21 November 2018

Information and knowledge society

Information and communication technologies usage and e-commerce in enterprises

2018

63% of enterprises have a website

In 2018, 98% of enterprises with 10 or more persons employed have access to the Internet and 67% connect using mobile broadband. The penetration rate for mobile broadband is higher in Information and communication activities (89%), and lower in Accommodation and food service activities (50%).

In the same year, 63% of enterprises with 10 or more persons employed report having a website of their own or the economic group they belong, 11 pp more than in 2010 (52%). The majority provide a description of goods or services or price lists (69%) or links or references to the enterprises' social media (51%).

On the other hand, 16% of the enterprises under review pay to advertise on the Internet, using webpages' content or keywords searched on the Internet (75%), tracking of internet users' past profiles or activities (42%) or based on their geolocation (35%).

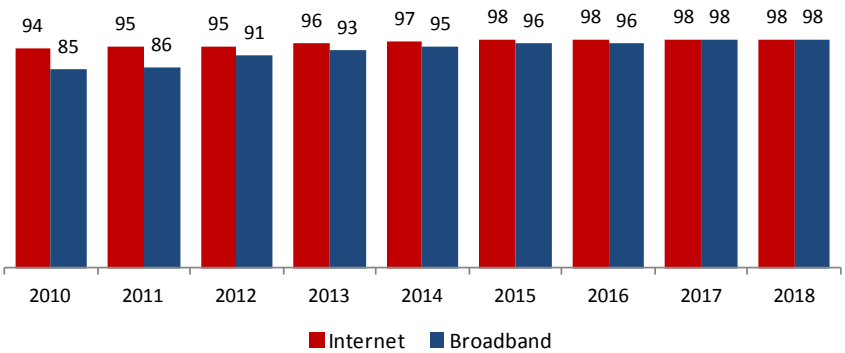
In 2018, 8% of the enterprises use robots in their activity, mainly in Industry and energy (17%). Almost ¼ of large enterprises (23%) use industrial robots or service robots.

In 2017, 13% of the enterprises reported having analyzed Big Data, mainly based on geolocation data from the use of portable devices (54%) or data generated from digital media (52%).

67% of enterprises use mobile broadband to connect to the Internet

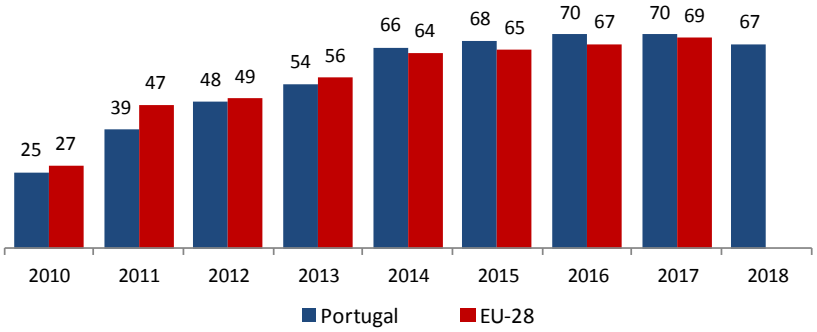
In 2018, 98% of enterprises with 10 or more persons employed have access to the Internet. All enterprises with access to the Internet use broadband connection, with an increase of around 13 percentage points (pp) in the penetration rate of this type of connection in relation to the beginning of the decade (85% in 2010).

Enterprises with internet access (%) and use of broadband (%), Portugal, 2010-2018



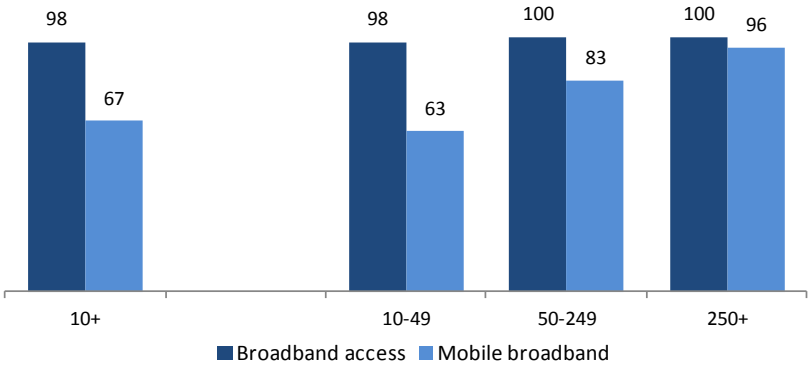
However, there are fewer enterprises with 10 or more persons employed reporting to access the Internet by mobile broadband (67%) than in the previous year (70%), although national levels were higher than those of the European Union (EU-28) in the previous four years.

