

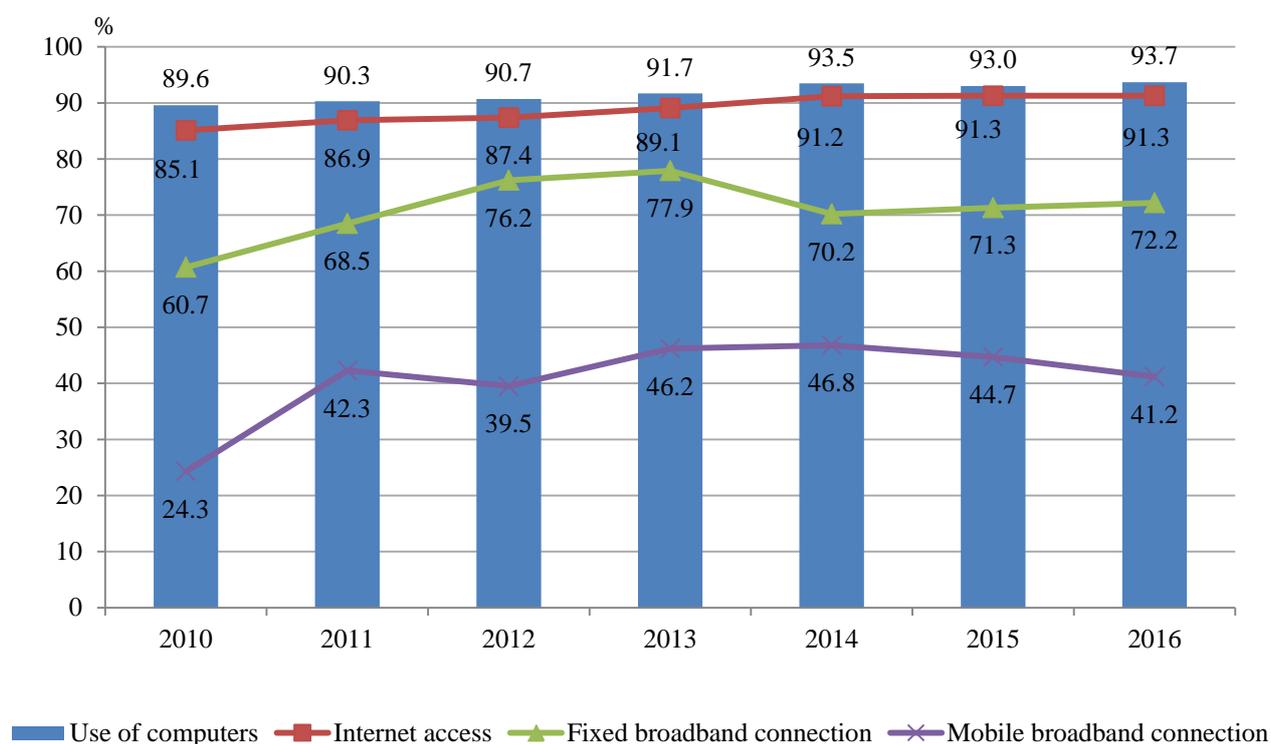


MAIN RESULTS OF THE SURVEY ON THE INFORMATION SOCIETY IN ENTERPRISES IN 2016

Information and communication technologies (ICT) and internet are key characteristics of the information society and are important factor for building a competitive economics based on the knowledge and innovation.

The results of the 2016 survey showed that 93.7% of the enterprises with 10 or more persons employed used computers¹, as among the big enterprises with 250 and more persons employed the relative share was 100.0%. High-speed and reliable internet access is a basic necessity for the enterprises and during the current year 91.3% of them had permanent connection with the global network. The enterprises mainly used DSL or other type fixed broadband connection (72.2%), and 41.2% of them used mobile broadband connection.

Figure 1. Relative share of enterprises using computers, having internet access, fixed broadband connection and mobile broadband connection



