



Agency for Strategic planning
and reforms of the
Republic of Kazakhstan
Bureau of National statistics

Quality Report

**On the use
of information and communication technologies by households in
the Republic of Kazakhstan
in 2024**

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S.1 Contact Information

S.1.1 Organization

Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan

S.1.2 Structural Division

Department of Service and Energy Statistics

S.1.3 Contact Person's Name

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S.1.3.1 Name of the acting head of the Responsible Structural Division

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S.1.5 Contact Person's Postal Address

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S.1.6 Contact Person's Email Address

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S.2 Introduction - Relevance

The level of development of information and communication technologies (hereinafter - ICT) to a certain extent affects the competitiveness of the country's economy.

The current level of economic development should correspond to the level of interaction between the business sector, civil society and the state. It is impossible to achieve this without the development and application of ICT.

ICT is a set of methods, production processes and software and hardware integrated for the purpose of collecting, processing, storing, distributing, displaying and using information in the interests of its users.

As part of the information support for government agencies to implement the activities of the national project program, information is generated annually that characterizes the level of ICT use in enterprises.

The basis for the formation of statistics on the use of ICT by households is the report on the questionnaire N-020 "Household survey questionnaire on the use of information and communication technologies". The main purpose of the statistical survey is to determine the level of ICT use by households

The main users are the Ministry of Digital Development, Innovation and Aerospace Industry of the Republic of Kazakhstan and other users.

The Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan (hereinafter referred to as the Bureau) holds meetings of working groups (focus groups) with the participation of potential users and respondents, representatives of interested government agencies, which analyze in detail the indicators of national statistical forms for their relevance and avoid duplication with indicators of departmental statistical forms and administrative forms.

S.3 Metadata Update

S.3.1 Last Confirmation of Updated Metadata

August 24, 2022

S.3.2 Last Publication of Metadata

August 24, 2022

S.3.3 Last Update of Metadata

August 24, 2022

S.4 Presentation of Statistical Information

S.4.1 Description of Data

The main indicators of statistical observation in the field of ICT by households are the proportion of Internet users, the level of digital literacy of the population, households with access to the Internet, the level of penetration of household broadband Internet access networks and computer activities of household members.

S.4.2 Classification System

Statistical classifications are of great importance in conducting sample surveys. Their use affects the comparability of the information collected with data from other statistical surveys and its quality.

When conducting a sample survey on household use of ICT, the following statistical classifiers are used:

- 1) CATO – Classifier of Administrative-Territorial Objects;
- 2) ISCO - International Standard Classification of Occupations;
- 3) ISCED - International Standard Classification of Education.

As well as reference books developed by the Bureau.

These classifiers are available on the Bureau's website: www.stat.gov.kz / «Home» / «Classifiers».

S.4.3 Sectoral Coverage

The households included in the sample participate in the observation.

The general population is the statistical register of housing stock (hereinafter referred to as the GRF). The general population includes households living in all types of residential premises, with the exception of those living in shared communal apartments, dormitories, medical and social institutions (organizations) for the elderly, people with disabilities, children with disabilities in hospital settings, orphanages, prisons, hotels, religious communities and other similar residential premises. The sample was formed from apartments and amounted to 21,000 households (annually).

S.4.4 Statistical Concepts and Definitions

1) The survey unit is a household, which is an economic entity consisting of one or more individuals living together, combining all or part of their income and property, and jointly consuming goods and services.

Household members aged 6 years and older are subject to the survey

2) Instrument: Statistical form "Household survey questionnaire on the use of information and communication technologies" (index H-020, annual frequency).

3) Type of observation: selective.

4) The deadline for submission is January 30 (inclusive). The survey is conducted on paper by the interviewers. The sample survey questionnaire is

filled out for each individual household (family) included in the sample. It is not allowed to combine information on several families belonging to different households in one form of the questionnaire, even if they live within the same premises.

The last revision of the form was in 2022, the statistical form is available on the Bureau's Internet resource. www.stat.gov.kz in the section «For respondents» / «Statistical forms for 2025» / «Annual forms».

S.4.5 Statistical Unit

Statistical objects are households and family members aged 6 years and older.

