

# Usage of Information and Communication

## Technology in Enterprises (ICT)

Reference Metadata in Euro SDMX Metadata Structure

(ESMS)

INSTAT

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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
1.4. Contact person function	Head of Unit, R&D, Innovation, Information Technology and Transport Statistics Unit
1.5. Contact mail address	St. Vllazën Huta, Building 35, Entrance 1, Tirana, ZIP Code 1017, Tirana
1.6. Contact email address	<a href="mailto:inuellari@instat.gov.al">inuellari@instat.gov.al</a>
1.7. Contact phone number	+ 355 (4)2 2233357/249
1.8. Contact fax number	+(355) 4 2228300
<b>2. Metadata update</b>	
2.1. Metadata last certified	02.11.2021
2.2. Metadata last posted	02.11.2021
2.3. Metadata last update	02.11.2021
<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 sell or buy through websites or through computer data sharing, i.e. Degree of enterprise digitization. Prioritization is done in accordance with <a href="#">Regulation (EU) No 2152/2019</a> on European business statistics, <a href="#">Regulation (EC) No 808/2004</a> of the European Parliament and of the Council of 21 April 2004, concerning Community Statistics on the Information Society, <a href="#">EU implementing regulations</a> for individual years and <a href="#">Official Statistics National Program, 2017 - 2021</a> and <a href="#">Law No. 18/2018 "On Official Statistics"</a>, the <a href="#">National Program of Official Statistics 2017-2021</a> and the <a href="#">Decision of the Assembly No. 19/2021 "On</a></p>

	<a href="#">the approval of the Annual Plan 2021 for the implementation of the Official Statistics Program 2017-2021"</a>
3.2. Classification system	<p>The classification used for enterprise information technology statistics is the Statistical Classification of Economic Activities, <a href="#">NACE Rev.2</a>.</p> <p>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>
3.3. Sector coverage	<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_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, 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>
3.4. Statistical concepts and definitions	<p><b>Main indicators</b></p> <p>The main indicators in this survey are indicators related to the</p>

development and monitoring of digital entrepreneurship. Among these indicators are:

- Percentage of enterprises that have access to computers;
- Percentage of employees who have access to a computer;
- Percentage of enterprises that have internet access;
- Percentage of employees who have internet access;
- Percentage of enterprises that have fix line of internet;
- Percentage of enterprises that have used website;
- Percentage of enterprises that have one of the social media;
- Percentage of enterprises that have made sales/purchases online;
- Percentage of enterprises that have used the Cloud software;
- Percentage of enterprises that have used information sharing for resource planning and management;
- Percentage of enterprises that have used customer relationship management software;
- Percentage of enterprises that have used the Internet of Things.

**Information and Communication Technologies** 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.

**ICT skills** are capabilities that enable effective use of common or advanced software tools (computers, software, and internet).

**Computers** include Personal Computers, portable computers, tablets, other portable devices such as Smartphone.

**Internet access:** The term "internet access" means having an external connection to the internet through an "internet service provider" (ISP).

**Broadband** 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, 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 microblogs, 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 (EDItypes) 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.

**Extranet:** A closed network that uses internet protocols to securely share enterprise's information with suppliers, vendors, customers or other businesses partners. It can take the form of a secure extension of an Intranet that allows external users to access some parts of the enterprise's Intranet. It can also be a private part of the enterprise's website, where business partners can navigate after being authenticated in a login page.

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

**Cloud services:** Refers to information and communication technology services that are used on the Internet to access computer programs, storage capacities, etc.

**Automatic information sharing within the enterprise:** A software package that is used for enterprise resource planning and management by sharing information between different functional areas (e.g accounting, planning, production, marketing, etc.).

**CRM Software:** Refers to any client information management software application.

**3D printing:** Refers to the use of special printers either by the enterprise itself or the use of 3D printing services provided by other enterprises for the creation of three-dimensional physical objects using digital technology.

**Internet of Things (IoT):** The Internet of Things (IoT) refers to

	interconnected devices or systems, often called “smart” devices or “smart” systems. They collect and exchange data and can be monitored or remotely controlled via the Internet, through software on any kind of computers, smartphones or through interfaces like wall-mounted controls.
3.5. Statistical unit	The target and observed statistical unit is the enterprise with over 10 employed. Data published by economic activity and size of the enterprise refers to the enterprise.
3.6. Statistical population	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: <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 2015-2021.
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 and computers with internet access is also the percentage.
<b>5. Reference Period</b>	The data belong to the reference period of the current year 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 2021.
<b>6. Institutional mandate</b>	
6.1. Legal acts and other agreements	The legal basis on which is based the annual survey of ICT in enterprises consist on: <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, 2017 - 2021</a></li> <li>• Decision of Parliament <a href="#">No. 19/2021</a> “For the approval of the</li> </ul>

