METHODOLOGICAL REPORT

PRIVACY AND PERSONAL DATA PROTECTION

**Methodological Report**

**Privacy and Personal Data Protection 2023**

he Regional Center for Studies on the Development of the Information Society (Cetic.br), a department of the Brazilian Network Information Center (NIC.br) affiliated with the Brazilian Internet Steering Committee (CGI.br), presents the methodological aspects of Privacy and personal data protection 2023: Perspectives of individuals, enterprises and public organizations in Brazil. The aim of the survey was to ascertain the current scenario and understand the main challenges to building a digital

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ecosystem that guarantees privacy and protection of personal data in the country. The information gathered was based on the collection and processing of quantitative data through surveys conducted regularly by Cetic.br|NIC.br.

The project had three specific objectives:

* to investigate the perceptions of the population of Internet users about the use and protection of their personal data;
* to understand how small, medium, and large enterprises process the personal data of their clients/consumers, in addition to relevant issues associated with the implementation of the Brazilian General Data Protection Law (LGPD) in Brazil;
* to outline a scenario of data protection by public organizations, public healthcare facilities, and public schools.

Presented below are the main methodological aspects of the surveys carried out and the references for comprehensive access to the “Methodological Report” and the “Data Collection Report” of each survey.

# ICT Panel – Internet Users (2023)

Carried out via online questionnaires, the ICT Panel was developed as an alternative to in-person data collection. Its methodology has been adopted to collect data about topics relevant to the discussion on digital transformation since 2020.

In 2021, a new module of the ICT Panel was developed to investigate the perceptions of the population of Internet users about the processing and protection of their personal data (CGI.br, 2021). Creating a specific module about privacy among Internet users was based on various previous surveys with converging objectives. One of the first data collections identified was *Special Eurobarometer 431: Data Protectio*n, of 2015, requested by the European Commission. Another relevant source was the June 2019 edition of the *American Trends Panel* of the Pew Research Center. Among official surveys produced by national statistics institutes, we considered the *Survey of Canadians on Privacy-Related Issues*, carried out in 2020 by the Office of the Privacy Commissioner of Canada.

The second edition of the ICT Panel COVID-19 survey of Cetic.br|NIC.br was also considered, which included a privacy module. This module was part of a regional effort headed by the Inter-American Development Bank (IDB), with the goal of measuring attitudes and perceptions in relation to personal data protection, considering the use of information and communication technologies (ICT) in pandemic containment measures (CGI.br, 2020).

The 2023 survey followed the objectives and references of the 2021 study. The target population was composed of individual Internet users 16 years old or older in Brazil, considering that users are people who used the Internet in the three months prior to the survey, following the methodological recommendation of the International Telecommunication Union (ITU, 2020).

For its sampling design, the survey used as a basis an online panel of individuals maintained by Quaest Consulting & Research (*Quaest Consultoria e Pesquisa*), with approximately 153,000 panelists. A quota sampling plan was employed to obtain the sample of respondents, considering the variables sex, age group, level of education, macro-region, and social class. The data collection for the survey was carried out between December 11 and 22 of 2023 and, in all, 2,618 interviews were obtained.

With the objective of minimizing the selection biases found in quota approaches, a weighting structure was constructed for the ICT Panel, in which the reference was a probabilistic survey, ICT Households 2023.**1** In its initial step, the results were recalibrated for the population of the Continuous National Household Sample Survey (Continuous Pnad) (Brazilian Institute of Geography and Statistics [IBGE], n.d.), regarding the last published trimester.

Subsequently, with the objective of estimating the contingent of the population represented by the respondents of the ICT Panel, a propensity score estimation procedure was adopted.**2** In this methodology, initially, the propensity scores for being an Internet user were calculated according to socioeconomic variables based

**1 More information available at:** [**https://www.cetic.br/pt/pesquisa/domicilios**](https://www.cetic.br/pt/pesquisa/domicilios)

**2 Different from estimates based on a traditional sample design, the probabilities of selection in the Panel are unknown and undefined because it is a pseudo-design sample. Pseudo-probability is the estimated probability of belonging to the non- probability sample used instead of a known probability. More information available in Baker et al. (2013).**

on the last available edition of the ICT Households survey.**3** Next, this same model was used to estimate propensity scores for respondents of the ICT Panel.

