

**Quality Report**

On the use of information and communication technologies at enterprises of the Republic of Kazakhstan for 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

Rysbaeva Ulzhan Turdalykyzy

S.1.3. Head of the Responsible Structural Division

Misyura Marina Vladimirovna

S.1.5 Contact Person’s Postal Address

010000, Astana, Left Bank of the Ishim River, 8 Mangilik El Street, House of Ministries, Entrance 4

S.1.6 Contact Person’s Email Address

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S.1.7 Phone number of the contact person

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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 in organizations is the report on the form 3-inform «On the use of information and communication technologies in enterprises» The main purpose of the statistical survey is to determine the level of ICT use in organizations in the Republic of Kazakhstan.

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 on the use of ICT in enterprises include:

1) The number of organizations using computers;

2) The number of organizations with Internet access;

3) The number of organizations using Cloud IT services;

4) The number of computers in organizations;

5) The number of ICT specialists in the field of ICT;

6) The share of large and medium-sized enterprises in the manufacturing industry using digital technologies, etc.

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.

The following statistical classifiers are used in the survey:

1) CATO – Classifier of Administrative-Territorial Objects;

2) OKED – General Classifier of Economic Activities;

3) CFS – Classifier of Forms and Types of Ownership;

4) CRP – Classifier of the dimension of legal entities;

5) CSE – Classifier of Economic Sectors.

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

S.4.3 Sectoral Coverage

Scope of respondents: legal entities and (or) their structural and separate subdivisions with types of economic activity according to the codes of the General Classifier of Types of Economic Activity (hereinafter referred to as the OKED) 01-03, 05-09, 10-33, 35, 36-39, 41-43, 45-47, 49-53, 55-56, 58-63, 64.19, 64.92, 65, 68-74, 77-82, 86, 93 95.1 with a population of over 100 people - by the continuous method, with a population of up to 100 people - by the selective method.

S.4.4 Statistical Concepts and Definitions

1) Instrument: Statistical form «Report on the use of information and communication technologies in enterprises» (index 3-inform, annual frequency).

2) Type of observation: selective.

3) The deadline for submitting respondents is January 19 (inclusive) after the reporting period.

The presentation of this statistical form is carried out on paper or in electronic form.

Filling out the statistical form in electronic form is carried out through the information system «On-line data collection», posted on the Bureau's Internet resource. www.stat.gov.kz in the «For respondents»/ «Respondent's Cabinet» section. 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

Legal entities and/or their structural and separate subdivisions that conducted research and development.

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

The survey of organizations using ICT is conducted on an annual basis using a sample method.

To determine the general population, the Statistical Business Register (hereinafter referred to as the SBR) is used, which contains a complete list of units with the necessary classification and address data. The main criteria for the formation of a sample population for the survey of the use of ICT in organizations are:

1) by enterprises (OKED codes 01-03, 05-09, 10-33, 35, 36-39, 41-43, 45-47, 49-53, 55-56, 58-63, 64.19, 64.92, 65, 68-74, 77-82, 86, 93, 95.1)

- activity code: 1 - the company is active;

- dimension codes: 105-160 (small) (10%);

- dimension codes: 215-225 (average) (100%);

- dimension codes: 305-311 (large) (100%).

The sample population is formed on the basis of a sample design order according to the «Methodology for conducting sample surveys of enterprises» approved by Order No. 169 of the Chairman of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan dated August 22, 2016, posted on the Bureau's Internet resource www.stat.gov.kz in the «Main» / «Methodology» section, the formation of a sample population for statistical observations.

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 enterprises 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

Person thousand tenge and units.

S.6 Reporting Period

Year.

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 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](http://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 enterprises 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»;

1. 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».

S.11.3 Online Databases

The Bureau’s website: [www.stat.gov.kz](http://www.stat.gov.kz" \t "_blank) Information and Analytical System «Taldau» / «Statistics of information and communication technologies»/ «Use of ICT by enterprises»

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 Документация по методологии

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](http://www.stat.gov.kz) «Methodology»;

3) The Eurostat methodology "Methodological Guide to Information Society Statistics 2015" is available on the Eurostat Internet resource www.ec.europa.eu.

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 national survey on the use of ICT in enterprises 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 sample survey of organizations using ICT in their activities was conducted. Large and medium-sized organizations were surveyed using the continuous method, while small ones were surveyed using the selective method.

The number of organizations reporting in 2024 was 172335, of which 78.0% (134416 units) used computers, 76.0% (131012 units) had Internet access, and only 11.7% (20126 units) of organizations used Cloud IT services. The share of large and medium–sized enterprises in the manufacturing industry using digital technologies was 19.2%.

**Percentage of organizations with Internet access in 2024**

**The share of computers connected to the Internet in organizations in 2024**

The total cost of organizations for ICT amounted to 678.0 billion tenge.

S.15. Sampling Errors – Indicators A1.

The survey on the use of ICT in enterprises 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 errors will decrease by half.

S.15.3 Non-Sampling Errors

Errors that were not caused by the sample survey: due to the obligation to provide primary statistical data, there are no non-responses during the survey. When conducting a survey on the use of ICT in enterprises, there were no errors that were not caused by the sample survey.

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 56 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.

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

* + 1. 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.
		2. S.18.2 Internal Coherence

S.19 Load

The data is collected electronically and on paper at the request of the respondent.

When collecting data online, automated arithmetic and logical controls are provided for the respondent, eliminating the possibility of typical input errors. Information processing processes are automated using local software systems, and controls of input and output information are provided. 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

No revisions or re-publications were made for 2024.

S.21 Processing of Statistical Data

S.21.1 Source Data

Statistical information on ICT statistics in organizations is formed on the basis of primary reports of respondents in the 3-inform form "Report on the use of information and communication technologies (ICT) in enterprises".

Statistical observation is carried out using a selective method.

When forming a sample for a survey of the use of ICT in organizations, a stratified sample is used using the simple random sampling method.

In this survey, the target population is stratified by type of economic activity, enterprise size, and region.

The data of the sample population is distributed to the general population using distribution coefficients.

The distribution coefficients are calculated by strata.

S.21.2 Frequency of Survey

Annual.

S.21.3 Method of Primary Statistical Data Collection

According to ICT statistics in organizations, the statistical form is provided on paper or in electronic form.

Filling out the statistical form in electronic form is carried out through the information system "Data collection in online mode", posted on the Bureau's Internet resource (www.stat.gov.kz).

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 5 Imputation – Share /А7

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.