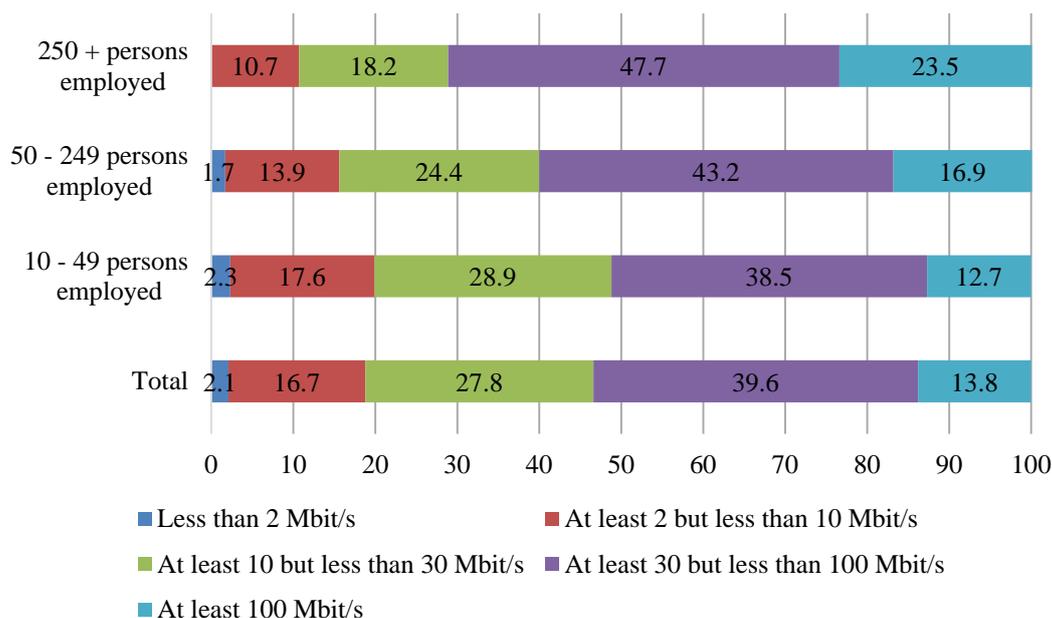
¹ Include personal computers, portable computers, tablets, other portable devices such as smartphones.



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The speed of internet connections has also increased and more than a half of the enterprises using fixed broadband connection had a connection with download speed more than 30 Mbps.

Figure 2. Structure of enterprises using fixed broadband connection by maximum download speed and by size class in 2016



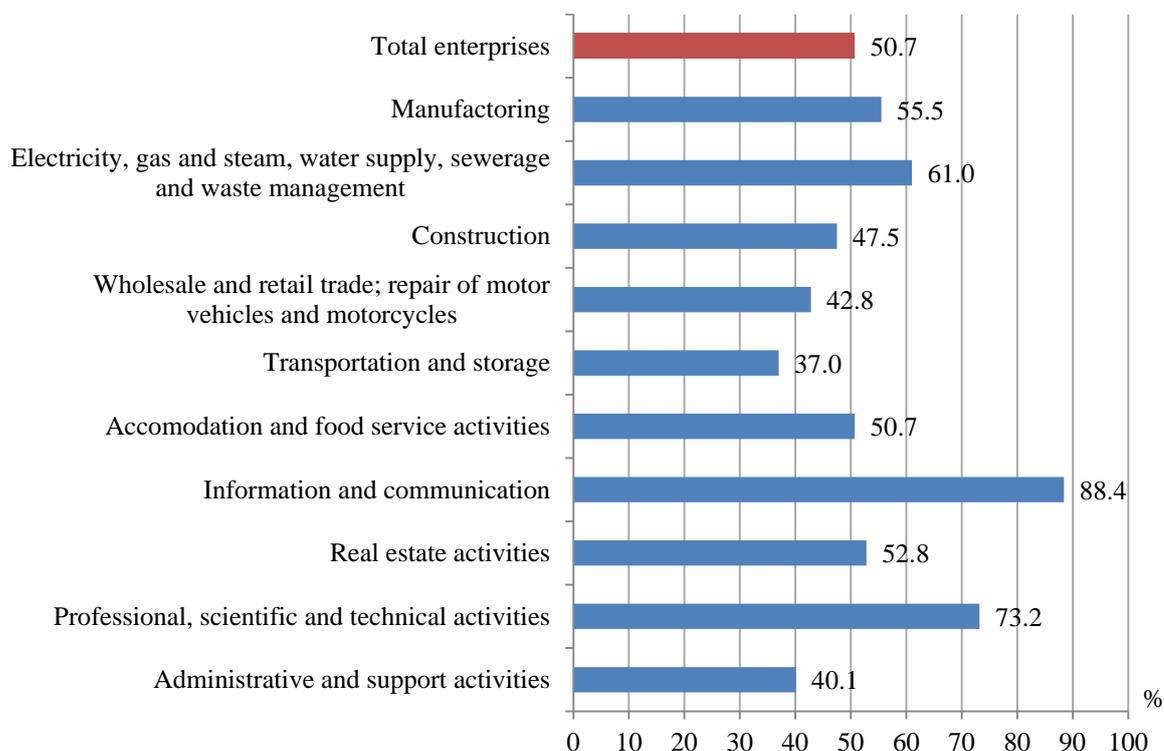
In 2016, 29.7% of persons employed used a computer at least once a week for executing their work duties and 25.8% were granted access to the internet. More and more enterprises provided their employed persons with portable devices and during this year 8.6% of the employed used portable devices for business purposes.

