

# Usage of Information and Communication Technology in Enterprises (ICT)

Reference Metadata in Euro SDMX Metadata Structure  
(ESMS)

INSTAT

## Reference Metadata

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<b>1. Contact</b>	
1.1. Contact organisation	Institute of Statistics, INSTAT
1.2. Contact organisation unit	R&D, Innovation, Information Technology and Transport Statistics Unit, Directory of Economic Statistics
1.3. Contact person	Irsida Nuellari
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<b>2. Metadata update</b>	
2.1. Metadata last certified	29.09.2022
2.2. Metadata last posted	29.09.2022
2.3. Metadata last update	29.09.2022
<b>3. Statistical presentation</b>	
3.1. Data description	<p>The purpose of “Usage of Information and Communication Technologies” (ICT) in enterprises is to collect and disseminate harmonized and comparable information.</p> <p>ICT usage in enterprises data shows to what extent enterprises with 10 and more employed use Information and Communication Technologies</p>

	<p>sell or buy through websites or through computer data sharing, i.e. shows the degree of enterprise digitization. Prioritization is done in accordance with <a href="#">Regulation (EU) No 2152/2019</a> on European business statistics, <a href="#">Commission Implementing Regulation (EU) 2021/1190</a> laying down the technical specifications of data requirements for the topic ‘ICT usage and e-commerce’ for the reference year 2022, pursuant to Regulation (EU) 2019/2152 of the European Parliament and of the Council, <a href="#">Commission Implementing Regulation (EU) 2020/1030</a> and <a href="#">Official Statistics National Program, 2022 - 2026</a> and <a href="#">Law No. 17/2018 "On Official Statistics"</a>, and the <a href="#">Decision of the Assembly No. 19/2021 "On the approval of the Annual Plan 2021 for the implementation of the Official Statistics Program 2017-2021"</a>.</p>
<p>3.2. Classification system</p>	<p>The classification used for enterprise information technology statistics is the Statistical Classification of Economic Activities, <a href="#">NACE Rev.2</a>. The survey covered enterprises selected by the Statistical Business Register registered in the Republic of Albania and operate in one of the activities classified according to the Nomenclature of Economic Activities, NACE Rev.2, at two digit level corresponding to the section level including sections from C to N (excluding K financial and insurance activities), i.e. (C) Manufacturing activities, (D) Electricity, gas, steam and air conditioning supply, (E) Water supply, sewerage, waste management and remediation activities, (F) Construction, (G) Wholesale and retail trade; repair of motor vehicles and motorcycles, (H) Transportation and storage, (I) Accommodation and food service activities, (J) Information and communication, (L) Real estate activities, M (Groups 69-74) Professional, scientific and technical activities, (N) Administrative and support service activities, (S) (Sessions 95.1) Repair of computers and communication equipment.</p>
<p>3.3. Sector coverage</p>	<p>Statistics on Usage of Information and Communication Technologies in enterprises are based on sampling. Population consists of all enterprises that according to Statistical Business Register were active in December of the reference year and they exercise their activity in one of the activities covered by ICT statistics in enterprise. The sample was stratified using size class and activity of the enterprise as stratification variables (according to NACE Rev.2). The basis of selection is Statistical Business Register (closed year), excluding:</p> <ul style="list-style-type: none"> <li>• Affiliates of enterprises.</li> <li>• Out of scope (NACE Rev.2 codes).</li> <li>• Enterprises with less than 10 number of employed.</li> </ul> <p>The activities covered in this survey are from sections C to N (excluding K financial and insurance activities), (C) Manufacturing activities, (D-E) Electricity, gas, steam and air conditioning supply; Water supply,</p>