	<p><a href="#">annual plan 2021</a> for the implementation of the Program of official Statistics 2017-2021";</p> <ul style="list-style-type: none"> <li>• Decisions of the Statistics 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.</p> <p>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="#">Regulation 808/2004</a> of the European Parliament and of the Council of 21 April 2004 concerning Community Statistics on Information Society.</li> <li>• <a href="#">All legal acts</a> related to this data collection.</li> </ul>
6.2. Data sharing	<p>Statistics on ICT usage on enterprises are not transmitted to EUROSTAT. 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, questionnaire of SEE 2020, DESI Index, etc. INSTAT plans to transmit data on ICT usage on enterprise as soon as possible to EUROSTAT.</p>
<b>7. Confidentiality</b>	
7.1. Confidentiality - policy	<p>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.</p>

<p>7.2. Confidentiality - data treatment</p>	<p>Albanian Institute of Statistics protects and does not disseminate data it has obtained or it has access to, which enable the direct or indirect identification of the statistical units. Albania Institute of Statistics takes all appropriate preventive measures so as to render impossible the identification of individual statistical units by technical or other means that might reasonably be used by a third party. Statistical data that could potentially enable the identification of the statistical unit are disseminated by Albania Institute of Statistics if and only if:</p> <ul style="list-style-type: none"> <li>a) The data have been treated, as it is specifically set out in the Regulation, in such a way that their dissemination does not prejudice statistical confidentiality or</li> <li>b) The statistical unit has given its consent, without any reservations, for the disclosure of data.</li> </ul> <p>The confidential data that are transmitted to Albania Institute of Statistics are used exclusively for statistical purposes and the only persons who have the right to have access to these data are the personnel engaged in this task. Issues referring to the observance of statistical confidentiality are examined by the staff working in Albania Institute of Statistics. The responsibilities of this staff are to recommend on: which detailed level the statistical data can be disseminated, so as the identification, either directly or indirectly, of the surveyed statistical unit is not possible; the anonymization criteria for the microdata provided to users; the access granting to researchers on confidential data for scientific purposes.</p>
<p><b>8. Release policy</b></p>	
<p>8.1. Release calendar</p>	<p>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.</p>
<p>8.2. Release calendar access</p>	<p>Access to the release calendar is granted through the following link: <a href="#">Publications Calendar</a>.</p>
<p>8.3. User access</p>	<p>In accordance with article 34 of Law No. 17/2018 "On Official Statistics", official statistics are disseminated so that all users have an 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. Website - online release</li> <li>2. Written requests</li> <li>3. Publication “<a href="#">ICT usage in enterprises</a>”</li> <li>4. <a href="#">Data request</a>, section available for external users</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>Press releases of ICT usage in enterprises are published online at INSTAT's website.</p>
10.2. Publications	Results of ICT usage in enterprises are published in the publication Albania in Figures. Users can find the results on the INSTAT website: <a href="#">Albania in Figures</a> .
10.3. On-line database	All the information is available in both Albanian and English language. The data on ICT usage in enterprises are published in the official website of INSTAT, under the section: <a href="#">Statistical database</a> .
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 data requests through INSTAT website in a dedicated section for <a href="#">Contact</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	<p>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 ongoing 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.</p>
11.2. Quality assessments	<p>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.</p>
<b>12. Relevance</b>	
12.1. User needs	<p>Users of ICT usage in enterprises are classified as external and internal.</p> <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> <li>○ Private firms</li> <li>○ Researchers, students and other similar groups.</li> </ul> </li> <li>• With internal users, means other sectors within INSTAT which use ICT usage in enterprise results as input into their work.</li> </ul>
12.2. User satisfaction	<p>Page Views (Hits) about ICT in Enterprise for 2020 are around 1,236 clicks.</p> <p>During 2020, 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 3.71 (74.2%) on a scale of 1 (very poor) to 5 (very good).</p> <p>INSTAT organizes every year <a href="#">User Satisfaction Survey</a>.</p>
	<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</p>