More than a half of the enterprises (50.7%) maintained their own website, the highest proportion was in the group of enterprises with 250 and more persons employed (86.3%). The website was mainly used for presenting goods or services (81.4%)¹, links or references to the enterprise's social media profiles (31.1%), as well as offered possibility for online ordering or reservations of goods or services (25.9%). The largest proportion was in sectors 'Information and communication' (88.4%) and 'Professional, scientific and technical activities' (73.2%), and least enterprises took advantage of this functionality in sector 'Transportation and storage' - 37.0%.

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



Figure 3. Relative share of enterprises having website by economic activities in 2016



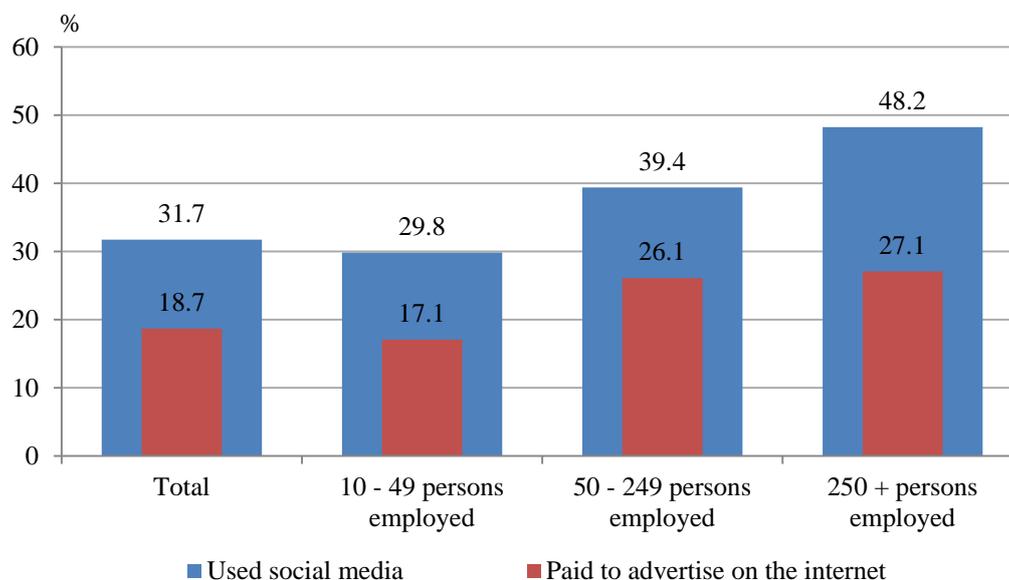
Almost one third of the enterprises (31.7%) used social media to develop their business activity and enlarge their internet presence. Most popular were social networks like Facebook, LinkedIn, Google+, and 45.9% of the enterprises with 250 and more persons employed maintained a profile on a social network (38.0% in 2015). Large companies were the most active in the use of multimedia content sharing websites like VBox7, YouTube, Flickr, Picassa, SlideShare, with relative share of 18.4% while among the small enterprises with 10 - 49 persons employed the relative share was only 7.3%.

Advertisement is important for any business as it allows the companies to present their products or services in the public space. During the current year 18.7% of the enterprises decided to include in their strategies online advertisement¹ using various techniques such as adverts on search engines, on social media or on other websites, targeted advertising, etc. Middle and big enterprises had the highest relative share, respectively 26.1% and 27.1%.

¹ Only paid advertisement.