	<p>sewerage, waste management and remediation activities, (F) Construction, (G) Wholesale and retail trade; repair of motor vehicles and motorcycles, (H) Transportation and storage, (I) Accommodation and food service activities, (J) Information and communication, (L) Real estate activities, (M) (Groups 69-74) Professional, scientific and technical activities, (N) Administrative and support service activities, (S) (Group 95.1) Repair of computers and communication equipment.</p>
<p>3.4. Statistical concepts and definitions</p>	<p><b>Main indicators</b>  The main indicators in this survey are indicators related to the development and monitoring of digital entrepreneurship. Among these indicators are:</p> <ul style="list-style-type: none"> <li>• Percentage of enterprises that have access to computers;</li> <li>• Percentage of employees who have access to a computer;</li> <li>• Percentage of enterprises that have internet access;</li> <li>• Percentage of employees who have internet access;</li> <li>• Percentage of enterprises that have ICT specialists;</li> <li>• Percentage of enterprises that have fix line of internet;</li> <li>• Percentage of enterprises that have used website;</li> <li>• Percentage of enterprises that have one of the social media;</li> <li>• Percentage of enterprises that have made sales/purchases online;</li> <li>• Percentage of enterprises that have remote meetings;</li> <li>• Percentage of enterprises that have remote access to email system, documents and business application;</li> <li>• Percentage of enterprises that have used industrial or service robots;</li> <li>• Percentage of enterprises that have reduced the amount of paper used for printing and copying;</li> <li>• Percentage of enterprises that have reduced the energy consumption of the ICT equipment.</li> </ul> <p><b>Information and Communication Technologies</b> are hardware and software (computers, cell phones, Internet, operating systems, computer software, mobile applications, etc.) that enable the collection, storage, use and transmission of data.</p> <p><b>ICT skills</b> are capabilities that enable effective use of common or advanced software tools (computers, software, and internet).</p> <p><b>Computers</b> include Personal Computers, portable computers, tablets, other portable devices such as Smartphone.</p> <p><b>Internet access:</b> The term "internet access" means having an external connection to the internet through an “internet service provider” (ISP).</p> <p><b>Broadband</b> are technologies or connections which enable rapid transmission of data respectively films, games, video-conferences over an Internet network (for example: ADSL, cable connection, UMTS,</p>

optical connection, VDSL, leased lines).

**Website:** Website is a document with hypertext, as it is shown by a web browser. Websites can have text, hypertext links, images, videos and sound

**Social media:** are a set of Internet 2.0 technologies that enable interactive information sharing, interoperability and user-oriented design. Social media include: social networks, blogs or micro blogs, websites for sharing multimedia content and tools for sharing knowledge based on Wiki. Enterprises use them, e.g. Facebook, Google+, Twitter, YouTube, etc., for linking, creating or exchanging content, information over the Internet, with customers, suppliers, partners or within an enterprise among persons employed. The enterprise uses social media if it has a user profile, account or license according to the requirements and type of social media.

**EDI, EDI-type:** Electronic Data Interchange (EDI) refers to the structured transmission of data or documents between organizations or enterprises by electronic means. It also refers specifically to a family of standards (EDI type) and EDI-type messages suitable for automated processing.

**EDI e-commerce:** Orders initiated with EDI-type messages. EDI (electronic data interchange) is an e-business tool for exchanging different kinds of business messages. EDI is here used as a generic term for sending or receiving business information in an agreed format suitable for automated processing (e.g. EDIFACT, XML, etc.) and without the individual message being manually typed.

**Sales via website:** Web sales are sales made via an online store (web shop), via web forms on a website or extranet, or apps. Web sales are distinguished from EDI sales. In particular, the type of e-Commerce transaction is defined by the method of making the order. This approach should mitigate the interpretation problems where both types, EDI and Web, are used in the process.

**Online payment:** An online payment is an integrated ordering-payment transaction.

**Robots - Robotics:** According to their intended application, robots may be industrial or service robots. An industrial robot is an automatically controlled, reprogrammable, multipurpose manipulator programmable in three or more axes, which may be either fixed in place or mobile for use in industrial automation applications. A service robot has a degree of autonomy and can operate in complex and dynamic environments that may require interaction with persons, objects or other devices. They use wheels or legs to achieve mobility and are often used in inspection, transport or maintenance tasks. Examples are: autonomous guided vehicles, inspection and maintenance robots, cleaning robots, etc.

