

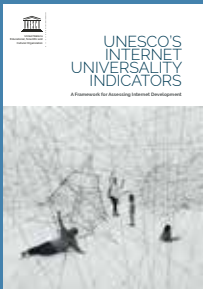


United Nations
Educational, Scientific and
Cultural Organization



ASSESSING INTERNET DEVELOPMENT IN BRAZIL

Using UNESCO's Internet
Universality ROAM-X Indicators



Through this first edition, UNESCO launches a new Publication Series on Internet Universality National Assessments. This Series is a means to share good practices in voluntarily assessing the Internet Universality ROAM-X Indicators at national level. It follows the resolution of UNESCO's 31st session of the Council of the International Programme for

the Development of Communication (IPDC) in November 2018, by which Member States were given the green light to engage in voluntary assessments of their Internet environment using the ROAM-X Indicators.

By evaluating a given country's Internet environment against the ROAM-X indicators, the national assessment process aims to:

- Present a comprehensive and substantive understanding of the national Internet environment and policies;
- Assess their alignment to UNESCO's R.O.A.M. principles and their contribution to sustainable development;
- Develop policy recommendations and practical initiatives that will enable the country to improve their Internet ecosystem as advanced ICTs evolve.

The national assessment of Brazil is the first edition of the Series.



ASSESSING INTERNET DEVELOPMENT IN BRAZIL

**Using UNESCO Internet
Universality ROAM-X Indicators**

Brazilian Network Information Center (NIC.br)

*Regional Center for Studies on the Development of
the Information Society (Cetic.br)*

Author's note: Much of this research was completed on August 31, 2018 and was conducted as a pilot application of the UNESCO Internet Universality Indicators. Data and information are current as of this date, unless otherwise indicated. Updates have been added in the form of editor's notes to encompass a few relevant changes that happened until this publishing (November 2019).

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Preface



How can the Internet develop in line with, and contribute to, sustainable development? It is through the concept of Internet Universality that UNESCO strives to bring answers to this question. This concept, which constitutes the basis of the present national voluntary assessment report of UNESCO's Internet Universality Indicators in Brazil, is at the heart of UNESCO's positioning on Internet issues since the concept won the endorsement of UNESCO Member States in 2015, during the 38th General Conference. At its core, Internet Universality is tied to the four

ROAM principles – meaning that UNESCO stands for an Internet that is human-Rights based, Open, Accessible to all, and governed through Multistakeholder participation.

Beyond its conceptual approach, Internet Universality lends itself to serving as a tangible, practical tool to enable the development of Internet environments towards alignment with the ROAM principles. That is why, over a period of two years, and through a global, open and multi-stakeholder process, UNESCO worked towards the elaboration of the *Internet Universality Indicators* – an unprecedented tool designed to assess Internet development relative to the ROAM framework of Internet Universality. The idea behind the Indicators is to render possible a “diagnosis” of national Internet environments from the ROAM perspective, based on which recommendations for action can be elaborated.

The process of developing the Indicators culminated in November 2018, as UNESCO's 31st session of the International Programme for the Development of Communication (IPDC) Council “endorsed the use of this tool on a voluntary basis as a useful resource available for Member States”, and further “encouraged interested Member States and all stakeholders, on a voluntary basis, to support and conduct national assessments of Internet development with the Internet Universality Indicators”. The framework of Internet Universality consists of 303 indicators, with 109 “core” ones, that look at the four ROAM categories and at cross-cutting issues such as gender, children, trust and security. Also included are a series of contextual indicators meant to situate the findings within the country's specific background.

The present voluntary assessment report of Internet Universality Indicators in Brazil is a first, and paves the way for other countries to follow suit. Its production is owed to the work of the Regional Center for Studies on the Development of the Information Society (Cetic.br), of the Brazilian Network Information Center (NIC.br), and to the fruitful engagement of the Multisakeholder Advisory Board, represented by the Brazilian Internet Steering Committee (CGI.br).

It is my hope that the insights and options for action included in this Report will trigger fruitful policy discussions, and thereby help bring the Internet in Brazil a step closer to universality and relevance to sustainable development.



Moez Chakchouk

Assistant Director-General for Communication and Information
UNESCO

Foreword

There is much to celebrate in 2019 – the 50th anniversary of the Internet, the 10th anniversary of the Brazilian Internet Steering Committee’s (CGI.br) decalogue, and 30th anniversary of the “.br” domain. In the past three decades, the “.br” domain has been consolidated as one of the most successful country code top-level domains (ccTLDs) in the world, with more than 4 million domain names currently registered. The Internet in Brazil has always found fertile ground for quick development: today, according to the ICT Household Survey¹, Brazil already has about 127 million Internet users, which corresponds to 70% of the population. The proportion of those who use the Internet daily is even higher among 16 to 24-year-olds, reaching 90% of Brazilians in this age group.

This story also includes a very important milestone: the creation of CGI.br in 1995, which consolidated and began to guide the initial achievements of the academic community network. CGI.br represents a multi-stakeholder model of Internet governance, featuring the participation of the government and all sectors of society, which has guided the development of the Internet in the country. The CGI.br model has gained global recognition as a reference in participatory management of Internet development and protection of its basic concepts: freedom, accessibility and scope. The combination of policies proposed by CGI.br with resources from domain registration and allocation of addresses resulting from the operation of the Brazilian Network Information Center (NIC.br) is among the most emblematic aspects of the Brazilian Internet governance model. These resources are given back to society through a set of activities and projects developed by NIC.br, a non-profit private legal entity that aims to continuously expand and improve the quality of the Internet.

Ten years ago, in 2009, the “Principles for the Governance and Use of the Internet in Brazil,” known as the CGI.br decalogue, was approved and disseminated. It was enthusiastically received by the global Internet community when it was announced internationally during the 2010 Internet Governance Forum (IGF) in Vilnius, Lithuania. These principles represented the key components of the discussion that led to the approval of the Brazilian Civil Rights Framework for the Internet in 2014. This achievement put the international spotlight on the country for establishing a framework for the development and protection of the Internet based on civil rights.

¹ Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian Households: ICT Households 2018.

There is still much to be done to achieve universal Internet access, ensure the protection of citizens' rights online, and maintain an innovative and open environment. For these reasons, it is imperative to have extensive knowledge about the ecosystem of Internet development in the country. Traditionally, international frameworks for measuring information and communication technologies have been focused on the dimensions of access and infrastructure. With the publication of the United Nations Educational, Scientific and Cultural Organization's (UNESCO) "Internet Universality Indicators," we are given the opportunity to use a developed concept of the national Internet Universality to help comprehend future developments.

The present report is the result of the efforts of NIC.br, through the work of the Regional Center for Studies on the Development of the Information Society (Cetic.br), to gather data on a wide range of the indicators approved by UNESCO in November 2018. Since 2005, Cetic.br has worked to generate reliable and internationally-comparable statistics on access to, and use of, information and communication technologies, in addition to conducting studies on the implications of the Internet in Brazilian society. The surveys conducted by Cetic.br have contributed significantly to the creation of public policies that promote digital inclusion and strengthen the digital economy. A UNESCO Category 2 Center since 2012, Cetic.br also supports initiatives that contribute to improving and strengthening the comparability of statistics produced in Latin American countries and Portuguese-speaking Africa.

It is also worth remembering that the involvement of NIC.br and Cetic.br was essential for the approval of the "Internet Universality Indicators". In addition to incentivizing consultations about indicators among important regional actors, Cetic.br was also responsible for the pilot implementation of this methodology in Brazil, which consolidates the country's role as a model in matters related to the development of the Internet. Cetic.br also contributes by helping other nations implement similar surveys.

With the present report, NIC.br provides another relevant source of evidence for public policies in the sector and hopes to contribute to improving the Brazilian Internet, strengthening its multi-stakeholder governance, and preserving its open and inclusive nature.

Enjoy your reading!

Demi Getschko

Brazilian Network Information Center – NIC.br

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The Regional Center for Studies on the Development of the Information Society (Cetic.br) and the Brazilian Network Information Center – NIC.br would like to thank all the stakeholders involved in this publication, including experts interviewed, the Multi-stakeholder Advisory Board – represented by the Brazilian Internet Steering Committee (CGL.br) – and the peer reviewers who voluntarily engaged in the process.

The research was conducted by João Brant (research coordination and categories R and O), Diogo Moyses (sub-coordination and categories A and M), Sivaldo Pereira and Vivian Peron (category X).

Cetic.br's staff was also directly involved in gathering and collecting data. Alexandre Barbosa and Fábio Senne led the implementation process. Winston Oyadomari led the data gathering and collecting process. The contextual indicators were collected by Leonardo Melo Lins. Daniela Costa, Luciana Lima and Manuella Maia Ribeiro also participated in data collection.

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Abbreviations and Acronyms

Abinee	Brazilian Electrical and Electronics Industry Association
ABO2O	Brazilian O2O Association
ABRAJI	Brazilian Association of Investigative Journalism
Abranet	Brazilian Association of the Internet
ADPIF	Association for the Protection of the Intellectual Property Rights of the Phonographic Industry
ALAI	Latin American Information Agency
Anatel	National Telecommunications Agency
ANCINE	Brazilian Film Agency
ANEEL	Brazilian Electricity Regulatory Agency
ANS	National Regulatory Agency for Private Health Insurance Plans
APC	Association for Progressive Communications
ASN	Autonomous system numbers
BNCC	National Common Curricular Base
Brasscom	Brazilian Association of Information and Communication Technology Companies
CAPES	Coordination for the Improvement of Higher Education Personnel
ccTLD	Country code top-level domain
CDES	Economic and Social Development Council
CDUST	Committee for the Defense of Users of Telecommunications Services
CERT.br	National Computer Emergency Response Team
Cetic.br	Regional Center for Studies on the Development of the Information Society
CGI.br	Brazilian Internet Steering Committee
CRC	UN Convention on the Rights of the Child
CSIRT	Computer security incident response team
CT-Spam	Anti-spam task force
CWG	Council Working Group
DATASUS	Informatics Department of the National Health System
ERB	Radio base stations

FGV	Getulio Vargas Foundation
FISTEL	Funds for the Inspection of Telecommunications
FOSS	Free and open-source software
FUST	Fund for the Universalization of Telecommunication Services
GDP	Gross domestic product
GDPR	General Data Protection Regulation
GESAC	Electronic Government Service of Attendance to Citizens
GNI	Gross national income
GNSO Council	Generic Names Supporting Organization
GNU-GPL	GNU General Public License
gTLD	Generic top-level domain
HDI	Human Development Index
IBGE	Brazilian Institute of Geography and Statistics
IBOPE	Brazilian Institute of Public Opinion and Statistics
ICANN	Internet Corporation for Assigned Names and Numbers
ICESCR	International Covenant on Economic, Social and Cultural Rights
ICT	Information and Communication Technologies
IDEB	Index of Basic Education Development
IDEC	Brazilian Institute of Consumer Protection
IDN ccTLD	Internationalized country code top-level domain
IGF	Internet Governance Forum
Inesc	Brazilian Institute for Socioeconomic Studies
IPDC	International Programme for Development of Communication
IPHAN	National Institute of Historic and Artistic Heritage
ISP	Internet service providers
ITS Rio	Institute of Technology and Society of Rio de Janeiro
ITU	International Telecommunications Union
LAC	Latin American and the Caribbean
LACNIC	Latin America and the Caribbean Network Information Centre
LAI	Access to Information Law
Lavits	Latin American Network of Studies on Surveillance, Technology and Society
LGPD	General Data Protection Law
MCTIC	Ministry of Science, Technology, Innovation and Communication
MDH	Ministry of Human Rights
MEC	Ministry of Education
MP	Ministry of Planning, Development and Management

MPF	Federal Prosecution Service
NCUC	Noncommercial Users Constituency
NGO	Non-governmental organisation
NIC.br	Brazilian Network Information Center
NPSP	National Policy of Social Participation
OECD	Organisation for Economic Co-operation and Development
OER	Open educational resources
OHCHR	Office of the United Nations High Commissioner for Human Rights
OSP	Online service provider
OTT	Over-the-top services
PERT	Structural Plan for Telecommunications Networks
PNAD	National Household Sample Survey
PNBL	National Broadband Plan
PNC	National Connectivity Plan
PNE	National Education Plan
Procon	Attorneys for Consumer Protection and Defense
ProInfo	National Educational Technology Program
PROTESTE	Brazilian Association of Consumer Defense
SCM	Multimedia Communication Service
Sebrae	Brazilian Micro and Small Business Support Service
SIAFI	Federal Finance and Administration Integrated System
SIAPE	Integrated Human Resource Administration System
SindiTelebrasíl	National Union of Telephone and Mobile Service Providers
SME	Small and medium-sized enterprises
STEM	Science, Technology, Engineering and Mathematics
TAC	Conduct adjustment terms
Telcomp	Brazilian Association of Competitive Telecommunications Services Providers
TELEBRAS	Brazilian Telecommunications Company
TIM	Telecom Italia
UAB	Brazilian Open University
UNCTAD	United Nations Conference on Trade and Development
UN DESA	United Nations Department of Economic and Social Affairs
UNICEF	United Nations Children's Fund
W3C	World Wide Web Consortium
WCAG	Web Content Accessibility Guidelines

Executive Summary

This report presents the results of the pilot implementation of the UNESCO framework of Internet Universality Indicators in Brazil, which was completed by the Brazilian Network Information Center (NIC.br), through the Regional Center for Studies on the Development of the Information Society (Cetic.br), in August 2018. It contains all of the core indicator set proposed by UNESCO, as well as the full indicators for the dimension of multi-stakeholder participation.

The assessment follows a multi-stakeholder approach and is based on UNESCO's guidelines for pilot assessments. The report was further developed following its assessment and validation by the Brazilian Internet Steering Committee (CGI.br), the multi-stakeholder body responsible for core decisions on Internet governance in the country. It constitutes a unique Internet governance model for the effective participation of society in decisions involving network implementation, management and use. Based on the principles of multilateralism, transparency and democracy, CGI.br coordinates and integrates all Internet service initiatives in Brazil, promoting technical quality, innovation and the dissemination of Internet services.

Major findings

The development of the national environment of the Internet in Brazil is strong and positive, and in line with international standards when considering the regulatory framework. However, there are enforcement problems in some areas and significant shortcomings in access and connectivity for citizens.

Although there has been an increase in access to the Internet for Brazilians, there are still inequalities in the conditions for use and appropriation of ICTs, which can be pointed out as one of the most critical national issues for Internet development.

R – Rights

Brazil has a structured sectorial regulatory framework. Its guiding principles are present in the Federal Constitution of 1988 and can be applied to the digital environment. This is the case for individual rights and guarantees, such as freedom of expression, the right to information,

and privacy. Since 2014, the Brazilian Civil Rights Framework for the Internet² has been the main Internet sectorial legislation approved. The Civil Rights Framework can be considered an international reference for its novel approach, which clearly defines the civil rights that are to be protected online. It is strongly aligned with human rights standards and affirms that access to the Internet is essential to the exercise of citizenship. The law also provides strong protection for net neutrality and freedom of expression.

There are, however, enforcement challenges for the guarantees contained in the Brazilian Civil Rights Framework for the Internet, such as freedom of expression, which is sometimes curtailed by decisions of the Judiciary or online platforms.

Although Brazilian legislation does not provide for sanctions such as blocking or filtering, since 2015 there have been nine judicial cases requesting the blocking of applications such as WhatsApp and Facebook; four were carried out, mostly based on non-compliance with judicial orders for data delivery.

The Personal Data Protection Law (LGPD) was approved in 2018. It is in line with international standards, in particular the European General Data Protection Regulation (GDPR); however, it is not clear how the implementation of the law will be carried out since there was a presidential veto of some of its provisions when the law was approved.

The Access to Information Law (LAI)³ has been in force since 2011. The LAI has heralded a new culture of transparency and accountability in the public sector, especially in federal administrative bodies. However, its application is still fragile in certain federal administrative bodies and, more emphatically, in other federation units (states and municipalities). In recent years, there have also been cases of threats, intimidation, harassment and constraint for seeking public information through this law.

O - Openness

Regarding innovation, the legal and regulatory framework is to some extent conducive to innovative practices and the establishment of new businesses. The situation differs depending on the perspective analysed. The legal framework for the Internet is considered positive for fostering innovation. The general framework for business is bureaucratic and is criticized by the private sector. Policies to foster innovation have recently been changed and cannot yet be assessed.

The Brazilian Open Data Policy, enacted in 2016⁴, has strong foundations. Its objectives include the promotion of transparency and social participation and the development of government

2 Law nº 12.695/2014, available at http://www.planalto.gov.br/CCIVIL_03/_Ato2011-2014/2014/Lei/L12965.htm

3 Law nº 12.527/2011, available at http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2011/Lei/L12527.htm

4 Presidential Decree nº 8.777/16, available at http://www.planalto.gov.br/ccivil_03/_Ato2015-2018/2016/Decreto/D8777.htm

services. Exceptions are made for technical requirements essential to the adequate provision of services and applications and prioritization of emergency services.

A - Access

Internet connectivity is a critical point of the Brazilian digital scenario. Although Brazil has an increasing number of Internet users, there is still a large population without any type of access, especially among the poorest, those aged more than 60 years old, and those living in rural areas. Data also indicates that fixed access, especially among groups with lower rates of connection, has not evolved to the point of being considered as contributing to universalization, meaning that mobile connections are the main driver of Internet diffusion.

Another area of concern is the use of ICTs in schools. As the set of indicators reveal, although some specific public policies have been implemented over the last decade, access to and use of ICTs in Brazilian schools have not yet progressed satisfactorily. Different sectors that have been interviewed for this research have pointed out that persistent challenges to universalization in the last decade are related to: lack of effectiveness of government telecommunication development policies, especially in poorer regions and those not served by high-speed networks; failure to invest resources, especially sectorial funds, in universalization policies; lack of support for small Internet Service Providers (ISPs) operating in regions of low commercial interest; and continued influence of a model that places fixed telephony at the centre of sectorial regulation.

Accessibility for people with disabilities is another issue where enforcement is far from complying with the law. Although the Brazilian Inclusion Law and the Brazilian Civil Rights Framework for the Internet define a clear reference for government and the business sector in this field, in neither case is accessibility a reality.

M - Multistakeholder

The Internet governance environment is led by the Brazilian Internet Steering Committee (CGI.br)⁵, the purpose of which is to coordinate and integrate Internet service initiatives in Brazil and to promote technical quality, innovation and dissemination of Internet services. The committee is composed of 21 representatives from the government, the corporate sector, the third sector and the academic community, and has been directly electing representatives from civil society since 2004. CGI.br is not a binding body, and all recommendation and strategies defined by the Committee are based on consensus among different stakeholders.

The multi-sectoral environment anchored in CGI.br also allowed the development and consolidation of the national Internet Governance Forum⁶, currently in its ninth edition, which

5 Information in English about CGI.br is available at <http://www.cgi.br/about/>

6 Brazilian Internet Forum: <http://forumdainternet.cgi.br/>

has increased Brazilian participation in international governance forums, especially the regional IGF (LAC IGF) and global IGF.

X - Cross-cutting Issues

Although the Internet opens up new possibilities for participation, emancipation, and promotion of human rights, new types of human rights violations also find fertile ground in the digital environment. From this perspective, data on online abuse and harassment are worrying.

In general, experts recognize the existence of a Brazilian legal framework to protect women against violence and abuse and some policies are implemented by the federal administration. However, there are still problems in its applicability because of endogenous problems with the judicial and public security systems.

Key Policy Recommendations for Action

Overarching recommendations

- Consolidate and develop the national multi-stakeholder governance model, expanding the participation of the various sectors in forums and organizations related to Internet governance and telecommunications policy and regulation in Brazil.
- Record and publish quantitative and qualitative data on the participation of the different sectors (private, public and third sector) in IGF (including LAC IGF), ITU and ICANN forums.

Government

- Create an independent National Personal Data Protection Authority and a National Council for the Protection of Personal Data, complementing the normative framework put into force with the enactment of the Personal Data Protection Law⁷.
- Expand and improve policies for the preservation and promotion of cultural heritage online.
- Promote policies and regulations focused on overcoming barriers to new digital businesses and start-ups.

⁷ Editor's Note (August 2019): Since the completion of this report, the Personal Data Protection Law has been modified by an Executive Order, which created the Data Protection Authority directly linked to the Presidency, leaving room for a revision in two years that can lead to a switch to indirect administration, with more independence and autonomy.

- Guarantee full accessibility for persons with disabilities on government portals and public websites.
- Ensure adequate levels of resources for the monitoring and supervisory activities of regulatory bodies.
- Ensure that telecom norms and regulations avoid unnecessary and bureaucratic rules and properly enforce those that guarantee public interest.
- Promote technical measures for ensuring technical monitoring of network neutrality.
- Fully apply the open data policy, publishing open data plans and all databases or information not protected by law.
- Make all public websites, especially those that support public services, available on any browser.
- Implement an access and telecommunications development policy that addresses infrastructure bottlenecks in localities identified as having little or no service by broadband networks, with a focus on rural areas and locations of low economic attractiveness.
- Update regulatory models that switch the focus from fixed telephony to broadband.
- Enforce the provision of accessibility for persons with disabilities included in the Statute on Inclusion of Persons with Disability and the Brazilian Civil Rights Framework for the Internet.
- Seek universal access to the Internet in urban and rural public schools based on high standards of connectivity that overcome bottlenecks in access and use.
- Supply all the necessary inputs for effective pedagogical use in schools, such as high-speed connections, devices, high-quality digital content, and teacher training.
- Promote public materials for training the workforce on ICT use and development.
- Strengthen the instruments for online participation and consultation on topics of social interest in all institutional bodies at all levels of government.
- Extend and accelerate the digitization of public services and strengthen the application of the Access to Information Law in all public agencies of all units of the federation, overseeing compliance comprehensively at the federal level and promoting enforcement at the state and municipal levels.
- Record and publish government submissions to international forums concerned with ICT and the Internet.
- Enhance law enforcement against the crime of online harassment and violence against women.

- Promote initiatives for receiving claims and gathering data about human rights violations on the Internet, particularly abuses committed against children and women, and promote a culture of peace and respect in the online environment.
- Include the private and third sectors in the debate on cybersecurity, while maintaining the principles of caution and confidentiality.

Judiciary

- Avoid over-inclusive judicial decisions that generate blocking of apps or of entire Internet segments.
- Protect freedom of association online and avoid decisions that may violate the right to peaceful assembly and association.

Private Sector

- Report on governmental or judicial attempts to hold companies liable for content that infringes on third parties, in conflict with the Brazilian Civil Rights Framework for the Internet.
- In their report on governmental or judicial requests for content removal, platforms should differentiate judicial and executive orders, and separate all the different cases (such as IP infringement) by geographical location.
- Guarantee full accessibility for persons with disabilities on private portals and apps, with special attention to public service providers.
- Enhance 4G coverage in the country, reaching all municipalities, and enable mobile communication in all districts.
- Promote materials for training the workforce on ICTs use and development.
- Deepen and strengthen existing initiatives for monitoring and combating human rights violations on the Internet, particularly abuses committed against children and women, and promote a culture of peace and respect in the online environment.
- Report on the incidence of breaches and the numbers of individuals and businesses affected.
- Design and adapt services and products offered in the country to the principles and values of Brazilian legislation, such as the Brazilian Civil Rights Framework for the Internet.