S.4.6 General total (The principle of choosing survey units)

The survey on the use of ICT in households is carried out on the basis of a sample observation method.

The information base for the formation of a sample of households is the GRF.

The use of the specified database is due to a number of advantages:

- the availability of a ready-made sampling frame, which excludes one of the significant cost items associated with the compilation of the sample base;
- the availability of a constantly updated database, which is necessary for the implementation of household rotation;
- availability of information about households in a territorial context.

The sample population is 21,000 households and the reserve is 0.1% of the total population (annually).

In order to avoid the effect of household fatigue from participating in the survey, annual household rotation (replacement) is carried out.

The size of the rotation is 1/3 of the total number of households surveyed. Every year, 1/3 of the households are removed from the sample, replaced with others, and after 3 years, the sample population is completely updated. Household replacement is performed using the same method as was originally used to generate the sample. This includes replacing households with households belonging to the same stratum, segment, or cluster.

Households living in all types of residential premises are subject to examination, with the exception of those living in shared communal apartments, dormitories, boarding schools for the elderly and disabled, orphanages, prisons, hotels, religious communities and other similar residential premises.

S.4.7 Territorial Coverage

Republic of Kazakhstan (all regions and cities of republican significance).

S.4.8 Time Coverage

In Kazakhstan, a survey on the use of ICT in households has been conducted on an annual basis since 2004. Time series data are available from 2004 to 2024.

S.4.9 Base period

The base period is the year preceding the survey year.

S.5 Unit of Measure

%

S.6 Reporting Period

Год.

S.7 Legal Framework

S.7.1 Legal Basis

1. Law of the Republic of Kazakhstan dated March 19, 2010 No. 257-IV «On State Statistics».
2. Rules for the submission of primary statistical data by respondents, approved by Order No. 173 of the Chairperson of the Agency of the Republic of Kazakhstan for Statistics dated July 9, 2010 (registered in the State Register of Regulatory Legal Acts under No. 6459)
3. Statistical Work Plan, approved by the Order of the Head of the Bureau.
4. Schedule for Dissemination of Official Statistical Information, approved by the Order of the Head of the Bureau.
5. Methodology for statistics of information and communication technologies" approved by the Order of the Chairman of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan dated October 21, 2016 No. 246.

S.8 Confidentiality and Data Protection

S.8.1 Confidentiality Policy

1. Article 8 of the Law of the Republic of Kazakhstan dated March 19, 2010 «On State Statistics» guarantees the confidentiality and protection of data submitted by respondents.
2. Article 28 of the Entrepreneurial Code of the Republic of Kazakhstan dated October 29, 2015 ensures the protection of information that constitutes a commercial secret.
3. The Information Security Policy (hereinafter – the Policy), approved by the Order of the Head of the Bureau dated February 10, 2021 No. 20, defines the goals, objectives, guiding principles, and practices in the field of information security. The primary objective of the Policy is to ensure the availability of official statistical information, confidentiality of information stored and processed by the Bureau's computing systems, and integrity and authenticity of this information.

S.8.2 Confidentiality - Data Handling

Rules for the provision of de-identified databases for use in scientific and scientific-technical activities, approved by the Order of the Chairperson of the Agency for Statistics of the Republic of Kazakhstan dated July 2, 2010 No. 168 (registered with the Ministry of Justice of the Republic of Kazakhstan on August 13, 2010 No. 6388).

S.9 Publication Policy

S.9.1 Publication Calendar

Items 1 and 2 of Article 26 of the Law of the Republic of Kazakhstan “On State Statistics” dated March 19, 2010 No. 257-IV.

he statistical work plan and the Schedule for the dissemination of official statistical information for 2025 are available on the Single Portal of government agencies. www.gov.kz in the section «Government agencies» / «Other» / «Agency for Strategic Planning and Reforms of the Republic of Kazakhstan» / «Bureau» / «Documents».

S.9.2 Access to the Schedule

The schedule for the dissemination of official statistical information for 2025 is available on the Unified Portal of government Agencies. www.gov.kz in the section «Government agencies» / «Other» / «Agency for Strategic Planning and Reforms of the Republic of Kazakhstan» / «Bureau» / «Documents».

