

18 October 2022

Survey on ICT usage and e-commerce in enterprises
Year 2021 – First quarter 2022

Nine out of 10 companies have some ICT security measure implemented and eight out of 10 use remote access technologies for their staff

A total 31.6% of companies made sales through e-commerce in 2021

The INE has adapted the statistical concept of Enterprise and has implemented it for the first time in this survey

In accordance with the European Statistical System, the Survey on the use of Information and Communication Technologies (ICT) and Electronic Commerce in companies has implemented the new statistical concept of 'Enterprise'¹. Under this modification, the statistical enterprise can coincide with the legal unit, the business group or part of a group of companies (the last two cases represent around 3% of the total). The results of the survey and its distribution by activities and company sizes are thus affected.

For this reason, **the data for 2021-2022 are not strictly comparable with those of other years**. However, the methodological annex offers a comparative analysis under the assumption of considering Legal Units as an operational approach to enterprises.

Use of ICTs in enterprises with 10 or more employees

In the first quarter of 2022, 66.1% of employees in enterprises with 10 or more workers use computers for business purposes. A total of 61.1% used computers with an Internet connection.

67.3% of enterprises with an internet connection use social media. By sectors, this use is more intense in *Services* (71.7%).

The percentage of companies with internet connection that have a website/web page is 78.5%. In the *Industry* and *Services* sectors, the percentage exceeds 80%.

¹ The reasons why the INE has adapted the definition of enterprise, from a statistical perspective, were communicated in press release published on December 17, 2019.

Main variables. Percentages

	Total	Industry	Construction	Services
Persons employed use computers for business purposes	66.1	57.7	54.9	70.8
Persons employed use computers with access to the internet for business purposes	61.1	50.7	51.3	66.5
Enterprises with ICT specialists	17.2	13.7	6.0	22.0
<i>Enterprises have access to the internet, of which:</i>	98.3	98.4	98.2	98.3
- Access to the internet and website ¹	78.5	80.1	67.3	80.7
- Social media ¹	67.3	64.3	56.3	71.7

⁽¹⁾Percentage over total enterprises with access to the Internet

Other technologies in enterprises

Of the other technologies studied, the most used are ICT security measures and remote access. Nine out of 10 enterprises have some ICT security measure implemented in the company. For their part, eight out of 10 use technologies that allow their staff remote access to email, documents or company applications.

The least used technologies are robots and Artificial Intelligence (AI), used by 8.3% and 12.6% of enterprises, respectively. In *Industry*, the least used technology is *Big Data* analysis (9.8%).

Other technologies. Percentage

	Total	Industry	Construction	Services
Enterprises whose persons employed have remote access*	82.7	80.2	80.6	84.5
Enterprises with teleworking	40.8	32.0	29.9	48.1
Enterprises with AI technologies	12.6	10.3	6.8	15.3
Enterprises with Big Data analysis	15.1	9.8	10.1	19.0
Enterprises with ICT security	89.3	88.0	85.6	90.9
Enterprises with robots	8.3	18.7	4.3	4.3

*Remote access to e-mail, documents or business applications of the enterprise

Use of ICT by Autonomous Community

The enterprises with 10 or more employees whose headquarters are located in Cataluña, Comunidad de Madrid and País Vasco have the highest intensities² in the use of ICT in the first quarter of 2022.

For their part, enterprises in Extremadura and the autonomous communities of the Canary Islands and Andalusia have the lowest percentages.

Use of ICT by Autonomous Communities and Cities in which the head office of the enterprise is located. Percentages