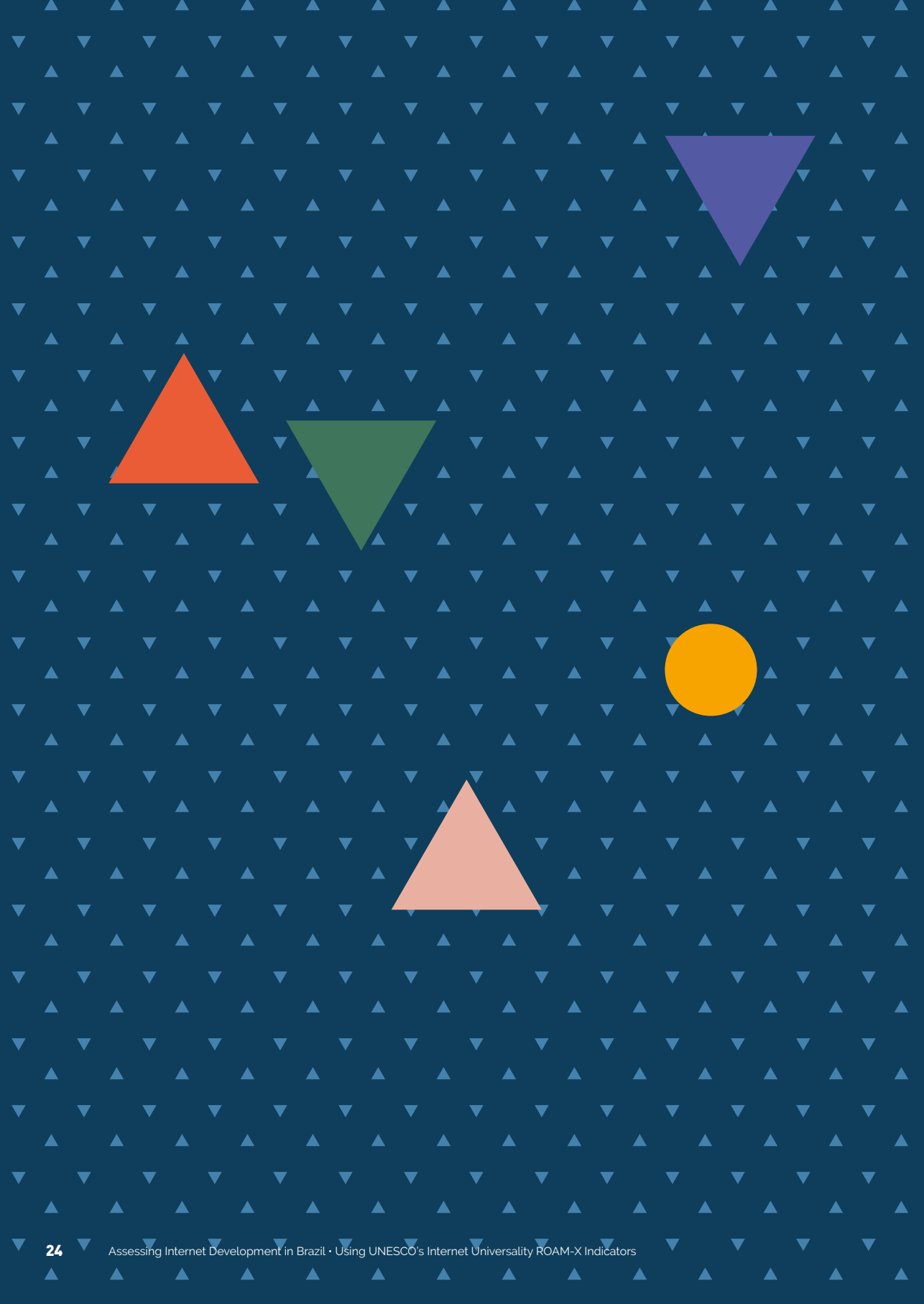
Civil Society

- Monitor and periodically report on violations of the rights supported by the Brazilian Civil Rights Framework for the Internet.

- Monitor and periodically report on accessibility for persons with disabilities on public and private websites and apps.
- Monitor and periodically report on network neutrality violations through citizens' assessment of their connections.
- Monitor the provision of accessibility for persons with disabilities included in the Statute on Inclusion of Persons with Disabilities and the Brazilian Civil Rights Framework for the Internet.
- Deepen and strengthen existing initiatives for monitoring and combating human rights violations on the Internet, particularly abuses committed against children and women, and promote a culture of peace and respect in the online environment.

Academic and Technical Community

- Develop systematic research on new challenges to ensuring freedom of expression, access to information and privacy in the digital realm.
- Evaluate the positive and negative effects of different billing models on the democratization of access to the Internet.
- Provide proposals for curricula, activities and training materials regarding the use of ICT at all educational levels.
- Promote studies and recommend procedures, rules and technical and operational standards for the security of the network and services on the Internet.
- Monitor and publicly report on the incidence of breaches and the numbers of individuals and businesses affected.



1

INTRODUCTION

Background on UNESCO's Internet Universality Concept and Indicators Project

In 2013, UNESCO initiated a consultative research that led to a debate on the concept of *Internet universality*. This aimed to identify those aspects of the Internet that are fundamental to the realization of the Internet's potential for the development of knowledge societies and the achievement of sustainable development.

The concept was based on four principles that structure the key pillars underpinning the growth and evolution of the Internet. They are seen as fundamental to the development of the Internet in ways that are conducive to achieving the Sustainable Development Goals. These principles are:

R – that the internet be based on human **Rights**

O – that it is **Open**

A – that it is **Accessible to all**, and

M – that it is nurtured by **Multistakeholder participation**

This concept was approved in 2015 by the UNESCO General Conference, and served as a basis for creating indicators appropriate to measure the universality of the Internet. The background was the need to strengthen these principles because the Internet was increasingly directly involved in all human affairs.

The indicator framework was developed through an open and participative process (see below). This led to 303 indicators, divided into the four categories listed above, plus a transversal category and one chapter of contextual indicators. 109 out of the 303 are considered 'core indicators', a selective set that makes it possible to apply them in contexts where there are constraints on time, human and financial resources. Both the full set and the core set gather quantitative, qualitative and institutional indicators.

The framework of indicators was designed to be applied through carrying out concrete research on the concept of Internet universality at the country level. This framework is intended to assist governments and stakeholders who wish to assess their national Internet environment voluntarily, as a means to enable the formulation of evidence-based public policies.

Development Process of the Indicator Framework⁸

In April 2017, a consortium led by the Association for Progressive Communications (APC) was appointed through a global competitive bidding process to undertake work with UNESCO on the development of the Indicators. In addition to APC, this consortium included ict Development Associates and two regional ICT research institutes: LIRNEasia and Research ICT Africa.

UNESCO appointed a Multi-stakeholder Advisory Board, made up of 15 international experts on different aspects of the Internet, from different regions and stakeholder communities, to provide advice on the implementation of the project. Additional support and advice were provided by the UNESCO Institute for Statistics. Advice was sought and received from the Organization for Economic Co-operation and Development (OECD).

The project was developed through three phases: research, consultation, and validation.

This first phase involved the preparation of a draft indicator framework and set of indicators that were set out in the document *Defining Internet Universality Indicators*, published online and offline in December 2017. Six main criteria, drawn from UNESCO's previous experience with indicators, were considered in this phase:

- Indicators should be chosen for which measurement data are sufficiently reliable in quality to permit confident interpretation;
- The selected indicators should be quantitative where possible and qualitative where appropriate;
- They should be independently verifiable where possible;
- They should, where possible and relevant, permit disaggregation by sex, age group, locality, and other population characteristics; and
- It should be possible for the necessary data or information to be gathered, at a reasonable cost in time and money, in the majority of countries.

A second consultation process was held from December 1, 2017 to May 18, 2018, enabling all stakeholders to respond to this framework and the draft indicators. The governments of Member States, international organizations and associations with a particular interest in the Internet were again explicitly invited to participate.

⁸ This section was drawn from the document UNESCO's Internet Universality Indicators. A Framework for Assessing Internet Development, launched in 2019, which gathers the indicators and an implementation guide for countries. It is available at <https://unesdoc.unesco.org/ark:/48223/pf0000367617?locale=fr>

The draft indicators were revised in light of contributions made during this consultation process. In the third phase, scientific assessments of the feasibility of the revised draft indicators were undertaken in four countries – Brazil, Ecuador, Nigeria and Pakistan – in May 2018. These studies addressed the viability of obtaining evidence to assess each of the indicators included in the framework and considered ways of implementing the framework in pilot countries.

Partial pilots of the indicators, exploring actual evidence, were undertaken in Brazil, Senegal and Thailand between July and September 2018.

On November 21, 2018, the 31st Session of UNESCO's Intergovernmental Council of the International Programme for Development of Communication (IPDC) "welcomed the Internet Universality indicators framework" and "endorsed the use of this tool on a voluntary basis as a useful resource available to Member States."⁹ The Council also "encouraged interested Member States and all stakeholders, on a voluntary basis, to support and conduct national assessments of Internet development with the Internet Universality indicators," and "to use the research findings for evidence-based policy discussions and recommendations."

Brazilian Assessment Initiative

Brazil has been involved in the process since the beginning, through the Brazilian Network Information Center (NIC.br), which is responsible for Internet governance in the country. In 2014, NIC.br and the Latin America and Caribbean Network Information Centre (LACNIC) supported the production of a background paper and proposed categories of indicators of Internet Universality. NIC.br also opened up a dialogue and engaged key stakeholders in Brazil who could provide feedback on different phases of the consultation process; organized and hosted a public consultation on the "ROAM Framework" proposal; provided Portuguese and Spanish translations of key UNESCO documents such as the "Keystones to Foster Inclusive Knowledge Societies"; and conducted the pre-test and pilot for the Internet Universality Indicators in Brazil. The pre-pilot and pilot phases run in Brazil were carried out by its Regional Center for Studies on the Development of the Information Society (Cetic.br).

This report presents the results of the pilot application of the framework in Brazil, which was completed in August 2018. It contains the core indicators set proposed by UNESCO, as well as the full indicators for the dimension of multi-stakeholder participation. Since its goal was also to contribute to testing UNESCO's framework, this document was not made public until the final assessment, approval and official publication of the Universality Indicators. This publication has

⁹ Decisions taken by the 31st Council Session of the International Programme for the Development of Communication (IPDC), 21-22 November 2018, UNESCO HQ. <https://unesdoc.unesco.org/ark:/48223/pf0000266235>

preserved the data as it was found at that time. Editor's notes were added to provide updates on relevant changes that occurred as this publication was being finalized, in August 2019.

Methodology

This research was conducted between July 18 and August 27, 2018, by the Brazilian Network Information Center (NIC.br), through the Regional Center for Studies on the Development of the Information Society (Cetic.br). The methodology of this application was based on UNESCO's guidelines for the pilot document. The following steps were carried out:

Desk-based research into published and online reports, official statistics, independent surveys and written assessments produced by academics, research institutes, and other credible and authoritative sources;

Requests for information from government departments, private companies, and other sources;

Individual discussions (interviews) with informants from government departments, private companies and other sources. Information on these interviews is provided in the table below (the full names of the organizations that are abbreviated appear below the table).

Table 1: Interviews with Informants from Government Departments, Private Companies and Other Sources

Organization	Interviewee	Function	Method of Contact	Response Date
Government				
Anatel ¹	Otávio Rodrigues/ Guilherme Alcantara	Director/Chief of Staff	E-mail	8/13/2018
MCTIC ²	Arthur Coimbra	Broadband Department Director	Telephone	8/2/2018
MDH ³	Niege Siqueira das Neves	Press Office	E-mail	8/21/2018
MP ⁴	Heber Maia	Advisor to the Secretary of ICTs	Telephone	8/13/2018
ABO2O ⁵	Vitor Magnani	President	Telephone	8/28/2018
Abranet ⁶	Eduardo Parajo	Director President	Telephone	8/6 and 8/20/2018
ALAI ⁷	Gonzalo Navarro	Executive-Director	Videoconference	8/23/2018
Brasscom ⁸	Ana Paula Bialer	Coordinator for GTT Regulation & Internet	Telephone	8/24/2018
Dínamo	Kiko Afonso	President	Telephone	8/20/2018
SindiTelebrasil ⁹	Eduardo Levy	Executive-Director	Telephone	8/8/2018
ABRAJI ¹⁰	Sergio Spagnuolo and Tiago Mali	Director and Course Coordinator	E-mail	8/10/2018
Article 19	Laura Tresca	Acting Executive-Director	In person	7/24/2018
Lemann Foundation	Henrique Pimentel	Education and Technology Coordinator	In person	8/9/2018
IDEC ¹¹	Rafael Zanatta	Telecom and Digital Rights Program Leader	In person	8/3/2018
Inesc ¹²	José Antonio Moroni	Managing Collegiate Coordinator	Telephone	8/6/2018
Nupef Institute	Carlos Afonso	Executive-Director	Telephone	9/10/2018
Institute for Technology & Society	Carlos Afonso Souza and Fabro Steibel	Directors	In person	8/6 and 8/8/2018

InternetLab	Mariana Valente and Dennys Antonialli	Directors	Telephone	8/10 and 8/15/2018
National Organization of Blind People in Brazil	Sarah Marques	Secretary of Technology and Access to Information	Telephone	8/17/2018
PROTESTE ¹³	Flávia Lefevre	Telecom Coordinator	In person	7/17/2018
SaferNet	Thiago Tavares	President	Telephone	8/21/2018
Transparência Brasil	Manoel Galdino	Executive-Director	Telephone	8/20/2018
CGI.br ¹⁴ – Executive Secretariat	Juliano Cappi / Jamila Venturini	Assistant Manager of Technical Assistance / Technical Assistant	In person	8/6/2018
CERT.br ¹⁵	Cristine Hoepers	General Manager	E-mail	8/19/2018
Federal Public Prosecutor	Neide de Oliveira	Coordinator of the Working Group on Fighting Cybercrimes	E-mail	8/20/2018
Sebrae ¹⁶		Press Office	E-mail	8/17/2018

1. National Telecommunications Agency; 2. Ministry of Science, Technology, Innovation and Communication; 3. Ministry of Human Rights; 4. Ministry of Planning, Development and Management; 5. Brazilian O2O Association; 6. Brazilian Association of the Internet; 7. Latin American Information Agency; 8. Brazilian Association of Information and Communication Technology Companies; 9. National Union of Telephone and Mobile Service Providers; 10. Brazilian Association of Investigative Journalism; 11. Brazilian Institute of Consumer Protection; 12. Brazilian Institute for Socioeconomic Studies; 13. Brazilian Association of Consumer Defense; 14. Brazilian Internet Steering Committee; 15. National Computer Emergency Response Team; 16. Brazilian Micro and Small Business Support Service.

After the document was completed, it was assessed and validated by the Brazilian Internet Steering Committee, the multi-stakeholder body responsible for core decisions on Internet governance in the country. The composition at the time of approval is shown in Annex 1.

The document was also submitted to three peer reviewers with different types of expertise (See Annex 2). This publication has incorporated these reviewers' suggestions.

Contextual indicators were not included in the pilot process, but were included in this publication by Cetic.br, in August 2019. They are presented below in a format that highlights historical series in chart and table format.

Structure of the Report

The report is structured around the Internet Universality Indicators framework. This covers the four ROAM Principles, with the addition of Cross-cutting Indicators concerned with gender and the needs of children, sustainable development, trust and security, and legal and ethical aspects of the Internet. Together, these form the ROAM-X Indicators framework.

In addition to the ROAM-X Indicators, this report assesses a number of contextual indicators concerned with the demographic, social and economic characteristics of the country, which are intended to contextualize the report's findings in terms of conditions specific to Brazil.

Categories. The report as a whole is structured around five categories, which include the four ROAM principles together with a category of Cross-Cutting Indicators (X).

Themes. Each of the ROAM-X indicators category is divided into a number of themes. There are six themes in the R and A categories, five themes in the O and C categories, and three themes in the M category.

Questions. A number of questions are set out within each theme. These address the specific points on which national performance is assessed and on which evidence is used for assessment.

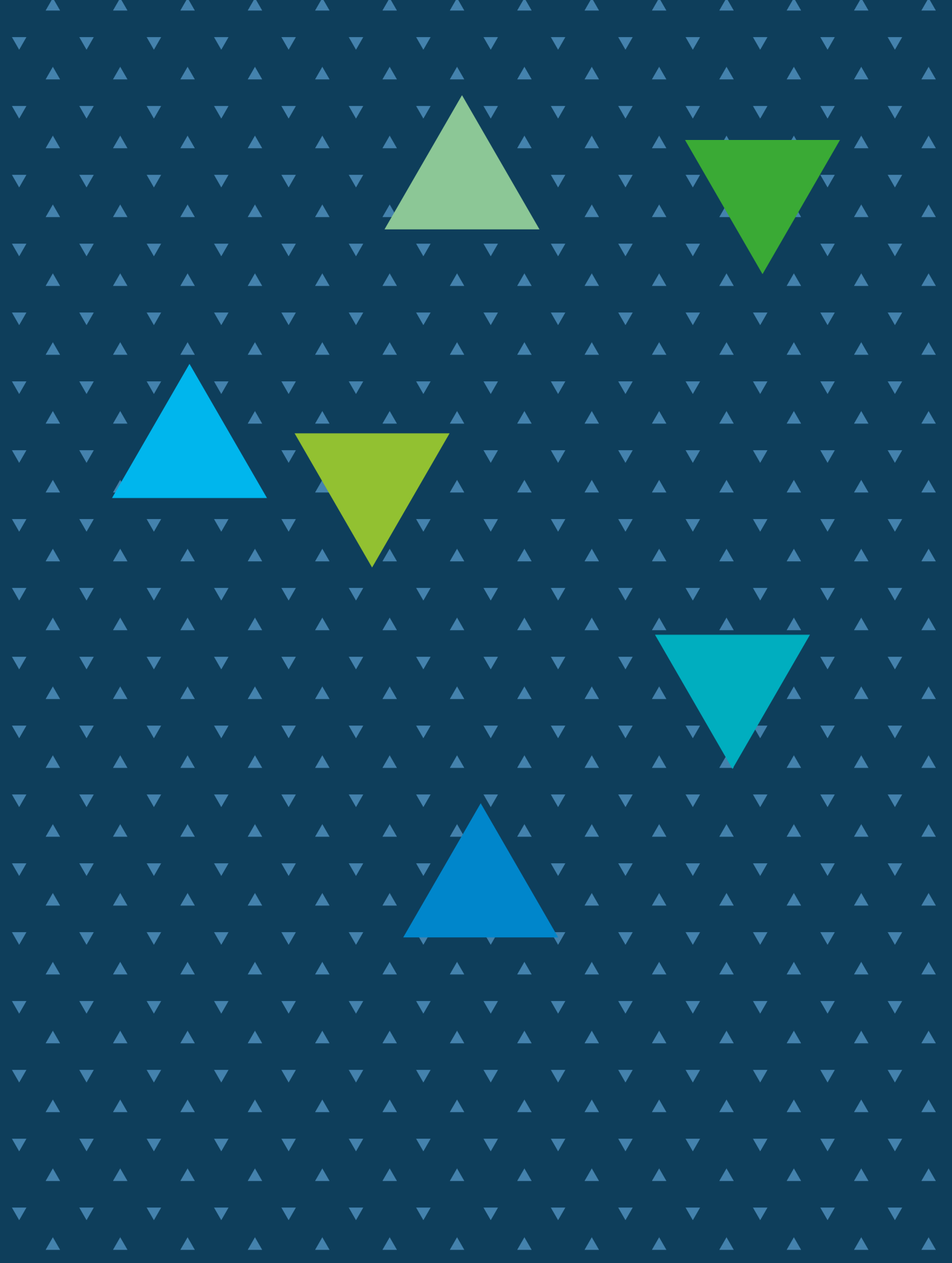
Indicators. One or more indicators is/are identified for each question. These indicators provide the evidence base for the assessment of the question. Core indicators are labelled using the ROAM-X triangle '▶', while other IUI indicators are marked using a '●'.

Indicator findings. Each of the categories includes the findings of the core indicators.

Policy Recommendations. Each of the categories includes policy recommendations for various stakeholders to the findings found in the assessment of Brazil's Internet Development.

Conclusions and Key Priority Recommendations, by stakeholder groups.

Conclusions from the findings of each category are summarised and key priority recommendations are formulated in terms of relevance to stakeholder groups.



2

CONTEXTUAL INDICATORS: **FINDINGS**

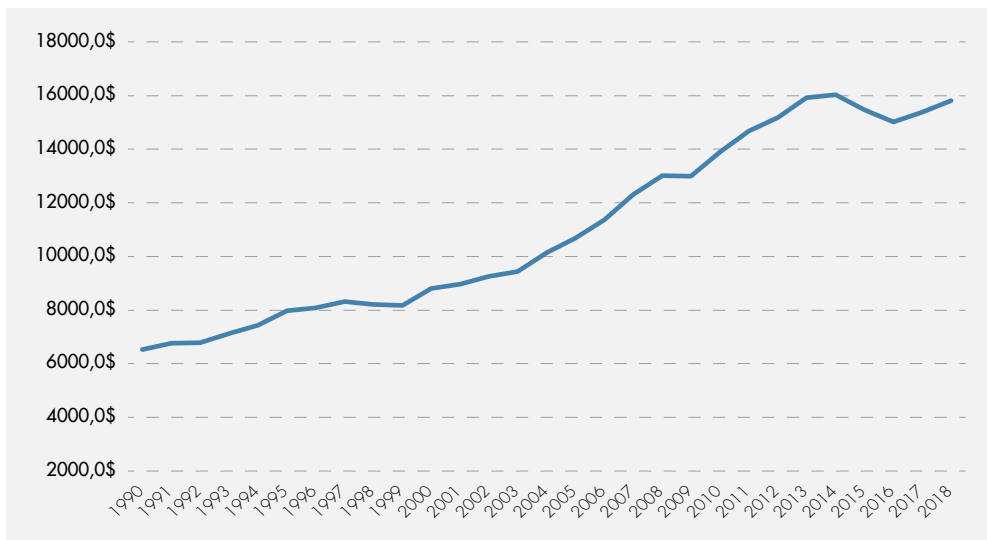
Brazil has an uneven performance in the economic, demographic, development, equality, governance and ICT development indicators, although it is generally in an upper middle position in most comparative indices. Overall, it is possible to see a significant improvement in economic, development and equality indices between 2000 and 2015. Since then, the scenario of an economic crisis has brought negative impacts to most of the indicators. Regarding governance and ICT development indicators, the indicators show fluctuations, making advances in specific dimensions insufficient for the country to achieve a consistent position among international rankings. Below is the country's performance for each dimension of the contextual indicators.



ECONOMIC Indicators

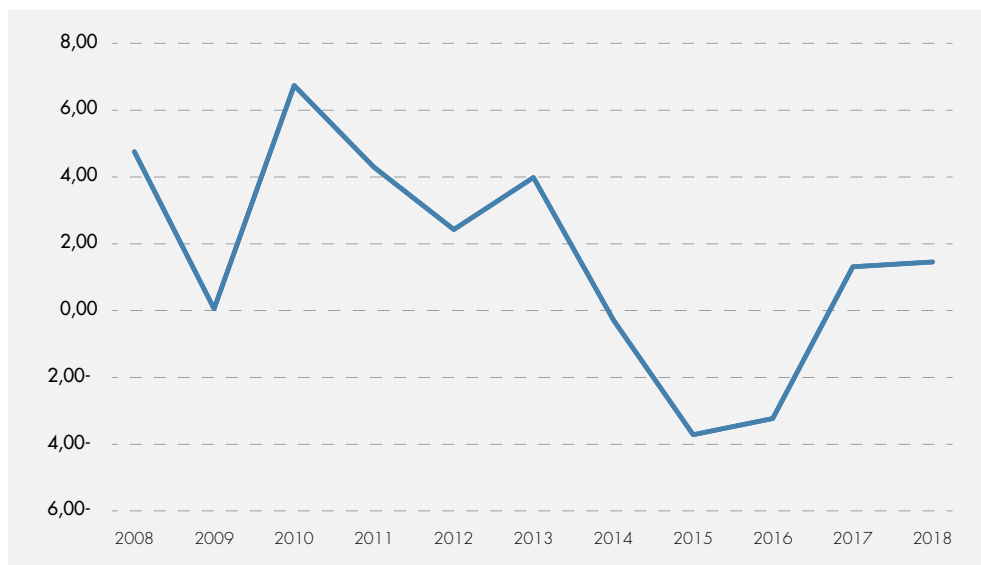
Brazil has had consistent growth in its GNI per capita between 1999 and 2014. By 2015, a scenario of economic crisis restricted economic growth and kept it in negative figures until 2017, when it slowly recovered growth. Looking at the proportion of GDP attributable to services, it has become steady around 60% since 1994, when the country has balanced its former high inflation rates. A new growing trend for the services sector took place since the world crisis, by the end of the 2000s.

