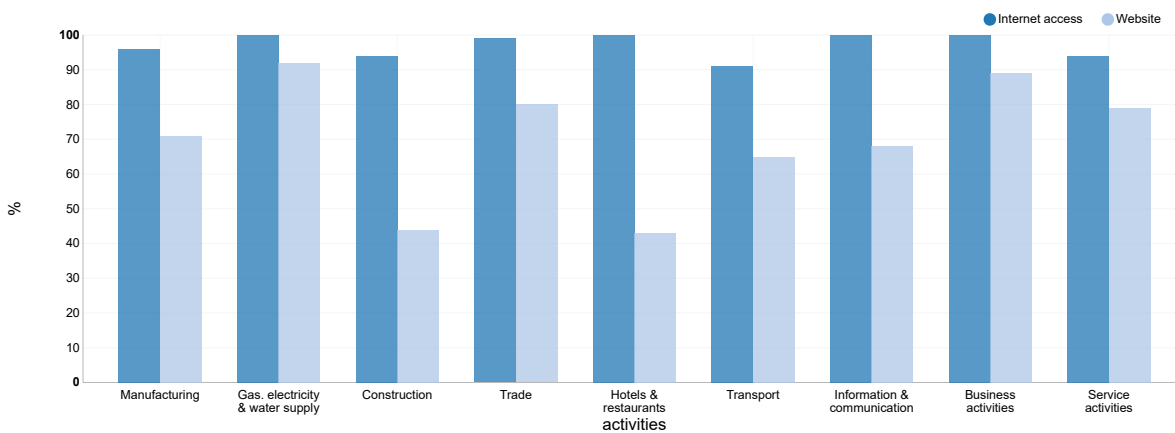


USAGE OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) IN ENTERPRISES, 2022

Tendencies

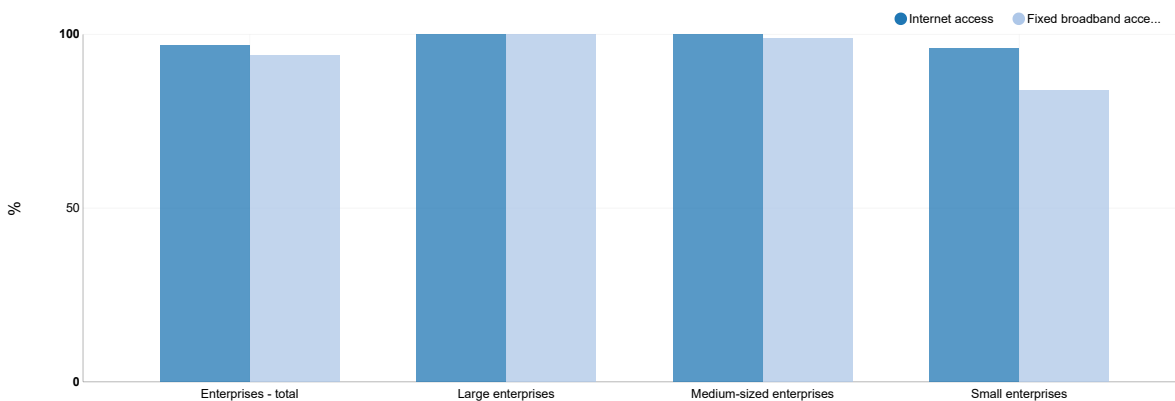
- High level of ICT integration in business conducts; 97% of enterprises used computers with internet access and 69% of enterprises owned a website.
- Usage of broadband internet access prevailed; 94% of enterprises used some type of fixed broadband internet connection.
- Internet sales covered only 17% of the total sales of goods and services.
- Cloud computing internet service as a new technology was used by 44% of enterprises.
- Green ICT – 70% of companies took measures to reduce paper consumption, while 40% took measures to reduce the electricity consumption of ICT equipment.