S.9.3 User Access

The Bureau's website www.stat.gov.kz «Home» / «Statistics» / «Social Statistics» / «Statistics of Education, Science, and Innovation» / «Electronic Tables».

S.10 Frequency of Dissemination

Annually.

S.11 Format of Dissemination, Accessibility, and Clarity

S.11.1 News Publications

S.11.2 Publications

1) Spreadsheets «On the use of information and communication technologies in households of the Republic of Kazakhstan», posted on the Internet resource of the Bureau stat.gov.kz , in the section «Home»/ «Industry statistics»/ «Statistics of information and communication technologies and communications»/ «Spreadsheets»;

2) The main indicators and dynamic tables are posted on the Bureau's Internet resource stat.gov.kz, in the section «Home»/ «Industry statistics»/ «Statistics on information and communication technologies and communications»/ «Dynamic series» / «On the use of ICT by households».

S.11.3 Online Databases

The Bureau's website: www.stat.gov.kz Information and Analytical System «Taldau» / «Statistics of information and communication technologies»/ «Use of ICT by households».

S.11.3.1 AC1. Data Tables – Consultations

Not implemented.

S.11.4 Access to Microdata

Rules for the provision of de-identified databases for use in scientific and scientific-technical activities, approved by the Order of the Chairperson of the Agency for Statistics of the Republic of Kazakhstan dated July 2, 2010 No. 168 (registered with the Ministry of Justice of the Republic of Kazakhstan on August 13, 2010 No. 6388).

S.11.5 Other

Not applicable.

S.11.5.1 AC2. Metadata - Consultations

Not implemented.

S.12 Documentation Availability

S.12.1 Methodology documentation

- 1) Methodology for statistics of information and communication technologies» approved by the Order of the Chairman of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan dated October 21, 2016 No. 246 (registered with the Ministry of Justice of the Republic of Kazakhstan on November 23, 2016 No. 14447). Posted on the Bureau's Internet resource www.stat.gov.kz in the section «Methodology»/ «Statistics of information and communication technologies and communications».
- 2) Methodological Position on Statistics 2018, fourth edition, with addendum. Available at www.stat.gov.kz «Methodology»;
- 3) A guide on measuring access to and use of ICTs at the household and individual levels is available on the Internet resource of the International Telecommunication Union (ITU) www.itu.int .

S.12.2 Quality Documentation

1. Quality Policy approved by the Order of the Chairperson of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan dated November 16, 2020.
2. Quality objectives of the relevant structural division.
- 3 Documented information of the quality management system: Quality Manual; Documented Procedures; Instructions; Process Maps.
4. Standard Methodology for Describing the Process of Statistical Information Production by State Agencies, approved by Order No. 53 of the Chairperson of the Committee on Statistics dated March 30, 2015.
5. Methodology for Evaluating the Quality of Official Statistical Information, approved by Order No. 63 of the Chairperson of the Committee on Statistics dated May 23, 2018.

S.13 Quality Management

S.13.1 Quality Assurance

The quality and reliability of data on ICT statistics in organizations is supported by generally accepted procedures:

- compliance with the basic principles of primary accounting;
- the use of standard statistical classifications of goods, products, and services;
- development and implementation of various controls (format-logical, arithmetic) at the stages of primary data collection and processing;
- obtaining additional information from the respondents to confirm the reliability of the primary data;
- conducting a comparative analysis of statistical data in dynamics;
- the definition of validation at the level of input of primary data in electronic format, as well as the inclusion of various format-logical controls in the software for processing primary statistical information to improve data

quality, verify the correctness of filling out the statistical form and minimize the lack of answers to some questions of the statistical form.

S.13.2 Quality Assessment

«Methodology for statistics of information and communication technologies» complies with international standard.

S.14 Relevance

S.14.1 User Needs

Information users: The Ministry of Digital Development, Innovation and Aerospace Industry of the Republic of Kazakhstan, the Ministry of National Economy of the Republic of Kazakhstan, government agencies, individuals and legal entities, central and local executive bodies - for analytical work.

S.14.2 User Satisfaction

A user questionnaire is available on the Bureau's website www.stat.gov.kz «Home» / «Surveys» / «User Questionnaire».