	<p><b>ICT specialists:</b> Persons employed for whom ICT is the main job and to develop, operate or maintain ICT systems or applications. ICT specialists have the relevant skills to specify, design, install, support, manage, evaluate or perform research activities.</p> <p><b>Remote access:</b> Measure enterprises' readiness, capacity or willingness to make it possible for their employees to work remotely by allowing them a remote access to enterprise's resources such as: remote e-mail access, remote access to documents and ICT systems of the enterprise.</p>
3.5. Statistical unit	The target and observed statistical unit is the enterprise with over 10 employed. Data are published by economic activity and size of the enterprise.
3.6. Statistical population	<p>The statistics comprise all active enterprises in Albania, of all legal forms. The population consist of all enterprises that, according to Statistical Business Register were active in December of the reference year in economic activities covered by ICT, excluding:</p> <ul style="list-style-type: none"> <li>• Enterprise affiliates</li> <li>• Out of scope enterprises (NACE codes)</li> <li>• Enterprises with less than 10 employed.</li> </ul>
3.7. Reference area	The data on ICT on enterprise comprise all territory of Albania.
3.8. Time coverage	This statistical activity started in 2015. The data are complete and comparable for the time series 2015-2022.
3.9. Base period	Not applicable.
<b>4. Unit of measure</b>	Percentage is used as the unit of measurement for the indicators produced by this survey. The unit of measurement for the indicator of employees who use computers, computers with internet access and ICT specialists are also in percentage.
<b>5. Reference Period</b>	The data belong to the reference period of the current year, (first quarter of 2022) for most of the indicators and the annual calendar period for the indicators of employees who use computers, computers with internet access, online sales / purchases, etc. This report belongs to the reference year 2022.

## 6. Institutional mandate

6.1. Legal acts and other agreements	<p>The legal basis on which is based the annual survey of ICT in enterprises consist on:</p> <ul style="list-style-type: none"><li>• <a href="#">Law No.17/2018, "On Official Statistics"</a></li><li>• <a href="#">Official Statistics National Program, 2022 - 2026</a></li><li>• Decision of Parliament <a href="#">No. 19/2021 “Për miratimin e Planit vjetor 2021 për zbatimin e Programit të Statistikave Zyrtare 2017-2021”</a>.</li><li>• Decisions of the Statistical Council.</li></ul> <p>Whereas, under Article 6 of the Law No. 17/2018 “On Official Statistics”, the role of this body is to supervise, support and make decisions in support of INSTAT and other statistical agencies to ensure the design and implementation of the Official Statistic National Program, the acts adopted by this body are important for the progress of the implementation of statistical activities and the monitoring of the performance of the constituent institutions of the National Statistical System. Although Albania is not yet a member of the European Union, INSTAT performs all statistical activities in accordance with the respective EUROSTAT regulations. The survey results on ICT usage in enterprise, in order to be comparable with European countries, are produced by applying the new European Commission regulations (EC):</p> <ul style="list-style-type: none"><li>• <a href="#">Regulation (EU) No 2152/2019</a> on European business statistics;</li><li>• <a href="#">Commission Implementing Regulation (EU) 2022/1344</a> of 1 August 2022 laying down the technical specifications of data requirements for the topic 'ICT usage and e-commerce' for the reference year 2023, pursuant to Regulation (EU) 2019/2152 of the European Parliament and of the Council;</li><li>• <a href="#">Commission Implementing Regulation (EU) 2021/1190</a> of 15 July 2021 laying down the technical specifications of data requirements for the topic ‘ICT usage and e-commerce’ for the reference year 2022, pursuant to Regulation (EU) 2019/2152 of the European Parliament and of the Council;</li><li>• <a href="#">Commission Implementing Regulation (EU) 2020/1030</a> of 15 July 2020 laying down the technical specifications of data requirements for the topic ‘ICT usage and e-commerce’ for the reference year 2021, pursuant to Regulation (EU) 2019/2152 of the European Parliament and of the Council.</li></ul>
6.2. Data sharing	<p>Statistics on ICT usage on enterprises are transmitted to EUROSTAT from 2021. Currently, INSTAT completes a series of questionnaires to international organizations regarding the results of the survey on ICT in the enterprise, such as: European Commission, Eurostat questionnaires,</p>