Enterprises using mobile broadband (%), Portugal and EU-28, 2010-2018



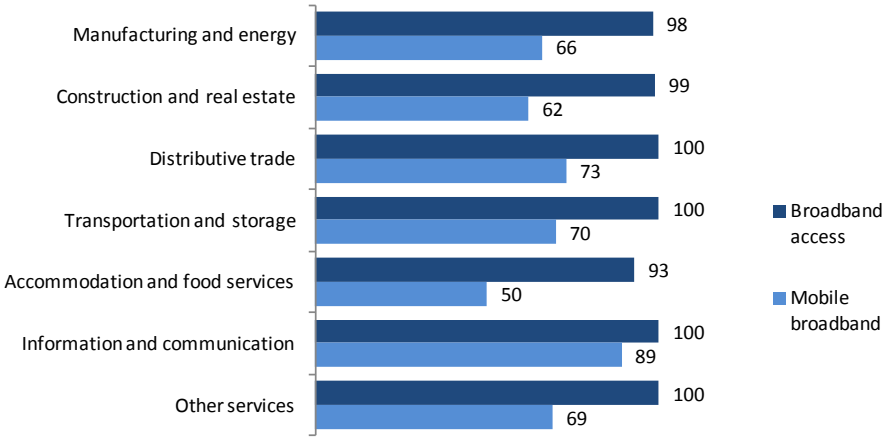
The use of broadband encompasses all large and medium-sized enterprises, with only 2% of small-sized ones not using this type of connection in 2018. On the other hand, almost all large enterprises (96%) connect to the Internet using mobile broadband, a figure that falls to 83% for medium-sized enterprises and to 63% for small enterprises.

Enterprises with broadband access (%) and mobile broadband (%), by employment size class, Portugal, 2018



The penetration rate for Internet connection is higher than 98% for most economic activities covered by the Survey on the information and communication technologies usage and e-commerce in enterprises, although slightly lower in the Accommodation and food service activities (93%). The Accommodation and food service activities also account for the lowest penetration rate for mobile broadband, which is higher in the Information and communication activities (89%).

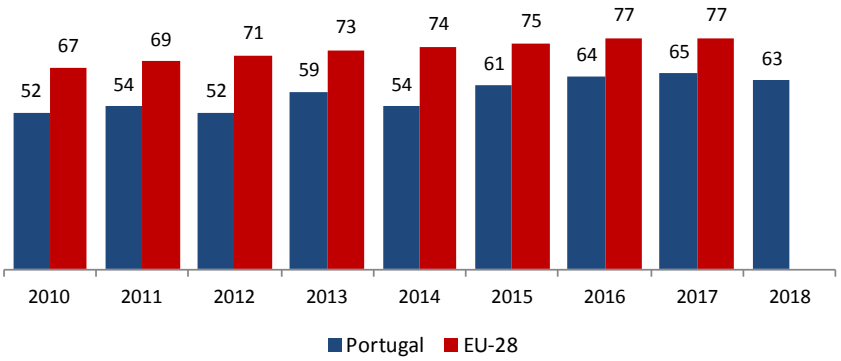
Enterprises with internet access via broadband and mobile broadband (%), by economic activity, Portugal, 2018



63% of enterprises have a website

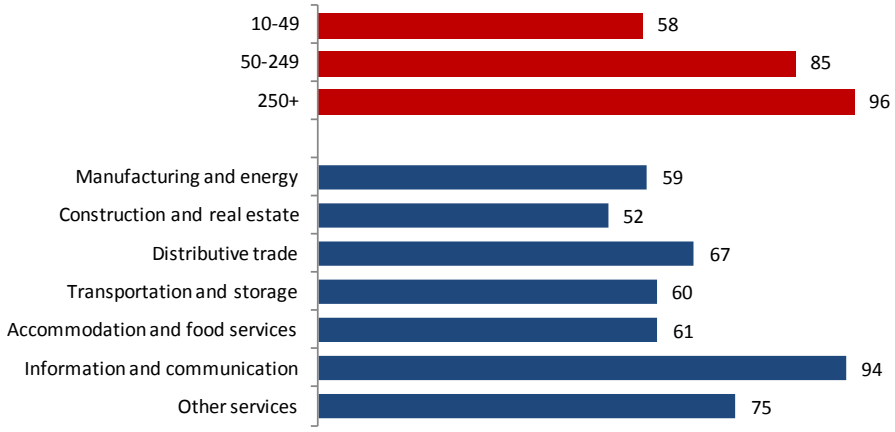
In 2018, 63% of enterprises with 10 or more persons employed report having a website of their own or the economic group they belong, 11 pp more than in 2010 (52%), however insufficient for a significant convergence of the national indicator to the European proportion.