Chart 1: Gross National Income (GNI) (Purchasing Power Parity) per Capita



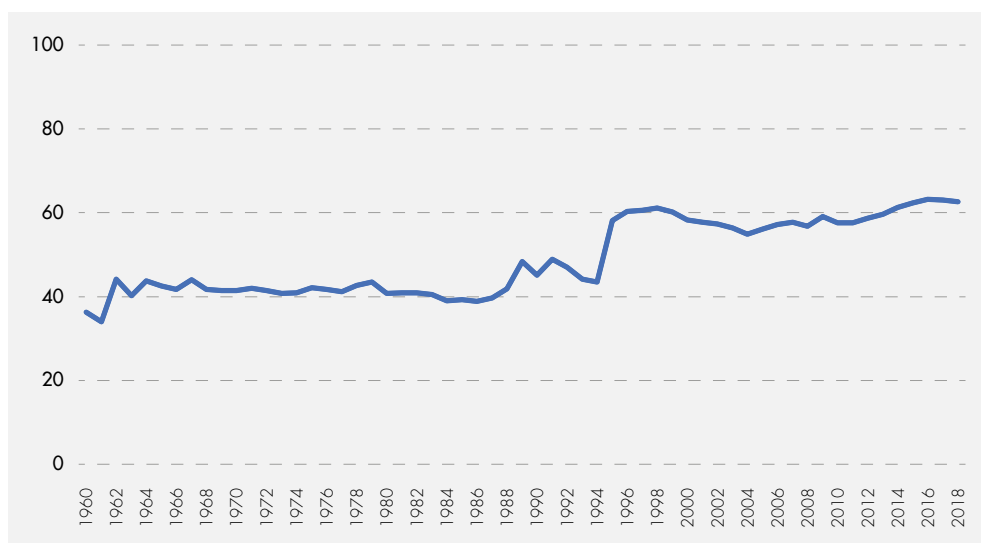
Source: <https://data.worldbank.org/indicator/NY.GNP.PCAP.PP.CD?locations=BR>

Chart 2: GNI Growth Rate Over the Past Ten Years (Annual %)



Source: <https://data.worldbank.org/indicator/NY.GNP.MKTP.KD.ZG?end=2018&locations=BR&start=2008>

Chart 3: Proportion of GDP Attributable To Services (% Of GDP)



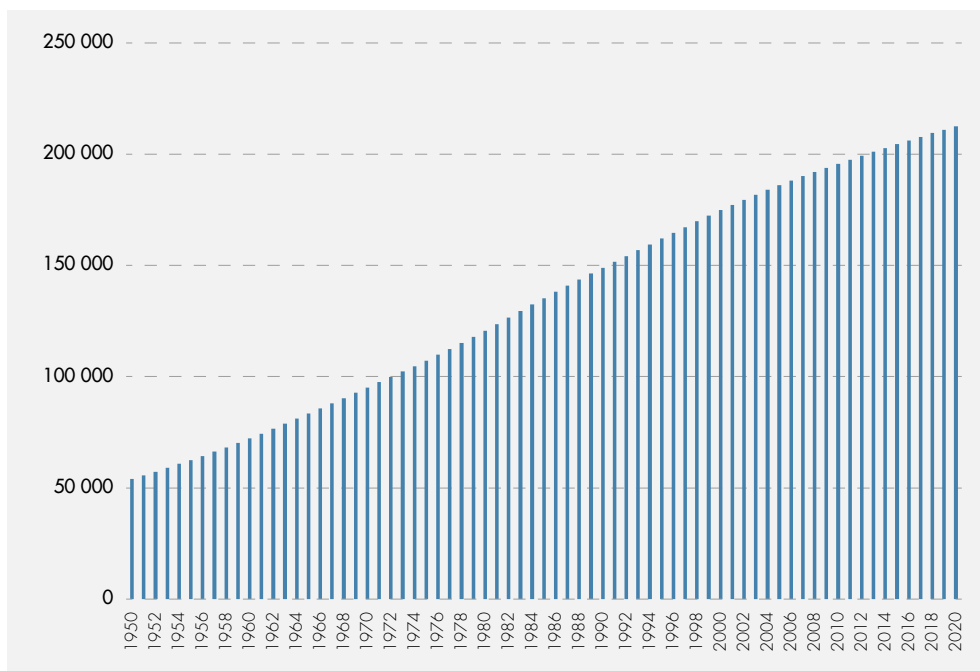
Source: <https://data.worldbank.org/indicator/NV.SRV.TOTL.ZS?locations=BR>



DEMOGRAPHIC Indicators

Brazil had a significantly fast population growth trend until the beginning of the 1990s, when the annual rate started decreasing. Currently, with a population of around 210 million people, the trend is to reach 233 million in 2047, the year when the population is expected to start decreasing.¹ Life expectancy in 2016 was of 78,9 years for women and 71,4 for men, reaching an aggregated rate of 75,1. Figures show that the population is becoming older since the beginning of the 2000s. The urbanization rate was of 86% in 2015, and it is expected to reach 90% in 2035.

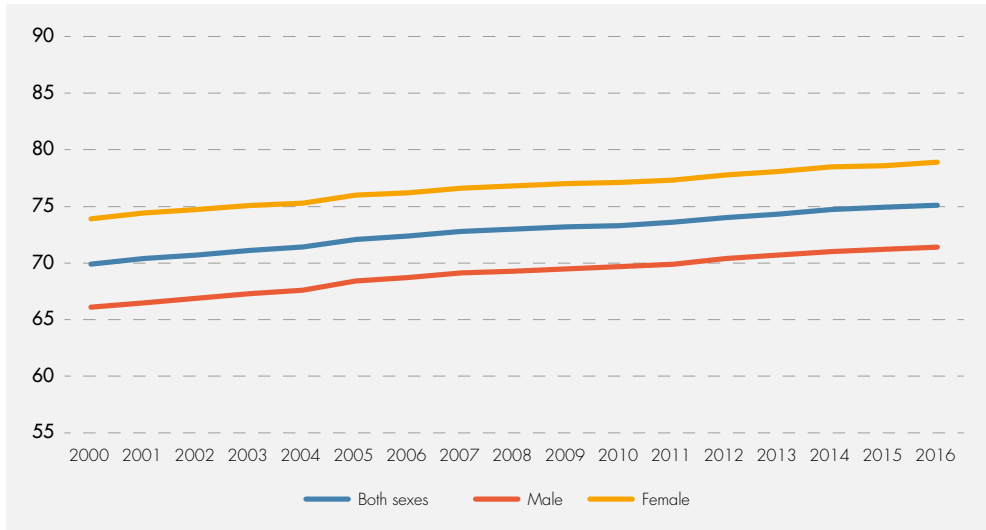
Chart 4: Overall Population Size and Growth Trend



Source: [https://population.un.org/wpp/Download/Files/1_Indicators%20\(Standard\)/EXCEL_FILES/1_Population/WVPP2019_POP_F01_1_TOTAL_POPULATION_BOTH_SEXES.xlsx](https://population.un.org/wpp/Download/Files/1_Indicators%20(Standard)/EXCEL_FILES/1_Population/WVPP2019_POP_F01_1_TOTAL_POPULATION_BOTH_SEXES.xlsx)

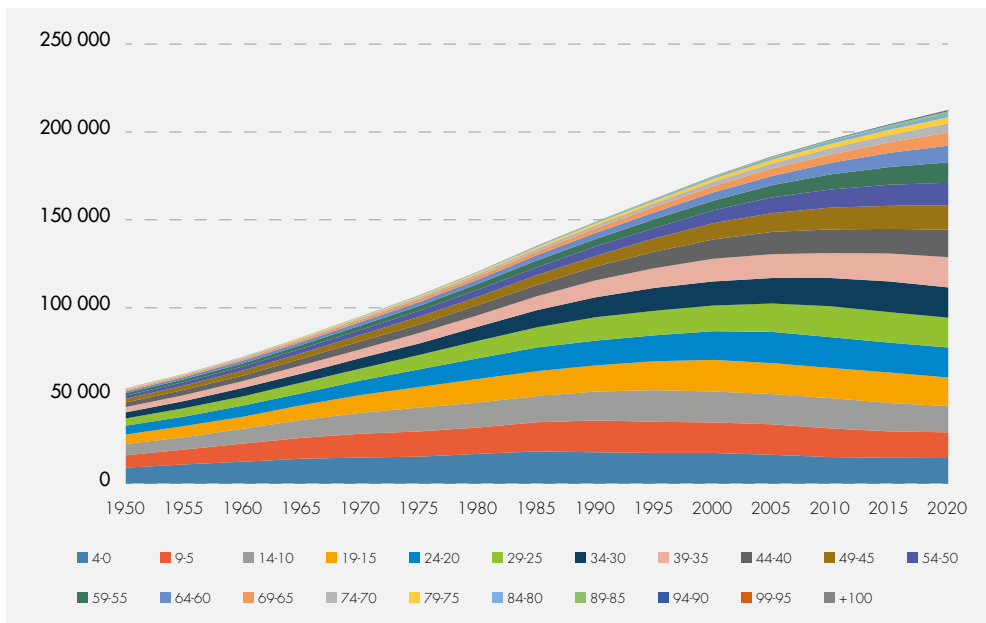
¹ [https://agenciadenoticias.ibge.gov.br/agencia-sala-de-imprensa/2013-agencia-de-noticias/releases/21837-projecao-da-populacao-2018-numero-de-habitantes-do-pais-deve-parar-de-crescer-em-2047#targetText=A%20popula%C3%A7%C3%A3o%20total%20projeta%20para,%28%2C4%20mil%C3%B5es\).](https://agenciadenoticias.ibge.gov.br/agencia-sala-de-imprensa/2013-agencia-de-noticias/releases/21837-projecao-da-populacao-2018-numero-de-habitantes-do-pais-deve-parar-de-crescer-em-2047#targetText=A%20popula%C3%A7%C3%A3o%20total%20projeta%20para,%28%2C4%20mil%C3%B5es).)

Chart 5: Average Life Expectancy at Birth, Disaggregated by Sex



Source: <http://apps.who.int/gho/data/view.main.SDG2016LEXREGv?lang=en>

Chart 6: Proportions Of Children, Young People, People Of Working Age And Elderly People



Source: [https://population.un.org/wpp/Download/Files/1_Indicators%20\(Standard\)/EXCEL_FILES/1_Population/WPP2019_POP_F07_3_POPULATION_BY_AGE_FEMALE.xlsx](https://population.un.org/wpp/Download/Files/1_Indicators%20(Standard)/EXCEL_FILES/1_Population/WPP2019_POP_F07_3_POPULATION_BY_AGE_FEMALE.xlsx)

Linguistic diversity

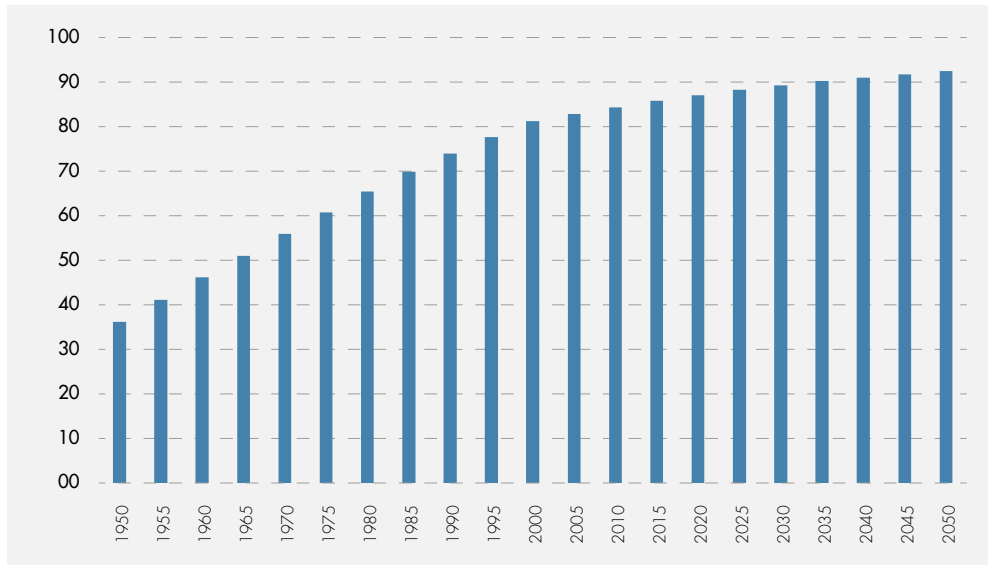
Brazil's official language is Portuguese, as spoken by 99,7% of the population.

The number of individual languages listed for Brazil is 237. Of these, 217 are living and 20 are extinct. Of the living languages, 201 are indigenous and 16 are non-indigenous. Furthermore, 7 are institutional, 31 are developing, 39 are vigorous, 40 are in trouble, and 100 are dying.

The country also has immigrant languages, such as Catalan, Dutch, Japanese (380,000), Kabuverdianu (4,000), Korean (37,000), North Levantine Spoken Arabic, Spanish (491,000), Turoyo, Vlax Romani.

Source: <https://www.ethnologue.com/country/BR>

Chart 7: Degree of Urbanization (% Of Population At Mid-Year Residing In Urban Areas, 1950-2050)



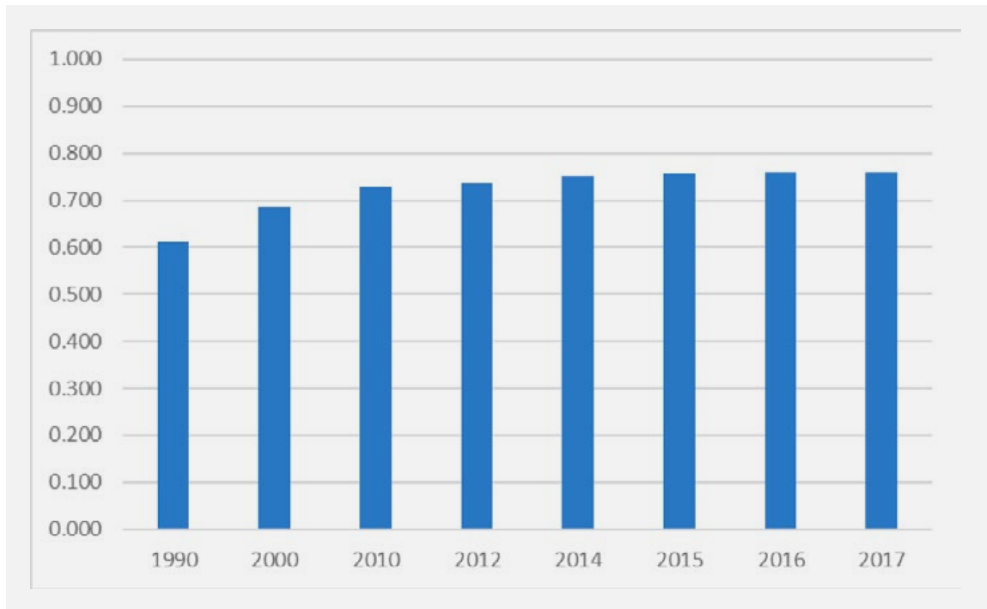
Source: https://population.un.org/wup/Download/Files/WUP2018-F03-Urban_Population.xls



DEVELOPMENT Indicators

Brazil has experienced a significant enhancement of its Human Development Indicator between 1990 (when it was 0.611) and 2015 (0.757), placing the country at the 79th position in the HDI Global Rank. Educational rates show that the country had 7.98 as the mean of years of schooling for people over 25 in 2018, a low rate compared to other countries. The literacy rate reached 90% in 2007, and it is currently around 92%. The proportion of the population covered by electricity supply was 94.5% in 2000 and reached 99.7% in 2014.

Chart 8: UNDP Human Development Index (HDI)



Source: <http://hdr.undp.org/en/composite/trends>

b. Mean years of schooling and proportions of appropriate age groups in primary, secondary and tertiary education, disaggregated by sex²

Table 2: Mean Years of Schooling (25+)

	2013	2014	2015	2016	2017	2018
Total	7.37	7.47	7.60	7.73	7.85	7.98
Female	7.57	7.68	7.81	7.91	8.06	8.18
Male	7.15	7.23	7.37	7.53	7.62	7.75

Source: <http://data.uis.unesco.org/Index.aspx?queryid=242>

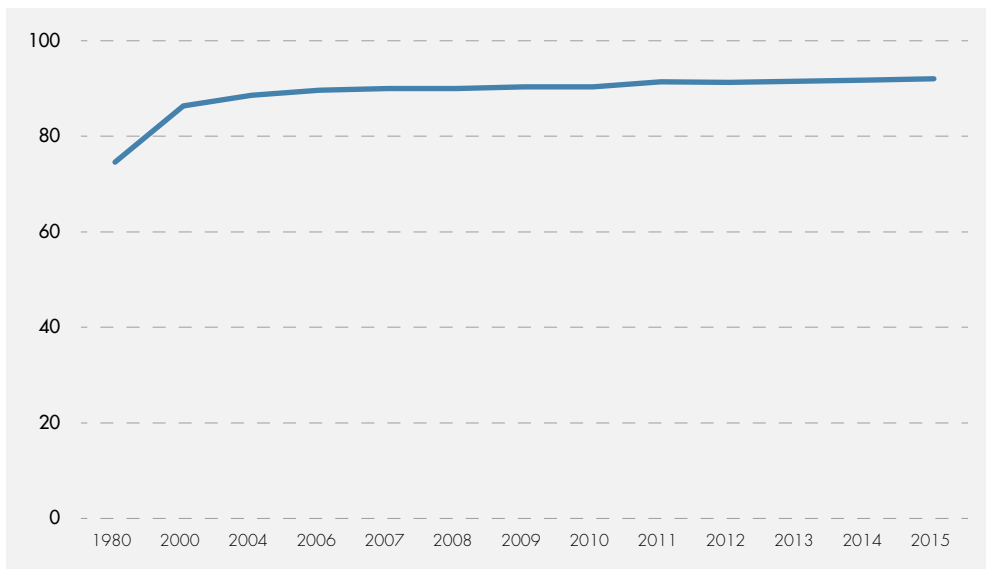
Table 3: Share of Population by Educational Attainment, Population 25 Years and Older (%)

Primary	2010	2011	2012	2013	2014	2015
Total	49	22	23	20	21	20
Female	51	22	24	21	21	21
Male	48	21	23	19	20	19
Lower secondary	2010	2011	2012	2013	2014	2015
Total	15	14	14	14	14	14
Female	15	15	15	15	14	14
Male	14	14	14	13	13	13
Upper secondary	2010	2011	2012	2013	2014	2015
Total	25	28	29	29	29	30
Female	24	27	28	29	29	30
Male	25	28	29	30	30	31
Bachelor or equivalent	2010	2011	2012	2013	2014	2015
Total	11	11	12	13	13	14
Female	10	10	11	11	11	12
Male	12	13	13	14	15	15

Source: <http://data.uis.unesco.org>

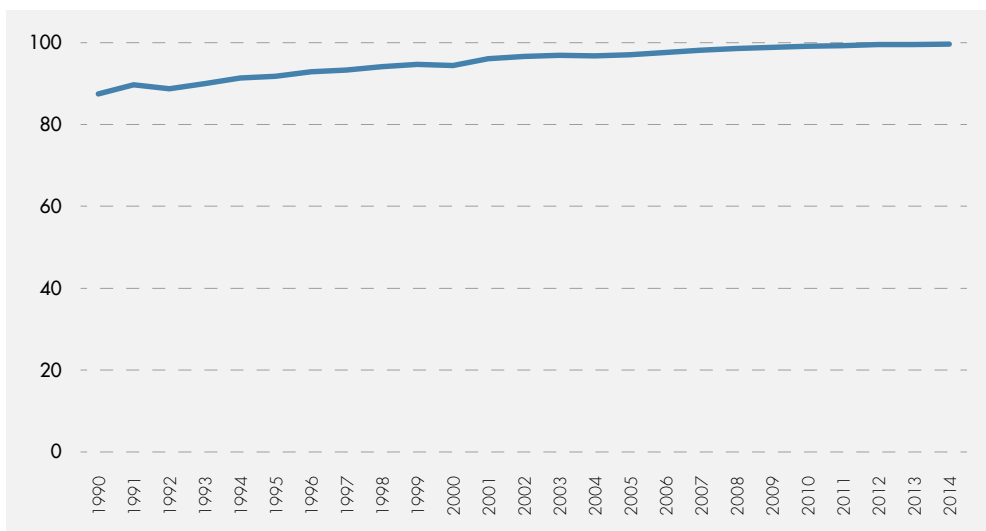
2 "Proportions of appropriate age groups in primary, secondary and tertiary education, disaggregated by sex" not available in international sources.

Chart 9: Adult Literacy Rate, Disaggregated by Sex
(And Language Where Appropriate)

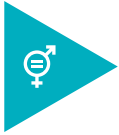


Source: <https://data.worldbank.org/indicator/SE.ADT.LITR.ZS?locations=BR>

Chart 10: Proportion of Population Covered by Electricity Supply



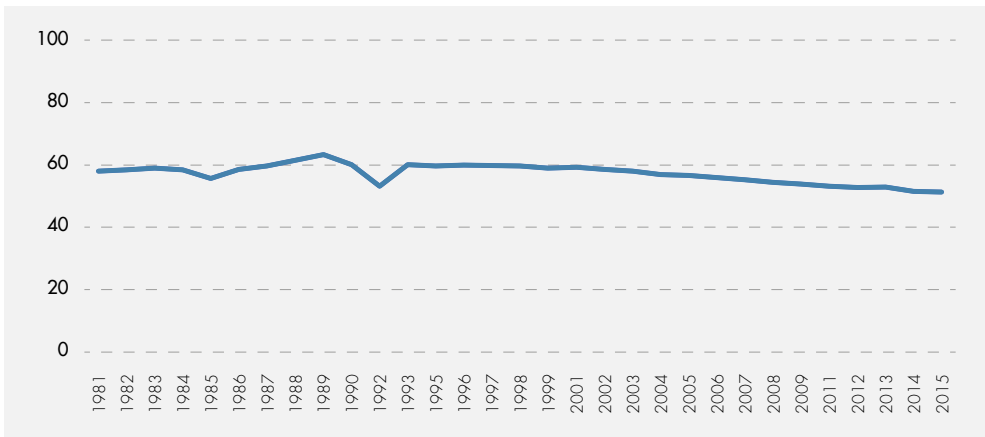
Source: <https://www.indexmundi.com/facts/indicators/EG.ELC.ACCS.ZS/compare#country=br>



EQUALITY Indicators

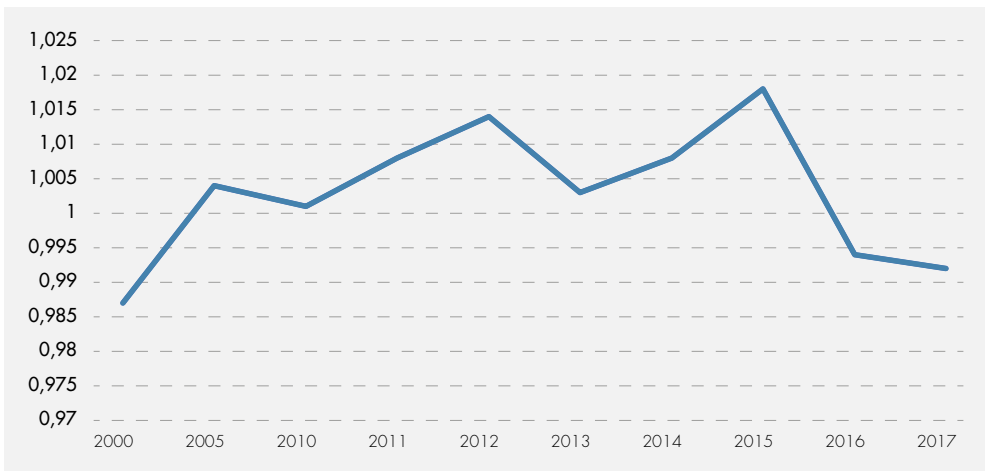
The inequality has dropped in the country since 2001, and the GINI coefficient reached 51.3 in 2015. Gender equality, measured as the ratio of female to male HDI values, had reached its best result in 2015, with 1.018, but dropped to 0.992 in 2017.