	questionnaire of SEE 2021, DESI Index, etc.
<b>7. Confidentiality</b>	
7.1. Confidentiality - policy	The data collected are considered as strictly confidential and used only for statistical purposes and scientific research in accordance with the national Statistical Law No. 17/2018 "On Official Statistics" date 10.3.2018, and Law No. 9887, dated 10.03.2008, "Personal Data Protection". Article 31 of the Law No. 17/2018 "On Official Statistics" clearly define that all statistical information collected by INSTAT are confidential and may only be used or published in such summary tables that do not identify the information of the unit. The direct identification is called when a statistical unit is directly identified by the name, address or any officially recognized identification number. When data processing is performed in such a way as to enable the data subject to be identified, the data must be coded immediately so that the entities are no longer recognized.
7.2. Confidentiality - data treatment	The data at individual level on ICT usage in enterprises are excluded all individual demographic data, such as NIPT, enterprise's name, president's name and surname, date of establishment of the enterprise and its address. Primary confidentiality is flagged on either too few enterprises (where the number of units is less than 3), or if the dominance share of the largest two units is 75% or more. Secondary confidentiality is flagged in order to protect primary confidential data, which are suppressed so that sensitive information is not revealed. These are identified and flagged by NSO using a common methodology applied by other statistical agencies.
<b>8. Release policy</b>	
8.1. Release calendar	Notifications about the dissemination of statistics are published in the release calendar, which is available on the website. The announcements and delays are pre-announced in this calendar. In the case of delays, the date of the next publication and the explanation of the reasons for the delays are specified.
8.2. Release calendar access	Access to the release calendar is granted through the following link: <a href="#">Publication Calendar</a> .
8.3. User access	In accordance with article 34 of Law No. 17/2018 "On Official Statistics", official statistics are disseminated so that all users have an



	<p>immediate and equal right and all possible forms of media are used. INSTAT and statistical agencies, having in the program the responsibilities of dissemination, seek to meet every requirement of any organization or individual for unpublished data or specific analysis. The following dissemination channels are used to release the results of the ICT Usage in enterprises:</p> <ol style="list-style-type: none"> <li>1. <a href="#">Press Release</a></li> <li>2. <a href="#">The data in tabular form</a></li> <li>3. <a href="#">Data request via the form on the INSTAT website.</a></li> </ol>
<b>9. Frequency of dissemination</b>	Results of the Survey on the Usage of Information and Communication Technology in the Enterprise are published annually.
<b>10. Accessibility and clarity</b>	
10.1. News release	<p>The press release contains information on key indicators provided by the survey such as: enterprises that have computers, enterprises that have internet, enterprises that have broadband internet, enterprises that have websites, enterprises that have sold/bought online. The format of press release has not been changed; it is defined by publication sector as well as the date of release.</p> <p><a href="#">Press releases of ICT usage in enterprises</a> are published online at INSTAT's website.</p>
10.2. Publications	Results of ICT usage in enterprises are published in the publication " <a href="#">Albania in Figures</a> ". Users can find the results on the INSTAT website: Albania in Figures.
10.3. On-line database	<p>All the information is available in both Albanian and English language. The data on ICT usage in enterprises are not located in the statistical database, but detailed data can be found in Excel format where the main indicators are detailed by economic activity and enterprise size.</p> <p>These tables can be found at the link below: <a href="#">Usage of Information and communication technologies in enterprises.</a></p>
10.4. Micro – data access	Databases at micro level are not published due to confidentiality reasons. Aggregated data is the only type of data that is provided to external users. Even the micro data are not published they can be accessed based on the article 34 of Law No. 17/2018, "On Official Statistics".

