



**MONTENEGRO**  
**STATISTICAL OFFICE**

**METHODOLOGY**

Use of information and communication technologies in households and by individuals

<b>87</b>	<b>METHODOLOGICAL GUIDELINES</b>	<b>87</b>
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Podgorica, May 2021

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**The legal basis** for the implementation of the survey on statistics of Use of information and communication technologies in households and by individuals is the Law on Official Statistics and Official Statistical System of Montenegro ("Official Gazette of Montenegro", No. 18/12 from 30. 03. 2012, 047/19 from 12. 08. 2019) and Annual plan for statistical surveys.

Law on Official Statistics and the system of official statistics reporting units are obliged to give information and individual data obtained in the survey are protected and can be used only for statistical purposes.

## METHODOLOGICAL GUIDELINES

### The aim of survey

The main objective of the survey on the use of information and communication technologies in households and by individuals is to collect information from individuals about the following characteristics:

- access and use of the Internet by individuals and households,
- use of the Internet for various purposes by individuals and households,
- ICT security, security and protection,
- ICT skills and needs for ICT skills,
- barriers to the use of ICT, the Internet and other electronic networks,
- access to the use of the Internet in order to obtain information and services from public administrations.

The regulation defines what data and what characteristics of households and individuals will be collected in the reference year, which means that not all the above characteristics are monitored every year.

### Statistical units

Statistical units are:

- (1) Households with at least one persons aged between 16 and 74;
- (2) Persons aged between 16 and 74.

### Coverage

Use of information and communication technologies in households and by individuals is conducted on a representative sample a the level of Montenegro. The framework for the sample design is the 2011 Census od population, households and dwellings. The survey is conducted on a two stage stratified sample. Size sample is 1 800 households with 1 800 individuals annually. Collective housholds are not observation units. The survey covers all households in Montenegro with at least one person aged between 16 and 74 years.

The reference period refers to the 3 months of the year which the survey is conducted, while some questions refer to the year preceding the survey.

### **Survey organization**

Pursuant to the Plan of Statistical Surveys, Organization, Preparation and Implementation of survey, as well as collected data processing are done by Statistical Office and direct actors are interviewers and controllers.

Statistical Office performs all preparation tasks for proper and successful survey implementation. For this purpose, it also performs the tasks, as it follows: survey methodology production, questionnaire drafting, determining framework for reporting unit selection, performing selection and make an address list of reporting units.

Data collection is realized by face-to-face survey, CAPI<sup>1</sup> method of data collection, at the level of Montenegro.

The period of data collection is annually, data are collected only once a year, in April, for the year in which the survey is conducted.

### **Definitions**

**Personal computer (PC)** includes desktop computer that is usually fixed in one place with a separate physical keyboard for data input, display, and storage case. Laptop is not considered as a PC.

**Laptop** is the computer with extremely small dimensions than the personal computer that a man can easily carry with you.

**Access to the Internet** refers to all the ways in which the household is able to have access to the internet, both if it is considered the possession of a device used to access the Internet (modem, ISDN, DSL, Cable Internet, 3G, GPRS), or the possibility of connection to the internet used in areas where the household is located.

**DSL (Digital Subscriber Line)** stands for a technology that transports data at high speeds (e.g. equal to or greater than 144 Kbit/s) over existing copper networks. DSL technology is a type of Internet connection that is much faster than dial-up access. Therefore, it is referred as a broadband one.

Important DSL technologies include:

**ADSL:** This term is used for DSL where assigned more bandwidth to download from upload (Asymmetric DSL).

**SHDSL:** The same download and upload speed (DSL Simmetric).

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<sup>1</sup> CAPI (Computer aided personal interviewing) - a method of data collection in which data is collected via computer, laptop or tablet.

**VDSL:** Very high bit-rate DSL, with speeds up to 53Mbps compared to about 8 to 10 Mbps for ADSL.

**Wired fixed Internet** (Cable modem, LAN, optic cable, PLC)

**Cable modem:** This technology allows high-speed Internet access to be delivered over a cable TV network.

**LAN (Local Area Network):** High-speed Internet connections via housing networks.

**PLC:** Means power line communication. Broadband over ordinary power lines in general can range from 256 Kbit/s to 2.7 Mbit/s.

**Fibre optic cable:** A technology which is not based on copper wire. The technology uses lasers or light emitting diodes and can provide unlimited bandwidth potential.

**Fixed wireless technologies:** Technologies in this group are all wireless technologies for Internet access between fixed points (provider for the household, and not at home). Examples include WiFi or WiMax. Public WiFi or WiMax can be available to everyone within a specific area. Different households within a building can be connected to WiFi. WiMax connectivity provides fixed wireless access similar to WiFi functionality, but at a much higher range (up to about 50 km).

**Modem** (dial-up access over normal telephone line) connected households use dial-up via analogue modems.

**Mobile broadband** connections (3G, GPRS, GSM, UMTS)

Third generation (3G) of mobile technology allows greater access speed compared to GPRS.

**GPRS** data transmission standard for mobile telephony is the transition to the 3G standard. GPRS allows for faster data transfer compared to traditional standard, but not as fast as the 3G.

**GSM** (Global System for Mobile Communications) in addition to voice and data transmission, this standard provides services such as SMS or international Roaming.

**UMTS** is a third generation (3G) mobile technology for networks based on the GSM standard.

## Dissemination

The publication of data is done in accordance with the Statistical Release Calendar of the Statistical Office, according to a predefined date and manner of publishing data.

Published data are available to users in the annual release on the use of information and communication technologies in Montenegro, the Statistical Yearbook, the publication "Montenegro in Figures", and on the Web.

## Harmonization with EU regulations

The survey on the usage of information and communication technologies in households and by individuals is harmonized with the Implementing Regulation (EC) no. 808/2004 and regulations of the European Commission which change depending on the year of survey.

**Published and printed by Statistical Office of Montenegro (MONSTAT)  
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