Enterprises with website (%), Portugal and EU-28, 2010-2018



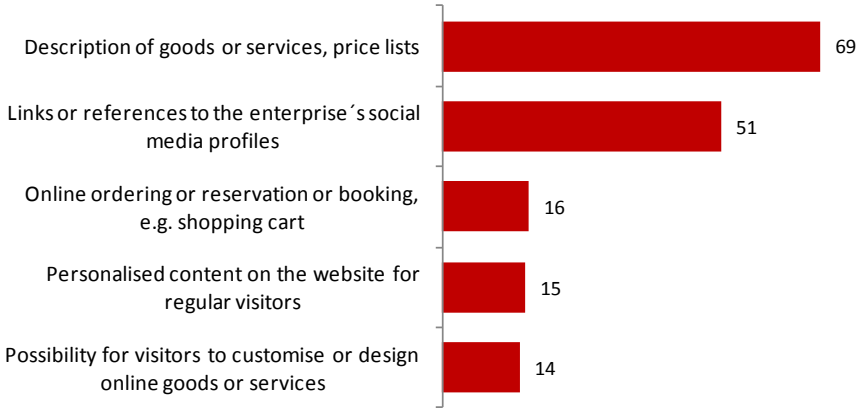
The proportion of enterprises with a website increases with their size: it corresponds to 58% of enterprises with 10 to 49 persons employed, 85% of medium-sized enterprises (50 to 249 persons employed) and 96% of large companies. The use of a website is also quite different for the various economic activities, its frequency being higher in Information and communication activities (94%), Other services (75%) and Distributive trade (67%).

Enterprises with website (%), by employment size class and economic activity, Portugal, 2018



The majority of enterprises having a website provide a description of goods or services or price lists (69%) or links or references to the enterprises' social media (51%).

Enterprises with website (%), by type of functionality available, Portugal, 2018

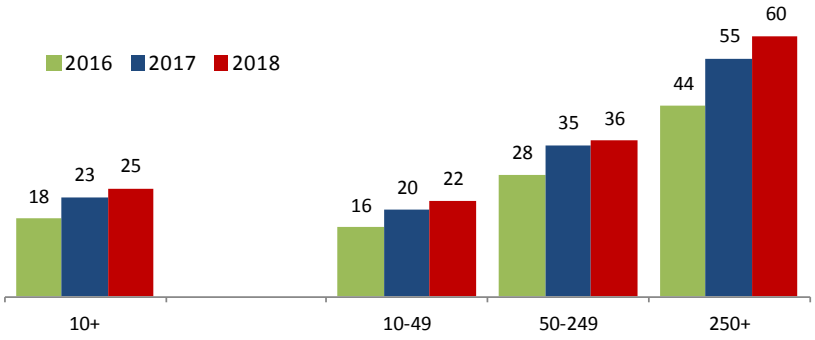


On the other hand, 16% of the enterprises with 10 or more persons employed pay to advertise on the Internet, using webpages' content or keywords searched on the Internet (75%), tracking of internet users' past profiles or activities (42%) or based on their geolocation (35%).

25% of enterprises use cloud computing services

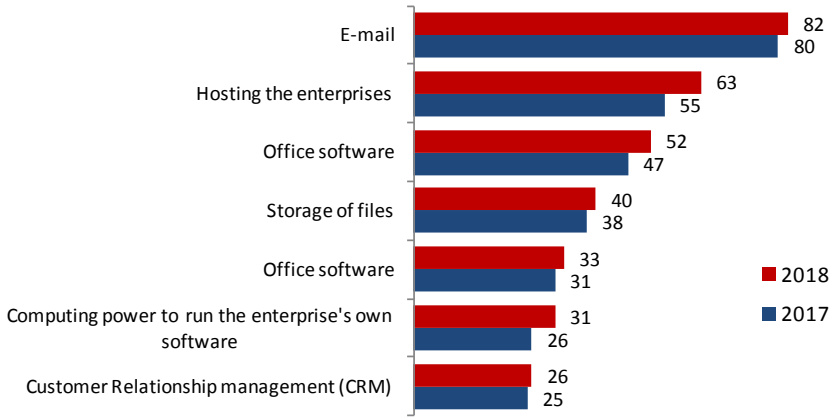
In 2018, 25% of enterprises report purchasing cloud computing services over the internet, 2 pp higher than in the previous year (23%) and 7 pp higher than in 2016. This proportion also increases with the size of the enterprise, being mentioned by 22% of small-sized enterprises, 36% of medium-sized enterprises and 60% of enterprises with 250 or more persons employed. In recent years, it was mainly the large enterprises that increased the use of this type of services (16 pp higher than in 2016).

Enterprises using cloud computing services (%), by employment size class, Portugal, 2016-2018



Among the enterprises purchasing cloud computing services, 82% buy e-mail, 63% files storage, and 52% office software as cloud computing services. The acquisition of hosting enterprises' and the acquisition of finance or accounting software applications are referred by, respectively, 40% and 33% of enterprises, while acquiring computing power for running the enterprise's own software and the acquisition of Customer Relationship Management (CRM) as cloud computing services are indicated by 31% and 26% of enterprises. Among the various types of cloud computing services, the share of enterprises purchasing files storage as a cloud computing service increased the most (14 pp vis-à-vis 2017).

Enterprises purchasing cloud computing services (%), by type of service purchased, Portugal, 2017-2018



29% of enterprises carried out e-commerce in 2017[1]

According to the survey carried out in 2018, 29% of enterprises report carrying out transactions via electronic networks in 2017[2], similar to the previous year. By type of transaction, 19% referred having received orders for goods or services

[1] E-commerce data refers to orders received representing at least 1% of turnover and to orders placed representing at least 1% of purchases.