10.5. Other	Users can submit specific requests for data from the “Usage of ICT in enterprises survey” through <a href="#">Data Request Form</a> .
10.6. Documentation on methodology	A short explanation related to the definitions of the main concepts and methodological explanations are provided to users in the end of press releases and publications. Additional support information is given to internal users when needed or required. Also the <a href="#">Methodological</a> notes are published at INSTAT's website.
10.7. Quality documentation	R&D, Innovation, Information Technology and Transport Statistics unit documents all the work process and procedure for the ICT usage in enterprises for internal purposes.
<b>11. Quality management</b>	
11.1. Quality assurance	INSTAT is committed to ensure the highest quality with respect to the compilation of statistical information. In accordance with the Statistics Law, INSTAT use statistical methods and processes in compliance with internationally recognized scientific principles and standards conduct on-going analyses of the statistics with a view to quality improvements and ensure that statistics are as up to-date. In performing its tasks it follows the general principles of quality management from the European Statistics Code of Practice. INSTAT for quality assurance is guided by the following principles: impartiality, quality of processes and products, user orientation, employee orientation, effectiveness of statistical processes and reduction of response burden.
11.2. Quality assessments	ICT usage in enterprises data are compared with previous year's data and checked for any large changes in the data, especially due to large deviations in the main variables concerned. In case of changes, data from other available sources are used to confirm the situation of cases where are encountered large differences of behaviour of one year with other years.
<b>12. Relevance</b>	
12.1. User needs	Users of ICT usage in enterprises are classified as external and internal. <ul style="list-style-type: none"> <li>• External users are: <ul style="list-style-type: none"> <li>○ Public administration institutions</li> <li>○ Universities</li> <li>○ National and international NGOs</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ Private firms</li> <li>○ Researchers, students and other similar groups.</li> <li>● With internal users, means other sectors within INSTAT which use ICT usage in enterprise results as input into their work.</li> </ul> <p>Publications of results of ICT usage in enterprises are sent annually to a specific group of users. Some key indicators are sent by filling in various questionnaires to the European Commission, Eurostat (Enlargement Countries Questionnaire), SEE 2021, Index of Economics and Digital Society, etc.</p>
12.2. User satisfaction	<p>Page Views (Hits) about ICT in Enterprise for 2021 are around 6.154 clicks.</p> <p>During 2021, INSTAT conducted the user satisfaction survey. The results of the survey shows that the quality of the theme "Information and Communication Technology in the Enterprise" was rated 3,61 (72.2%) on a scale of 1 (very poor) to 5 (very good).</p> <p>INSTAT organizes every year <a href="#">User Satisfaction Survey</a>.</p>
12.3. Completeness	<p>Completeness of ICT data in the enterprises is judged by comparing the quality and quantity of indicators covered by INSTAT with those of the regulations followed. ICT usage in enterprises statistics, in order to be comparable to those of European countries, are produced by applying the new European Commission (EC) regulations:</p> <ul style="list-style-type: none"> <li>● <a href="#">Regulation (EU) No 2152/2019</a> on European business statistics;</li> <li>● <a href="#">Commission Implementing Regulation (EU) 2022/1344</a> of 1 August 2022 laying down the technical specifications of data requirements for the topic 'ICT usage and e-commerce' for the reference year 2023, pursuant to Regulation (EU) 2019/2152 of the European Parliament and of the Council;</li> <li>● <a href="#">Commission Implementing Regulation (EU) 2021/1190</a> of 15 July 2021 laying down the technical specifications of data requirements for the topic 'ICT usage and e-commerce' for the reference year 2022, pursuant to Regulation (EU) 2019/2152 of the European Parliament and of the Council;</li> <li>● <a href="#">Commission Implementing Regulation (EU) 2020/1030</a> of 15 July 2020 laying down the technical specifications of data requirements for the topic 'ICT usage and e-commerce' for the reference year 2021, pursuant to Regulation (EU) 2019/2152 of the European Parliament and of the Council.</li> </ul> <p>The degree of completeness of the data for the survey on ICT usage in enterprises is 60% for 2022, as some indicators are not produced for the</p>