Figure 4. Relative share of enterprises using social media and paid advertisement on the internet by size class in 2016



Big Data analysis

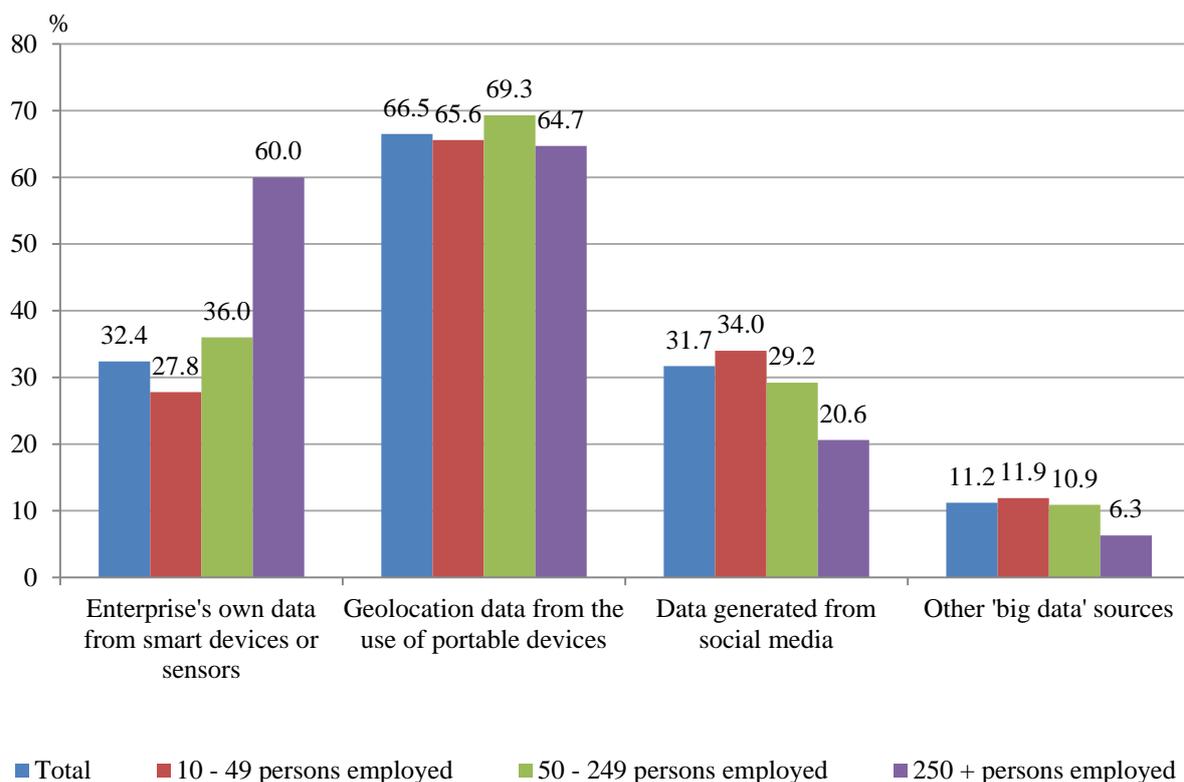
‘Big data’ refers to vast amounts of various data generated at high speed from a large number of different sources. By using statistic techniques and specialized software tools the raw ‘big data’ transform into valuable information that helps the enterprises to develop appropriate strategies to improve their products, increase sales, reduce costs, improve operations and customer service.

In 2016, a special module on the use of ‘big data’ was included in the survey. The data showed that 7.2% of the enterprises perform ‘big data’ analysis, as the most active were the big enterprises with 250 or more persons employed (23.1%). The main data source used by the enterprises was geolocation data from the use of portable devices (66.5%)¹, and enterprises’ data from smart devices or sensors, as well as data generated from social media were used respectively by 32.4% and 31.7% of the enterprises. Mainly the ‘big data’ analysis were performed by own employees of the enterprise (83.1%).

¹ The relative shares were calculated on the basis of enterprises which perform ‘big data’ analysis.



Figure 5. Relative share of enterprises performing 'big data' analysis by type of source and size class in 2016



ICT specialists

Fast development of internet and digital technologies and their wide use in the enterprises' daily activities leads to a growing need for specialists with relevant digital skills and knowledge. Compared to the previous year the trend in recruiting ICT specialists is preserved and every fifth enterprise (19.9%) had employees for whom the main job was to develop, operate or maintain ICT systems or applications. Large companies with 250 or more persons employed offered most jobs for ICT specialists (61.1%), while among the small enterprises with 10 - 49 persons employed the relative share was 16.2%. E-skills are mandatory for the workers but only 7.9% of the employers provide some kind of training to improve the qualification of the employees in the ICT area.

During the previous calendar year 8.9% of the enterprises recruited or tried to recruit ICT specialists and 39.2% of them had difficulties to fill the vacancies.