G-1 USAGE OF ICT IN ENTERPRISES, BY ACTIVITIES, 2022



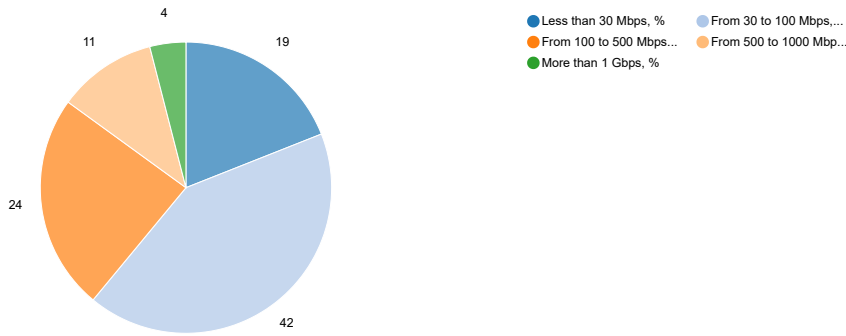
The usage of information and communication technologies is an extremely important part of contemporary business conduct. The survey showed that 97% of enterprises used computers with internet access in their daily work. The internet became a necessity for efficient business conduct, so 69% of enterprises had their own website.

G-2 ACCESS TO INTERNET IN ENTERPRISES, BY ENTERPRISE SIZE, 2022



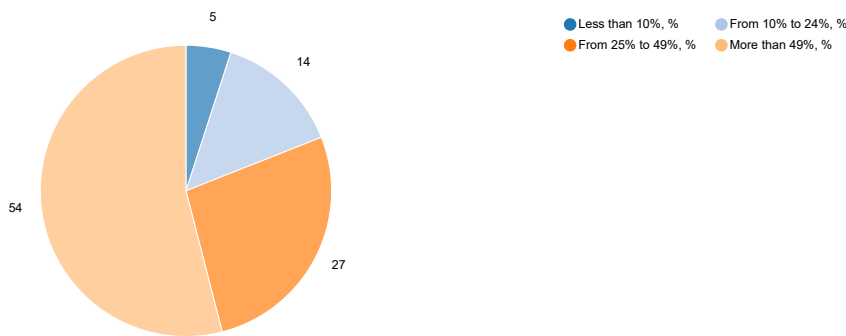
The internet and other network technologies allow for connectivity between sectors within an enterprise and the integration of business processes that contribute to more efficient business conduct. The type and speed of data transfer allow for better quality of business conduct. There were 94% of enterprises that used a fixed broadband connection (DSL, cable, leased line).

G-3 CONTRACTED SPEED OF INTERNET ACCESS IN ENTERPRISES, 2022

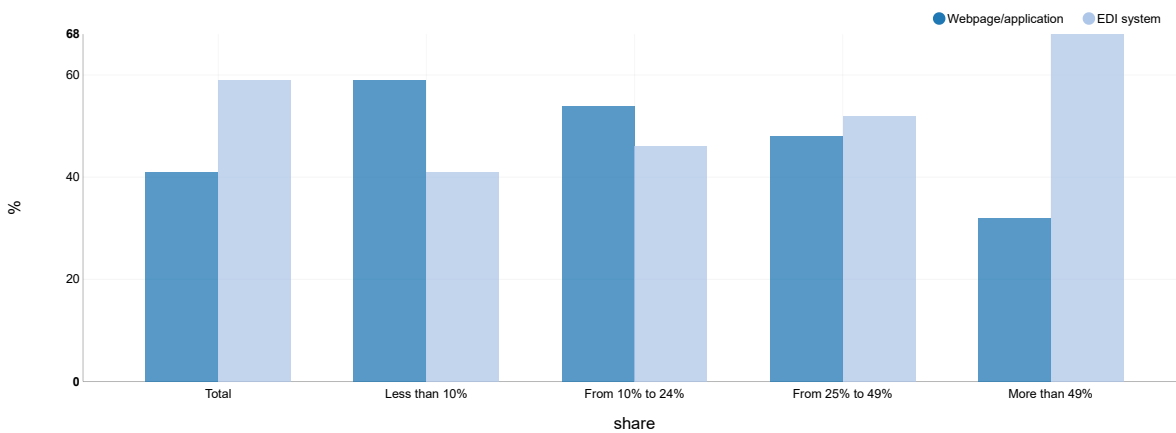


The usage of the internet caused changes in the way business is conducted by enabling the integration of business processes at a higher level. The internet connection speed is becoming an important factor in business conduct. The increasing availability of broadband internet boosts data transfer speed. Data transfer speed of more than 100 Mbps is used by 39% of enterprises (an increase of 10% compared to the previous year).