effect of quality and level of detail required.

### 13. Accuracy and reliability

#### 13.1. Overall accuracy

Overall, the data is checked with previous years to identify any significant changes in the data. Where changes occur, the survey data is checked with alternative sources, if any. When there is no information from alternative sources, INSTAT corrects or confirms the data using emails or by calling the respondents. Measures taken by INSTAT each year, to increase response rates or to reduce the impact of nonresponse by imputing them are as follow:

- Data are collected directly from the enterprise.
- Data are collected by using CAPI method with face to face interviews using tablets.
- The enumerators staff is trained how to handle difficult respondents.
- Due to the lack of an address system, it is often difficult for enumerators to find enterprise. For this reason, INSTAT staff, via email addresses or phone number, contacts the person responsible for completing the survey and receives more information on the location as well as the date and time of the meeting.
- Priority is given to larger businesses. When these enterprises refuses to respond to interviewer, an official request in particular is directed for the president of enterprises and signed by INSTAT director general; it is also done for enterprises that require only this way to give the information.
- A formal request is also sent to other companies that agree to respond only if the information is formally requested.
- The enterprises are invited to contact the Statistical Office in case of questions and always qualified staffs are available to answer the enterprises calls.
- Using tablets for data collection as a way to minimize interview time.

#### 13.2. Sampling error

The error due to probability sampling is estimated for more important indicators, which you may find on Table A1 in Annex 1. All indicator values are weighted to represent the population.

#### 13.3. Non - sampling error

Unit non-response takes in consideration enterprises that are unable or unwilling to give the answers or when interviewers are unable to find the enterprises address, or when other barriers exist to complete the interview. Unit non-response rate for ICT 2022 is 15.51%.

	<p>Item non-response rate for the variable “Computer Usages” is 0.00% and for “Internet Use” is 0.00%.</p> <p>Over-coverage is possible when a unit is registered in the activity under observation, but it actually performs some other activity, which is not the subject of observation or the enterprise’s status has changed, it’s not active anymore. Over coverage rate for ICT 2022 is 1.26%.</p>
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## 14. Timeliness and punctuality

14.1. Timeliness	<p>Results of ICT usage in enterprises are published on INSTAT website 182 days after the end of the reference period (T+182 days). The reference period of ICT 2022 results is the first quarter of 2022 and the closed calendar year for some indicators.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Reference period</td> <td style="width: 50%;">03/31/2022</td> </tr> <tr> <td>Date of publication</td> <td>09/29/2022</td> </tr> <tr> <td>Timeliness</td> <td>182</td> </tr> </table>	Reference period	03/31/2022	Date of publication	09/29/2022	Timeliness	182
Reference period	03/31/2022						
Date of publication	09/29/2022						
Timeliness	182						

14.2. Punctuality	<p>The data of the ICT Survey are disseminated according to the publication calendar.</p> <p>The publication of ICT usage in enterprise has been punctuality in time to 100% of publications carried out over the years.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Reference period</td> <td style="width: 50%;">03/31/2022</td> </tr> <tr> <td>Date of announcement</td> <td>09/29/2022</td> </tr> <tr> <td>Date of publication</td> <td>09/29/2022</td> </tr> <tr> <td>Time lag</td> <td>0</td> </tr> </table>	Reference period	03/31/2022	Date of announcement	09/29/2022	Date of publication	09/29/2022	Time lag	0
Reference period	03/31/2022								
Date of announcement	09/29/2022								
Date of publication	09/29/2022								
Time lag	0								