First quarter 2022	Internet & Web ⁽¹⁾	Social Media ⁽¹⁾	Remote access ⁽²⁾	Teleworking	AI	Big Data	ICT Security	Robots
TOTAL	78.5	67.3	82.7	40.8	12.6	15.1	89.3	8.3
Andalucía	69.7	63.1	78.8	33.5	10.5	15.0	87.9	9.2
Aragón	81.2	64.7	81.5	35.9	14.2	14.4	88.0	10.5
Asturias, Principado de	78.9	65.4	84.1	29.2	9.7	14.1	92.2	8.7
Balears, Illes	75.9	67.1	85.0	33.9	9.7	15.7	83.4	5.2
Canarias	73.9	65.4	80.4	29.5	9.7	9.7	88.4	6.1
Cantabria	71.6	59.6	80.3	31.8	7.0	10.2	89.0	7.1
Castilla y León	77.6	61.7	79.9	29.9	7.2	11.5	89.4	9.2
Castilla-La Mancha	70.5	64.6	82.7	27.8	9.2	8.9	83.0	9.3
Cataluña	86.4	77.0	87.2	55.3	14.3	18.6	92.1	7.9
Comunitat Valenciana	78.5	64.4	81.8	35.2	14.9	15.4	90.7	10.4
Extremadura	69.3	62.1	74.2	24.1	11.5	8.8	78.6	7.3
Galicia	77.0	62.1	78.6	32.8	12.2	12.5	86.0	8.3
Madrid, Comunidad de	81.3	71.7	85.2	53.8	16.4	18.1	91.2	4.7
Murcia, Región de	68.9	56.3	72.5	26.5	9.6	13.3	86.8	7.4
Navarra, Comunidad Foral de	82.6	61.3	83.2	40.6	11.2	10.0	88.3	13.8
País Vasco	83.1	62.6	86.6	40.0	10.3	11.8	91.1	11.9
Rioja, La	80.2	66.6	81.8	32.3	12.3	17.7	83.7	9.5
Ceuta	63.7	45.6	78.4	40.2	5.0	5.5	88.9	0.9
Melilla	47.6	45.2	72.5	27.3	2.5	2.5	73.4	0.9

(1) Percentage over total enterprises with access to the Internet

(2) Remote access to e-mail, documents or business applications of the enterprise

² The intensities in the use of ICT refer to the following indicators: Internet and *website*, use of social media, remote access, teleworking, use of AI, *Big Data* analysis, ICT security and use of robots.

E-commerce

E-commerce sales

A total of 31.6% of enterprises with 10 or more employees made purchases via e-commerce in 2021.

By sectors, *Services* had the highest percentage of enterprises with e-commerce sales, with 37.2%

%Enterprises that make sales via E-commerce Year 2021. Percentages

	Total	Industry	Construction	Services
Enterprises with sales via e-commerce	31.6	29.5	14.8	37.2
Enterprises with sales via websites/apps	27.3	21.8	13.2	33.8
Enterprises with sales via EDI messages	8.6	12.8	1.9	8.3

Turnover generated by these sales reached 313,512.9 million euros in the year 2021.

E-commerce sales represented 20.0% of the total sales of enterprises with 10 or more employees.

E-commerce sales. Year 2021

Millions of euros

	Total	Industry	Construction	Services
Sales via e-commerce	313,512.9	173,347.2	1,427.2	138,738.5
Sales via websites/apps	128,225.1	49,665.7	817.6	77,741.8
--- % via own website/app	84.6	93.8	69.3	78.8
--- % via marketplace	15.4	6.2	30.7	21.2
Sales via EDI messages	185,287.8	123,681.5	609.6	60,996.7

Use of ICT in companies with less than 10 employees

A total of 46.8% of enterprises with fewer than 10 employees used technology to give their staff remote access to email, documents or applications in the first quarter of 2022. A total of 16.5% allow teleworking.

In turn, 79.7% have measures favorable to the environment with their ICT equipment, such as recycling, maintenance of equipment for spare parts, sale, donation or return of ICT equipment that they do not use.

Main variables

Percentage over the total number of enterprises with less than 10 employees

2021-2022	Total
Enterprises with computers	86.0
Persons employed use computers for business purposes	76.0
Persons employed use computers with access to the internet for business purposes	71.3
Enterprises with ICT specialists	1.2
Enterprises whose persons employed have remote access*	46.8
Enterprises with teleworking	16.5
<i>Enterprises have access to the internet, of which:</i>	82.1
- Fixed connection	83.7
- Mobile connection	82.8
- Access to the internet and website	31.8
- Social Media	36.1
Enterprises with ICT environmental measures	79.7
Enterprises with sales via e-commerce	13.2

*Remote access to e-mail, documents or business applications of the enterprise

With regard to the use of e-commerce, 13.2% of enterprises with less than 10 employees carried out sales by this means and 18.2% made purchases.