Chart 11: GINI Coefficient



Source: <https://www.indexmundi.com/facts/brazil/indicator/SI.POV.GINI>

Chart 12: Gender Inequality Index



Source: <http://hdr.undp.org/en/indicators/137906>



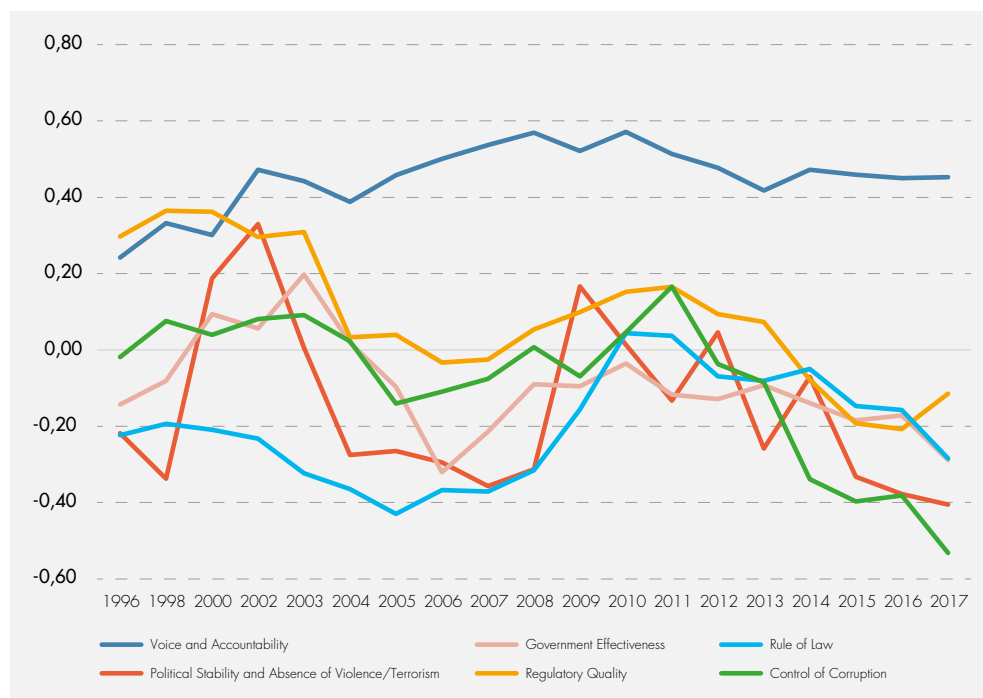
GOVERNANCE Indicators

2

Brazilian governance indicators show uneven performance. Voice and accountability indicators were kept at relatively high levels since 2002. Rule of law, government effectiveness, regulatory quality, control of corruption and political stability have varied significantly in the period, with average peaks in 2002 and 2010 and a sharp decrease since then. The country's rule of law index scores high in order and justice, but low in absence of corruption and criminal justice. In the Doing Business Index, Brazil scores 109 out of 190 countries, with a strong performance in enforcing contracts and protecting minority investors, and weak performance in paying taxes, dealing with construction permits and starting a business.

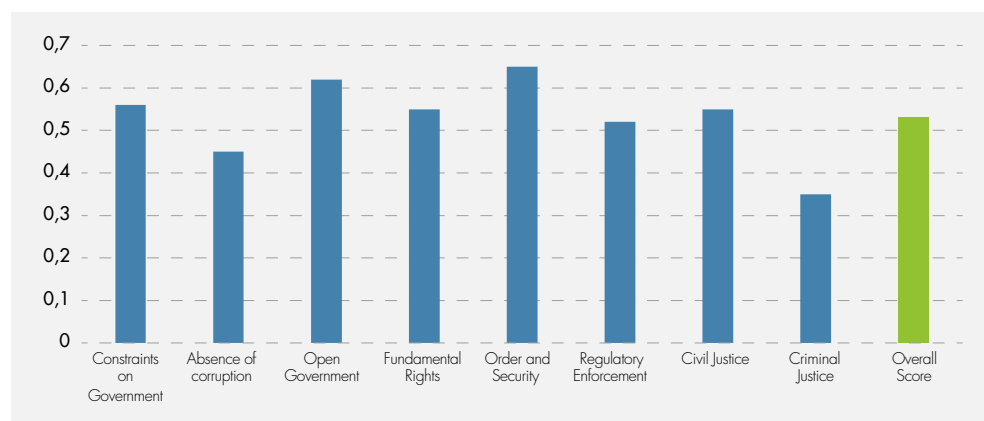
Chart 13: World Governance Indicators

Estimate of governance (ranges from approximately -2.5 (weak) to 2.5 (strong) governance performance)



Source: <http://info.worldbank.org/governance/wgi/wgidataset.xlsx>

Chart 14: Rule of Law Index



Source: <http://data.worldjusticeproject.org/#/groups/BRA>

Table 4: Doing Business Index ³

Brazil's overall score: 57.05 (2018) and 60.01 (2019).

Brazil Rank (position out of 190 countries)

TOPIC	POSITION (OUT OF 190 COUNTRIES)
Ease of Doing Business Ranking (overall)	109
Starting a Business	140
Dealing with Construction Permits	175
Getting Electricity	40
Registering Property	137
Getting Credit	99
Protecting Minority Investors	48
Paying Taxes	184
Trading Across Borders	106
Enforcing Contracts	48
Resolving Insolvency	77

Source: <https://www.doingbusiness.org/en/data/doing-business-score>

3 As described by the World Bank: "Economies are ranked on their ease of doing business, from 1–190. A high ease of doing business ranking means the regulatory environment is more conducive to the starting and operation of a local firm. The rankings are determined by sorting the aggregate scores on 10 topics, each consisting of several indicators, giving equal weight to each topic. The rankings for all economies are benchmarked to May 2018". Available at <https://www.doingbusiness.org/en/data/doing-business-score>



ICT DEVELOPMENT Indicators

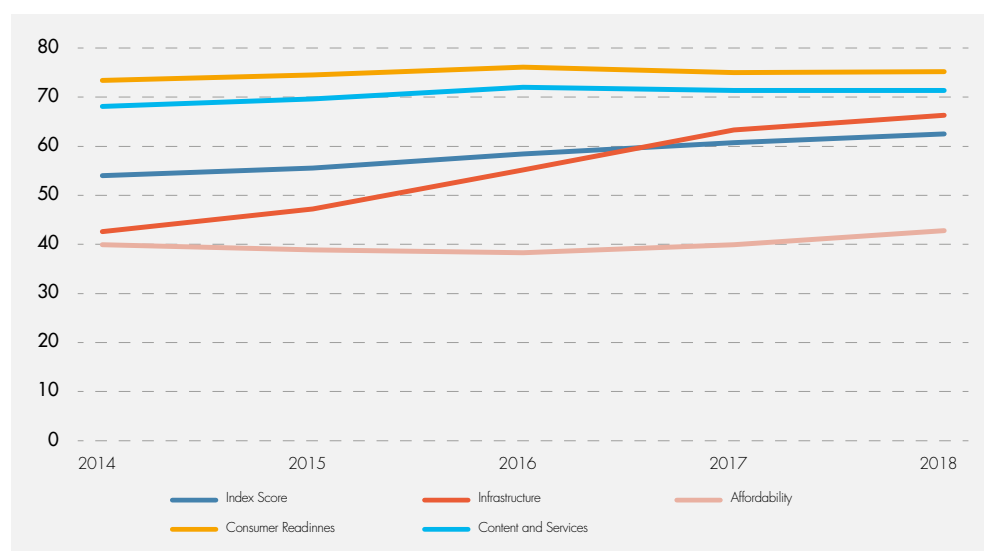
Regarding the ICT Development Index (IDI), Brazil is in the 67th position in the IDI Rank. Its performance in the mobile connectivity index is strong for contents and services and consumer readiness, and weak for affordability, especially for taxation. In the World Economic Forum Networked Readiness Index, Brazil scored 4.01 in 2016, leaving the country in the 72nd position in the rank. In the UNCTAD E-Commerce Index, Brazil is in the 62nd position in 2017 Rank.

Table 5: ICT Development Index

	2016	2017
IDI Rank	66	67
IDI Value	6.12	5.89

Source: <https://www.itu.int/net4/ITU-D/idi/2017/index.html#idi2017economytab&BRA>

Chart 15: Mobile Connectivity Index



Source: <http://www.mobileconnectivityindex.com/>

Table 6: World Economic Forum Networked Readiness Index

	2012	2013	2014	2015	2016
Index	3.92	3.97	3.98	3.85	4.01
Rank	65	60	69	84	72

Table 7: UNCTAD E-Commerce Index

Share of individuals using the Internet (2016)	60
individuals with an account (15+, 2014 or latest)	68
Secure Internet servers per 1 million people (normalized, 2016)	63
UPU postal reliability score (2016)	58
Index Value (2016 data)	62
Index Value (2015 data)	65
Index Rank (2015 data)	53

Source: https://unctad.org/en/PublicationsLibrary/tn_unctad_ict4d09_en.pdf



R

Rights

3

CATEGORY R **RIGHTS:**

Findings of core indicators,
and policy recommendations
for various stakeholders



THEME A

Policy, Legal and Regulatory Framework

A.1 Is there a legal framework for the enjoyment and enforcement of human rights which is consistent with international and regional rights agreements, laws and standards, and with the rule of law?

► **Indicator:** *Existence of a constitutional or legal framework, including oversight arrangements, which is consistent with international and regional rights agreements, laws and standards, and evidence that it is respected and enforced by government and other competent authorities*

The Brazilian Constitution and the legal framework, in general, are consistent with regional and international agreements. Brazil is a signatory to 16 of 18 international treaties¹, including all that support major human rights frameworks, such as the International Covenant on Civil and Political Rights and the International Covenant on Economic and Social Rights.

The country has a vibrant civil society and a strong framework of political rights. There is political pluralism and participation in politics is free. Freedom of expression and association is generally respected and protected. Economic, social and cultural rights are also protected by a wide range of public policies, which include a universal health system and a system of social protection for the less wealthy.

However, civil society organizations and the United Nations have pointed out serious violations of civil rights, especially concerning public security and the rights of indigenous peoples. In 2017, Brazil had 63,800 homicides². At a rate of around 30.8 per 100,000 inhabitants, it was one of the highest in the world. Of these homicides, more than 5,000 occurred during police interventions.

Racism and discrimination against black and indigenous people are seen as frequent violations in the country, and are often directly related to land conflicts and the “war on drugs”³. The country has also failed to protect human rights defenders. In 2017, there were 57 murders among this

1 As stated in <http://indicators.ohchr.org/>

2 Fórum Brasileiro de Segurança Pública. Anuário Brasileiro de Segurança Pública 2018 <http://www.forumseguranca.org.br/publicacoes/anuario-brasileiro-de-seguranca-publica-2018/>

3 Human Rights Council. Working Group on the Universal Periodic Review. Summary of other stakeholders’ submissions on Brazil. 2017. Available at undocs.org/en/A/HRC/WG.6/27/BRA/3

population, which amounted to 27% of the global total of 207 reported by Global Witness.⁴ This makes Brazil the most dangerous country for such defenders.

In the country report submitted in the framework of the recent Universal Periodic Review⁵, Brazil reported progress in poverty reduction, promotion of social equality, combating slave labour, promoting the rights of persons with disabilities, and issues related to gender equality, combating violence against women, combating discrimination against LGBT people, and promoting ethnic-racial equality. Progress has also been reported in combating human trafficking, migration policy, and the fight against torture, among other issues.

Brazil has a National Human Rights Council, with the participation of civil society in equal numbers to government representatives. Its objectives include:

- Promoting measures necessary for the prevention, repression, punishment, and reparation of conduct and situations contrary to human rights, including those foreseen in international treaties and acts ratified in the country, and determining their responsibilities;
- Overseeing the national human rights policy, and suggesting and recommending guidelines for its implementation;
- Receiving reports or accusations of conduct or situations contrary to human rights and establishing their responsibilities;
- Issuing recommendations to public and private entities involved in the protection of human rights, setting a reasonable period for their attainment, or justifying the impossibility of doing so.

The National Human Rights Council has requested recognition as a National Human Rights Institution under the terms of the Paris Principles.

A.2 Is there a legal framework which recognizes that the same rights that people have offline must also be protected online?

► **Indicator:** Evidence that the principle of online/offline equivalence is accepted and implemented in law and practice

The main legal framework for protecting rights online is the Brazilian Civil Rights Framework for the Internet (Law 12.965/14), enacted in 2014, which establishes principles, guarantees, rights and duties for the use of the Internet in Brazil. It states that the discipline of Internet use

4 Available at <https://www.globalwitness.org/pt/press-releases/deadliest-year-record-land-and-environmental-defenders-agribusiness-shown-be-industry-most-linked-killings/>

5 Human Rights Council. Working Group on the Universal Periodic Review. Brazilian National Report. 2017. Available at undocs.org/en/A/HRC/WG.6/27/BRA/1

in the country is based, among others, on the respect for freedom of expression, human rights, personality development, and the exercise of citizenship in digital media. In Article 3, it defines, among others, the following principles for this discipline:

- guarantee of freedom of expression, communication, and expression of thought, in accordance with the Federal Constitution;
- protection of privacy;
- protection of personal data, according to the law.
- In Article 7, the Brazilian Civil Rights Framework for the Internet clearly defines thirteen rights of Internet users, including:
 - privacy and inviolability and protection of privacy, and compensation for material or moral damage resulting from its violation;
 - inviolability and confidentiality of the flow of communication over the Internet, except by judicial order, according to the law;
 - inviolability and confidentiality of stored private communications, except by judicial order.

This means that the equivalence of offline and online is accepted and implemented for the main related rights. Civil society organizations, such as Article 19, however, emphasize that there is a permanent debate in Congress raised by bills that try to create new criminal types or restrain civil rights, modifying the Brazilian Civil Rights Framework for the Internet.



THEME B

Freedom of Expression

B.2 Are any restrictions on freedom of expression narrowly defined, transparent and implemented in accordance with international rights agreements, laws and standards?

► **Indicator:** *Legal restrictions on freedom of expression that are consistent with international and regional rights agreements, laws and standards, and evidence that these are respected by government and other competent authorities*

Freedom of expression is guaranteed by the Constitution in Article 5 (fundamental rights) and Article 220 (social communication). The Brazilian Civil Rights Framework for the Internet (Law

12.965/14) also defines freedom of expression both as fundamental and as a principle for the Internet discipline in the country.

The problems with legal restrictions are related to the fact that slander, libel, and defamation are defined not only as civil offenses, but also as criminal offenses. This is inconsistent with international standards.

There is also a problem of implementation and interpretation by the judiciary. Legitimate issues, such as defamation or intellectual property, have been used as legal arguments to request the removal of lawful content, especially during election periods. Ctrl+X, a platform created in 2014 by the Brazilian Association of Investigative Journalism (Abraji) to monitor removal cases⁶, has recorded around 3,500 lawsuits attempting to withdraw content online since 2011. Among the monitored processes for which decisions have already been published, 64% had sentences that led to the exclusion of news and posts. Abraji emphasizes that among the 662 actions that pleaded previous censorship – such as those that forces media companies or journalists to pre-filter content, refraining from publishing terms related to specific politician – 30% were accepted by judges.

The Brazilian Civil Rights Framework for the Internet Watch, an online initiative held by academic researchers, has gathered 78 judicial cases related to freedom of expression in which the Framework is referred to.⁷ They show conflicts between freedom of expression and intellectual property (trademark and copyright) or religious freedom and attempts to use “fake news” and the right to be forgotten as arguments against freedom of expression.

B.4 Under what conditions does the law hold platforms and other online service providers liable for content published or shared by users on them?

► **Indicator:** *Legal framework for intermediary liability and content regulation is consistent with international and regional rights agreements, laws and standards, and evidence concerning proportionality of implementation*

The legal framework for intermediary liability and content regulation is consistent with international laws and standards.

The Brazilian Civil Rights Framework for the Internet establishes that Internet Service Providers will not be held liable for damages arising from third-party content, which creates a “safe harbor” for freedom of expression. The “safe harbor” also applies to online service providers (OSPs) which may only be held liable if they fail to comply with specific judicial orders demanding the

⁶ Ctrl+X Platform, available at www.ctrlx.org.br

⁷ Observatório do Marco Civil da Internet, available at <http://www.omci.org.br/jurisprudencia/liberdade-de-expressao/>

removal of content. There are three exceptions. In the first, online service providers may be held liable for the violation of intimacy if they do not remove content with sexual acts or nudity after notification by involved parties. The second is related to intellectual property rights. The law states that “the application of the provisions of this article for infringements of copyright or related rights depends on a specific legal provision, which must respect the freedom of expression and other guarantees provided in art. 5 of the Federal Constitution.”

At present (August 2018), the specific legal provision has not yet been approved. According to the law, until the approval of a new law, the Copyright Act (Law 9.610/1998) must be observed. However, the wording of this law is 20 years old and does not offer a useful framework for analyzing conflicts in the digital realm.

A third exception is defined by the Child and Adolescent Statute (Law 8.069/1990), which was modified in 2008 to include liability of providers that do not remove content after notification.

Regarding implementation, the Institute for Technology and Society⁸ considers that judges have shown fairly broad acceptance of the Brazilian Civil Rights Framework for the Internet approach to intermediary liability, though there have been a few cases of in which article 19 of the Framework – which covers intermediary liability – has not been applied for alleged conflict with the Consumers Code. One of these cases has reached the Supreme Court⁹, and is considered to have general repercussions. This means that the case will determine the constitutionality of Article 19. As of August 2018, the case had not yet been adjudicated.

One question that remains open concerns the responsibility of platforms and online service providers when they decide to remove content for violating their terms of use. Since the beginning of 2018, Google (twice) and Facebook (once) have been held liable by courts for removals made by themselves that were considered to infringe on freedom of expression.

8 ITS-Rio, www.itsrio.org

9 Recurso Extraordinario (Extraordinary Appeal) 1.037.396



THEME C

Right of Access to Information

C.2 Does the government block or filter access to the Internet or to specific online services, applications or websites, and on what grounds and with what transparency is this exercised?

► **Indicator:** *Legal framework for blocking or filtering Internet access, including oversight arrangements*

Brazilian legislation does not provide for the sanction of blocking or filtering in any case. The Brazilian Civil Rights Framework for the Internet also states that blocking or filtering is forbidden. However, electoral law provides for the possibility of suspending electronic sites that violate it for 24 hours.¹⁰ Nevertheless, since 2015 there have been nine judicial cases requesting that applications such as WhatsApp and Facebook be blocked. In three of them blocking was carried out and overturned between 4 to 24 hours. In one case a website was blocked since then (Table 8). The justification in most cases has been for non-compliance with judicial orders for data delivery.

The Brazilian Civil Rights Framework for the Internet has a provision for sanction that was misused as a reason to block applications in some of these cases. Article 12, in the section that addresses log registers and data protection, establishes that, in case of non-compliance, there will be a temporary suspension of activities involving the acts described in Article 11 or prohibition of the exercise of the activities that involve the acts described in this article. These provisions should only apply when the infringement is related to log register and data retention, which is not applicable in the cases involving WhatsApp and Facebook. Moreover, it should apply to the suspension or prohibition of illegal activities, not the provision of services as a whole. Recently, two cases claimed that Article 12 is unconstitutional, considering that blocking the services as a whole affect users that are not involved in illegal activities. Until the conclusion of the data collection of this report the cases were not judged by the Supreme Court and the Article remains in force.¹¹

¹⁰ Article 571 of the Electoral Law (Law 9504/1997, modified by Law 12.034/2009)

¹¹ ADFP 403, available at <http://portal.stf.jus.br/processos/detalhe.asp?incidente=4975500> and ADI 5527, available at <http://portal.stf.jus.br/processos/detalhe.asp?incidente=4983282>

► **Indicator:** Evidence in government and court decisions, and from other credible and authoritative sources, concerning blocking or filtering of access

There are no records of blocking or filtering requests made by the Federal government. There are, however, nine cases of court decisions demanding the blocking of applications, as described below:

Table 8: Cases of Court Decisions Demanding the Blocking of Applications

CASE	DATE	REASON	EFFECTIVE BLOCKING? FOR HOW LONG?
Case Facebook III	28/03/2018	Non-compliance with court order to remove and filter content	No. Judge threatened to block. Decision suspended.
Case MinerWorld	19/03/2018	Violation of the Consumer Protection Code	No. Blocking requested by promoter, but not granted by judge
Case Facebook II	05/10/2016	Non-compliance with judicial order for content removal	No
Case WhatsApp IV	19/07/2016	Non-compliance with judicial order for data delivery	Yes, 4 hours
Case WhatsApp III	02/05/2016	Non-compliance with judicial order for data delivery	Yes, 24 hours
Case WhatsApp II	16/12/2015	Non-compliance with judicial order for data delivery	Yes, around 12 hours
Case Tudo sobre Todos	29/07/2015	Violation of norms of personal data protection	Yes, since then
Case Uber	28/04/2015	Offering clandestine transport service	No
Case WhatsApp I	25/02/2015	Non-compliance with judicial order for data delivery	No

Source: bloqueios.info, by Internetlab

The case *Tudo sobre Todos*, related to a site that made public personal data from millions of people, is the only one that properly matched the conditions for service suspension and being blocked as provided by Article 12 in the Brazilian Civil Rights Framework for the Internet.

The case *WhatsApp IV* was the third suspension of the app, and led to a precautionary measure by the president of the Supreme Court, which reestablished WhatsApp for considering the

suspension of the service a disproportionate measure. The cases have yet to have their merit analyzed.

► **Indicator:** *Incidence, nature and basis for Internet shutdowns or other restrictions on Internet connectivity*

There is no record of any Internet shutdown in Brazil, though the WhatsApp suspensions mentioned above (which lasted a few hours) may be interpreted as partial shutdowns, considering the relevance of this app.

► **Indicator:** *Numbers and trend of content access restrictions, takedowns of domain names and other interventions during the past three years*

The Brazilian Federal Government has no relevant records of removal requests. Most of the requests are orders coming from courts. Between 2015 and 2017, Google registered 2,184 removal requests through court orders in Brazil, concerning all their services (Web Search, YouTube, Google+, etc.). In the same period, there were 97 requests from the Police and Executive Branches (municipal, state and federal); these requests required the removal of a total of 23,266 items. The reasons varied, but defamation, privacy and security were the most frequent.¹² Facebook, in its turn, has a different indicator, measuring not removal requests, but pieces of content effectively removed for infringement of local laws. The company restricted 4,493 pieces in 2016 and 2017, mostly for defamation and infringement of the electoral law.¹³ In the case of Google and Facebook, the number of requests has been increasing over the last few years.

Regarding requests related to copyright violation, one requestor is responsible for almost all the 247 million URL removal requests for Google between 2016 and 2018: the *APDIF do Brasil Member Companies*, which gathers members of the music industry.¹⁴ These numbers do not include items that are removed because of the automatic detection of violating Google's terms of service. Regarding Facebook, the company counts removals of the copyrighted material as part of its terms of service and community standards and does not discriminate among countries. As of 2017, globally, Facebook has removed 3.75 million pieces of content for copyright infringement.¹⁵

12 Google Transparency Report – Government Removals, at <https://transparencyreport.google.com/government-removals>

13 Facebook Transparency Report – Content Restrictions, available at <https://transparency.facebook.com/content-restrictions/country/BR>

14 Google Transparency Report – Copyright, at <https://transparencyreport.google.com/copyright>

15 Facebook Transparency Report – Intellectual Property, available at <https://transparency.facebook.com/intellectual-property>

C.4 Are individuals, journalists or other online/media actors subject to arbitrary detention, prosecution or intimidation for accessing information online?

► **Indicator:** *Scope and nature of legal provisions and practice*

► **Indicator:** *Numbers of arbitrary detentions and prosecutions for access to content that is not illegitimate in terms of international agreements as to the circumstances and criteria for permissible restrictions¹⁶*

Brazil does not have any known cases¹⁷ of individuals, journalists or other online/media actors being subject to arbitrary detention or prosecution for accessing information online. However, there is at least one case of prosecution for publishing information that was already available online. In 2016, judges in Paraná State brought 36 lawsuits against the newspaper *Gazeta do Povo* and its journalists, for publishing information on the judges' wages.¹⁸

In addition, the NGO Article 19 detected 24 cases of threats, intimidation, harassment or constraints for seeking public information through the access to information law in recent years.¹⁹ In these cases, the abuses were committed by public officers from the public bodies responsible for providing the requested information.

16 The latter include 'propaganda for war' and 'advocacy of national, racial or religious hatred that constitutes incitement to discrimination, hostility or violence' (ICCPR Article 20), and 'exploitative use of children in pornographic performances and materials' (CRC Article 34).

17 An in-depth primary study would be needed to identify possible cases not made public.

18 <https://www1.folha.uol.com.br/poder/2016/06/1778916-magistrados-entram-com-dezenas-de-aco-es-contra-jornalistas-no-pr.shtml>

19 Article 19. Identidade revelada. Available at <http://artigo19.org/blog/2018/05/15/identidade-revelada-entruves-na-busca-por-informacao-publica-no-brasil/>



THEME D

Freedom of Association and the Right to take part in the Conduct of Public Affairs

D.2 Can non-governmental organizations organize freely online?

► **Indicator:** *Evidence of online organization, and absence of undue interference with such organization*

Online organization has usually been free in the country. E-mail groups and applications like Facebook and WhatsApp have been widely used for civil society organization and activists. However, there have also been examples of criminalization of protests by the judiciary, impacting online organization.

