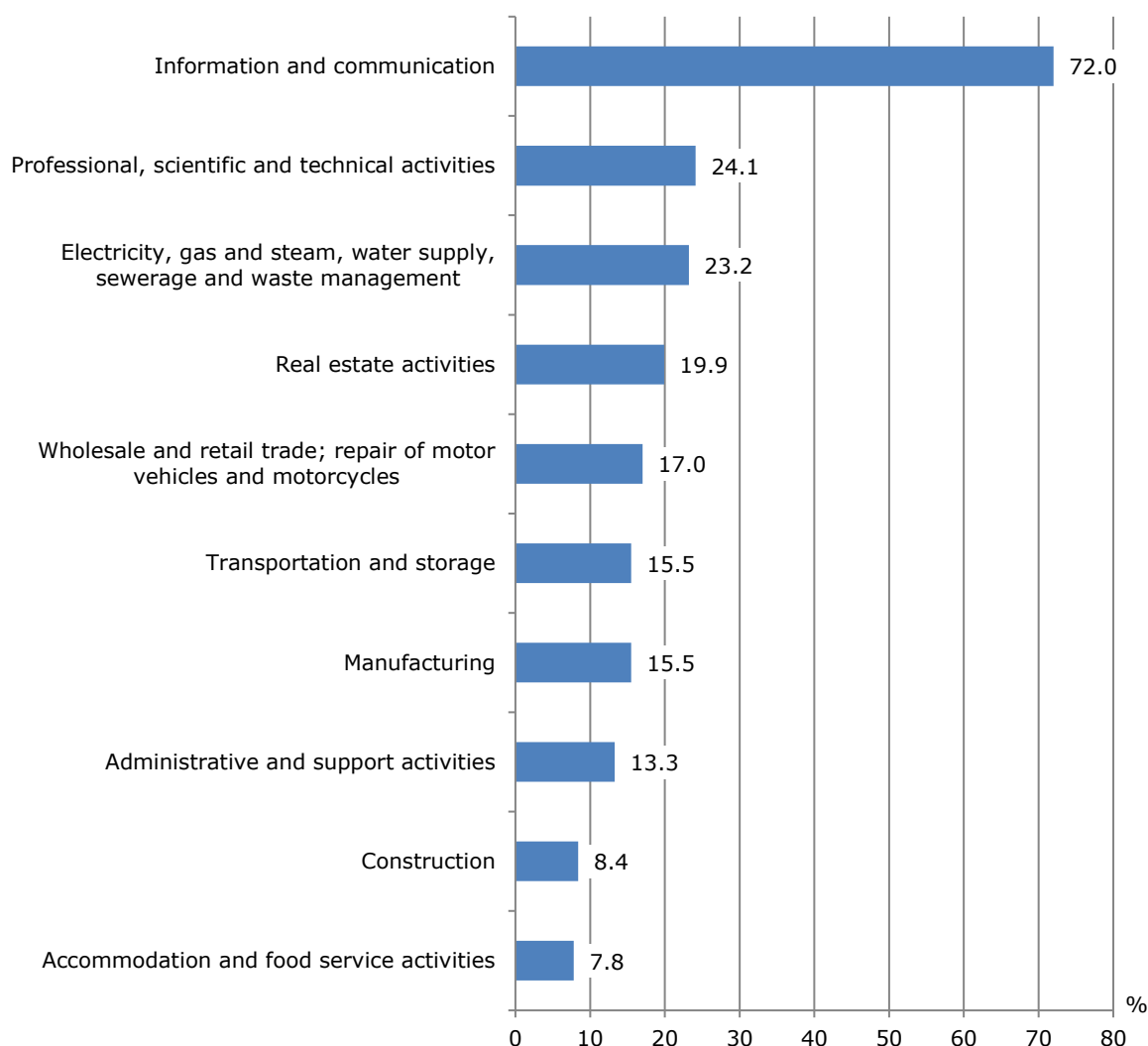


### ICT specialists and skills

In 2024, 17.8% of the enterprises had persons employed for whom the main job was to develop, operate or maintain ICT systems or applications. The biggest relative share was observed among the enterprises in sector 'Information and communication' (72.0%) and the smallest in sector 'Accommodation and food service activities' - 7.8% (Figure 8). Most of the large companies with 250 and more persons employed (61.7%) offered job for ICT specialists, while in small companies with 10 - 49 persons employed the relative share was only 14.1%.

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**Figure 8. Share of enterprises employing ICT specialists by economic activities in 2024**



In 2023, 9.0% of the enterprises recruited or tried to recruit ICT specialists and 3.7% had difficulties in finding suitable staff. In order to improve the qualification of the employees, 9.1% of the employers provided training in the field of ICT.

In half of the enterprises (51.4%) ICT-related functions were performed by external suppliers and in 28.0% of the companies - by own employees (incl. those employed in parent or affiliate enterprises).