In addition, in order to maintain constant feedback from users and respondents, the Bureau operates a Single Contact Center 1446.

S.14.3 Completeness /R1. Data Completeness – Share

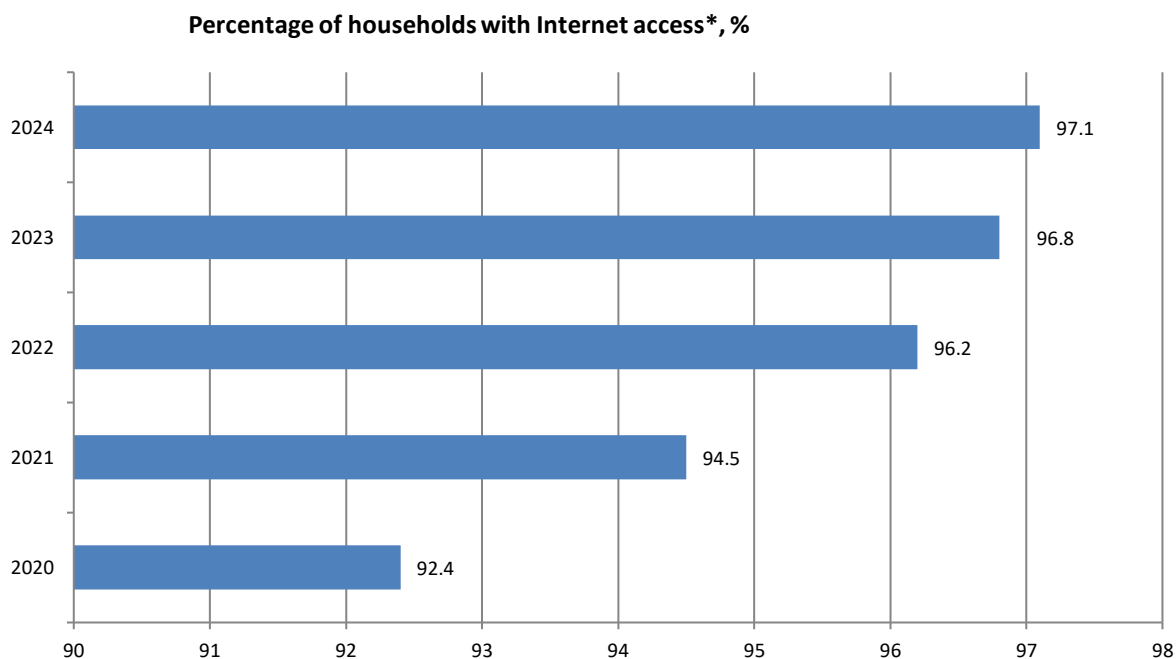
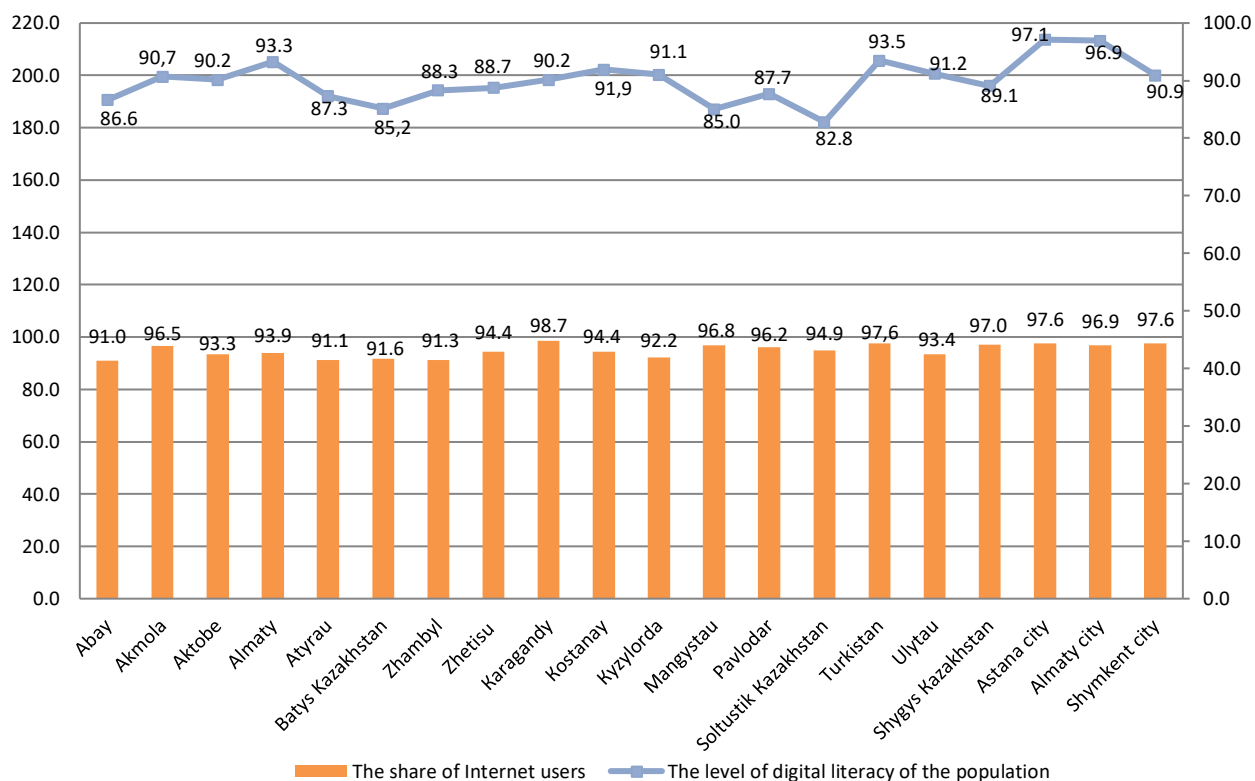
S.15 Accuracy and Reliability (based on observation type)