Comparing the distribution of propensity scores for the ICT Panel with those verified in the last ICT Households survey, it was possible to determine the part of the population that, since the last survey (or all of it), could be represented by the respondents of the Panel. This is the equivalent of estimating the coverage error of the ICT Panel in relation to the target population initially considered for the survey.

In the present edition of the ICT Panel, the represented audience is equivalent to the entire target audience of the ICT Households survey, which allows for a direct comparison of the results of the edition with the equivalent indicators collected. In relation to previous editions of the Panel, which did not represent the total target audience, the comparison has to be done via the same populational cut-outs for the previous editions.

The complete survey results and the complete “Methodological Report” are available at the Cetic.br|NIC.br website ([https://www.cetic.br](https://www.cetic.br/)).

# ICT Enterprises – small, medium, and large enterprises (2023)

Carried out since 2005, the main objective of the ICT Enterprises survey is to measure the ownership and use of ICT by Brazilian enterprises. The survey presents indicators that translate the reality of Brazilian enterprises in relation to various topics into numbers, such as access to ICT; Internet use; electronic commerce; ICT skills; software; digital security; and new technologies.

The universe covered by the survey consists of all active Brazilian enterprises with 10 or more employed persons**4** that are registered with the Central Register of Enterprises (*Cadastro Central de Empresas* [Cempre]) of IBGE and belong to the National Classification of Economic Activities (*Classificação Nacional das Atividades Econômicas* – CNAE 2.0) market segments of interest to the ICT Enterprises survey and met the definition of Legal Nature Type 2 – business entities, except for public enterprises (Legal Nature 201-1).

The surveyed enterprises operate in the following segments: C – Manufacturing;

F – Construction;

G – Wholesale and retail trade; repair of motor vehicles and motorcycles;

H – Transportation and storage;

I – Accommodation and food service activities;

**3 For this edition of the ICT Panel, the ICT Households 2023 (CGI.br, 2024) was used.**

**4 The ICT Enterprises survey considers small, medium, and large enterprises with 10 to 49 employed persons, 50 to 249 employed persons, and 250 or more employed persons, respectively. Microenterprises, those with 1 to 9 employed persons, were not within the scope of the survey.**

J – Information and communication;

L – Real estate activities;

M – Professional, scientific, and technical activities;

N –Administrative and support service activities;

R – Arts, entertainment, and recreation;

S – Other service activities.

The ICT Enterprises survey is developed to maintain international comparability. It uses the methodological standards proposed in the manual from the United Nations Conference on Trade and Development (UNCTAD, 2020), which was prepared in partnership with the Organisation for Economic Co-operation and Development (OECD), the Statistical Office of the European Union (Eurostat), and the Partnership on Measuring ICT for Development, a coalition formed by various international organizations that seeks to harmonize key indicators in ICT surveys.

The sampling plan for the present survey was stratified in two steps, and the enterprises were selected randomly within each stratum. The first step covered the definition of natural strata by correlating the variables geographic region and activity segment (CNAE 2.0). The final strata were defined from each natural stratum, which considered the division of natural strata by enterprise size.**5** In 2023, the survey interviewed 4,457 enterprises, of which 2,075 answered specific questions from the module about personal data privacy and protection.

Enterprises were contacted for interviews using the computer-assisted telephone interview (CATI) technique. In all enterprises, the survey sought to interview the persons in charge of information technology, computer network management, or similar areas, which corresponded to positions such as:

* Information and technology directors;
* Business managers (senior vice presidents, business vice presidents, directors);
* Technology managers or buyers;
* Technology influencers (employed persons in commercial or IT operations departments who influenced decisions on technology issues);
* Project or system coordinators;
* Directors of other departments or divisions (excluding IT);
* System development managers;
* IT managers;

**5 The sizes considered were 10 to 19 employed persons; 20 to 49 employed persons; 50 to 249 employed persons; and 250 employed persons or more.**

* Project managers;
* Enterprise owners or partners.