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Electronic commerce (e-Commerce)

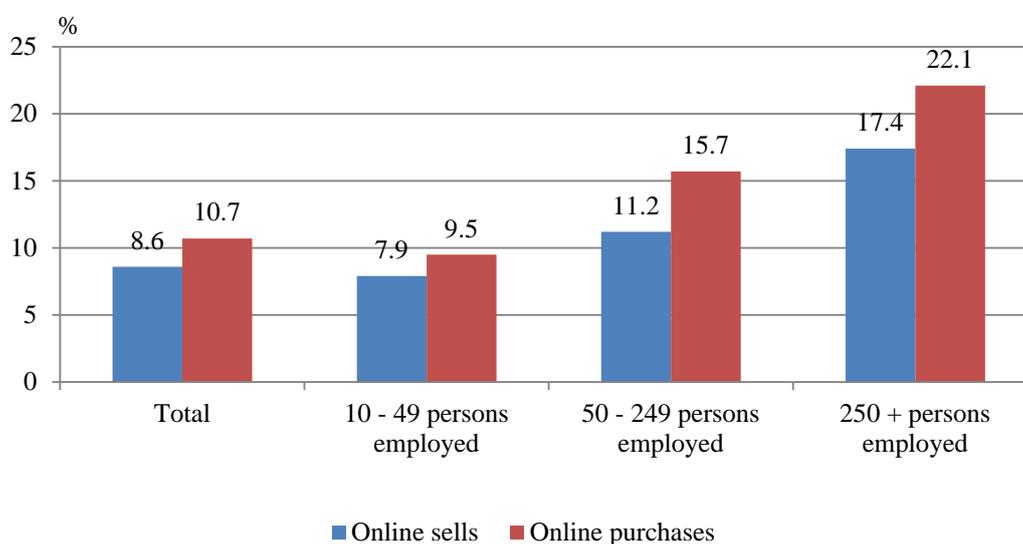
E-commerce is the sale or purchase of goods or services made via an online store (web shop), via web forms on a website or extranet, via ‘apps’ or via EDI-type messages. Its development is essential for cost reduction, market expansion and optimization of business processes.

Results of the 2016 survey showed that 8.6% of the enterprises have received orders online during the previous calendar year, as a lot of them offer their clients the opportunity to pay online, by a credit or debit card, by direct debit authorization or via 3rd party accounts - 40.0%¹. Most of the enterprises were selling to final customers (74.2%) and 57.6% offered their products to other companies or public institutions.

Enterprises face serious obstacles which prevent them from selling online, since most of the products or services are not suitable for web sales (60.8%)² while 26.9% believe that the cost of introducing web sales was, or would have been, too high compared to the benefits.

In 2015, 10.7% of the enterprises preformed online purchases and most active in the use of e-commerce to improve their business were the large enterprises, 22.1% of which purchased goods or services online and 17.4% sold over the internet.

Figure. 6. Relative share of enterprises conducting online sales or purchases of goods or services by size class in 2015



¹ The relative shares were calculated on the basis of enterprises selling goods or services online.

² The relative shares were calculated on the basis of enterprises which do not sell goods or services online.



Methodological notes

The survey on Information Communication Technologies (ICT) usage and e-commerce in enterprises is a part of the European statistical programme and has been carried out in Bulgaria since 2004 according to the Regulation (EU) No. 808/2004. 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 and by face-to-face interviews, carried out by NSI employees. The questionnaire for 2016 comprised several topics like availability and use of computers and internet by enterprises, use of cloud computing, social media, automated data exchange, e-commerce, 'big data' analysis, etc.

Fixed broadband connection include 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 broadband 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 (3G or 4G).

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 at the NSI's web site: <http://www.nsi.bg/en/content/6132/ict-usage-enterprises> and in Information System 'Infostat'.



Annex

Table 1

Enterprises using social media in 2016 by type of social media and by size class

(Per cent)

	Size class			
	Total	10 - 49 employed	50 - 249 employed	250+ employed
Total	31.7	29.8	39.4	48.2
of which:				
By type of social media				
Social networks (e.g. Facebook, LinkedIn, Xing, Google+, DotBulgaria, etc.)	30.6	28.8	28.2	45.9
Enterprise's blog or microblogs (e.g. Twitter, Svejo.net, Dao.bg, Present.ly, etc.)	4.9	4.4	7.2	10.4
Multimedia content sharing websites (e.g. VBox7, YouTube, Flickr, Picasa, SlideShare, etc.)	7.3	6.4	10.8	18.4
Wiki based knowledge sharing tools	3.2	2.8	4.8	8.6