S.15.1 Overall Accuracy

The survey on the use of ICT by households is designed in such a way that possible errors can be minimized and controlled. When conducting a sample survey, there may be inaccuracies called random errors in statistics (incorrect filling in cost data, specialist error when entering a report, etc.). Such errors are identified and corrected by the Departments of Statistics of the regions and cities of Almaty, Astana, Shymkent and the Bureau during statistical observation.

In 2024, a nationwide sample statistical survey was conducted on the use of ICT by households. A sample survey was conducted in 21,000 households. The general population for the formation of a sample of households is the GRF.

In the reporting year 2024, the share of computer users from the total population aged 6 years and older was 88.8%, of which aged 6-74 years – 91.3%, of which 87.2% and 89.1% in rural areas, respectively.



The penetration rate of home broadband Internet access networks was 97.0%.

S.15.2 Sampling Errors – Indicators A1.

The survey on the use of ICT by households is conducted on the basis of a sample survey based on a random sample.

Thus, it is possible to estimate the accuracy of the results within the framework of calculating errors.

The relative standard error is calculated after conducting a sample survey. The value of the "relative standard error" estimates the percentage of deviation of the obtained sample results from the true value of the general population. The relative standard error of the sample is inversely proportional to the sample size, i.e. if the sample size is increased four times, its error will decrease by half.

S.15.3 Non-Sampling Errors

When conducting a survey on the use of ICT by households, there were no errors that were not caused by the sample survey, as the sample size was set at 21,000 households (0.42% of the total population) and a reserve number of 33.3% households was provided. In this regard, the number of reported households for 2024 amounted to 21,000 households.

S.15.3.1 Coverage Error

Not applicable.

S.15.3.1.1 A2. Over-coverage – Share

Not applicable.

S.15.3.1.2 A3. Common Units – Ratio

Not applicable.

S.15.3.3 Non-Response Errors

S.15.3.3.1 A4. Unit Non-Response – Share

Not applicable.

S.15.3.3.2 A5. Item Non-Response – Share

Not applicable.

S.16 Timeliness and Punctuality

S.16.1 Timeliness

S.16.1.1 TP1. Time Lag – First Results

The time taken to process the first results from the date of submission by respondents to the first publication averages 61 days.