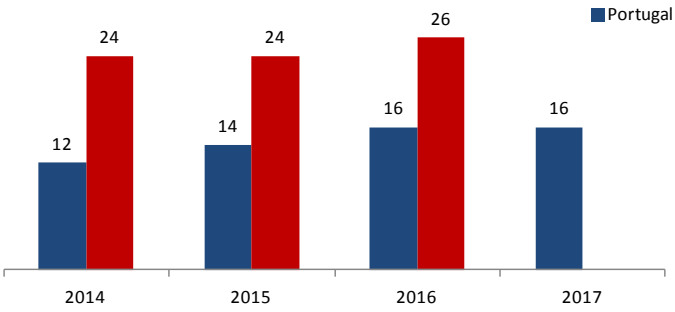
[2] Data on e-commerce refers to the year prior to the survey.

that were placed via a website or Electronic Data Interchange, and 16% have placed orders for goods or services using the same type of networks.

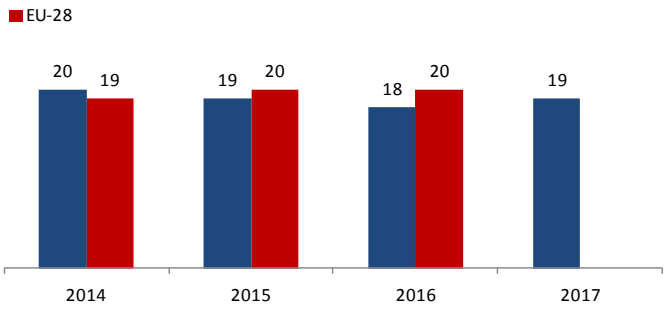
Enterprise that used e-commerce (at least 1%) (%), by employment size class and by type of transaction, Portugal, 2015-2017

In Portugal, the proportion of enterprises with 10 or more persons employed having received orders via e-commerce (representing at least 1% of turnover) tends to be similar to that of the European Union. In contrast, the proportion of national enterprises that placed orders via e-commerce was generally 10 pp below the value of the indicator for the European Union.

Enterprises that placed orders by e-commerce (%), Portugal and EU-28, 2014-2017



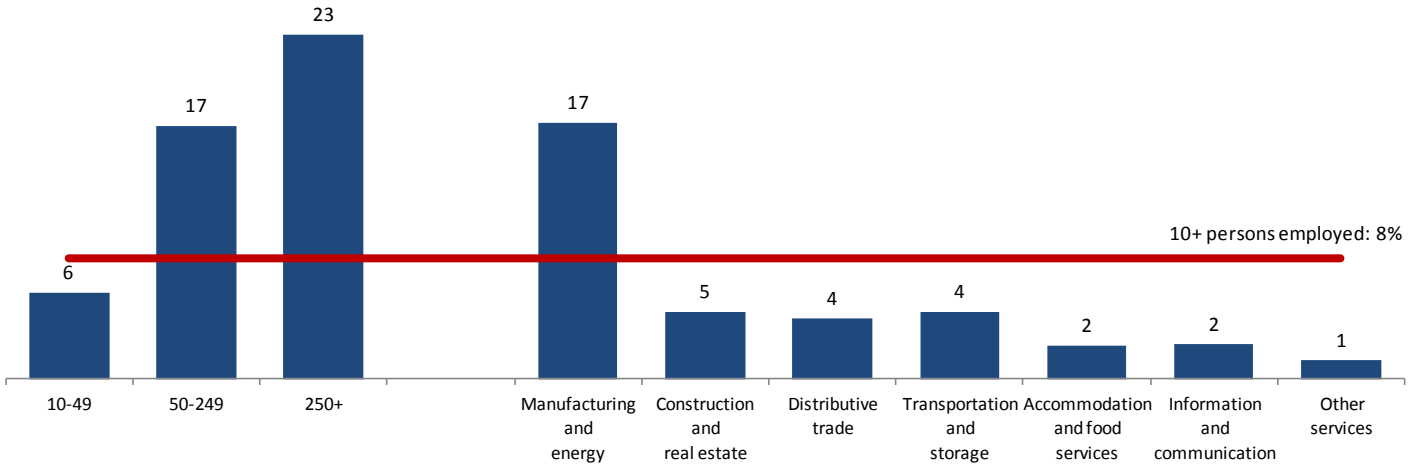
Enterprises that received orders by e-commerce (%), Portugal and EU-28, 2014-2017