In the most emblematic case, 23 protesters were convicted in July 2018 for ‘criminal association’ during the June 2013 protests in Brazil. In a statement sent to a UN special rapporteur on the right to freedom of peaceful assembly and association²⁰, four civil society organizations denounced the process as arbitrary, stating that it “represents a grave violation of the right of peaceful assembly and association”. In this case, simple interest in Facebook events or reactions to posts were used “to establish the alleged union of intent and hierarchy between the activists, despite the fact that several defense witnesses made firm allegations that the defendants did not all know each other during the events, or even that their presence at said events was peaceful”.²¹As of August 2018, the case was awaiting a second-instance trial.

20 <http://artigo19.org/wp-content/blogs.dir/24/files/2018/08/UrgentAppeal-23-activists.pdf>

21 <http://artigo19.org/wp-content/blogs.dir/24/files/2018/08/UrgentAppeal-23-activists.pdf>

D.3 Are there government policies for e-government and/or e-participation that encourage participation in government and public processes?

► **Indicator:** *Existence of government policies for e-government and e-participation, including use of the Internet for public consultation*

Brazil established a Digital Governance Strategy in 2016 and revised it in 2018.²² It has three axes: access to information, service provision, and social participation. It outlines five strategic objectives:

- Encouraging the availability and use of open data
- Promoting transparency through the use of information and communication technologies (ICT)
- Broadening supply and improving public services through digital transformation
- Sharing and integrating infrastructures, data, processes, systems, and services
- Expanding social participation in the policy life cycle and public services

These objectives are related to 15 goals and targets, including:

- Increasing digital services in the Services Portal, from 696 (Mar 2018) to 850 in 2019;
- Massively increasing the issuance of the national identification document (DNI), not yet started, reaching 500,000 people in 2019;
- Increasing the use of digital services, from 61% of the population (Mar 2018) to 64% by the end of 2018;
- Increasing the digital services that use the unique citizen ID, from 29 (Mar 2018) to 100 in 2019;
- Increasing the number of federal and state level public bodies that hold online consultations, from 17% (Mar 2018) to 22% in 2019.²³

Brazil has had strong processes of online participation in specific cases, such as the debate on the Brazilian Civil Rights Framework for the Internet, which had two phases in the Executive Branch before being sent to Congress. However, as shown by the figures above, online participation processes are not yet spread out in the Federal Administration. Public agencies, such as the National Telecommunications Agency (Anatel), promote public consultations about their standards, but this obligation is not defined for all agencies.

²² <http://www.planejamento.gov.br/EGD/arquivos/revisao-da-estrategia-de-governanca-digital-2015-2019.pdf>

²³ <http://www.planejamento.gov.br/EGD/arquivos/revisao-da-estrategia-de-governanca-digital-2015-2019.pdf>

Regarding public services, there has been an effort to gather them in the Services Portal²⁴ and to digitalize them. According to the Ministry of Planning, Management and Budget²⁵, as of August 2018, 31% of public services were digital. The goals stated in the Digital Governance Strategy are based on the proposal of a unique citizen ID related to the National Identification Document.

This indicator considers only the federal government, but the states and the major cities also have their own systems of e-government and e-participation.

When it comes to the actual use of online e-government services, 64% of Internet users have used at least one service in the past 12 months. Among those who have not used it, the key factors are a preference for being personally attended and a lack of skills.

● **Indicator:** *Assessments in the Online Services Index of UNDESA's E-Government Development Index*

Brazil scores 0.9236 out of 1.0 on the Online Services Index.²⁶ The index is based on a survey with 140 binary questions²⁷, in which positive answers generate more in-depth questions. The researchers analyzed the national portal, e-services portal, and e-participation portal.

► **Indicator:** *Values/rankings in UNDESA's e-government index*

Brazil scores 0.7327 in the E-Government Development Index, ranking 44 of 193 (51 in 2016).²⁸

Brazil scores 0.9179 in the E-Participation Index, ranking 12 of 193 (37 in 2016).²⁹

24 servicos.gov.br

25 Editor's Note (August 2019): This Ministry was merged with others in January 2019, creating the Ministry of Economy

26 <https://publicadministration.un.org/egovkb/en-us/Data/Country-Information/id/24-Brazil>

27 https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2018-Survey/E-Government%20Survey%202018_FINAL%20for%20web.pdf

28 As stated in <https://publicadministration.un.org/egovkb/en-us/Data/Country-Information/id/24-Brazil>

29 As stated in <https://publicadministration.un.org/egovkb/en-us/Data/Country-Information/id/24-Brazil>



THEME E

The Right to Privacy

E.2 Is the protection of personal data guaranteed in law and enforced in practice, with respect to governments, businesses and other organizations, including rights of access to information held and to redress?

► **Indicator:** *Legal framework for data protection, including monitoring mechanisms and means of redress, and evidence that it is respected and enforced by government and other competent authorities*

The first Brazilian Federal Law for Data Protection was enacted in August 2018, as Law 13.709³⁰, but it will be put into effect in 18 months (in February 2020).³¹ The law embodies the principle of informative self-determination, conditioning the use of personal data only if according to a basis legally defined, among them the citizen's consent. It states that "consent shall be for specific purposes, and generic authorizations for the processing of personal data shall be void," and that the consent may be revoked at any time.³² The law adopts a broad concept of personal data, which includes those that may be 'deanonymized' with reasonable effort. Special protection is given to sensitive data, such as health records and religious or sexual information.

The exceptions for the law include journalistic and artistic exclusive use, public security, national defense, state security or investigation, and prosecution of criminal offenses. These last four exceptions are considered too broad by civil society organizations that followed the approval process, such as Intervezes and InternetLab.

The law provides means of redress in case of violations by controllers or processors. Processors are "jointly and severally liable for damage caused by the treatment when it fails to comply with the obligations of the data protection legislation or if it has not followed the licit instructions of the controller, in which case the processor equals the controller." The bill proposed a national authority to monitor, oversee and sanction violations. The authority would have a Board of

30 Law 13.709/2018, available at http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2018/Lei/L13709.htm

31 Editor's Note (August 2019): After the completion of this report, the Personal Data Protection Law has been modified by an Executive Order, which defined a 24 months *vacatio legis*, what means that the Law will be only put into effect in August 2020.

32 Law 13.709/2018, available at http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2018/Lei/L13709.htm

Directors and a National Council for the Protection of Personal Data and Privacy. However, this part was vetoed by the president.^{33 34}

Considering its recent approval and the large *vacatio legis*, it is not possible to evaluate its respect and enforcement.

► **Indicator:** *Legal framework concerning the commercial use of personal data and international data transfer/security, including monitoring mechanisms and means of redress*

Regarding international data transfer, the recently approved law provides that it is only allowed in the following cases:

For countries or international organizations that provide an adequate degree of protection of personal data in respect to the provisions of the Law;

When the controller offers and proves guarantees of compliance with the principles, rights of the holder and data protection regime provided for in this Law, in the form of:

- Specific contractual clauses for a specific shipment;
- Contractual standard clauses;
- Global corporate standards;
- Seals, certificates, and codes of conduct duly issued;
- Where the transfer is necessary for international legal cooperation between public intelligence, investigation and prosecution bodies, in accordance with international law;
- When the transfer is necessary for the protection of the life or physical safety of the owner or third party;
- When the national authority authorizes the transfer;
- When the transfer results in a commitment made in an international cooperation agreement;
- When the transfer is necessary for the execution of public policy or legal attribution of the public service;
- When the holder has given their specific consent and highlighted the transfer, with prior information on the international character of the operation, clearly distinguishing this from other purposes; or

33 As explained below in the indicator about the national authority.

34 Editor's Note (August 2019): After the completion of this report, the Personal Data Protection Law has been modified by an Executive Order, which created the Data Protection Authority directly linked to the Presidency, leaving room to a revision in two years which can lead to a switch to indirect administration, with more independency and autonomy.

- When necessary to meet the hypotheses provided for in items II, V and VI of Article 7 of the Law (data controller’s legal or regulatory obligation; judicial, administrative or arbitration process; life protection of the data subject).

The law defines as an exception the treatment of information coming from outside the national territory that is not subject to communication, shared use of data with Brazilian treatment agents, or the object of international data transfer with a country other than the country of provenance, provided that the country of origin provides the degree of protection of personal data appropriate to the provisions of the Law.

► **Indicator:** *Existence and powers of an independent data protection authority or similar entity*

The text of the bill approved in Congress provided for an authority with independence and autonomy to monitor, oversee and sanction violations, but it was vetoed by the president for being unconstitutional, since Congress may not create public bodies if the bills have not been sent by the Executive Branch. The government has publicly committed to sending a new bill to Congress proposing the national authority.^{35 36}

E.3 Are the powers of law enforcement and other agencies for the lawful interception of user data necessary, proportionate and limited to circumstances which are consistent with international and regional rights agreements, laws and standards?

► **Indicator:** *Legal framework for the lawful interception of data, including independent oversight and transparency, and evidence concerning implementation by government and other competent authorities*

The possibility of data interception is provided for in the Constitution when defining the right of secrecy in communications:

Article 5, XII: The secrecy of correspondence and of telegraphic, data and telephone communications is inviolable, except, in the latter case, by court order, in the cases and the manner prescribed by law for the purposes of criminal investigation or criminal procedural finding of facts.

³⁵ This document was finished only one week after the Law enacting.

³⁶ Editor’s Note (August 2019): After the completion of this report, the Personal Data Protection Law has been modified by an Executive Order, which created the Data Protection Authority directly linked to the Presidency, leaving room to a revision in two years which can lead to a switch to indirect administration, with more independency and autonomy.

Law 9.296/1996 establishes the conditions for violating telephonic or data secrecy, stating that it will not be allowed if any of the following occurs:

- There is no reasonable evidence of authorship or participation in a criminal offense;
- The proof can be obtained by other available means;
- The fact investigated constitutes a criminal offense punished, at the most, with a penalty of detention.

The law does not provide for independent oversight and transparency.

The Brazilian Civil Rights Framework for the Internet (Law 12.965/2014) defines the inviolability and secrecy of the flow of the communications over the Internet as a user's right, except by judicial order, as provided by law. It also defines the inviolability and secrecy of user's stored private communications, except by judicial order.

Resolutions of the National Justice Council³⁷ and the Public Prosecutor National Council³⁸ define the criteria to be observed in requests and decisions.

The civil society organization InternetLab considers that the interception law largely complies with international law enforcement guidelines and principles, but there is no way to assess the actual practice, for the following reasons:

- Official figures are available on deferred intercepts – about 1,500 VOIP and about 1,000 electronic mails a month³⁹ – but it is not known how many intercepts were requested, to compare that with the deferrals;
- The Judiciary does not observe the clear guidelines provided for by the law; there are frequent renewals of authorization for long terms;
- Although there is no provision for the Intelligence Agency to request interception, there is a possibility of cooperation between the Federal Police and the Intelligence Agency in interchanging information, as defined in Article 6 of Decree 4.376/2002.

In addition, there are no details about specific guidelines to access stored data.

The end-to-end cryptography utilized by apps such as WhatsApp is a challenge for the authorities who are allowed to request interception. Judges obtained suspension of the app three times for not delivering data about its users, as described in Indicator C.2. The possibility that apps can have their activities suspended for not delivering data is being analyzed in two cases in the Supreme Court.⁴⁰

37 Resolution 59/2008, available at http://www.cnj.jus.br/images/atos_normativos/resolucao/resolucao_59_09092008_04032016200708.pdf

38 Resolution 36/2009, available at <http://www.cnpm.mp.br/portal/atos-e-normas/norma/571/>

39 As can be seen at http://www.cnj.jus.br/interceptacoes_tel/relatorio_quantitativos.php

40 ADF 403, available at <http://portal.stf.jus.br/processos/detalhe.asp?incidente=4975500> and ADI 5527, available at <http://portal.stf.jus.br/processos/detalhe.asp?incidente=4983282>



THEME F

Social, Economic and Cultural Rights

F.1 Do government policies incorporate the Internet in strategies concerned with employment, health and education, with particular reference to ICESCR rights?

► **Indicator:** *Evidence of inclusion of a) the Internet, and b) respect for ICESCR rights, in sector strategies for employment, health and education*

The Ministry of Labor maintains the Workers' School⁴¹, an online platform with free courses in 23 areas. Each course lasts about 40 hours and provides a certificate from the University of Brasilia. There is a very wide range of subjects, from "Creating a Successful Business" to "Human Resources Management" and "Intermediate Users of Excel." The content is taught using texts, videos and games.

In the Brazilian educational system, the Brazilian Open University (UAB) is the main strategy for distance education, with the goal of expanding and internalizing the offer of courses and programs of higher education in Brazil. As stated on the website, "The UAB System's primary goal is to contribute to the National Teacher Education Policy of the Ministry of Education, so courses are primarily aimed at the initial training of primary education teachers".⁴² The program promotes collaboration between the Union, states and municipalities, to create permanent training centres in distant and isolated locations. The program describes that as a strategy for the development of municipalities with a low Human Development Index (HDI) and the Basic Education Development Index (IDEB). The program is offered by the Coordination for the Improvement of Higher Education Personnel (CAPES), a foundation linked to the Ministry of Education (MEC).

The Internet is also widely used as a tool for democratizing access to higher education, in a system of national distribution of places in public universities that use scores on a common exam taken by all students when finishing high school. The main bottleneck for including the Internet in strategies for education is the access gap and lack of good quality connections in schools, as can be seen in the indicators Access F.1 and Cross-Cutting B.5.

Although the country has participated in cutting-edge projects to use technology in education since the early 1980s, the policy still in effect is the National Educational Technology Program

41 Available at <http://escola.trabalho.gov.br>

42 <http://www.capes.gov.br/uab/o-que-e-uab>

(ProInfo), created by Ordinance No. 522/MEC of April 9, 1997, to promote the pedagogical use of information and communication technologies (ICT) in public elementary and high school systems. The National Educational Technology Program (ProInfo) is one of the longest-lasting nationwide policy in Latin America to foster ICT use in education. After 20 years of implementation of ProInfo, there are still challenges to be overcome in terms of access to ICT equipment and Internet connectivity available for pedagogical use.

The sector strategy for health uses the Internet to gather data and offer statistics and indicators on the health and sanitary situation, in a system managed by DATASUS, the National Health System ICTs Department. The system also gathers financial and administrative information on the health system.

The Ministry of Health is in the process of implementing electronic health records in the basic health units, which will enable the exchange of clinical information. The survey ICT in Health 2016, conducted by the Regional Center for Studies on the Development of the Information Society (Cetic.br), showed how far healthcare facilities were from using information exchange functionalities.

Table 9: Healthcare Facilities by Available Electronic Healthcare Information Exchange Functionalities (2016)

Percentage of the total number of healthcare facilities that used the Internet in the last 12 months

Available functionalities	Total	Administrative Jurisdiction	
		Public	Private
Sending or receiving clinical information (to/from healthcare professionals at other facilities)	23%	20%	26%
Sending or receiving electronic referrals (to/from other healthcare facilities)	28%	29%	27%
Sending or receiving reports on the care provided to patients at the time of discharge or referral to other facility	21%	23%	20%
Sending or receiving patients' prescribed medication lists (to/from other healthcare facilities)	15%	19%	11%
Sending or receiving patients' lab test results (to/from other healthcare facilities)	27%	22%	31%
Sending or receiving patients' imaging test results (to/from other healthcare facilities)	15%	10%	19%
Sending or receiving nursing care plans (to/from other healthcare facilities)	10%	14%	7%

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian healthcare facilities: ICT in Health 2016

The survey also showed that only 25% of the healthcare facilities enabled Internet access to electronic systems from outside. When analyzing the kind of services that healthcare facilities offered through the Internet, only 18% (16% of public facilities) enabled booking appointments, 19% (13% public) booking lab tests, 23% (16% public) viewing lab test results, and 7% (6% public) viewing electronic medical records.

► **Indicator:** *Evidence of analysis by government of the impact of Internet on employment, health and education*

Cetic.br, the statistics and indicator department of the Brazilian Network Information Center (NIC.br), carries out the ICT in Health and the ICT in Education surveys annually.

The survey on education analyzes:

- Schools: ICT infrastructure in schools; teacher training projects on the use of technology; insertion of ICT into the curriculum.
- Students: profile of computer and Internet use; skills in the use of these technologies; school activities carried out; guidance for the use of ICT.
- Teachers, pedagogical coordinators and directors: professional profile; use, skills and specific training for the use of ICT; educational and coordination activities proposed by them; perceptions of possible obstacles to the use of these technologies in the school environment.

The survey on health analyzes:

- Healthcare facilities: ICT infrastructure and IT management; electronic health records and information exchange; services offered to patients; and the practice of telehealth.
- Doctors and nurses: profile of professionals; access to and use of ICT; appropriation of these technologies.
- There is no data analyzing the impact of the Internet on employment.

● **Indicator:** *Submission and content of country reports to the OHCHR on implementation of ICESCR rights*

The last Brazilian report to the OHCHR specifically about the implementation of ICESCR rights was submitted in 2009, which makes it outdated for use in this application. In 2017, Brazil submitted a report to the Universal Periodic Review, in which the country provided the following information:⁴³

Between 2004 and 2014, 36 million Brazilians moved out of extreme poverty.

The *My House, My Life* Program, launched in 2009 by the Brazilian Federal Government, delivered more than 2.512 million houses by the year 2015.

In 2016, the Family Health Strategy was present in 5,481 municipalities. In addition, 66.44% of the population had access to community health services.

43 Brazil's National Report to the Universal Periodic Review 2017, available at <http://undocs.org/en/A/HRC/WG.6/27/BRA/11a>

In 2015, the Basic Education Development Index (IDEB) indicated that Brazil exceeded the target for the initial years of Elementary School. However, in the final years of elementary education and in high school, IDEB's national goals were not reached.

The report does not connect the Internet and ICESCR rights.

F.2 Are all citizens and other individuals equally able to take advantage of the Internet to participate in cultural activities?

► **Indicator:** *Extent and nature of differences in Internet access and use between different communities/ethnicities*

The figures on Internet access and use by different communities/ethnicities are collected by Cetic.br, but it has a large margin of error for some ethnicities. The available data may be used as a proxy for identifying possible differences among them. The margin of error is in parentheses.

Table 10: Individuals Who Accessed the Internet by Last Access (With Margin of Error) (2017)

Total population

		Less than 3 months (user)	Between 3 and 12 months	More than 12 months	Did not access the Internet
TOTAL		67(2)	3(1)	3(1)	26(2)
Color or race declared by respondents	White	70(2)	3(1)	2(1)	25(2)
	Black	64(4)	3(1)	4(1)	29(3)
	Pardo	69(3)	4(1)	3(1)	24(2)
	Yellow	70(7)	1(1)	2(1)	26(6)
	Indigenous	56(11)	7(7)	12(10)	25(7)
	Did not answer	37(11)	3(2)	3(3)	57(11)

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian households: ICT Households 2017.

The figures show a slight difference between self-identified black and white people on Internet access. The most relevant apparent difference is among indigenous and others, though the margin of error does not allow affirming that these figures are statistically valid.

Regarding the use of the Internet, the ICT Households Survey covers 33 activities. There is also an inconsistency in some of the margins of error, but again it can be used as a proxy. Below are the ones for which differences between ethnicities appeared to be more relevant.

Table 11: Selected Indicators on Internet Use by Activities Carried Out (With Margins of Error) (2017)

Percentage of the total number of Internet users

Activities	Total	White	Black	Pardo	Yellow	Indigenous	Did not answer
Sending and receiving e-mails	58(2)	63(3)	56(5)	55(3)	51(10)	53(13)	59(20)
Information on health or healthcare services	44(2)	47(3)	37(5)	43(3)	49(11)	37(13)	26(15)
Information on travel and accommodations	29(2)	34(3)	26(4)	27(3)	24(8)	34(15)	36(28)
Job searches or sending resumes	21(2)	18(2)	22(4)	23(2)	16(7)	22(11)	33(29)
Financial information, making payments and other financial transactions	28(2)	34(3)	25(5)	24(2)	17(8)	13(6)	33(29)
Downloading music	42(2)	38(3)	47(5)	45(3)	44(12)	33(12)	20(11)

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian households: ICT Households 2017
Data on color/race must be analyzed controlling for other variables, such as level of education and family income.

► **Indicator:** Existence of government policy concerning cultural heritage online

The policy on preserving and promoting the cultural heritage online is spread among three bodies under the Ministry of Culture: the National Institute of Historic and Artistic Heritage (IPHAN), the National Library, and the National Cinematheque.

IPHAN is in the phase of digitalizing the central archive, to enable Internet access to information related to the Brazilian cultural heritage. Besides public access to the archive, it also promotes the handling and preventive conservation of the documents.

The National Library, a body that is responsible for implementing the government's policy of capturing, safeguarding, preserving and disseminating the country's intellectual production, maintains BNDigital, an archive with over 1.8 million digital documents, with free access to the public.

In the National Cinematheque, the Cultural Content Databank allows streaming access to some of the historical cinema archives of Brazil, such as the Atlantida and Vera Cruz studios and TV Tupi shows and soap operas.

► **Indicator:** *Constitutional or legal guarantee of freedom of artistic expression*

The Brazilian Constitution states, in Article 5, about individual rights, that "the expression of intellectual, artistic, scientific, and communications activities is free, independent of censorship or license".

Policy recommendations for various stakeholders

Government

- Create an independent National Personal Data Protection Authority and a National Council for the Protection of Personal Data, making the normative framework in force consistent with the enactment of the Personal Data Protection Law.⁴⁴
- Expand and improve policies for preservation and promotion of the cultural heritage online.

Judiciary

- Avoid over-inclusive first-instance decisions that generate blocking of apps or entire Internet segments.
- Protect freedom of association online and refrain from considering illegal any situation that may violate the right of peaceful assembly and association.
- Develop capacity-building programs to train judicial operators on the implications of the Internet to support well informed decisions.

Private Sector and Technical Community

- Report on governmental or judicial attempts to hold companies liable for content that infringes on third-parties, in conflict with the Brazilian Civil Rights Framework for the Internet.
- Include in their reports on governmental or judicial requests for content removal, companies should differentiate judicial and executive orders, and separate all the different cases (such as IP infringement) by geographic location.

Academia

- Develop systematic research on new challenges to ensuring freedom of expression, access to information and privacy in the digital realm.

Civil Society

- Monitor and periodically report on violations of all the rights supported by the Brazilian Civil Rights Framework for the Internet.

⁴⁴ Editor's Note (August 2019): After the completion of this report, the Personal Data Protection Law has been modified by an Executive Order, which created the Data Protection Authority directly linked to the Presidency, leaving room to a revision in two years which can lead to a switch to indirect administration, with more independency and autonomy.



Openness

4

CATEGORY 0

OPENNESS:

Findings of core indicators
and policy recommendations
for various stakeholders



THEME A

Policy, Legal and Regulatory Framework

A.2 Does the legal and regulatory framework for business, academia and civil society facilitate innovation on the Internet?

► **Indicator:** *Evidence concerning the conduciveness of the legal and regulatory framework towards the establishment of new business ventures and innovation by academia and civil society*

The current legal and regulatory framework in Brazil is to some extent conducive to innovation and the establishment of new businesses. The situation is different depending on the perspective analyzed: the framework for the Internet; the general framework for business; and the policies to foster innovation.

The framework for the Internet has important aspects regarding innovation. The Brazilian Civil Rights Framework for the Internet defines the promotion of innovation as one goal for the Internet sector in Brazil. Two definitions are key to fostering innovation. First, the Framework has clear provisions for net neutrality, which prevents the creation of entry barriers to online service providers by Internet service providers. Second, since it gives a safe harbour to online service providers¹ by not holding them liable for third-party content, the law makes room for new platforms based on user-generated content. The recent Data Protection Law is mentioned by some organizations as an important complement to the Internet legal framework in Brazil; by giving legal certainty to new players, the law creates a fertile environment for innovation. Some business associations, however, fear that the high level of requirements established by the law may create an entry barrier for start-ups and new companies. The Brazilian Association Online to Offline (ABO2O), which gathers digital platforms and companies, focuses on the collaborative economy, such as Ifood, Cabify and Decolar, considers that, in general, the regulatory framework for data protection is an important advance, since one of its structuring axes is the provision of legal security for both users and companies. At the same time, they consider it may affect competition because of the cost of compliance and operation, since Brazil does not have a robust digital ecosystem.