In large enterprises (250 or more employed persons), the strategy employed was to interview a second professional, preferably the accounting or finance manager. If one of these professionals was not available, the next option was the person in charge of the administrative, legal, or government relations area, who responded only to questions about e-commerce and activities carried out on the Internet.

In the application of the Privacy and Data Protection module, an additional respondent who is qualified to answer about measures relating to compliance with the Brazilian General Data Protection Law (LGPD) in the company is interviewed. For this module, respondents to the ICT Enterprises survey are asked to indicate the person most familiar with the topic in the enterprise, i.e., who could answer about the procedures and policies adopted for the collection, storage, and use of personal data, as well as the enterprise’s compliance with the LGPD. In cases where the topic was led by the ICT Enterprises respondent, the interview was conducted with this professional. The organization was not allowed to appoint an outsourced professional as a respondent; alternatively, it sought to identify the internal employee responsible for contracting this service, in order to ensure that the interviews were conducted with members of the enterprise’s internal team.

The results and tables of proportions, estimates, and margins of error of the ICT Enterprises survey, in addition to the “Methodological Report” and “Data Collection Report,” are available at the Cetic.br|NIC.br website ([https://www.cetic.br](https://www.cetic.br/)).

# ICT Electronic Government – Federal and state government organizations and local governments (2023)

Carried out every two years since 2013, the survey about the use of information and communication technologies in the Brazilian public sector – ICT Electronic Government – investigates the incorporation of digital technologies in public organizations and their use to offer public services. The study also measures the presence of initiatives related to the promotion of access to public information and participation of society via new technologies. Starting in 2021, new modules related to the adoption of new technologies and indicators about privacy and personal data protection were included.

The survey is carried out nationwide and includes two units of analysis: federal and state government organizations from all branches of power (Executive, Legislative, Judicial, and the Public Prosecutor’s Office) and local governments. A census is carried out in all audiences of interest, with the exception of State executive organizations, for a total sample of 400 public entities. The interviews are carried out using the CATI technique.

The indicators analyzed for this publication were collected between July 2023 and February 2024, in 677 federal and state government organizations and 4,265 local governments. The results of the ICT Electronic Government survey, including tables of proportions, totals and margins of error, are available on the website of Cetic.br|NIC.br ([https://www.cetic.br](https://www.cetic.br/)), in addition to the survey’s “Methodological Report” and “Data Collection Report.”**6**

# ICT in Health – Public health facilities (2023)

Carried out annually since 2013, the ICT in Health survey has the objective of understanding the stage of ICT adoption in healthcare facilities and its appropriation by health professionals (nurses and physicians). To this end, it seeks to identify the available ICT infrastructure and investigate the use of systems and applications based on ICT destined to support care services and healthcare facility management. Furthermore, it measures the activities carried out by health professionals via ICT, in addition to motivations and barriers to its adoption and use.

In 2021, the survey included an indicator that investigated the adaptation of healthcare facilities in relation to some of the measures indicated in the LGPD. In 2022, indicators for information security training were included, both that offered by the facilities and that carried out by professionals.

The ICT in Health survey has national coverage and collects data from public and private healthcare facilities at the three levels of care. The facilities were selected based on the National Registry of Healthcare Facilities (CNES), maintained by the Ministry of Health (MS). The interviews were carried out using the computer-assisted telephone interviewing (CATI) technique, and the questionnaire was also made available for self-completion online via a specific platform.