G-4 E-COMMERCE – SHARE OF SALES VIA INTERNET COMPARED TO TOTAL SALES, 2021

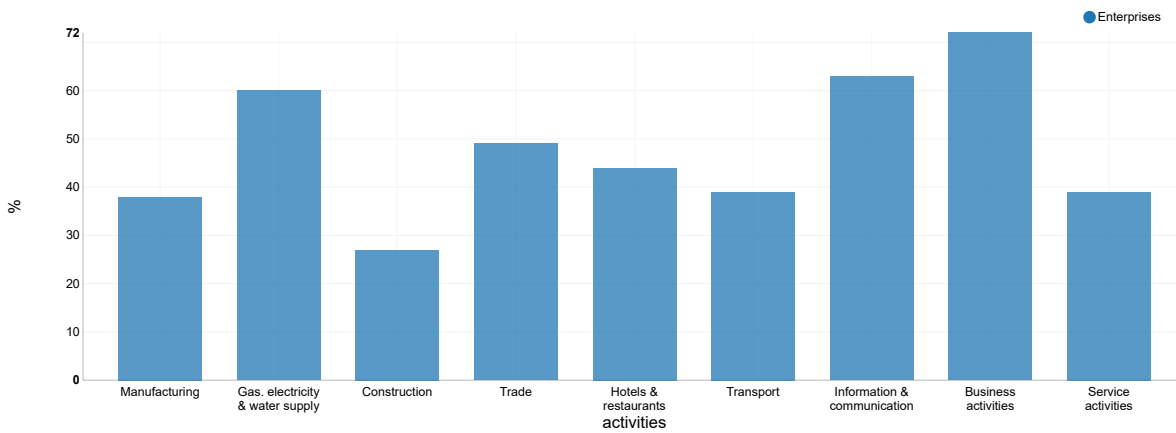


E-COMMERCE – INTERNET SALES, BY SALES TYPE, 2021



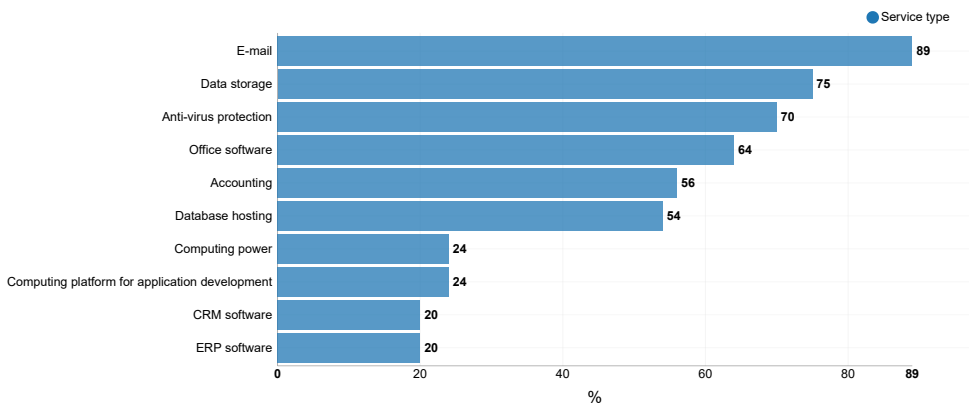
The integration of business processes and communication between business entities via the internet allow for a more efficient offer of goods and services and their purchase and sale on the market. The volume of e-commerce compared to conventional commerce was still rather low and barely 17% of sales were conducted via the internet.