Results are published annually, in accordance with the schedule approved by the Statistical Work Plan and the Schedule for Dissemination of Official Statistical Information.

S.16.1.2 TP2. Time Lag – Final Results

The results are published annually in accordance with the current year's Statistical Work Plan. These results are final.

S.16.2 Punctuality

S.16.2.1 Punctuality /TP3

Data are published and disseminated on time, according to the Statistical Work Plan and the Schedule for Dissemination of Official Statistical Information, approved by the Order of the Head of the Bureau.

Due to the difficulties in recruiting interviewers to conduct a household survey on the use of information and communication technologies due to low fees for their services, the dates and publication dates of 2025 were postponed (Internal memo No. 8-9/118-IL 01/10/2025).

S.17 Comparability

S.17.1 Geographical Comparability

Data are comparable across the regions of the Republic of Kazakhstan.

S.17.1.1 Mirror Flow Asymmetry – Coefficient /CC1

Not applicable.

S.17.2 Length of Comparable Time Series /CC2

The dynamic indicators of ICT statistics have been comparable and constant since 2004. The Bureau's Internet resource contains time series for 2004-2024. www.stat.gov.kz in the section «Home page»/ «Industry statistics»/ «Statistics of information and communication technologies and communications»/ «Dynamic series»/ «On the use of ICT».

S.18 Coherence

S.18.1 External Cross-Coherence

«The Statistical Methodology Information and Communication Technologies» was developed in accordance with the international recommendations of experts from the statistical offices of Germany and Spain, received within the framework of the KAZSTAT Project (Project to strengthen the National Statistical System) and the standards of Eurostat.

S.18.2 Internal Coherence

S.19 Load

The data is collected on paper by the interviewers. All answers are recorded from the words of the interviewees, no supporting documents are required.

The organization of data collection and processing is the task of territorial statistical divisions (departments of statistics of cities, districts and departments of statistics of regions). Information processing processes are automated using local software systems, control of input and output information is provided.

In 2024, 351 interviewers surveyed 21,000 households

The average time spent filling out the form is 1-2 hours.

Duplication with other surveys is excluded.

Administrative data is not used.

S.20 Data Revision

S.20.2 Data Revision /A6

There were no re-publications in 2024.

S.21 Processing of Statistical Data

S.21.1 Source Data

1) Statistical information on ICT statistics in households is formed on the basis of primary household reports on the questionnaire N-020 "On the use of information and communication technologies by households".

Statistical observation is carried out using a selective method.

2) The Household ICT Use Survey is a decentralized survey that is based on a survey of household members by interviewers. The organization of data collection and processing is the task of territorial statistical divisions (departments of statistics of cities, districts and departments of statistics of regions).

3) The ultimate goal of selective observation is to characterize the general population based on the data obtained from the sample. In order to obtain

data distributed to the general population, statistical weighting of the survey results is performed.

The implementation of this method is carried out by assigning a statistical weight to each surveyed household, which characterizes the total number of households represented by the part included in the sample.

4) The distribution coefficients are calculated by strata.

S.21.2 Frequency of Survey

Annual.

S.21.3 Method of Primary Statistical Data Collection

The survey is conducted on paper by the interviewers. The sample survey questionnaire is filled out for each individual household (family) included in the sample. It is not allowed to combine information on several families belonging to different households in one form of the questionnaire, even if they live in the same premises.

When conducting a household survey, a standard interviewing method is used, that is, the use of a standardized questionnaire form with a ready-made text of questions and standardized methods for recording respondents' answers. This method ensures that all respondents are asked the same questions in the same sequence, and that answers to the same question from different respondents are recorded using a comparable method.

S.21.4 Reliability of Primary Statistical Data

In order to improve the quality of data, verify the correctness of filling out the statistical form and minimize the lack of answers to some questions of the statistical form, reliability checks have been defined at the level of entering primary data in electronic format, and various format-logical controls have also been included in the software for processing primary statistical information.

Format-logical controls: between sections, modules, and items.

S.21.5 Imputation – Share /A7

Not applicable.

S.21.6 Adjustment

S.21.6.1 Seasonal Adjustment

Not applicable.

S.22 Comments

Continue efforts to ensure the quality of data.