Regarding the general framework for business, Brazil has legal and regulatory bottlenecks that hinder innovation. Data for 2016 from the World Economic Forum Networked Readiness Index

¹ As shown in Rights – B.4

ranked the Brazilian business and innovation environment 124th, because of problems with issues such as total tax rates, time and number of procedures to start businesses, venture capital availability, and government technology procurement².

Regarding initiatives to foster innovation, Brazil launched a modified Innovation Law in 2016³, detailed in a new decree in 2018. It builds new strategies to connect investments in science and technology to the productive process, opens new methods for government procurement, facilitates state capital investment in private business, simplifies the import of goods, inputs, and components for innovation and science and technology projects. Because of its recent implementation and detailing, there is no way to evaluate how effective is the new framework to foster innovation.

► **Indicator:** *Perceptions of experience of the regulatory environment for business and ICTs by businesses, including Internet-enabled business*

Different businesses, including those Internet-enabled, have similar perspectives on and criticisms of the regulatory environment.

The Latin American Association of the Internet (ALAI), which gathers online service providers such as Google and Facebook, considers that Brazil has a framework which is difficult to operate in and less flexible. ALAI states that cases in which a different approach was taken led to better results, such as the regulatory freedom given to fintechs – essential to the way they have flourished in Brazil in the last few years. They also note jurisdictional challenges, mentioning that there have been many attempts by Brazilian authorities to impose strong obligations that foreign companies must comply with. The number of new bills in Congress and the complex political process also slow the process of definition – the recently approved Personal Data Protection Law required seven years of debate between the Executive and Legislative branches.

Dinamo, a coalition of startups focused on changing the ecosystem for startups and innovation, has pointed out some of the challenges posed by the regulatory environment for this kind of venture: high taxes and a flat taxation policy, which does not consider the risks involved in new business; the liability imposed on investors in limited companies, which hinders investment; closing down a company is costly and time-consuming, and involves a complex bureaucratic process; and the lack of incentives for investment in startups.

The Brazilian Association Online to Offline (ABO2O), which gathers digital platforms and companies focused on the collaborative economy, considers that there is excessive regulation in some areas and lack of regulation of and protection for new businesses in others. According to them, most proposed regulation attempts to apply traditional formulas to a new environment, which is not a good fit and inhibits innovation. ABO2O suggests more legal certainty in taxation,

2 <http://reports.weforum.org/global-information-technology-report-2016/economies/#indexId=NRI&economy=BRA>

3 Law 13.243/2016, available at http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2016/lei/113243.htm

such as promoting a centralized collection of municipal taxes, to avoid the need for adapting and processing thousands of distinct municipal obligations.



THEME B

Open Standards

B.3 Does the government promote the diversity of intellectual property licensing options including free and open-source software (FOSS)?

► **Indicator:** *Government policy towards FOSS and other licensing options*

The Brazilian government has no policy in place for free and open-source software and licensing, despite some attempts by public officers. In 2003, the government established a committee on the adoption of free and open-source software in the Federal Government. This led to the discussion of a decree that would define free software as the standard for the Federal Government, obliging public officers to justify adopting proprietary solutions. The decree was not published, and adoption has been voluntary. In 2013, after the Snowden revelations occurred, the government launched a decree⁴ determining: that data communications of public administration should be carried out by IT services provided by public bodies; that Union entities should adopt mail services and complementary functionalities offered by organs and entities of the federal public administration; and that the programs and equipment devoted to that “must-have characteristics that allow an audit to guarantee the availability, integrity, confidentiality, and authenticity of the information”⁵.

What is in place is the Public Software portal, which gathers and shares among public entities distinct solutions based on free and open sources licensed under GNU-GPL. As of August 2018, 71 pieces of software had been published in the portal. The Ministry of Planning, Development, and Management⁶, as of August 2018, was discussing with states and municipalities strategies and solutions to integrate the three government levels, using the Public Software Portal as a common repository.

4 Decree 8.135/2013, available at http://www.planalto.gov.br/ccivil_03/_Ato2011-2014/2013/Decreto/D8135.htm

5 Decree 8.135/2013, available at http://www.planalto.gov.br/ccivil_03/_Ato2011-2014/2013/Decreto/D8135.htm

6 Editor’s Note (August 2019): This Ministry was merged with others in January 2019, creating the Ministry of Economy

► **Indicator:** *Extent to which software with diverse licensing options are used in government departments*

The ICT Electronic Government Survey 2017 showed that open source software was used by 93% of federal organizations, but less so by state organizations (78%). Nearly the same proportion of federal (98%) and state organizations (78%) adopted licensed software.

Among state organizations, 59% used software developed by in-house teams. At the federal level, 94% reported using software developed by in-house teams in the 12 months prior to the survey. To a certain extent, this may represent federal and state government organizations whose activities demand specific solutions not provided by external suppliers or partners.

Regarding the branches of government, with exception of the executive (58%), almost all of the organizations from the Public Prosecutor's Office (100%) and the judicial (98%) and Legislative (95%) branches reported using software developed by in-house teams.

B.4 Does the government promote and adopt standards to facilitate accessibility to the Internet and e-government services for persons with disabilities?

► **Indicator:** *Government policy and practice towards ensuring accessibility for persons with disabilities*

Brazilian law provides for full accessibility for people with disabilities. The Brazilian Statute on Inclusion of Persons with Disability⁷ states in Art. 63 that accessibility is mandatory in websites maintained by companies with headquarters or commercial representation in the country or by government bodies, for the use of persons with a disability, ensuring access to available information, in accordance with best practices and guidelines for accessibility adopted internationally.

It also states that community telecenters that receive federal public resources for their costs or installation and LAN houses must ensure that at least 10% of their computers have accessibility features for visually impaired persons. According to the law, companies that provide telecommunications services must guarantee full access for people with disabilities.

The Brazilian Civil Rights Framework for the Internet defines accessibility as a user's right. It also states that public applications should aim for accessibility "to all interested parties, regardless

⁷ Law 13.146/2015, available at http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2015/lei/113146.htm

of their physical, motor, perceptive, sensory, intellectual, mental, cultural or social capacities, subject to the privacy and administrative and legal restrictions".⁸

The government established a model for accessibility in e-government (eMAG), which adapts W3C's WCAG 2.0 standard to the Brazilian reality. However, actual practice is far removed from the principles in the laws and the manual. Using software to evaluate the accessibility of federal government websites, public officers found that only 5% of government portals are fully accessible.⁹

The Federal Public Prosecutor's Office instituted public civil action demanding the prohibition of government advertising on websites that are not accessible. The suit is based on research that shows that none of the ten of the most accessed news portals are fully accessible.¹⁰

► **Indicator:** *Perceptions of persons with disabilities concerning accessibility policy and practice*

The main group of people with disabilities whose access is affected is the blind. The 2010 Census pointed out that 6.5 million people – 3.46% of the total population – had severe difficulties with vision and more than 500,000 said they were totally blind.¹¹

The National Organization of Blind People from Brazil considers that, although there are good laws for accessibility, there is no control, supervision, incentive or punishment for the government and private companies. According to them, e-commerce sites and apps have significant barriers to people with visual disabilities. They cite airlines as an example of inaccessible websites. Some big retailer websites also have significant barriers to access, due to the large amount of information shown and the fact that various products have no alternative descriptions for pictures.

Web for All, a movement that promotes accessibility on the Web in Brazil, undertook a study to identify barriers to access on the main e-commerce sites in Brazil. It analyzed 56 websites, assessing them in three main categories: screen readers; navigation by the keyboard; and the motor difficulty of interaction¹². The results identified limits to accessibility regarding access, product search, carts and payments, account creation, and finalizing purchases¹³.

8 Law 12.965/2014

9 Interview given to this application process by the Ministry of Planning, Development and Management

10 Available at <http://mwpt.com.br/falta-de-acessibilidade-nos-sites-e-tema-de-acao-do-ministerio-publico-federal/>

11 IBGE. Censo 2010. Available at <https://ww2.ibge.gov.br/home/estatistica/populacao/censo2010/default.shtm>

12 Available at <http://mwpt.com.br/estudo-sobre-navegacao-em-sites-de-e-commerce/>

13 Available at <http://mwpt.com.br/estudo-sobre-navegacao-em-sites-de-e-commerce/>



THEME C

Open Markets

C.1 Is there independent regulation of communications markets, undertaken in accordance with international norms and standards?

► **Indicator:** *Existence of an independent regulatory authority or authorities*

Brazil has the National Telecommunications Agency (Anatel), created in 1997 for the purpose of carrying out the process of privatization of the telecom sector in the country. The agency deals with infrastructure issues, not with the Internet, which is considered an added-value service. But, in practical terms, Internet infrastructure depends basically on telecom and cable operators, which are both regulated by Anatel. Moreover, conflicts between online service providers and Internet service providers, such as those related to network neutrality, are dealt with by the agency.

Anatel's independence is partial. Under the Telecommunications Act¹⁴, "the nature of the special authority conferred on the agency is characterized by administrative independence, lack of hierarchical subordination, a fixed mandate, stability of its directors, and financial autonomy." However, the same article in the law states that the agency is linked to the Ministry of Communications. Its budget depends on distributions made annually by the ministry, which affects its independence.

The scope of Anatel does not extend to the entire communications sector. Television and radio services are not independently regulated, only being supervised by the Ministry of Communications. Anatel does not deal with content regulation at all.

The regulation of the programming sector within pay-TV is done by the Brazilian Film Agency (ANCINE), which is responsible for duties such as supervising the content quotas for national and independent programming. Studies on the regulation of video on demand and similar IP services are being carried out by ANCINE.

14 Law 9.472/1997, available at http://www.planalto.gov.br/ccivil_03/LEIS/L9472.htm

► **Indicator:** *Evidence concerning regulatory performance, including perceptions of the quality of regulation by communications businesses, consumer associations and other organisations*

In its 2017 Annual Report, Anatel provided information about all its activities and the fulfilment of its strategic and operational planning and regulatory agenda.¹⁵ The report deals with oversight and monitoring activities, indicators on consumer perceptions, pro-competition performance, participatory initiatives undertaken, and financial performance. The report shows the broad range of activities carried out by the agency, which undertook 6,300 oversight actions related to issues like illegal broadcasting, consumer relationships, follow-ups on conduct adjustment terms (TACs), broadband network expansion, and quality enforcement. Anatel has also carried out 2,525 procedures for the determination of noncompliance with obligations. The report also shows that more than 6 million instances of consumer service were undertaken. The Good Regulatory Practices Handbook, published by Anatel in 2018, describes the process of regulation undertaken by the agency, including the use and the steps for the Regulatory Impact Assessment.¹⁶

Perceptions of stakeholders vary based on their interests and perspectives. Sinditelebrasil, the organization that gathers telecom companies in Brazil, considers excessive regulation to be the second-largest barrier to development (taxation being the first one). According to them, there is excessive ex-ante regulation. The quality regulations for mobile and fixed broadband, produced and published by Anatel, are given as an example of excessively detailed regulation.

The Brazilian Institute for Consumer Protection (IDEC) has a contrasting view. They see structural difficulties in enforcement of established instruments, such as the fines that are levied by Anatel but not collected. Anatel's Annual Report shows that levied fines from 2000 to 2017 total R\$ 5.3 Billion, while collected fines total R\$ 741 million.¹⁷ IDEC also mentions the agency's structural and material difficulties, since the funds received by Anatel are not enough to maintain satisfactory monitoring and supervising processes in all areas.

15 Available at <http://www.anatel.gov.br/Portal/verificaDocumentos/documentoVersionado.asp?numeroPublicacao=348395&documentoPath=348395.pdf>

16 Anatel. Manual de Boas Práticas Regulatórias, available at <http://www.anatel.gov.br/Portal/verificaDocumentos/documento.asp?numeroPublicacao=348609&pub=original&filtro=1&documentoPath=348609.pdf>

17 Available at <http://www.anatel.gov.br/Portal/verificaDocumentos/documentoVersionado.asp?numeroPublicacao=348395&documentoPath=348395.pdf>

C.4 Is there sufficiently effective competition in communications access networks to protect consumer interests?

► **Indicator:** Number of fixed and mobile broadband providers

For fixed broadband, by the end of 2017, there were around 8,600 companies authorized to provide multimedia communication services (SCM licence). The main ones are Claro/NET/Embratel, Vivo/Telefonica, and Oi, which account for 80% of the market.¹⁸ Considering mobile broadband providers, there are 19 authorized providers. There are four main companies – Vivo, Claro, TIM, and Oi – which account for approximately 98% of the market (see below).

► **Indicator:** Market shares of fixed and mobile broadband providers

In 2017, the market share of mobile broadband providers was as shown below:

Table 12: Share of Mobile Broadband Providers (%)

Company	Market share (Access)
Vivo (Telefónica)	31.69%
Claro (América Móvil)	24.96%
TIM	24.79%
Oi	16.47%
Others	2.09%

Source: Anatel. 2017 Annual Report

However, if the market share per state is considered, there is a more unbalanced situation in some states, such as Acre and Amazonas, in the North, where Vivo maintains 71% and 66%, respectively; or Paraná and Santa Catarina, where TIM maintains 58% and 46%, respectively.¹⁹

¹⁸ Anatel. 2017 Annual Report. Available at <http://www.anatel.gov.br/Portal/verificaDocumentos/documento.asp?numeroPublicacao=348395&assuntoPublicacao=null&caminhoRel=null&filtro=1&documentoPath=348395.pdf>

¹⁹ Anatel. 2017 Annual Report. Available at <http://www.anatel.gov.br/Portal/verificaDocumentos/documento.asp?numeroPublicacao=348395&assuntoPublicacao=null&caminhoRel=null&filtro=1&documentoPath=348395.pdf>

In 2017, the market share of fixed broadband providers was as shown below:

Table 13: Share of Fixed Broadband Providers (%)

Company	Market share (Access)
Claro/NET/Embratel (América Móvil)	30.95%
Vivo/Telefonica	26.39%
Oi	21.39%
Others	20.73%

Source: Anatel. 2017 Annual Report

● **Indicator:** Rating in the Internet and telephony sectors competition sub-index of the Networked Readiness Index

Brazil ranks 1st, tied with 64 other countries, in the Internet and telephony sector competition sub-index of the Networked Readiness Index, with 2.0. It is worth noting that the last index was created at the beginning of 2016 from the ITU database, related to 2014.



THEME D

Open Content

D.4 Does the government encourage the use of open educational resources (OER) and facilitate open access to academic and scientific resources?

► **Indicator:** Educational policy framework concerning OER

In May 2018, the Ministry of Education published an ordinance requiring that educational resources for basic education that are produced using financial resources from the Ministry must

always be open educational resources and, when digital, be made compulsorily available on public electronic sites.²⁰ Resources will be made available in a new open-source repository.²¹

The ordinance defines open educational resources as those that are in the public domain or have been registered under an open license, allowing free access, use, adaptation and distribution by third parties. Where technically feasible, open educational resources should be developed and made available in formats based on open standards.

The ordinance was pushed by the Open Education Initiative, organized by the EducaDigital Institute and the UNESCO Open Education Chair, in dialogue with the Ministry of Education. It affects government procurement of didactic books, which totaled more than R\$ 1 billion (US\$ 300 million in 2017).²²

Besides the new ordinance, the Open University Brazil, an initiative linked to the Ministry of Communications, focused on providing higher education to basic education teachers. In April 2018 it launched an open education resource course that was expected to have more than 300 participants.²³

► **Indicator:** *Arrangements for access to academic and scientific resources by higher education institutions and students*

The Ministry of Education offers higher education institutions and students' access to more than 38,000 periodicals and publications, both international and national, through the *Portal de Periódicos CAPES*. The documents are made available to public institutions and to reputable private ones.

20 Ministry of Education, Portaria 451. Available at http://portal.imprensanacional.gov.br/materia/-/asset_publisher/KujrW0TZC2Mb/content/id/14729210/do1-2018-05-17-portaria-n-451-de-16-de-maio-de-2018-14729206

21 Available at <http://plataformaintegrada.mec.gov.br>

22 Available at <https://www.publishnews.com.br/materias/2016/12/05/fnde-devera-investir-13-bilhao-em-aquisicao-de-livros-para-o-pnld-2017>

23 Available at <http://www.capes.gov.br/sala-de-imprensa/noticias/8783-capes-promove-curso-sobre-recursos-educacionais-abertos>

D.5 Does the government require ISPs to manage network traffic in a way that is transparent, impartial and neutral, without discriminating against particular types of content or content from particular sources?

► **Indicator:** *Regulatory arrangements and practice concerning net neutrality and competition for online and network services*

Net neutrality is established in article 9 of the Brazilian Civil Rights Framework for the Internet²⁴, which provides that “the person responsible for transmission, switching or routing has a duty to treat any data packet in an isonomic manner without distinction by content, source, and destination, service, terminal, or application.” Exceptions are made for technical requirements essential to the adequate provision of services and applications and prioritization of emergency services.

The law also establishes that, in the event of discrimination or traffic degradation, the responsible person must refrain from causing damage to users; act with proportionality, transparency and isonomy; previously inform in a transparent, clear and sufficiently descriptive way its users about the traffic management and mitigation practices adopted, including those related to network security; offer services under non-discriminatory commercial conditions; and refrain from engaging in anti-competitive behavior.

The decree²⁵ that regulated the law established, in a more detailed manner, that the technical requirements for the adequate provision of services and applications shall aim to maintain their stability, safety, integrity, and functionality which arise from:

- Addressing network security issues, such as restriction of mass mailings (spam) and control of denial of service attacks; and
- Handling of exceptional congestion situations of networks, such as alternative routes in cases of main route interruptions and emergencies.

In article 6, the decree states that “for the adequate provision of services and applications on the Internet, network management is allowed with the objective of preserving its stability, security and functionality, using only technical measures compatible with international standards developed for the proper functioning of the Internet, observing the regulatory parameters issued by Anatel and considering the guidelines established by the CGI.br.”

24 Law 12.965/2014, available at http://www.planalto.gov.br/ccivil_03/_Ato2011-2014/2014/Lei/L12965.htm

25 Decree 8771/2016

The decree also has two articles reinforcing net neutrality and the prohibition of anti-competitive treatment of online service providers:

Article 9. Unilateral conduct or agreements are forbidden between the person responsible for transmission, switching or routing and application providers which:

I - Compromise the public and unrestricted character of Internet access and the fundamentals, principles, and objectives of Internet use in the country;

II - Prioritize data packets due to commercial arrangements; or

III - Privilege applications offered by the person responsible for transmission, switching or routing or by companies that are part of their economic group.

Article 10. Commercial offers and charging models for Internet access should preserve a single Internet, of an open, plural and diverse nature, understood as a means to promote human, economic, social and cultural development, contributing to building an inclusive and non-discriminatory society.

Anatel is responsible for the enforcement of these rules and has declared that the only concrete case of an alleged violation of net neutrality was taken by the Public Prosecutor's Office to the Administrative Council for Economic Defense.²⁶ The complaint was that offers to access apps without consumption of data franchising were a violation of the Brazilian Civil Rights Framework for the Internet. Anatel was notified and has given the opinion that there was no violation.

Anatel has also mentioned that eventual issues on net neutrality presented to the agency will be handled according to the procedure for administrative complaints. There had not been any such complaints of August 2018.²⁷

The Brazilian Civil Rights Framework for the Internet Watch lists this and four other judicial cases that invoke net neutrality rules.²⁸

26 In interview to this application process.

27 In interview to this application process.

28 Available at <http://www.omci.org.br/jurisprudencia/neutralidade-de-rede/>



THEME E

Open Data and Open Government

E.1 Has legislation been enacted which requires open access to public data, with appropriate privacy protections, and is that legislation implemented?

► **Indicator:** *Existence of a legal framework for access to open data which is consistent with international norms²⁹ and privacy requirements*

The Access to Information Law defines the obligation of public bodies to provide open access to data, enabling automated access by external systems in open, structured and machine-readable formats. Brazil established its open data policy via the Executive Branch through Decree 8.777/2016, which provides a framework consistent with international standards such as the Open Data Charter. It defines open data as “data accessible to the public, represented in a digital medium, structured in an open format, machine-readable, referenced on the Internet, and made available under an open license allowing its free use, consumption or crossing, and only crediting authorship or source”.³⁰

The principles and guidelines of the policy are as follows:

- Observance of the publicity of databases as a general precept and secrecy as an exception;
- Guarantee of unrestricted access to databases, which must be machine-readable and available in an open format;
- Description of the databases, with sufficient information for the understanding of possible reservations regarding their quality and integrity;
- Unrestricted permission to reuse databases published in an open format;
- Completeness and interoperability of databases, which must be made available in their primary form, with the highest degree of granularity possible, or refer to the primary databases, when made available in aggregate form;
- Periodic updating, to guarantee the permanence of the data, the standardization of information structures, the value of the data to society, and meeting the needs of users; and

²⁹ e.g., the Open Data Charter, <https://opendatacharter.net/#>

³⁰ Decree 8.777/2016, available at http://www.planalto.gov.br/ccivil_03/_Ato2015-2018/2016/Decreto/D8777.htm

- Clear assignment of responsibility for the publication, updating, evolution, and maintenance of each open database, including the provision of assistance regarding the use of the data.
- The policy establishes that all databases or information not protected by law must be open to citizens. It also states the obligation of the federal administration to publish their open data plans.

► **Indicator:** *Evidence concerning the extent to which open data resources are available and used online*³¹

The Brazilian Open Data Portal³² gathers more than 5,700 data sets in subjects like health, education, agriculture, defence, security, and another 17 topics.

The Open Data Barometer ranked Brazil at #18 in 2016, scoring 58.86 out of 100.

E.2 Do government departments and local government agencies have websites which are available in all official languages and through all major browsers?

► **Indicator:** *Government policy to ensure provision of websites with appropriate language and browser access, and evidence concerning effective implementation*

As stated in the Access/E.4 indicator, there is no content on government websites in languages other than Portuguese.

The Brazilian Civil Rights Framework for the Internet provides that the Internet applications of entities of the public power should seek “compatibility of e-government services with various terminals, operating systems, and applications for their access”.³³ Although there is no evidence regarding the implementation of this guideline, the Ministry of Planning, Development, and Management³⁴ acknowledges that the Federal Government is not in full compliance. Some services provided by the Internal Revenue Service (Receita Federal), for instance, are not accessible except with Internet Explorer.

31 e.g., value and ranking in the World Wide Web Foundation’s Open Data Barometer

32 dadosabertos.gov.br

33 Law 12.965/2014, available at http://www.planalto.gov.br/ccivil_03/_Ato2011-2014/2014/Lei/L12965.htm

34 Editor’s Note (August 2019): This Ministry was merged with others in January 2019, creating the Ministry of Economy

► **Indicator:** *Proportion of government services with websites (value/ranking in UNDESA online services index)*

According to Cetic.br, in 2017 90% of federal and state public bodies had websites.³⁵ According to the Ministry of Planning, Management, and Budget,³⁶ as of August 2018, 31% of public services were totally digital.

In 2018, Brazil scored 0.9236 out of 1.0 in the Online Services Index.³⁷ The index is based on a 140-question survey with binary responses,³⁸ in which positive answers generate more in-depth questions. The researchers analyze the national portal, e-services portal, and e-participation portal.

● **Indicator:** *Quality of government websites (extent of language availability, quantity of content, availability of mobile version)*

All the websites are provided in Portuguese, the official language of Brazil.

Regarding the availability of mobile versions, 58% of federal and state public bodies had websites adapted to mobile devices in 2017.³⁹ Considering only the federal level, this rises to 76%.

The type of content offered varies, but 89% of federal and state bodies published budget and public spending data, 89% covered purchasing and procurement, 73% offer catalogues of public services, 77% listed contracts, and 70% published their objectives, plans and, goals.⁴⁰

● **Indicator:** *Proportion of adults who have used e-government services within twelve months, aggregate and disaggregated⁴¹*

According to Cetic.br, in 2017 64% of Internet users over 16 years old had used e-government in the last 12 months, including services on health, education, labor, security, and others.

35 Available at <https://cetic.br/tics/governo/2017/orgaos/C1/>

36 Editor's Note (August 2019): This Ministry was merged with others in January 2019, creating the Ministry of Economy

37 Available at <https://publicadministration.un.org/egovkb/en-us/Data/Country-Information/id/24-Brazil>

38 Available at https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2018-Survey/E-Government%20Survey%202018_FINAL%20for%20web.pdf

39 <https://cetic.br/tics/governo/2017/orgaos/C6B/>

40 Available at <https://cetic.br/tics/governo/2017/orgaos/D2B/>

41 E.g., with particular reference to gender, age, locality, ethnicity and disability

The figures disaggregated by area, gender, and social class are shown below:

Table 14: Individuals Who Used E-Government Services in the Last 12 Months (2017)

Percentage of the total number of Internet users 16 years old or older

		Yes	No
Total		64	36
Area	Urban	66	34
	Rural	44	56
Sex	Male	69	31
	Female	59	41
Social Class	A	86	14
	B	77	23
	C	61	39
	D/E	44	56

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian households: ICT Households 2017.