G-5 USAGE OF INTERNET RESOURCES VIA CLOUD COMPUTING SERVICES, BY ACTIVITIES, 2022



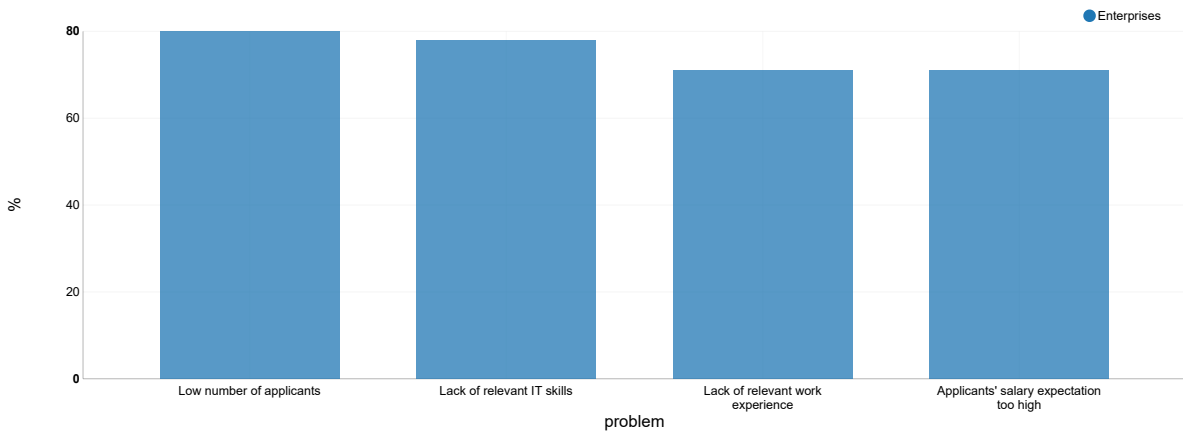
In the Republic of Croatia, the usage of computing resources via cloud computing services is developing; it is used by 44% of enterprises (an increase of 5% compared to the previous year). The representation structure by enterprise size was evenly distributed between small, medium-sized and large enterprises, while graphic presentation shows that its usage was predominant in business activities, information and communication sectors as well as in gas, electricity and water supply.

G-6 USAGE OF CLOUD COMPUTING SERVICES, BY SERVICE TYPE, 2022



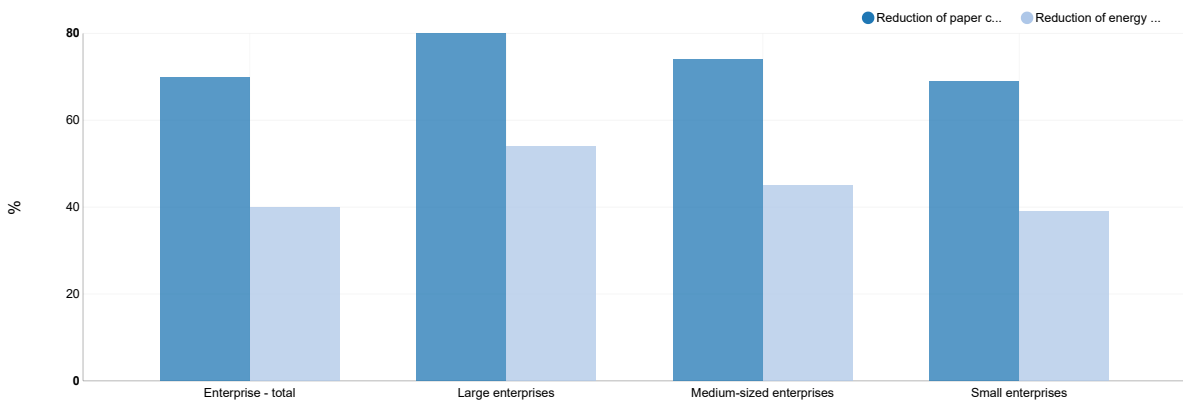
The classification by types of services shows that enterprises most often used cloud computing for e-mail processing, while data storage, antivirus protection, usage of office and accounting software as well as database hosting services were somewhat less represented.