Data Review and Update

The data published today is final and is not subject to further revision. All results are available on INEBase.

Methodological annex

New practical implementation of the statistical unit 'Enterprise'

The statistical definition of the “Enterprise” statistical unit is established by a regulation of the European Union (696/93) that defines it as the *“smallest combination of legal units that produces goods or services and that enjoys a certain degree of decision-making autonomy, particularly when using the resources available to it.”*

Up to the 2020-2021 reference period included, the INE has been identifying, for operational purposes, the Enterprise statistical unit with the Legal Unit (through the NIF) in the Survey on the use of ICT and Electronic Commerce in Companies (ETICCE). Thus, for statistical purposes each Legal Unit formed an enterprise.

However, the progressive complexity of the way in which enterprise groups operate internally nowadays caused the European Statistical System to search for an improvement as regards the way in which the activity of these groups is reflected in enterprises’ official statistics. Legal Units that belong to enterprise groups sometimes sell their products or provide their services exclusively or mainly within the group, without being market-oriented or having decision-making power over the entire production process.

For all these reasons, and in accordance with the European Statistical System, based on the data referring to 2021, **using the data with a reference period of 2021-2022** the ETICCE establishes a new practical application for the statistical concept of Enterprise, by which an “enterprise” may be:

- An independent Legal Unit that is not part of the enterprise group, meaning that it should have decision-making autonomy.
- An enterprise group made up of one or more Legal Units, which operate together.
- A subset of one or more Legal Units of an enterprise group.

This change in the treatment of enterprises -which was also implemented in the Statistical Use of the Central Enterprise Register (DIRCE)- was announced by the INE in a December 17, 2019 Press Release:

https://www.ine.es/prensa/nueva_definicion_empresa.pdf

For more information on the delineation of the statistical unit Enterprise within enterprise groups, please see the following link:

https://www.ine.es/metodologia/t37/t3730200_profiling.pdf

Effects of the implementation of the Statistical Enterprise in the ETICCE

The adoption of the concept of the Statistical Enterprise in the ETICCE implies that, when the Enterprise is made up of more than one Legal Unit (LU), its LUs must be grouped, condensing all values of each indicator into the Statistical Enterprise.

Furthermore, when certain relationships exist between the Enterprise's LUs (such as vertical integration of industrial activities, and/or Industry-Trade relationships, and/or auxiliary relationships), certain intra-company flows must be consolidated.

There are thus two effects on the results of the 2021-2022 ETICCE based on the Statistical Enterprise:

- **Reclassification effect**, due to the grouping of Legal Units that are part of the Enterprise and their reassignment to the main activity and size of said Enterprise. Defined as the variation rate of the variables calculated for the Statistical Enterprises before consolidation, with respect to those obtained based on the LUs; both referring to the 2021-2022 period.
- **Consolidation effect**, due to the cancellation of intra-company flows. This second effect only occurs in economic variables such as e-commerce sales. The variables of employment, ICT personnel, personnel with remote access or telecommuting are not affected. The ETICCE Methodological document includes details on the consolidation process.

This effect is defined as the weight of the consolidation applied to each non-additive variable compared to those obtained based on the LUs that make up each Statistical Enterprise.

Impact of the Implementation of the Statistical Enterprise in the ETICCE 2021-2022

	Total Effect	Reclassification Effect	Consolidation Effect
Sales via e-commerce	-0.1	0.7	-0.8
Sales via websites/apps	0.6	1.0	-0.4
Sales via EDI messages	-0.7	0.5	-1.2
Persons employed use computers for business purposes	1.0	1.0	.
Persons employed use computers with access to the internet for business purposes	0.9	0.9	.
Enterprises with ICT specialists	-3.8	-3.8	.
Enterprises have access to the internet	-4.6	-4.6	.
Enterprises have access to the internet and website	-3.9	-3.9	.
Enterprises have access to the internet and social media	-3.6	-3.6	.