<p>12.3. Completeness</p>	<p>new European Commission (EC) regulations:</p> <ul style="list-style-type: none"> <li>• <a href="#">Commission Regulation (EU) 2019/1910 of 7 November 2019</a> implementing Regulation (EC) No 808/2004 of the European Parliament and of the Council concerning Community statistics on the information society for reference year 2020 (Text with EEA relevance).</li> <li>• <a href="#">Commission Regulation (EU) 2018/1798</a> of 21 November 2018 implementing Regulation (EC) No 808/2004 of the European Parliament and of the Council concerning Community statistics on the Information Society for the reference year 2019.</li> <li>• <a href="#">Commission Regulation (EU) 2017/1515</a> of 31 August 2017 implementing Regulation (EC) No 808/2004 of the European Parliament and of the Council concerning Community statistics on the Information Society for the reference year 2018.</li> <li>• <a href="#">Commission Regulation (EU) 2016/2015</a> of 17 November 2016 implementing Regulation (EC) No 808/2004 of the European Parliament and of the Council concerning Community statistics on the Information Society.</li> </ul> <p>The degree of completeness of the data for the survey on ICT usage in enterprises is 60% for 2021, as some indicators are not produced for the effect of quality and level of detail required.</p>
<p><b>13. Accuracy and reliability</b></p>	
<p>13.1. Overall accuracy</p>	<p>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:</p> <ul style="list-style-type: none"> <li>• Data are collected directly from the enterprise.</li> <li>• Data are collected by using CAPI method with face to face interviews using tablets.</li> <li>• The enumerators staff is trained how to handle difficult respondents.</li> <li>• 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.</li> <li>• 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</li> </ul>

	<p>INSTAT director general; it is also done for enterprises that require only this way to give the information.</p> <ul style="list-style-type: none"> <li>• A formal request is also sent to other companies that agree to respond only if the information is formally requested.</li> <li>• The enterprises are invited to contact the Statistical Office in case of questions and always qualified staffs are available to answer the enterprises calls.</li> <li>• Using tablets for data collection as a way to minimize interview time.</li> </ul>								
13.2. Sampling error	<p>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.</p>								
13.3. Non - sampling error	<p>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 2021 is 16.00%.</p> <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 2021 is 1.44%.</p>								
<b>14. Timeliness and punctuality</b>									
14.1. Timeliness	<p>Results of ICT usage in enterprises are published on INSTAT website 212 days after the end of the reference period (T+212 days). The reference period of ICT 2021 results is the first quarter of 2021 and the closed calendar year for some indicators.</p> <table border="1"> <tr> <td>Reference period</td> <td>3/31/2021</td> </tr> <tr> <td>Date of publication</td> <td>10/29/2021</td> </tr> <tr> <td>Timeliness</td> <td>212</td> </tr> </table>	Reference period	3/31/2021	Date of publication	10/29/2021	Timeliness	212		
Reference period	3/31/2021								
Date of publication	10/29/2021								
Timeliness	212								
14.2. Punctuality	<p>The data of the ICT Survey are disseminated according to the publication calendar. 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"> <tr> <td>Reference period</td> <td>3/31/2021</td> </tr> <tr> <td>Date of announcement</td> <td>10/29/2021</td> </tr> <tr> <td>Date of publication</td> <td>10/29/2021</td> </tr> <tr> <td>Time lag</td> <td>0</td> </tr> </table>	Reference period	3/31/2021	Date of announcement	10/29/2021	Date of publication	10/29/2021	Time lag	0
Reference period	3/31/2021								
Date of announcement	10/29/2021								
Date of publication	10/29/2021								
Time lag	0								

<b>15. Coherence and comparability</b>	
15.1. Comparability - geographical	<p>Data on ICT usage in enterprises are collected according to Regulation (EC) No. 808/2004 of the European Parliament and of the Council on Community statistics on the Information Society, as well as annual implementing regulations setting out the monitored variables for each year.</p> <p>The data are not 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>
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. Baseline data are comparable from 2015-2021 in time series those providing a comparability of 7 years (<math>CC2=Jlast-Jfirst+1=7</math>).</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.</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, 54 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> </ul>

	<ul style="list-style-type: none"> <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 European Union countries.</p> <p>No reviews of data on “ICT usage in enterprises” for 2021 have been conducted, subject to this report.</p>
<b>18. Statistical processing</b>	
18.1. Source data	Data on ICT usage in enterprises are based on survey. Frame population for ICT 2021 contains 6,796 enterprises. The sample size selected is 1,947 enterprises of all legal forms and types of ownership, with 10 and more employed, from which respondents were 1,612 enterprises.
18.2. Frequency of data collection	Data are collected on an annual basis.
18.3. Data collection	<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	6,715	19.3	6,677	6,753	0.3%
Computer Usage	6,605	34.7	6,537	6,673	0.5%
Internet Use	6,501	45.2	6,412	6,589	0.7%

Computer Usage, expressed as the number of enterprises for the 95% confidence level, lies between 6,537 and 6,673 and has a standard deviation of 34.7, 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 6,412 and 6,589 and has a standard deviation of 45.2, expressed as a percentage in the form of a coefficient of variation is 0.7%.