G-7 RECRUITMENT OF ICT SPECIALISTS IN ENTERPRISES, 2021



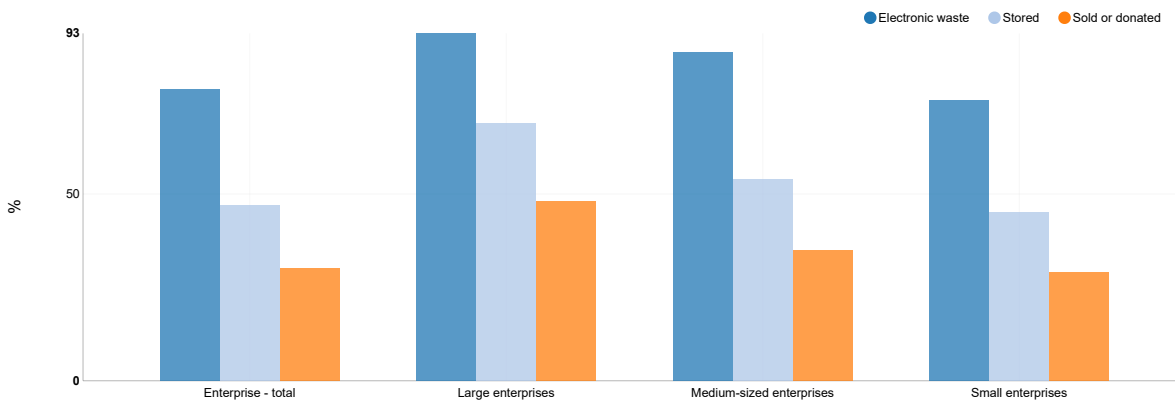
We also examined whether enterprises had IT specialists employed. IT specialists include staff whose main job is to design, maintain, develop, manage and support information systems in the enterprise. There were 17% of enterprises who stated they had IT specialists employed. In that connection, 7% of enterprises tried to employ new IT specialists last year, but as many as 75% of them had problems finding employees (an increase of 9% compared to the previous year). The most common issues were a low number of applicants and lack of relevant IT skills among candidates.

G-8 GREEN ICT – APPLICATION OF RESOURCE CONSUMPTION REDUCTION MEASURES, 2022



For the first time, we examined whether companies apply active measures to reduce paper consumption and electricity consumption of ICT equipment. The graph shows that 70% of companies cared about paper consumption, while only 40% took measures to reduce the electricity consumption of installed ICT equipment. Concerning the distribution by the enterprise size, it can be seen that the implementation of reduction measures decreased proportionally to the size of the enterprise.

G-9 GREEN ICT – DISPOSAL OF ICT EQUIPMENT NO LONGER IN USE, 2022



We asked enterprises how they treated ICT equipment that is no longer in use, i.e. how they disposed of such equipment. From the graph, it can be seen that 78% of enterprises disposed of such equipment at electronic waste sites, in 47% of enterprises the equipment remained stored in the enterprise (e.g., as a spare parts repository), while 30% of enterprises sold or donated equipment that is no longer in use. Concerning the distribution by the enterprise size, it can be seen that the shares of individual categories decreased proportionally to the size of the enterprise.

NOTES ON METHODOLOGY

Purpose of the statistical survey

The data shown in this First Release are estimates obtained through the IKT-POD Survey. This is an annual survey on the usage of information and communication technologies (ICT) and provides information on computer usage, usage of the internet, electronic commerce and other ICTs in enterprises. The data are an important source for conducting policies in the field of information society in the Republic of Croatia and in the European Union.

Legal framework

The IKT-POD Survey was conducted in 2022 according to Eurostat guidelines and on the basis of the Official Statistics Act (NN, No 25/20). Harmonised surveys were conducted in all EU Member States, and, therefore, the data are internationally comparable. The international data are available on the following web address: https://ec.europa.eu/eurostat/statistics-explained/index.php/Digital_economy_and_society.

Concepts and definitions used in the Survey are in line with the EU Methodology for Statistics on the Information Society, 2022, especially with Regulation (EU) No. 2019/2152 of the European Parliament and of the Council on European business statistics.