(.)not applicable

Statistical results based on Legal Units

The following table shows the differences with respect to the previous period of the main variables studied on the use of ICT for companies with 10 or more employees if the Legal Unit is taken as an approximation to the concept of enterprise.

Main variables. Percentages

	1er quarter 2022	1er quarter 2021	Annual rate
Persons employed use computers for business purposes	66.0	65.7	0.3
Persons employed use computers with access to the internet for business purposes	61.0	59.4	1.6
Enterprises with ICT specialists	17.0	16.4	0.6
<i>Enterprises have access to the internet, of which:</i>	98.2	99.0	-0.8
- Access to the internet and website ¹	77.9	78.3	-0.4
- Social media ¹	66.5	66.6	-0.1

⁽¹⁾Percentage over total enterprises with access to the Internet

The percentage of enterprises that made sales through e-commerce increased 3.1 points compared to 2020. Total value of these sales increased by 14.0%, to 313,975 million euros

%Enterprises that make sales via E-commerce Percentages

	2021	2020	2021-2020
Enterprises with sales via e-commerce	30.0	26.9	3.1
Enterprises with sales via websites/apps	25.6	23.2	2.4
Enterprises with sales via EDI messages	8.1	6.5	1.6

E-commerce sales. Millions of euros

	2021	2020	Annual rate
Sales via e-commerce	313,975	275,398	14.0
Sales via websites/apps	127,407	107,887	18.1
Sales via EDI messages	186,569	167,511	11.4

Among companies with less than 10 employees, the percentage of those that made e-commerce sales increased by 2.9 points. On the other hand, the percentage of companies that allowed their employees to telecommute fell 4.5 points.

Use of ICT and CE in companies with less than 10 employees Percentages

	ICT Survey 2022	ICT Survey 2021	Annual Rate
Enterprises with computers	85.8	85.4	0.4
Persons employed use computers for business purposes	75.8	75.1	0.7
Persons employed use computers with access to the internet for business purposes	71.1	71.4	-0.3
Enterprises with ICT specialists	1.2	1.4	-0.2
Enterprises with teleworking	16.6	21.1	-4.5
<i>Enterprises have access to the internet, of which:</i>	81.7	83.0	-1.3
- Fixed connection	83.8	83.7	0.1
- Access to the internet and website	31.8	29.4	2.4
- Social Media	35.8	36.3	-0.5
Enterprises with sales via e-commerce	13.0	10.1	2.9

Methodological note

The main objective of the **Survey on the use of Information and Communications Technologies (ICT) and e-commerce in businesses** is to obtain the necessary data that will allow the use of ICT and e-commerce in businesses in EU member countries to be measured.

Following the methodological recommendations of Eurostat, the survey has a dual time scope; the variables on ICT use refer to the first quarter of the year in which the survey was carried out, while the general information about the business, e-commerce and ICT training refers to the previous year.

Type of survey: annual continuous survey.

Population scope: companies belonging to sections C, D, E, F, G, H, I, J, L, M, N and group 95.1 according to the National Classification of Economic Activities (CNAE-2009).

Geographical scope: the entire national territory.

Reference period of the results: the variables on ICT use refer to the first quarter of the year in which the survey was carried out, while the general information about the business, e-commerce and ICT training refers to the previous year.

Reference period of the information: first quarter of the year in which the survey is conducted.

Sample size: variables according to year. For businesses with 10 or more employees: about 15,000 companies and for those with less than 10 employees: about 11,000 companies.

Type of sampling: stratified sampling method by company size, economic activity and autonomous community.

Collection method : multi-channel: on the Internet (CAWI) and regular mail.

For more information you can access the methodology and the standardized methodological report at:

https://www.ine.es/dynqs/INEbase/es/operacion.htm?c=Estadistica_C&cid=1254736176743&menu=metodologia&idp=1254735576692

INE statistics are produced in accordance with the Code of Good Practice for European Statistics, which is the basis for the institution's quality policy and strategy. For more information see the section [Quality at INE and the Code of Best Practices](#) on the INE website.

For further information see **INEbase:** www.ine.es/en/ Twitter: [@es_ine](https://twitter.com/es_ine)

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