8% of enterprises use industrial or service robots

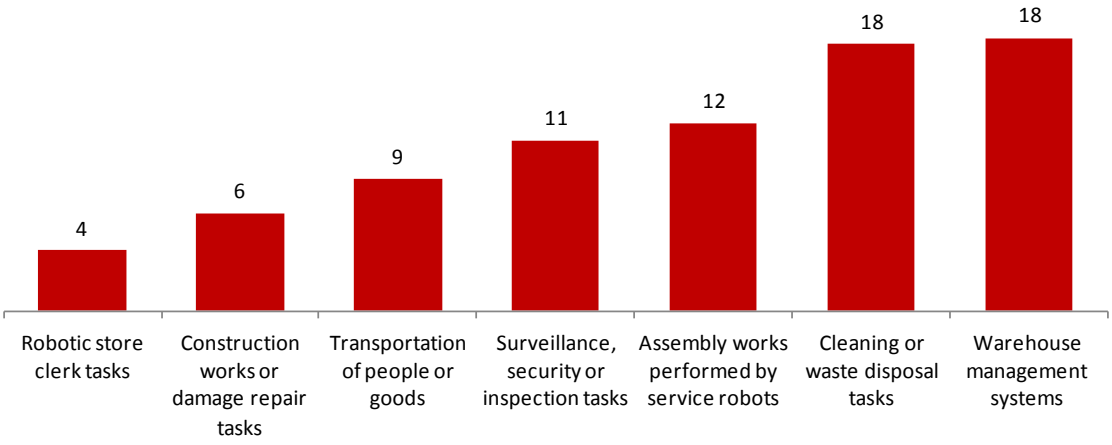
In 2018, 8% of enterprises use robots in their activity, mainly in Industry and energy (17%). Almost ¼ of large enterprises (23%) use industrial robots or service robots.

Enterprises using robots (%), by employment size class and economic activity, Portugal, 2018



There are two main purposes for the use of robots: Warehouse management and Cleaning and waste disposable tasks, both referred to by 18% of enterprises using robots.

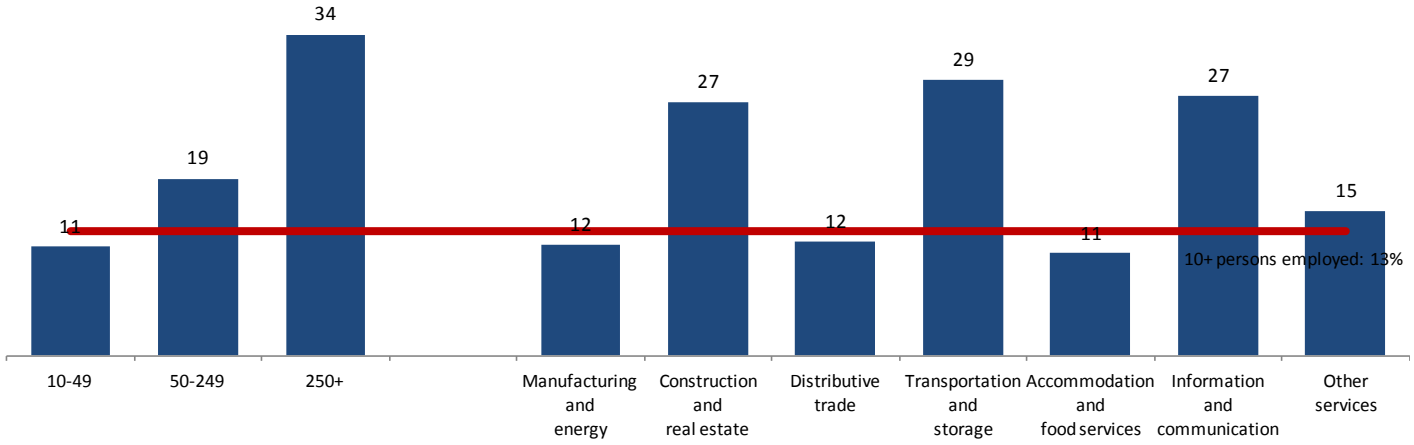
Enterprises using robots (%), by purpose, Portugal, 2018



13% of enterprises analyzed Big Data in 2017

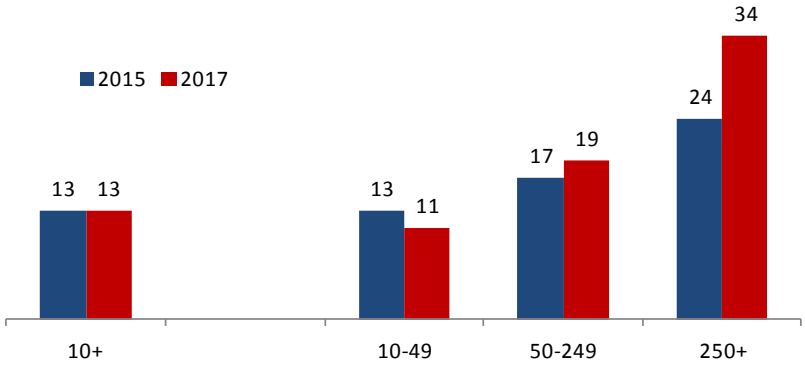
In 2017, 13% of enterprises reported having analyzed Big Data, mainly the large-sized enterprises (34%), and those in Transportation and storage activities (29%), Construction and real estate (27%) and Information and communication (27%).

Enterprises performing Big data analysis (%), by employement size class and economic activity, Portugal, 2017



The largest increase in the proportion of enterprises that analyzed Big Data occurred in large enterprises (up by 10 pp vis-à-vis 24% in 2015).