Among all users, 26% searched for information offered by government websites; 25% used some type of online public service, such as issuing documents, filling forms or paying taxes; 63% did not use the Internet to interact with public authorities.

The figures disaggregated by area, gender and social classes are shown below:

Table 15: Individuals That Used the Internet by Types of Interactions Carried out With Authorities (2017)

Percentage of the total of Internet users

		Looking for information provided on government sites	Carrying out some type of public service, such as issuing documents online, completing and sending forms, or paying taxes and fees online	Did not use the Internet to interact with authorities
Total		26	25	63
Area	Urban	27	27	62
	Rural	16	12	78
Sex	Male	27	29	60
	Female	25	22	66
Social Class	A	43	55	38
	B	38	40	46
	C	23	21	68
	D/E	12	9	83

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian households: ICT Households 2017.

Policy recommendations for various stakeholders

Government

- Promote policies and regulations focused on overcoming barriers to new digital businesses and start-ups.
- Guarantee full accessibility for persons with disabilities on government portals and public websites by defining transparent goals and indicators to monitor implementation of policies in the field.
- Ensure adequate levels of resources for monitoring and supervising activities of regulatory bodies.
- Ensure that telecom norms and regulations avoid unnecessary and bureaucratic rules and properly enforce those that guarantee public interest.
- Fully apply the open data policy, publishing open data plans and all databases or information not protected by law.
- Make all public websites, especially those that support public services, available on any browser.
- Promote technical measures to ensure technical monitoring of network neutrality.

Private Sector and Technical Community

- Guarantee full accessibility for persons with disabilities on private portals and apps, with special attention to public service providers.

Academia

- Evaluate the positive and negative effects of different billing models on the democratization of access to the Internet.
- Monitor and periodically report on accessibility for persons with disabilities on public and private websites and apps.

Civil Society

- Monitor and periodically report on network neutrality violations through citizens' assessment of their connections.



A

Accessibility
to All

5

CATEGORY A **ACCESSIBILITY TO ALL:**

Findings of core indicators, and
policy recommendations for various
stakeholders



THEME A

Policy, Legal and Regulatory Framework

A.1 Is statistical information concerning access and use of Internet regularly gathered by national statistical systems and/or other competent authorities, on a systematic basis?

► **Indicator:** *Arrangements for gathering aggregate and disaggregated statistical information, from diverse sources, including the inclusion of relevant questions in household surveys*

Brazil currently has a consolidated system of data collection on access to and use of the Internet at the national level. Most of the initiatives in this field are developed by the Regional Center for Studies on the Development of the Information Society (Cetic.br), initiator of this report and a department of the Brazilian Network Information Center (NIC.br), which implements the decisions and projects of the Brazilian Internet Steering Committee (CGI.br); and by the Brazilian Institute of Geography and Statistics (IBGE), an entity run by the Federal Administration that carries out the main government research, under the Ministry of Planning, Budget and Management.¹

Cetic.br has expanded its range of surveys since its inception in 2005, consolidating its position as a reference centre for indicators and statistics on the use of information and communication technologies, publishing periodic specialized surveys and reports that are crucial to monitoring and assessing the social and economic impact of ICTs. The Cetic.br surveys are based on international methodological references and data collection instruments, such as those defined by the *Partnership on Measuring ICT for Development*, Eurostat, OECD, Unicef, UNESCO, and UNCTAD. IBGE, whose surveys use robust sampling, is progressively including, in its latest domiciliary surveys, topics on access to and use of the Internet.

In addition, there are other national sources of administrative data, such as the National Telecommunications Agency (Anatel), generally with the use of primary data from telecommunication companies and Internet access providers. The Agency has reported that it is currently developing sector strategic indicators.

Private survey institutes, as well as research conducted by the third sector and universities, complete the Brazilian data collection environment.

¹ Editor's Note (August 2019): This Ministry was merged with others in January 2019, creating the Ministry of Economy

► **Indicator:** *Availability of independent household surveys and other evidence concerning aggregate Internet access and use*

In general, the availability of household surveys in Brazil can be considered satisfactory. Surveys carried out by Cetic.br and IBGE are available to the public through the websites of the institutions², and primarily include the availability of microdata. The main survey carried out by Cetic.br, ICT Households, is applied annually, with more than 50 indicators regarding access to and use of ICT, covering a wide range of topics with data disaggregated by area, region, income, gender, and age, among other disaggregated data. There are also specialized surveys of education, children, enterprises, e-government, culture, health, nongovernmental organizations, public access centres, and Internet service providers.

Data produced by Anatel is partially available through periodic reports or online systems; they are, however, outdated on the organization's website.³

Surveys conducted by private institutes such as the Brazilian Institute of Public Opinion and Statistics (IBOPE) and Datafolha (a private polling company) are mostly carried out extemporaneously and their dissemination depends on the interest of the survey contractors. Third-sector surveys have limited disclosure, although there are exceptions, especially those produced by consumer organizations, which have greater dissemination capacity. Academic studies usually have less ability to become available to the larger public.⁴

A.4 Does the government have a policy and programme to implement universal access to reliable, affordable broadband, and is this effectively implemented?

► **Indicator:** *Adoption of a universal access strategy and evidence of effective deployment of UA resources*

Since the telecommunications reform of the late 1990s and the creation of the Telecommunication Universalization Fund (FUST) in the year 2000⁵, Brazil has seen attempts to implement various programs to expand Internet access. These have included the public policy for the telecommunications sector announced in 2003⁶; the National Broadband Plan, formulated in

2 Available at www.cetic.br and www.ibge.gov.br.

3 Survey conducted on 08/02/2018 on the institution's website, available at <http://www.anatel.gov.br/dados/>

4 It is worth mentioning platforms managed by universities and academic institutions that give access to private and public inquiries that, in some cases, allows to increment contextual analysis, like Cesop at Unicamp (https://www.cesop.unicamp.br/por/banco_de_dados) and CIS at USP (<http://www.nadd.prp.usp.br/cis/>).

5 FUST Law (Law n° 9998/2000), available at http://www.planalto.gov.br/ccivil_03/leis/19998.htm

6 Presidential Decree n° 4733/2003, available at http://www.planalto.gov.br/ccivil_03/decreto/2003/d4733.htm

2010⁷; new guidelines presented in 2016⁸, called Intelligent Brazil; and Internet for All, begun in 2018, which basically consists of the use of a newly issued satellite, owned by the Federal Administration, for access to the Internet by schools and other public facilities in rural areas. In general, however, all these plans have suffered from formatting and execution limitations, such as lack of robustness and, especially, lack of resources.

Although these specific regulatory arrangements have been implemented in the last two decades by the Ministry of Science, Technology, Innovation, and Communication (MCTIC) with the support of Anatel, the perception of a low level of government priority for the execution of an effective universal access strategy is shared by different segments of society, including the third sector, such as consumers organizations, and the private sector, especially small and medium companies, which complain about absence of government support.

The Telecommunication Universalization Fund, the main instrument for financing access universalization policies, has raised more than R\$ 20.7 Billion (US\$ 5.3 Billion)⁹ since its inception in 2000. However, these resources were not effectively invested for the purposes defined in the sectorial legal framework but transferred to other governmental priorities. Other funds, such as the Funds for the Inspection of Telecommunications (FISTEL), which could also contribute to improving the implementation of public policies, have also been mostly allocated to other purposes. Since 2014, FUST resources have been transferred for other uses in government, reducing the amount available from FUST to approximately R\$ 3,5 billion (US\$ 870 million).¹⁰

Among the most relevant structural policy initiatives to develop Internet access was the reactivation, in 2010, of TELEBRAS, a former state telecommunications company, to increase provision in areas lacking infrastructure, as well as to contribute directly to access in public facilities such as schools and health centres. However, TELEBRAS was not able to change the stage of sectoral development or contribute decisively to the implementation of universal access policies.

Regulators and experts have pointed out that the design of the Brazilian regulatory framework is still based on fixed telephony as the most important public service for telecommunications, which is out of sync with the current demand for Internet access policies. Therefore, in recent years, discussions of access policies have focused on a new regulatory design for the sector, with the dissolution of the contractual obligations of large operators in fixed telephony, and the potential imposition of obligations to expand infrastructure for Internet access.¹¹ The issue is controversial.

7 Presidential Decree n° 7175/2010, available at http://www.planalto.gov.br/ccivil_03/_ato20072010/2010/decreto/d7175.htm

8 Presidential Decree n° 8776/2016, available at http://www.planalto.gov.br/ccivil_03/_Ato2015-2018/2016/Decreto/D8776.htm

9 Conversion to US dollars from Brazilian Real based on the official exchange rate on 08/03/2018. The history of FUST collection is available at <http://www.anatel.gov.br/setorregulado/arrecadacao-fust>.

10 Conversion to US dollars from Brazilian Real based on the official exchange rate on 08/03/2018. The financial balance of FUST up to 2017 is available at <https://cloud.anatel.gov.br/index.php/s/sCjSGutyDqV51T3#pdfviewer>.

11 The mentioned discussions were held in the National Congress around the Complementary Law Project n° 79/2016, which amends the General Telecommunications Law of 1997, and is available at <http://www.senado.gov.br/atividade/materia/gefTexto.asp?l=203655>

Segments of civil society, such as consumer organizations, have criticized the model proposal and advocated for more public investments in the sector and the promotion of Internet access as a public service. The private sector has endorsed, in addition to this new model, the reduction of taxes on the sector. Small providers have advocated especially for lower financial interest rates to stimulate investment in areas without adequate infrastructure.¹²

► **Indicator:** *Statistical evidence of progress towards universal access, aggregate and disaggregated*

As the evolution of fixed access measured by the ICT Households survey conducted by Cetic.br¹³ reveals (table below), the progress made over the past decade in Brazil seems insufficient to ensure Internet universal access.

Table 16: Households with Internet Access (2011-2017)

Percentage of the total number of households

		2011	2012	2013	2014	2015	2016	2017
Total		36	40	43	50	51	54	61
Region	Southeast	45	48	51	60	60	64	69
	Northeast	21	27	30	37	40	40	49
	South	41	47	51	51	53	52	60
	North	21	21	26	35	38	46	48
	Center-West	37	39	44	44	48	56	68
Social Class	A	97	97	97	98	97	98	99
	B	73	78	80	82	82	91	93
	C	33	36	39	48	49	60	69
	DE	4	6	8	14	16	23	30

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian households: ICT Households 2017

¹² Interviews conducted with representatives from these sectors for the pilot application of the indicators.

¹³ Complete data can be found at <https://www.cetic.br/tics/domicilios>, which includes the historical series of ICT Households survey s indicator A4

A similar conclusion can be drawn from the observation on the evolution of the number of Internet users (individuals who have used the Internet in the last 3 months), even though it is possible to observe some growth in this specific index.¹⁴

Table 17: Internet Users (2011-2017) (NIC.br/Cetic.br)

Percentage of the total population

		2011	2012	2013	2014	2015	2016	2017
Total		46	49	51	55	58	61	67
Region	Southeast	53	55	56	63	64	69	74
	Northeast	32	38	42	43	49	50	58
	South	49	53	56	56	61	60	69
	North	36	36	39	48	51	58	58
	Center-West	53	53	58	54	59	63	76
Social Class	A	94	94	97	96	96	95	96
	B	77	80	78	80	84	86	89
	C	45	47	49	54	63	66	74
	DE	13	14	17	21	30	35	42

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian households: ICT Households 2017

This is especially noticeable in the statistics on progress in access among the poorest and in rural areas (further developed in the B1 and B3 indicators), which show great inequality in the conditions of access of those who somehow are already connected to the Internet. In practice, beyond the population without any form of access, there is a large population contingent whose connections are precarious, because of fixed low-speed residential connections or mobile devices with very low data download limits.

¹⁴ Complete data can be access on <https://cetic.br/tics/domicilios/2017/individuos/>, seeking the historical series of ICT Household survey - indicator C2

IBGE National Household Sample Survey, PNAD, also shows similar figures for Internet users:¹⁵

Table 18: Internet Users (2011-2017) (IBGE)

Percentage of the total number of households

	2011	2012	2013	2014	2015	2016
Total	46,5	49,2%	49,4%	54,4%	57,5%	64,7%

Source: National Household Sample Surveys, IBGE, 2011-2015 and Continuous National Household Sample Survey, IBGE, 2016



THEME B

Connectivity and Usage

B.1 What proportion of the population uses the Internet, with what frequency, and is this proportion growing?

► **Indicator:** *Proportion of households with Internet access*

National data from the ICT Households 2017 survey conducted by the Regional Center for Studies on the Development of the Information Society showed that 42.1 million households were connected in 2017, corresponding to 61% of Brazilian residences. In 2016, the percentage was 54% and in 2015, 51%.

The survey also pointed out the persistence of inequalities by socioeconomic class and among urban and rural areas. In urban areas, this proportion was 65%, while in rural areas only 34% of households had Internet access. Internet access was present in 30% of D/E class households, while in classes A and B, the proportions reached 99% and 93%, respectively.¹⁶

¹⁵ IBGE figures about households are not shown in this section because of two methodological changes occurred since 2013 which impair the historical series.

¹⁶ Complete indicator can be found at <https://cetic.br/tics/domicilios/2017/domicilios/A4/>

Table 19: Proportion of Households with Internet Access (2017)

Percentage of the total number of households

		YES	NO
TOTAL		61	39
Area	Urban	65	35
	Rural	34	66
Region	Southeast	69	31
	Northeast	49	51
	South	60	40
	North	48	52
	Center-West	68	32
Social Class	A	99	1
	B	93	7
	C	69	31
	DE	30	70

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian households: ICT Households 2017

It is important to note that the data incorporates all connection modes, including fixed connections and mobile connection via modem or 3G or 4G chips. Of the total number of connected homes, 64% had fixed connections. In rural areas, that figure was 50%. Socioeconomic inequality is the most pronounced: while 88% of connected households in class A had fixed connections, the penetration in classes D/E was 34%, which reveals that the poorest classes are connecting to the Internet primarily through mobile networks.¹⁷

The same should be noted about the national survey PNAD Continuous, conducted by the Brazilian Institute of Geography and Statistics in 2016¹⁸. The survey revealed, incorporating all connection modes, that the Internet was used in 69.3% of households (76.6% in the Southeast; 74.7% in the Center-West; 71.3% in the South; 62.4% in the North; and 56.6% in the Northeast). It is worth mentioning that the IBGE data, although collected in 2016, showed relatively higher rates than those of Cetic.br. This occurs because the concepts behind the questions are slightly different: IBGE asks if a resident of the household has used the Internet in the household, while Cetic.br asks if the household has Internet access, according to the concept of household Internet

¹⁷ Complete indicator can be found at <https://cetic.br/tics/domicilios/2016/domicilios/A5/>

¹⁸ These and other IBGE ICT survey data are available at https://agenciadenoticias.ibge.gov.br/media/com_media/ibge/arquivos/c62c9d551093e4b8e9d9810a6d3baff.pdf

access from ITU. Similar to Cetic.br, IBGE also found an unequal environment concerning the type of broadband used to access the Internet, in which mobile connections, which generally have reduced data limits in Brazil, are the gateway to Internet access in regions distant from urban centres, and also for economically disadvantaged classes. This is the case, for example, in the North, where the percentage of households with mobile broadband Internet connections (88.2%) was almost double that of fixed broadband (44.9%).

► **Indicator:** *Number of Internet users per hundred population, aggregate and disaggregated, by frequency of use*

The ICT Households 2017 survey conducted nationally by the Cetic.br collected disaggregated data that allow an enhanced view of the Brazilian connectivity environment. According to the survey, 67% of Brazilians over 10 years of age had accessed the Internet in the previous three months, an index that was 61% in 2016 and 58% in 2015. The percentage of Brazilians who never accessed the Internet in 2017 was 26%, approximately 46 million people.

The survey also indicated that the number of Internet users was higher in urban areas (71%), in classes A (96%) and B (89%), and among those with a university degree (95%). The number of people who had never used the Internet was higher in rural areas (46%), in the North (32%) and Northeast (34%), in classes D/E (47%), and among the illiterate (87%). There were no significant differences in the proportion of users between men and women. The age group with the highest percentage of use was 16 to 24 years old (88%).¹⁹

¹⁹ Complete indicator can be found at <https://cetic.br/tics/domicilios/2017/individuos/C2/>

Table 20: Proportion of Individuals Who Accessed the Internet by Last Access (2017)

Percentage of the total population

		Less than three months ago	More than three months ago	Has never used the Internet
TOTAL		67	6	26
Area	Urban	71	6	23
	Rural	44	10	46
Region	Southeast	74	5	21
	Northeast	58	8	34
	South	69	6	26
	North	58	10	32
	Center-West	76	5	19
Social Class	A	96	1	3
	B	89	2	9
	C	74	5	21
	DE	42	10	47
Sex	Male	68	7	26
	Female	67	6	26
Level of education	Illiterate/Pre-school	9	4	87
	Elementary	54	9	38
	Secondary	87	7	6
	Tertiary	95	2	3
Age Group	10 to 15 years old	84	7	9
	16 to 24 years old	88	8	4
	25 to 34 years old	85	7	8
	35 to 44 years old	76	7	17
	45 to 59 years old	54	6	39
	60 years old or older	25	3	72

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian households: ICT Households 2017

PNAD Continuous carried out by the Brazilian Institute of Geography and Statistics, has found similar results. According to the survey, 64% of people over the age of 10 used the Internet in the three months prior to the survey. As in ICT Households 2017, the lowest percentages of Internet users were observed in the Northeast (52%) and North (54%), among illiterates (11%) and those with incomplete elementary education (43%).²⁰

► **Indicator:** *Number of social media (social networks, microblogs, messaging, user-generated video streaming) users per hundred population, aggregate and disaggregated*

National data from the ICT Households 2017 survey conducted by Cetic.br showed that there was more intense use of social media among groups that had higher connectivity level, such as users in urban areas, the richest people, those with the highest levels of education, and those from 16 to 34 years old.²¹ Of Internet users, 77% used social networks, which, considering the number of Internet users (67% of the population), results in an index of 51.6% of social users among the Brazilian total population. There are no data on the specific use of user-generated video streaming.

²⁰ IBGE ICT survey data is available at www.ibge.gov.br

²¹ Complete indicator can be found at <https://cetic.br/tics/domicilios/2017/individuos/C5/>

Table 21: Activities Carried Out by Internet Users: Communication (2017)

Percentage of the total number of users

		Sent messages	Chatted by voice or video call	Used social networking websites	Used microblogs
TOTAL		90	67	77	9
Area	Urban	90	68	78	9
	Rural	86	58	66	3
Social Class	A	92	78	84	18
	B	94	73	81	12
	C	89	66	77	7
	DE	85	56	69	4
Sex	Male	88	65	76	11
	Female	91	68	77	6
Level of education	Illiterate/Pre-school	72	60	40	9
	Elementary	82	59	67	5
	Secondary	93	69	82	9
	Tertiary	95	74	83	14
Age Group	10 to 15 years old	79	55	69	9
	16 to 24 years old	95	68	89	16
	25 to 34 years old	92	71	86	9
	35 to 44 years old	93	69	76	5
	45 to 59 years old	88	66	64	4
	60 years old or older	79	63	53	2

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian households: ICT Households 2017

► **Indicator:** Number of visits to social media websites (defined as above) per hundred population

There are no data on the number of visits to social media websites in the national territory. There are, however, some data available on the topic, which allows observation of a high degree of concentration in the segment.

A study by the *We Are Social* agency and the Hootsuite platform in 2017, called *Digital in 2018: Essential insights into internet, social media, mobile, and ecommerce use around the world*,²² pointed out that Brazilians spent an average of 3 hours and 39 minutes every day on social networks (the second-highest index among the countries surveyed). According to the survey, the most-visited sites in the country in the last four months of 2017 were, in order, Google (US), Facebook (US) and YouTube (US), as shown in the table below. Although the study contained few references to the methodology of the data collection, the rankings were similar to those found in other surveys such as the ones produced by Alexa/Amazon.

Table 22: Rankings of Top Websites

Based on average monthly traffic to each website in Q4 2017

WEBSITE	CATEGORY	MONTHLY TRAFFIC (Billions)	PAGES PER VISIT
google.com.br (EUA)	Search	4.8	7.2
facebook.com (EUA)	Social	2.0	11.8
youtube.com (EUA)	Videos	1.5	9.6
google.com (EUA)	Search	1.5	7.0
globo.com (BRAZIL)	News & Media	0.755	3.9
uol.com.br (BRAZIL)	News & Media	0.568	5.3
googleweblight.com	Search	0.519	3.1
xvideos.com (POLAND)	Adult	0.460	10.1
mercadolivre.com.br (BRAZIL)	Shopping	0.427	9.0
live.com (EUA)	Email	0.366	9.9

Source: Hootsuite / We Are Social, *Digital in 2018: Essential insights into internet, social media, mobile, and ecommerce use around the world*

²² *Digital in 2018: Essential insights into internet, social media, mobile, and ecommerce use around the world*, available at <https://hootsuite.com/pt/pages/digital-in-2018>

B.2 Are broadband networks available in all districts of the country?

► **Indicator:** *Percentage of population covered by fixed broadband networks, including bandwidth tiers, disaggregated between urban and rural areas and by district*

The National Telecommunications Agency reports that there are fixed broadband services in all 5,570 Brazilian municipalities in 2018.²³ However, there are no specific data on the percentage of the Brazilian population that is covered by fixed broadband networks disaggregated between urban and rural areas. According to the agency, fixed coverage indicators are expected to be in the Sector Strategic Indicators proposal, which is in progress, with the indicator “Coverage - Area and Households (rural and urban, by technology)”.²⁴

At any rate, complementary data – such as that presented in the B3 indicators on the *proportion of households with Internet access* and the *proportion of Internet users* – reveal some degree of inequality in the stages of development of broadband networks among urban and rural areas. Another example of such differences lies in the fact that 38% of Brazilian municipalities were, at the end of 2017, still not served by fiber-optic networks²⁵, which impacted the overall local connectivity environment. In municipalities with fiber backhaul, the density of Internet access was 45% of households. For municipalities without fiber backhaul, located in rural areas, the average density was 7% of households.²⁶ While in the states of Rio de Janeiro, Santa Catarina, and Paraná, 100% of the municipalities had fiber backhaul, in the state of Piauí, the percentage was 18%.²⁷

A Cetic.br survey among 39% of households with no Internet access shows that 28% (47% in the rural area) define the lack of availability as one of the reasons for not having Internet. This figure means 11% out of all households in Brazil (31% in the rural area).²⁸

23 Data can be accessed on Anatel’s website, available at https://cloud.anatel.gov.br/index.php/s/TpaFAwSw7RPFba8?path=%2FComunicacao_Multimedia.

24 Information provided by the Strategic Planning Management of Anatel on 07/30/2018.

25 Anatel Annual Report, available at <http://www.anatel.gov.br/Portal/verificaDocumentos/documentoVersionado.asp?numeroPublicacao=348395&documentoPath=348395.pdf&Pub=&URL=/Portal/verificaDocumentos/documento.asp>.

26 Structural Plan for Telecommunications Networks (PERT) proposal, available at <https://sistemas.anatel.gov.br/SACP/Contribuicoes/ListaConsultasContribuicoes.asp?Tipo=1&Opcao=andamento&SISQSmodulo=1442>

27 The percentage of municipalities served by fiber optics per State is available at <http://www.anatel.gov.br/setorregulado/mapeamento-de-redes>

28 <https://www.cetic.br/tics/domicilios/2017/domicilios/A10/>

► **Indicator:** *Percentage of population covered by mobile broadband signal, disaggregated by available technology/bandwidth (and compared with proportion covered by mobile cellular signal) and by district*

According to data from the National Telecommunication Agency contained in the proposal of the Structural Plan for Telecommunications Networks (PERT), 4G technology was present at the end of 2016 in 1,357 Brazilian municipalities (24% of all municipalities), reaching approximately 72% of the total population. 3G coverage reached 94.66% of the population (27.21% of the area).