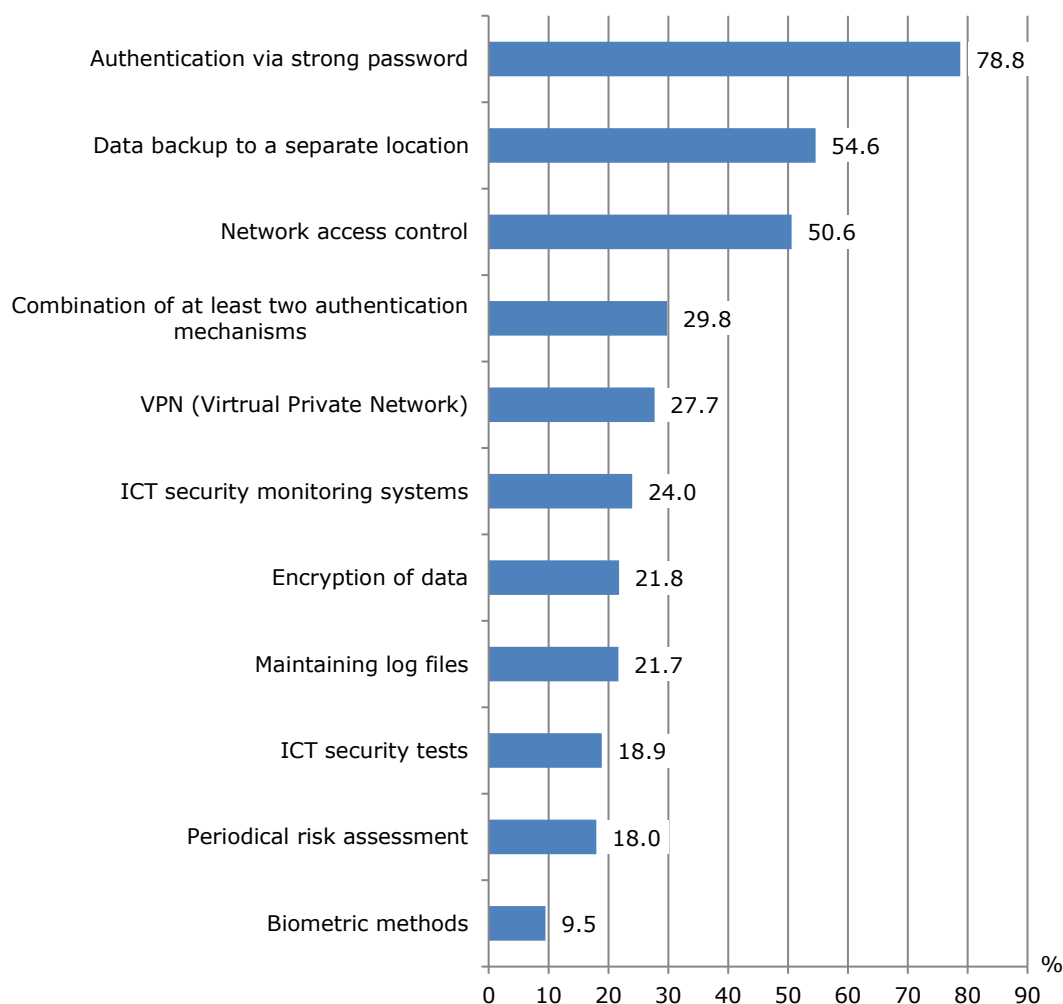
### ICT security

In 2024, 83.2% of the enterprises applied at least one ICT security measure in order to ensure integrity, availability and confidentiality of data and ICT systems. Most common measures were strong password authentication (78.8%), data backup to a separate location (54.6%) and network access control - 50.6%. Authentication via biometric

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methods for accessing the enterprise's ICT systems was least used security measure - 9.5%.

**Figure 9. Share of enterprises by type of ICT security measures used in 2024**



Almost every second enterprise (48.6%) made persons employed aware of their obligations in ICT security-related issues in the following ways:

- voluntary training or internally available information - 40.8%;
- compulsory training courses or viewing compulsory material - 20.6%;
- by contract of employment - 16.7%.

In 2023, 12.1% of the enterprises experienced ICT-related security incidents, where in 9.7% of the companies these incidents resulted in unavailability of ICT services and 4.0% were affected by destruction or corruption of data.



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### 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) 2023/1507. 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 method was an online questionnaire that enterprises were invited to complete by e-mail. The 2024 questionnaire comprised several topics like availability of access to the internet in the enterprises, e-commerce, ICT specialists and skills, ICT security, Artificial Intelligence, 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), 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).

**Artificial intelligence (AI)** refers to systems that use technologies such as: text mining, computer vision, speech recognition, natural language generation, machine learning, deep learning, etc. to gather and/or use data to predict, recommend or decide, with varying levels of autonomy, the best action to achieve specific goals.

EDI-type e-commerce are sales or purchases made via **EDI-type messages** in an 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 in 2024 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](https://infostat.nsi.bg/infostat/pages/module.jsf?x_2=241)).