Observation units

The observation units are enterprises registered on the territory of the Republic of Croatia for performing the following activities according to the NACE classification:

C – Manufacturing

D, E – Electricity, gas and water supply

F – Construction

G – Wholesale and retail trade, repair of motor vehicles and motorcycles

H – Transport and storage

I – Accommodation and food service activities

J – Information and communications activities

L – Real estate activities

M – Professional, scientific and technical activities

N – Administrative and support service activities

S – Other service activities (group 95.1)

The enterprises were also classified according to the number of persons employed:

- small enterprises (employing 10 – 49 persons)

- medium-sized enterprises (employing 50 – 249 persons)

- large enterprises (employing 250 or more persons).

Sampling frame and size

The basis for the sampling frame was the Statistical Business Register of the Croatian Bureau of Statistics. The sample consisted of 4 499 enterprises.

Data collection method

The data were collected via the internet by using the online questionnaire. The reference period for the main variables was the second quarter of 2022. For the questions concerning internet sales, the reference period was 2021.

Response rates

Out of the whole population of enterprises (12 549), there were 4 499 units taken into the sample. Out of the total sample size, 4 388 units were eligible and 2 641 enterprises took part in the survey. It means that the response rate was 61% and the eligibility rate was 98%. The non-response rate was 39%.

Weighting

RIM weighting procedure (iterative proportional fitting – IPF) was used for the grossing-up. The extrapolation weight was calculated for each participant of the survey, while the calculation method included the NACE category, number of employees and the total turnover of an enterprise.

The source of information on these variables was the Statistical Business Register of the Croatian Bureau of Statistics. The calculated weights enabled the calculation of the data for the whole population of enterprises.

Publishing

Total data were published for enterprises employing ten or more persons. The Eurostat publishes data of the EU countries for enterprises employing ten or more persons, which enables comparability of the data between the Republic of Croatia and other EU countries.

Definitions and explanations

Broadband technologies are technologies or connections that enable rapid transmission of data, especially films, games and video-conferences via an internet network (e.g. DSL, cable connection, optical connection, leased lines, mobile internet).

ICT (Information and Communication Technology) are software and hardware used for data communication (e.g. computer, fax, the internet, fixed mobile phone).

E-commerce means transactions conducted over internet protocol-based networks and over other computer-mediated networks. Goods and services are ordered via those networks, but the payment and the ultimate delivery of the goods or services may be conducted online or offline. Orders received via telephone, facsimile, or manually typed e-mails are not counted as electronic commerce.

EDI (Electronic Data Interchange) is used for the electronic exchange of data, documents and orders inside an enterprise and between enterprises. Data interchange flows automatically between the computer systems of partners. Standard and encrypted forms are used.

The internet refers to networks of the following internet protocols: www, extranet via the internet, EDI via the internet, internet-ready mobile phones.

Cloud computing is a technology that enables data storage and data sharing over the internet. Data are stored on servers of a service provider, who also provides connectivity, data storing and data sharing services.

Website is a location on the World Wide Web identified by a web address. Collection of web files on a particular subject includes a beginning file called the home page. Information is encoded in specific languages (HyperText Mark-up Language (HTML), XML, Java) readable over a web browser such as Google Chrome, Mozilla Firefox, Opera, or Microsoft's Internet Explorer.

Green ICT aims to achieve economic sustainability and improve the way computing devices are used. Practices include the development of environmentally sustainable manufacturing practices, energy-efficient computers and improved disposal and recycling procedures. These practices include:

- Minimising the electricity consumption of computers and their peripherals and using them in an environmentally friendly way
- Conversion of existing equipment, or appropriate disposal or recycling of unwanted electronic equipment
- Designing energy-efficient computers, servers, printers, projectors and other digital devices
- Reduction of waste during the production of computers and other subsystems in order to reduce the impact of these activities on the environment.

Abbreviations

CRM	Customer Relationship Management software
DSL	digital subscriber line
EC	European Community
ERP	Enterprise Resource Planning software
EU	European Union
Eurostat	Statistical Office of the European Communities
Gbps	gigabit per second
IT	information technologies
Mbps	megabit per second
NACE	Statistical Classification of Economic Activities in the European Union
NN	Narodne novine, official gazette of the Republic of Croatia



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