Enterprises performing Big data analysis (%), by employment size class, Portugal, 2015 and 2017



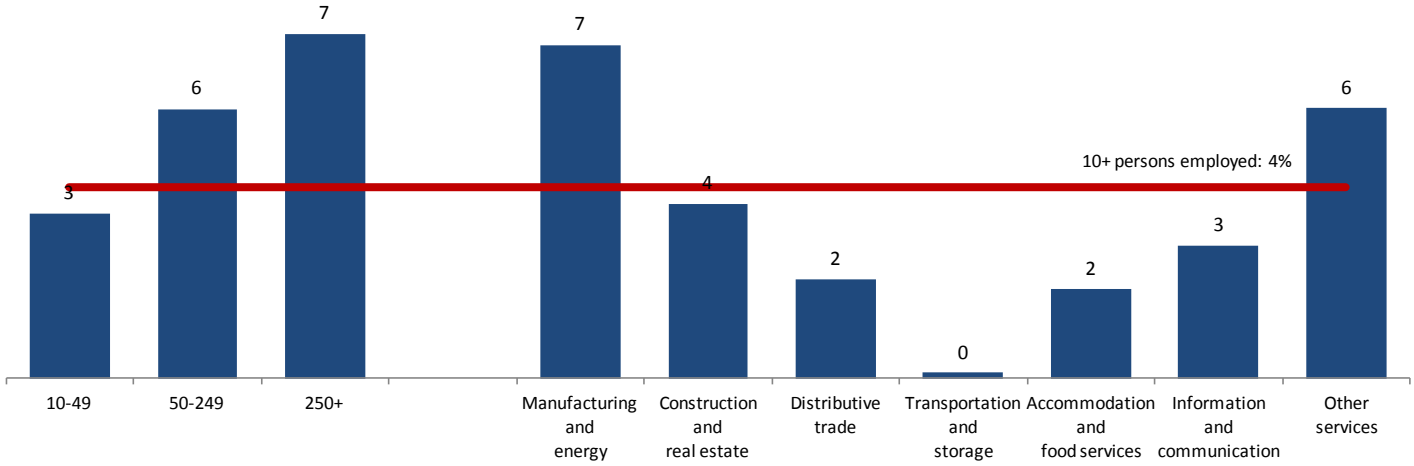
More than half of the enterprises having analyzed Big Data used geolocation data from the use of portable devices (54%) or data generated from digital media (52%).

The majority of the enterprises (77%) used their own employees (including those employed in parent or affiliated enterprises) to carry out this type of analysis. The use of external service providers was reported by 44% of the enterprises with 10 or more persons employed having analyzed Big Data.

4% of enterprises used 3D printing

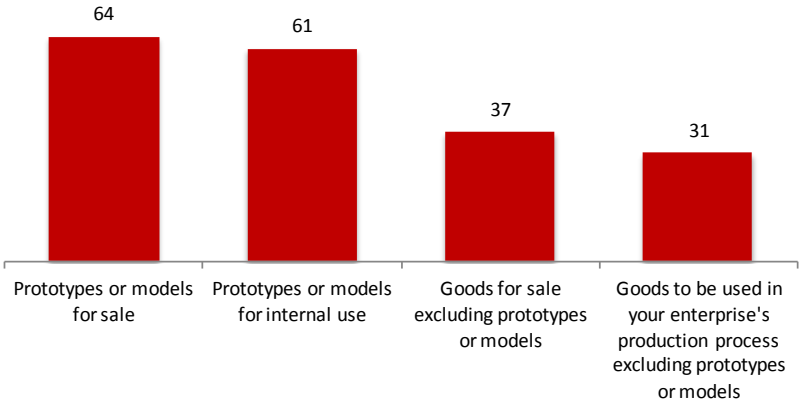
In 2017, 4% of the enterprises with 10 or more persons employed used 3D printing, mainly large and medium-sized enterprises and those in Industry and energy (7%) and Other services (6%). The majority (71%) of enterprises using 3D technology have used printing services provided by other enterprises (including printing services provided by parent or affiliated enterprises). The use of own 3D printers was mentioned by 39% of the users.

Enterprises that used 3D printing (%), by employment size class and economic activity, Portugal, 2017



More than 60% of enterprises using 3D printing did so in order to obtain prototypes or models, either for sale (64%) or for internal use (61%).

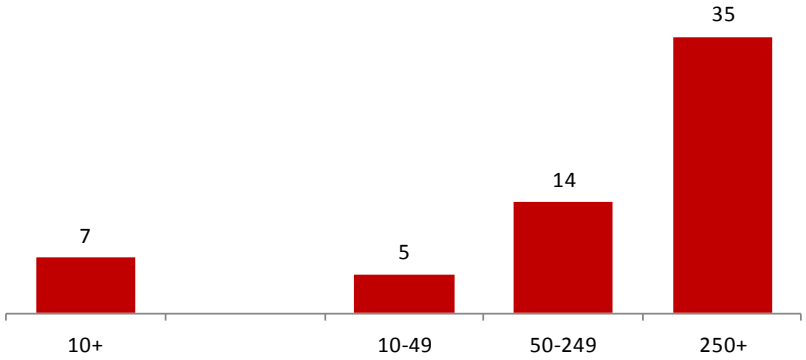
Enterprises that used 3D printing (%), by purpose, Portugal, 2017