## 15. Coherence and comparability

15.1. Comparability - geographical	<p>Data on ICT usage in enterprises are collected according to <a href="#">Regulation (EU) No 2152/2019</a> on European business statistics and <a href="#">Commission Implementing Regulation (EU) 2021/1190</a> statistics on the Information Society, as well as annual implementing regulations setting out the monitored variables for each year.</p> <p>The data are transmitted to Eurostat. Since the questionnaire used is the same as required by EUROSTAT and Eurostat Regulations are followed, statistics on the usage of Information and Communication Technology (ICT) in the enterprise may be comparable to those of the member countries.</p>
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15.2. Comparability - over time	<p>Survey on the ICT usage in enterprises monitors the development of digital entrepreneurship. Each year, Eurostat and its member states emphasize a specific topic in the field of digital society. Therefore, certain statistics are monitored only once a year or every other year, which means that individual statistics have different lengths of time series comparability.</p> <p>ICT usage in enterprise data were first produced in 2015. The baseline data are comparable from the year of the start of the survey 2015-2022 in time series those providing a comparability of 8 years (CC2=Jlast-Jfirst+1=8).</p>
15.3. Coherence - cross domain	<p>There is no survey or comparable administrative source that can be taken as a reference for ICT usage in enterprises statistics. Only the final data in ICT usage in enterprises are published. Some of the indicators are checked with information that is available on the website for some of the ICT indicators in the enterprise.</p>
15.4. Coherence - internal	<p>The internal consistency of the data is checked before it is finalised. The linkage between variables is checked and coherence between different data series is checked before publication.</p>
<b>16. Cost and Burden</b>	<p>Personnel working for ICT usage in enterprises are 1 employed in Central Office, 11 Staff in Regional Offices, 49 enumerators, 2 Controllers and 1 IT staff.</p>
<b>17. Data revision</b>	
17.1. Data revision - policy	<p>Revision policy of usage ICT in enterprises is done in accordance with general revision policy and errors treatment policy introduced by INSTAT which can be found:</p> <ul style="list-style-type: none"> <li>• <a href="#">Statistical revision policy</a></li> <li>• <a href="#">The Errors Treatment Policy</a></li> </ul>
17.2. Data revision - practise	<p>ICT usage in enterprises data are revised when:</p> <ul style="list-style-type: none"> <li>• A new classification of activities is implemented</li> <li>• There are methodological differences</li> <li>• Revision of weights.</li> </ul> <p>For ICT usage in enterprises data, efforts have been done to follow the standard guidelines and principles in the revisions made in cooperation with the technical assistance received from the best experiences of the</p>

	<p>European Union countries.</p> <p>No reviews of data on “ICT usage in enterprises” for 2022 have been conducted, subject to this report.</p>
<p><b>18. Statistical processing</b></p>	
<p>18.1. Source data</p>	<p>Data on ICT usage in enterprises are based on survey. Frame population for ICT 2022 contains 6,971 enterprises. The sample size selected is 1,907 enterprises of all legal forms and types of ownership, with 10 and more employed, from which respondents were 1,591 enterprises.</p>
<p>18.2. Frequency of data collection</p>	<p>Data are collected on an annual basis.</p>
<p>18.3. Data collection</p>	<p>Data are collected by using CAPI method with face to face interviews using tablets. In addition to the data collected from the survey, the R&amp;D, Innovation, ICT and Transport statistics unit analyses and uses data from past years surveys on ICT usage in enterprises. Unlike economic surveys, the person responsible for this survey is a decision maker with great responsibility for ICT matters in the enterprise (ICT manager or senior professional in the ICT department). In small enterprises, the respondent should be someone at the level of managing director or owner. However, the respondent should not be someone solely responsible for accounting.</p> <p>Important phase in the preparation for data collection is the preparation of all the necessary materials and the preparation of data entry software. Should be identified the enterprises to be interviewed, the sample is divided among enumerators; the enumerators are selected and trained. At the training the enumerators receive the prepared materials such as guideline of questionnaire, enumerator’s tasks, list of economic activity, notification letter for enterprises, a laptop and a training on how to complete a questionnaire via laptops taking into account technical computing issues, etc.</p> <p>Everything reported by enterprises is recorded in the data collection process. In case of lack of clarity, the reporting unit is contacted. In case of non-reporting, an official letter signed by the head of the Institution is sent to the reporting unit. The enumerator is required to behave ethically in the event of refusals by enterprises.</p>