The data for the 2023 edition were collected between February and July of the same year with 4,117 managers, representing a universe of 120,069 Brazilian healthcare facilities. The results and tables of proportions of the ICT in Health survey, in addition to the totals and margins of error, are available on the website of Cetic.br|NIC.br ([https://www.cetic.br](https://www.cetic.br/)), as well the survey’s complete “Methodological Report”**7** and “Data Collection Report.”**8**

**6 Available at:** [**https://cetic.br/pt/publicacao/pesquisa-sobre-o-uso-das-tecnologias-de-informacao-e-comunicacao-no-**](https://cetic.br/pt/publicacao/pesquisa-sobre-o-uso-das-tecnologias-de-informacao-e-comunicacao-no-setor-publico-brasileiro-tic-governo-eletronico-2023/)[**setor-publico-brasileiro-tic-governo-eletronico-2023/**](https://cetic.br/pt/publicacao/pesquisa-sobre-o-uso-das-tecnologias-de-informacao-e-comunicacao-no-setor-publico-brasileiro-tic-governo-eletronico-2023/)

**7 Available at:** [**https://cetic.br/media/microdados/773/tic\_saude\_2023\_relatorio\_metodologico\_v1.0.pdf**](https://cetic.br/media/microdados/773/tic_saude_2023_relatorio_metodologico_v1.0.pdf)

**8 Available at:** [**https://cetic.br/media/microdados/771/tic\_saude\_2023\_relatorio\_coleta\_de\_dados\_v1.0.pdf**](https://cetic.br/media/microdados/771/tic_saude_2023_relatorio_coleta_de_dados_v1.0.pdf)

# ICT in Education – Public schools (2022 and 2023)

Carried out since 2010, the ICT in Education survey investigates access to, and use and appropriation of, ICT by the educational community, especially students and teachers, in teaching, learning, and school management activities. Carried out nationwide, the survey is administered every year in Basic Education schools, both public and private, that are located in urban and rural areas and offer regular Primary and Secondary Education classes. In the 2020 edition, the inclusion of a specific module about privacy, with questions about digital security and the collection and protection of personal data, allowed for greater contact with the perceptions and experiences of the different school players about this specific topic.

The data analyzed in this publication are based primarily on the indicators for the 2022 and 2023 editions of the ICT in Education surveys. The 2022 edition was carried out between October 2022 and May 2023, in person, via the computer-assisted personal interviewing (CAPI) technique, in 1,394 schools. In all, 7,192 students in the 4th year of the Primary Education and 3rd year of Secondary Education, 1,424 teachers, 873 directors of studies, and 959 school managers were interviewed. The data from the 2023 survey were collected between August 2023 and April 2024, via CATI, with 3,004 school managers.

Similar to the other surveys, the results and tables of proportions of the ICT in Education survey and the totals and margins of error are available on the website of Cetic.br|NIC.br ([https://www.cetic.br](https://www.cetic.br/)), as well as the survey's complete “Methodological Report”**9** and the “Data Collection Report.”**10**

# Data dissemination

The results of the surveys mentioned above are presented according to the variables described in the “Methodological Report” for each survey, in the item “Domains of interest for analysis and dissemination.”

Rounding made it so that in some results, the sum of the partial categories differed from 100% for single-answer questions. The sum of frequencies on multiple-answer questions is usually different from 100%. It is worth noting that, in cases with no response to the item, a hyphen was used. Since the results are presented without decimal places, a cell’s content is zero whenever an answer was given to that item, but the result for the cell is greater than zero and smaller than one.

The survey results are published on the Cetic.br|NIC.br website ([https://www.](https://www.cetic.br/) [cetic.br](https://www.cetic.br/)). The tables of proportions, totals, and margins of error for each indicator are available for download in Portuguese, English and Spanish. More information about the survey’s documentation, metadata, and microdata bases are available on the microdata page (<https://cetic.br/microdados/>).

**9 Available at:** [**https://cetic.br/media/microdados/785/tic\_educacao\_2023\_relatorio\_metodologico\_v1.0.pdf**](https://cetic.br/media/microdados/785/tic_educacao_2023_relatorio_metodologico_v1.0.pdf)

**10 Available at:** [**https://cetic.br/media/microdados/784/tic\_educacao\_2023\_relatorio\_coleta\_de\_dados\_v1.0.pdf**](https://cetic.br/media/microdados/784/tic_educacao_2023_relatorio_coleta_de_dados_v1.0.pdf)

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