7% of enterprises with 10 or more persons employed sought for ICT specialists

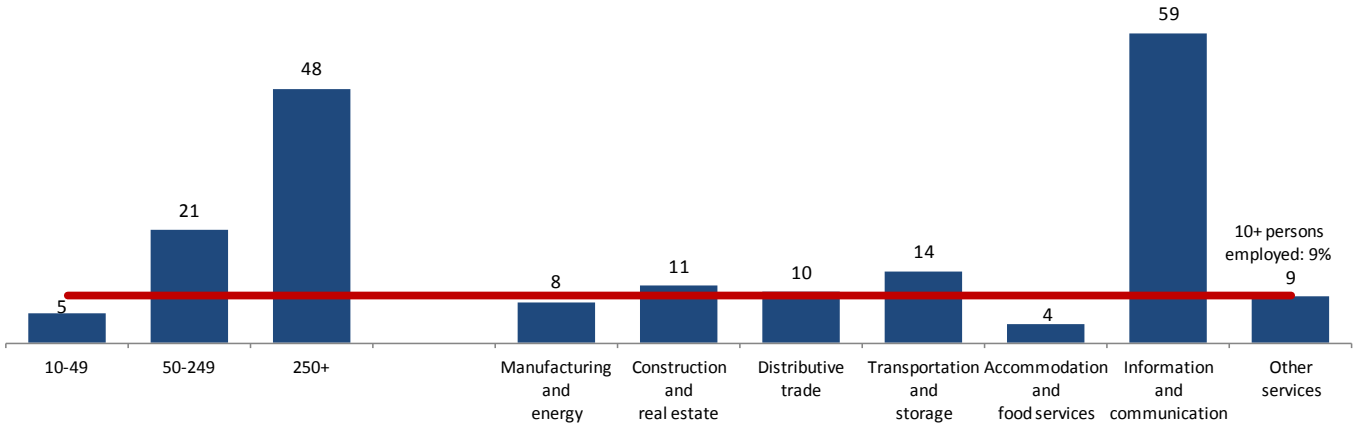
In 2017, 7% of enterprises with 10 or more persons employed recruited or tried to recruit ICT specialists; of these, 35% reported having had difficulty filling the available vacancies. The demand for ICT specialists was higher in large enterprises (35%).

Enterprises that recruited ICT specialists (%), by employment size class, Portugal, 2017

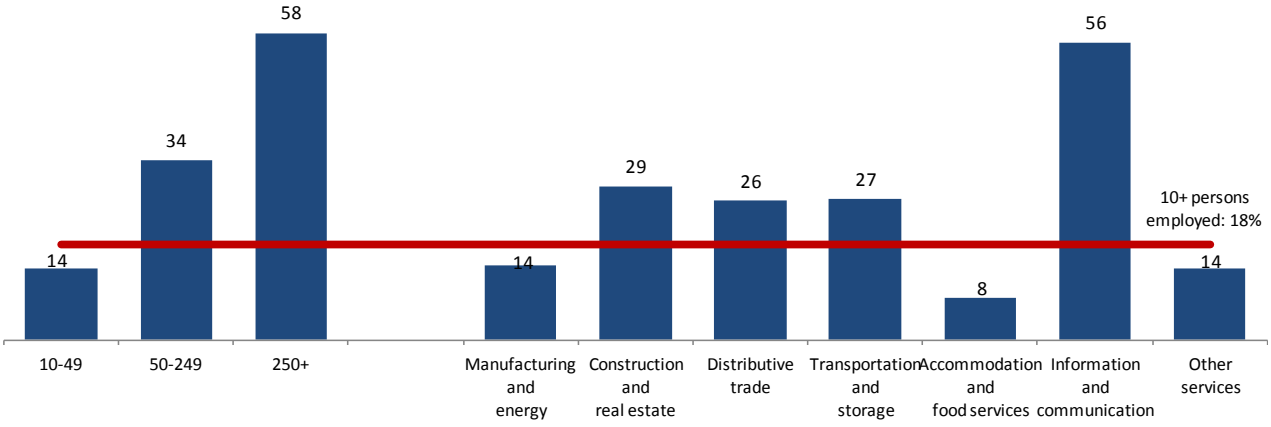


In the same year, 9% of enterprises with 10 or more persons employed reported having provided ICT training for ICT specialists and 18% for other persons employed, specially the large enterprises (48% carried out training for specialists and 58% for non-specialists) and Information and communication activities (59% for specialists and 56% for non-specialists).