<p>18.4. Data validation</p>	<p>In terms of data validation, data editing procedures generally refer to micro level or otherwise enterprise level editing.</p> <ol style="list-style-type: none"> <li>1. Data editing in data entry program. <ul style="list-style-type: none"> <li>• Control of incoming questionnaires, Completeness checks, valid values checks, range checks, logical control of the questionnaire. The number of incoming questionnaires should be equal with the number of distributed questionnaires in the prefectures.</li> <li>• Individual checks are done for the cases of refusal and no contacts.</li> <li>• The answered active enterprises are checked for coherence of data given in different sessions of questionnaire.</li> </ul> </li> <li>2. Control of some questions through information that can be found from individual contact of enterprise.</li> <li>3. An appropriate weight is calculated for each unit that reported its data. This weight is calculated for various reasons: unequal probability of selection, nonresponse adjustment, enterprises that result out of scope. Outlier treatment is taken into consideration at the weighting procedure.</li> </ol>
<p>18.5. Data compilation</p>	<p>For the data compilation there are two basic procedures:</p> <ol style="list-style-type: none"> <li>1. <b>Quality of data</b> There are applied some rules for analysing quality of data: <ul style="list-style-type: none"> <li>• Mathematic control of the questionnaire · Logic control of the questionnaire's data</li> <li>• Comparison of time series data · Comparison of data with other years</li> <li>• Comparison of data on employment and turnover with the Balance Sheet and payroll file.</li> <li>• Analyse of huge deviations from average.</li> </ul> </li> <li>2. <b>Treatment of non-response</b> Are considered as all cases of: <ul style="list-style-type: none"> <li>• Non-contact</li> <li>• Full refuse</li> <li>• Partial refuses (for different tables and indicators).</li> </ul> </li> </ol> <p>For non-response cases, logical corrections should be made where information can be extracted from other variables and priority is given to further contacts with enterprises to collect missing information. For categorical variables (e.g. YES / NO questions), respondents with non-question or 'do not know' answers should not be imputed to the values of the enterprises that answered the question.</p>



18.6. Adjustment	Not applicable.
19. Comment	

## Annex 1

**Table A1. Indicators of the accuracy of estimates for the total number of enterprises, enterprises using Computers and enterprises having access to the Internet**

Total	Total number of enterprises	Standard deviation	95% Confidence interval		Coefficient of Variation
			Lower Limit	Upper Limit	
Number of surveyed enterprises	6,864	26.0	6,813	6,915	0.4%
Computer Usage	6,794	35.1	6,725	6,863	0.5%
Internet Use	6,701	41.9	6,619	6,783	0.6%

Computer Usage, expressed as the number of enterprises for the 95% confidence level, lies between 6,725 and 6,863 and has a standard deviation of 35.1, expressed as a percentage in the form of a coefficient of variation is 0.5%.

Internet Use, expressed as the number of enterprises for the 95% confidence level, lies between 6,619 and 6,783 and has a standard deviation of 41.9, expressed as a percentage in the form of a coefficient of variation is 0.6%.