Enterprises that provided training for ICT specialists (%), by employment size class and economic activity, Portugal, 2017



Enterprises that provided ICT training for other persons employed (%), by employment size class and economic activity, Portugal, 2017



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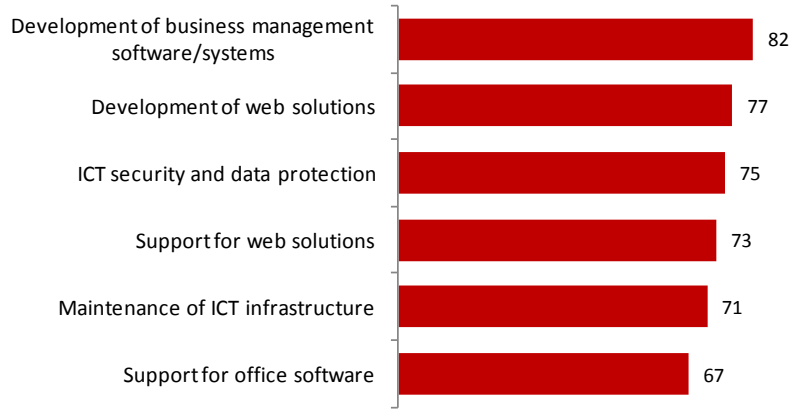
The majority of the enterprises that needed to develop ICT functions in 2017 chosen to use mainly external suppliers.

Enterprises that used mainly external suppliers to following ICT functions (%), by type of function, Portugal, 2017



TECHNICAL NOTE

Indicators in this press release were based on data from the Survey on Information and Communication Technologies Usage in Enterprises (IUTICE),carried out by Statistics Portugal annually as from 2001 (since 2006 in accordance with specific Community regulations and pursuant to Regulation (EC) No 808/2004 of the European Parliament and of the Council of 21 April 2004).

IUTICE is an annual survey based on a representative sample of enterprises in Portugal carrying out their main economic activity in manufacturing, energy, construction, trade and repair, hotels and restaurants, transport and communication, and other services (excluding education and health activities and, as from 2015 onwards, financial activities).

A sample of 3,312 units was selected among the population of enterprises with 10 or more persons employed and whose economic activity is classified in one of the following NACE Rev.2 sections: C, D and E, F, G, H, I, J, L, M (division 69-74), N, S (group 95.1).

The reference period for the information is 2016 for the majority of variables, with the exception of the ones related to e-commerce, invoicing and ICT training, which refer to 2015. In the case of e-commerce indicators, only orders received representing at least 1% of turnover and orders placed representing at least 1% of purchases are taken into account.

From 2015 onwards enterprises covered by the IUTICE do not include those mainly carrying out on financial or insurance activities, in line with the criteria established for EU countries. In this context, historical series have been rebuilt for the same scope of activities aiming to ensure comparability over time.

Main concepts:

ECONOMIC ACTIVITY - Combination of resources such as labour, raw materials, equipment, etc., are joined, leading to the creation of specific goods or services. Regardless of the factors of production integrating the good or service produced, all activities generically imply an input of products (goods or services), a production process and an output of products (goods or services).

MAIN ACTIVITY - The activity which contributes most to the total value added of a unit under consideration. It is ranked according to the gross value added at factor cost which it generates. If no value-added figures are available, other criteria must be used, and then the principal or main activity shall be considered the one that accounts for the highest turnover or alternatively the one that occupies the greatest number of employees on a permanent basis.

BROABAND - A connection that makes possible the transmission, at a high speed, of considerable quantities of information, such as television images. The types of broadband connection are: XDSL (ADSL, SDSL, etc.),cable, UMTS or other such as satellite.

E-COMMERCE - Business process conducted via Internet Protocol-based networks or via other computer-mediated networks. The goods and services are ordered over those networks, but the payment and the ultimate delivery of the good or service may be conducted on or off-line. Orders received via telephone, facsimile, or manually typed e-mails are not counted as electronic commerce. Note: if the e-mail system is used for the transmission of an automatic message, i.e. computer-to-computer without human intervention, then it is considered an e-commerce transaction.

CUSTOMER RELATIONSHIP MANAGEMENT (CRM) - Management methodology that is based on the intensive use of information technologies to collect, integrate, process and analyze the information related to customers and which aims to put the customer at the center of the business process.

EDI (ELECTRONIC DATA INTERCHANGE) - The standardised exchange of information between computers, which may use the internet as a platform (EDI on TCP/IP) or closed computer networks between institutions. It can be used for the paper-free exchange of documents (invoices, receipts, contracts, order forms).

INTERNET (www access) - The connection to the set of global computer networks interlinked by the TCP/IP protocol (Transmission Control Protocol/Internet Protocol), where data and service servers are located (FTP, WWW, email, etc.).

CLOUD - System/network of remote servers hosted on the Internet and used to store, manage, and process data in place of local servers or personal computers.

INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) - A branch of computing science and its practical uses which aims at classifying, preserving and disseminating information. Information systems and special knowledge are applied to businesses and learning. Hardware and software create the electronic structure to support the information logic.

WEBSITE - A programmed webpage or set of web pages viewed using a browser (Internet Explorer, Netscape, etc.). Each webpage has its own www address (e.g., www.organismo.pt), known as a URL (Uniform Resource Locator).

WIKI - Website oriented to provide and share knowledge in some domain, where content is created by anyone wanting to enter or change information or comment anyone else's contribution.

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