However, the methodology may have considered the total population of the municipalities where there was some level of coverage, not the actual percentage of the population covered in those municipalities, which tends to produce overestimated data. The available data showed that of the 4,717 districts not located in municipality headquarters, 2,012 (19.5%) did not have antennas (ERB) installed. Of the total population in these districts, which represented 18.13% of the total population, 11% were located in districts without ERB installed, representing 3.8 million people without mobile services, including 2G telephony.²⁹

► **Indicator:** *International Internet bandwidth per Internet user*

The international Internet bandwidth per Internet user measured by the International Telecommunication Union's (ITU) ICT Development Index 2017 for Brazil was 66,180 bit/s. By way of comparison, the world average is 74,464 bit/s and, in Europe, 178,000 bit/s.³⁰

B.4 What barriers to access are identified by users and non-users of the Internet?

► **Indicator:** *Perceptions (by users and non-users) of barriers to their Internet access and use, aggregate and disaggregated, from household surveys and/or other sources*

The ICT Households 2017 survey conducted by Cetic.br gathered information about the reasons why households did not have Internet connections, and non-users did not use the Internet.

Among those who do not have access at home, the main reason cited for not having residential Internet was the price (27%). There were also relatively high numbers of those who had no interest and those who said they did not have the Internet because they did not know how to

²⁹ Structural Plan for Telecommunication Networks (PERT) proposal, available at <https://sistemas.anatel.gov.br/SACP/Contribuicoes/ListaConsultasContribuicoes.asp?Tipo=1&Opcao=andamento&SISQSmodulo=1442>

³⁰ ITU ICT Development Index available at <http://www.itu.int/net4/ITU-D/idi/2017/index.html>

use it, both with 16%.³¹ Although the index of those who found the service expensive was high among class A households (65%), it is essential to consider that the index of households without access to the Internet was very small, at 1%, as shown in the B3 indicator.

Table 23: Households without Internet Access, by Main Reason for Not Having Internet (2017)

Percentage of the total number of households without Internet access)

	Does not have a computer in the household	Lack of need	Lack of interest	Has Internet access elsewhere	Costs are high	Does not know how to use the Internet	Lack of service availability in the area of the household	Concerns about security or privacy	Desire to avoid contact with dangerous content	Other reason / Does not know / Did not answer
Total	5	7	16	7	27	16	6	4	7	3
Area										
Urban	5	8	18	8	27	16	4	5	7	3
Rural	4	6	11	6	30	17	13	3	6	4
Social Class										
A	0	0	17	0	65	0	0	0	0	18
B	4	7	17	24	17	6	13	2	4	6
C	5	7	20	10	27	11	7	4	6	3
DE	5	7	14	5	28	19	6	5	7	4

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian households: ICT Households 2017

A similar question was asked of users who had never used the Internet. The results indicated that the lack of skills to use it (29%), the high price of the service (26%), and lack of need (17%) were the main reasons for never using the Internet.³² There are no data disaggregated by persons with disabilities.

31 Complete indicator data can be found at <https://cetic.br/tics/domicilios/2017/domicilios/A10A/>

32 Complete indicator data can be found at <https://cetic.br/tics/domicilios/2017/individuos/C15A/>

Table 24: Individuals Who Have Never Accessed the Internet by Main Reason for Never Having Used It (2017)

Percentage of the total number of people who have never accessed the Internet

	Lack of interest	Lack of computer skills	Too expensive	To avoid contact with dangerous content	Lack of need	No place to use it	Concerns with security or privacy	Other / Does not know / Did not answer
Total	8	29	26	4	17	3	9	4
Area								
Urban	6	32	26	3	16	3	10	4
Rural	14	20	27	7	19	2	7	3
Social Class								
A	31	22	40	0	0	7	0	0
B	3	39	37	3	7	1	7	4
C	4	37	28	2	11	4	10	4
DE	11	23	23	5	22	3	9	4
Sex								
Male	9	31	27	3	16	3	7	4
Female	7	27	25	5	18	4	11	4
Age Group								
10 to 15	16	13	11	19	27	2	7	6
16 to 24	5	17	11	6	33	4	12	10
25 to 34	8	16	11	5	26	4	29	2
35 to 44	20	21	24	8	14	2	10	1
45 to 59	6	30	24	2	21	4	10	4
60 +	6	34	31	3	13	3	7	4

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian households: ICT Households 2017

IBGE's PNAD Continuous also addressed the issue from the user's perspective, and the results are a little different from those obtained by Cetic.br. In the IBGE survey, the two most important reasons for not using the Internet were not knowing how to use the Internet (37.8%) and lack of interest (37.6%). The price of Internet access was indicated as a barrier by 14.3% of people who did not use the Internet.

The IBGE survey reinforces the perception of exclusion of those who did not have formal education. Among non-users, 60.7% said that they did not use it because they did not know-how. The lowest percentage of people who reported a lack of interest in accessing the Internet a reason for not using it occurred precisely in this uninstruced group (24.4%).³³



THEME C Affordability

C.1 Are mobile handsets capable of Internet connectivity affordable to all sections of the population?

► **Indicator:** *Cost of a) entry-level mobile handset and b) smartphone as a percentage of monthly GNI p.c.*

The cost of an entry-level mobile handset³⁴ is approximately US\$ 19.38³⁵, around 2.62% of the Brazilian monthly GNI p.c.³⁶

The cost of an entry-level smartphone³⁷ is approximately US\$ 53.70, around 7.3% of the Brazilian monthly GNI p.c.

► **Indicator:** *Perceptions of affordability by users and non-users, aggregate and disaggregated*

There are no national data or surveys on the perception of the affordability of mobile handsets and smartphones.

33 IBGE ICT survey data is available at www.ibge.gov.br

34 The model used as a reference (Positivo P25) was the cheapest one sold with the features suggested by the GSMA's Mobile Connectivity Index Handbook, available at https://www.mobileconnectivityindex.com/widgets/connectivityIndex/pdf/Mobile_Connectivity_Index_Methodology_10072017.pdf

35 Survey conducted on July 31, 2018, on a major shopping website in Brazil (www.buscape.com.br), which aggregates the offers of the largest department stores, such as Casas Bahia, Magazine Luiza, Submarino, Lojas Americanas and Extra. The search can be redone by accessing <https://www.buscape.com.br/celularpositivo-p25>. Conversion to dollars based on the official exchange rate on the day of the survey.

36 Brazilian GNI p.c. can be found at World Bank website: <https://data.worldbank.org/country/brazil?view=chart>

37 The model chosen for research (Smartphone Positivo First S410) was the cheapest one sold with the features suggested by the GSMA's Mobile Connectivity Index Handbook

C.2 Is broadband access and use affordable to all sections of the population?

► **Indicator:** *Cost of entry-level fixed broadband connection and use as a percentage of monthly GNI p.c.*

There is a large variation in the cost of fixed broadband³⁸ in different regions, and also within the regions themselves. Higher-income neighborhoods are served by more than one provider and can get faster connections at lower prices than regions away from urban centres or in neighborhoods where residents generally have lower purchasing power. There are many regions where there are no fixed networks available for hiring by potential users, where the only existing offers are made by mobile operators or, still quite common, only by satellite operators, whose cost can still be considered extremely high. This reality exists even in poor neighborhoods of large and medium-sized cities.

As a reference, in some of the richest neighborhoods in the city of São Paulo, the minimum speed offered is 5 MB, at a cost of US\$ 16.6 monthly. This corresponds to 2.25% of the monthly GNI p.c.. Some neighborhoods have offers of 2 MB for US\$ 11, corresponding to 1.5% of the monthly GNI, but without Wi-Fi equipment. As an example of what occurs in other urban areas, there are still neighborhoods in São Paulo City where some residents do not have any access to fixed broadband connections.

In contrast, in the city of Manaus, located in the North and known for a low level of telecommunications development, the offer of 2 MB costs US\$ 32.7 monthly. This corresponds to 4.4% of the monthly GNI per capita.³⁹ It is possible to find this same offer in several municipalities in the Midwest, North, and Northeast.⁴⁰

► **Indicator:** *Cost of entry-level mobile broadband connection and use as a percentage of monthly GNI p.c.*

Mobile broadband connections in Brazil have traffic limits, that is, the consumer contracts for a quantity of data for download, and at the end of the consumption of this data, the connection is blocked or the speed reduced, until the beginning of the next month or until the consumer buys

38 Although there are international references, Brazilian regulators have never established a minimum speed for a service to be considered broadband connection.

39 Survey conducted on 08/01/2018 through telephone calls, review of websites and chats with sellers of NET, Oi and Vivo services. The neighborhoods in São Paulo consulted as a reference for offers were Perdizes, Itaquera and Parelheiros. Conversion to dollars based on the official exchange rate on the day of the survey.

40 Survey carried out on a specialized website comparing prices of telecommunications services (<https://melhorescolha.com/>)

and additional data package. This model differs from fixed connections, where the consumer contracts for connection speed and has no data traffic limit.

In this context, the country's four main operators, which have 98% of the mobile telephone market share⁴¹, have similar data plans for mobile connections.

Vivo, which has the largest market share (32%), has plans of 1 GB for approximately US \$10, which represents 1.4% of the monthly GNI p.c.. There are also plans with smaller data limits of 500 or 100 MB. More robust packages, with 50 GB, have a monthly cost of US\$ 256, which represents 34% of the monthly GNI p.c.

TIM, which offers the cheapest deals among the four main operators, has plans of 1 GB for US\$ 8, which corresponds to 1% of the monthly GNI p.c. The cost of the 50 GB plan is US\$ 53, which represents 7% of the monthly GNI p.c..⁴²

Brazilian consumer organizations, such as the Brazilian Institute of Consumer Protection (IDEC) and the Brazilian Association of Consumer Defence (PROTESTE)⁴³, point out major limitations in prices and plans offered to mobile service users, and especially highlight the fact that most commercially available plans do not allow full use of Internet resources – since the more robust plans are inaccessible to a substantial number of potential users – limiting consumer possibilities.

► **Indicator:** *Availability or otherwise of zero-rated or low-cost access*

A broader initiative to reduce the value of fixed Internet plans was implemented in 2010, as part of the launch of the National Broadband Plan, to offer fixed connections of 1 MB at a cost of approximately US\$ 10 monthly. According to the federal government, since 2014, similar plans have been offered in more than 4,500 of the 5,570 Brazilian municipalities.⁴⁴ However, consumer forums have reported on the difficulty or impossibility of contracting these plans in certain regions.⁴⁵

In mobile connections, where there are download limits, plans increasingly incorporate data sponsorship (also known as zero-rating or reverse billing). In these cases, the Internet service

41 The evolution of the market share of mobile operators can be found here: http://www.teleco.com.br/mshare_3g.asp

42 Survey conducted on August 2, 2018, on the operators' websites (Vivo, TIM, Claro, Oi). Conversion to dollars based on the official exchange rate on the day of the survey. The survey was carried out having with the city of Rio de Janeiro as a reference. Although there are price differences in the various regions and localities, these differences were found to be much lower than those in access to fixed connections.

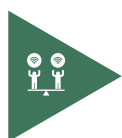
43 Interviews conducted with representatives from these organizations for the pilot application of the indicators.

44 Data released by the federal government; available at <http://www.brasil.gov.br/governo/2014/03/banda-larga-popular-ja-esta-em-mais-de-4-500-municipios>.

45 Survey conducted at Reclame Aqui (www.reclameaqui.com.br), in a search for "Popular Broadband."

provider does not discount the volume of data used for specific applications or content.⁴⁶ In most of these cases, after consuming the data contracted, only access to certain applications is maintained. More recently, operators have launched offers of data traffic for just a few applications, not for the entire Internet, known as “social network packages”.⁴⁷

Consumer associations and other civil society organizations evaluate this zero-rating practice as negative and claim that these plans violate the net neutrality guaranteed by the Brazilian Civil Rights Framework for the Internet. According to these organizations, once the traffic limits run out and the provider provides access only to certain applications and blocks everything else that is available on the Internet, the obligation of non-discriminatory treatment is disrespected.⁴⁸ However, private operators and regulatory agents have claimed that net neutrality as established by the Brazilian Civil Rights Framework for the Internet was specifically limited to the logical level and infrastructure of the Internet, so these market practices do not violate network neutrality (more about net neutrality in the D5 indicator of the Openness chapter).



THEME D

Equitable Access

D.1 Are there significant differences in broadband access and use between regions and between urban and rural areas?

► **Indicator:** *Geographical coverage in urban and rural areas, by level of bandwidth*

Anatel reports that there is a fixed broadband service in all 5,570 Brazilian municipalities. There is, however, an acknowledged technological gap between large and small cities, and among states and regions. An example of this gap, as pointed out in previous indicators, is the fact that 38% of Brazilian municipalities were, at the end of 2017⁴⁹, still not served by fiber optics, which impacts the overall local connectivity environment. In municipalities with fiber backhaul,

46 There are records of data sponsorship by banks (Bradesco and Santander), online stores like Mercado Livre, Magazine Luiza and Netshoes, as well as food delivery applications, such as Ifood, among others. More information available at <http://www.meioemensagem.com.br/home/marketing/2017/09/28/aumento-a-demanda-por-internet-patrocinada.html>

47 Commercial offers like this can be easily found on the operators' websites, such as <http://www.tim.com.br/sp/para-voce/planos/pre-pago/internet> and http://www.vivoturbo.com.br/pacotes-turbinados/redes-sociais/?_ga=2.123110155.1222887955.1533079022-1323276990.1533079022

48 Data on zero-rating practices South American countries were compiled in a survey conducted by Intervezos (Brazil) and Derechos Digitales (Chile) in 2017, available at <http://intervezos.org.br/arquivos/interliv011nral2017.pdf>

49 Data contained in the Annual Report of Anatel and is available here.

the density of Internet access is 45% of households. For municipalities without fiber backhaul, located in rural areas, the average density is 7% of households.

In the case of mobile broadband coverage, according to data from ANATEL contained in the proposed Structural Plan for Telecommunications Networks, 4G technology was present at the end of 2016 in 1,357 Brazilian municipalities (24% of all municipalities), reaching approximately 72% of the total population. 3G coverage reached 94.66% of the population. There is strong evidence that municipalities without 3G and 4G are mostly in rural areas. Complementary data – such as those in the B3 indicators, about the *proportion of households with Internet access* and the proportion of Internet users – provide a better view of this issue and confirm inequality in the development stage of broadband networks between urban and rural areas.

► **Indicator:** *Numbers of mobile broadband subscribers and of Internet users, aggregate and where possible disaggregated between urban and rural areas and in different regions*

According to the ICT Households 2017 survey, 83% of individuals over 10 years old had a mobile phone in Brazil: 86% in urban areas and 68% in rural areas. The North had the lowest index among the regions (72%).⁵⁰

Table 25: Individuals Who Own Mobile Phones (2017)

Percentage of the total population

		YES	NO
TOTAL		83	17
Area	Urban	86	14
	Rural	68	31
Region	Southeast	87	13
	Northeast	76	23
	South	87	13
	North	72	28
	Center-West	91	8

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian households: ICT Households 2017

⁵⁰ Complete indicator data can be found at <https://cetic.br/tics/domicilios/2017/individuos/j2/>

Of the individuals who had cell phones, 71% had used them to access the Internet in the previous three months. In this case, the difference between urban and rural areas was higher (74% and 49%, respectively). The difference between class A (96%) and class D/E (48%) was also significant.⁵¹

Table 26: Individuals Who Used the Internet on Mobile Phones in the Last Three Months (2017)

Percentage of the total population

		YES	NO
TOTAL		71	29
Area	Urban	74	25
	Rural	49	51
Region	Southeast	76	24
	Northeast	62	38
	South	72	28
	North	62	38
	Center-West	78	22
Social Class	A	96	4
	B	89	11
	C	77	23
	DE	48	52

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian households: ICT Households 2017

Additional data produced by Cetic.br contribute to a systemic view of the issue, such as the indicator of the use of mobile phones as Internet access devices. In this case, 96% of users accessed the Internet on cell phones, although they may have also used other platforms.⁵² The index was the same in urban and rural areas, and the difference between regions was not significant, although there may be differences in the quality of connections and commercial access plans. Data also indicated that the number of connected households using 3G or 4G mobile modems was higher in rural areas (35%) than in urban areas (24%), and significantly different between the North (51%), compared to the South (18%).⁵³

51 Complete indicator data can be found at <https://cetic.br/tics/domicilios/2017/individuos/J5/>

52 Complete indicator data can be found at <https://cetic.br/tics/domicilios/2017/individuos/C16/>

53 Complete indicator data can be found at <https://cetic.br/tics/domicilios/2017/domicilios/A5/>

Data from the IBGE has similar figures on this issue. According to PNAD Continuous, 77.1% of the population had a mobile cellular phone for personal use. Among people who had a mobile phone for personal use, 78.9% had access to the Internet through these devices. According to the IBGE survey, mobile phones were highlighted as the equipment most used to access the Internet: In the population that had accessed the Internet, 94.6% used mobile phones.⁵⁴

D.5 Do adults in all age groups make use of the Internet to the same extent?

► **Indicator:** *Proportion of adults in different age groups who are using the Internet, and frequency of use, including disaggregation by sex*

According to data from the ICT Households survey (also presented at the B4 indicator), the age ranges that made the most use of the Internet were: from 10 to 15 years old (84%), from 16 to 25 years old (88%), and from 25 to 34 years old (85%). As age increased, the number of connected people decreased, reaching 25% for age 65 years old or older. There were no significant gender differences in use.⁵⁵

Table 27: Individuals Who Accessed the Internet by Last Access (2017)

Percentage of the total population

		Less than three months ago	More than three months ago	Has never used the Internet
TOTAL		67	6	26
Sex	Male	68	7	26
	Female	67	6	26
Age Group	10 to 15 years old	84	7	9
	16 to 24 years old	88	8	4
	25 to 34 years old	85	7	8
	35 to 44 years old	76	7	17
	45 to 59 years old	54	6	39
	60 years old or older	25	3	72

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian households: ICT Households 2017

⁵⁴ IBGE ICT survey data is available at www.ibge.gov.br

⁵⁵ Complete indicator data can be found at <https://cetic.br/tics/domicilios/2017/individuos/C2/>

The survey also found an increased frequency of use, and pointed out more frequent use among younger people, although a significant proportion of those over 65 also made daily use of the Internet (77%).⁵⁶

Table 28: Internet Users, by Frequency of Access (2017)

Percentage of the total number of Internet users

		Every day or almost every day	At least once a week	At least once a month	Less than once a month
TOTAL		87	9	2	1
Sex	Male	87	9	3	1
	Female	87	10	2	1
Age Group	10 to 15 years old	86	10	3	2
	16 to 24 years old	90	7	2	1
	25 to 34 years old	91	7	1	1
	35 to 44 years old	86	11	2	1
	45 to 59 years old	84	10	4	1
	60 years old or older	77	18	4	1

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian households: ICT Households 2017

► **Indicator:** *Perceptions of barriers to Internet access and use, and of the value of Internet access and use to end-users (where available), disaggregated by age and sex*

Data on perceptions of barriers to Internet access including disaggregation by age and gender, previously presented in the B4 indicator,⁵⁷ allow for highlighting the perception that prices were considered high for 31% of those 60 years old or older. Privacy concerns were higher for women (in relation to men) and among those between 25 and 34 years old.

There is no data on the value of Internet access and use.

⁵⁶ Complete indicator data can be found at <https://cetic.br/tics/domicilios/2017/individuos/C3/>

⁵⁷ Complete indicator data can be found at <https://cetic.br/tics/domicilios/2017/individuos/C15A/>

Table 29: Individuals Who Have Never Accessed the Internet, By Main Reason for Never Having Used It

Percentage of the total number of people who have never accessed the Internet

	Lack of interest	Lack of computer skills	Too expensive	Avoiding contact with dangerous content	Lack of need	No place to use it	Concerns about security or privacy	Other / Do not Know / Did not answer
TOTAL	8	29	26	4	17	3	9	4
Sex								
Male	9	31	27	3	16	3	7	4
Female	7	27	25	5	18	4	11	4
Age Group								
10 to 15	16	13	11	19	27	2	7	6
16 to 24	5	17	11	6	33	4	12	10
25 to 34	8	16	11	5	26	4	29	2
35 to 44	20	21	24	8	14	2	10	1
45 to 59	6	30	24	2	21	4	10	4
60 +	6	34	31	3	13	3	7	4

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian households: ICT Households 2017



THEME E

Local Content and Language

E.1 How many Internet domains and servers are there within the country?

► **Indicator:** *Number of registered domains (including ccTLDs, gTLDs and IDNccTLDs) per thousand population, and trend where available*

In August 2018, Registro.br, which is responsible for the registration of domains in Brazil,⁵⁸ reported 3,973,616 registered domains (ccTLDs). Considering a total population of 207,660,929 inhabitants at the end of 2017, there were approximately 19.1 “.br” domains per 1,000 inhabitants. Registro.br currently does not have gTLD registrations. There are no IDN ccTLDs in Brazil.⁵⁹

According to a report by the Internet Corporation for Assigned Names and Numbers (ICANN), the number of gTLDs at the beginning of 2017 was 4.75 million domains registered in Brazil.⁶⁰ Subtracting approximately 3.9 million “.br” (ccTLD) domains registered at that time, yields a total of about 850,000 gTLDs registered with Brazilian addresses.⁶¹

► **Indicator:** *Number of secure web servers per million population, and trend where available*

In 2017, the World Bank and Netcraft (netcraft.com) estimated the number of secure Internet servers in Brazil at 1,570 per million people. In 2016, the number was 407, and in 2015, 157.⁶²

58 More about Registro.br in B.4 indicator, on multi-stakeholder participation chapter.

59 Information provided by Registro.br on 08/15/2018

60 ICANN’s report can be found at <https://www.icann.org/en/system/files/files/lac-dns-marketplace-study-13mar17-en.pdf>

61 Statistics regarding Brazilian domains can be found at <https://registro.br/estatisticas.html>

62 World Bank data available at <https://data.worldbank.org/indicator/IT.NET.SECR.P6?view=chart>

E.4 Is there a substantial and growing volume of Internet content in diverse local and indigenous languages, including locally-generated content?

► **Indicator:** *Proportion of population whose principal language and script are available on leading online services*

Portuguese is spoken by 99.93% of the Brazilian population⁶³, and all public and large private online services based in Brazil are in Portuguese. The official Brazilian languages are Portuguese and Brazilian Sign Language (Libras).⁶⁴

► **Indicator:** *Availability of content on government websites in all languages with significant user groups within the population*

There is no content on government websites in languages other than Portuguese. It is important to consider, however, that even though Portuguese is the most widely spoken language, the 2010 Census in Brazil pointed out the existence of 274 other languages spoken by approximately 815,000 indigenous people, who represented 0.4% of the Brazilian population at that time. About 17.5% of the indigenous population (142,000 people) do not speak Portuguese, a contingent that represented 0.07% of the total Brazilian population.⁶⁵ There are also other minority languages, especially in the South, such as those derived from European languages and dialects.

63 The 2010 Census can be found at <https://censo2010.ibge.gov.br/>

64 Libras is sign language used by the majority of deaf people in Brazil. Libras is not simply the gestualization of the Portuguese language, but a separate language, as shown by the fact that in Portugal, a different sign language is used, Portuguese Sign language.

65 2010 Census: General Characteristics of Indigenous People - Results of the Universe, available at https://www.ibge.gov.br/home/estatistica/populacao/censo2010/caracteristicas_gerais_indigenas/default_caracteristicas_gerais_indigenas.shtm



THEME F

Capabilities / Competencies

F.1 Do school and higher educational curricula include training in ICTs and Internet, focused on effective and safe use, and are these curricula implemented in practice?

► **Indicators:** *Policy concerning school curricula, including media and information literacy, intercultural dialogue and training in ICT skills*

► **Indicator:** *Evidence of appropriate educational curricula at primary, secondary and tertiary levels*

The two most important guiding documents of Brazilian educational policy and school curricula incorporate the need to use ICT in the daily life of schools. The goals of the National Education Plan (PNE) for the decade 2014-2024 include universalizing access to high-speed broadband connections, increasing the number of computers in public schools, and promoting the pedagogical use of ICT in public schools (target 3.11). Another goal addresses raising the Basic Education Development Index (IDEB) and points out the use of technologies as relevant for this purpose (target 7.11).⁶⁶

The National Common Curricular Base (BNCC),⁶⁷ in force since 2017, is the current normative document that defines the set of essential learning that all students must develop, being among the most relevant “to understand, use and create digital information and communication technologies in a critical, meaningful, reflective and ethical way in the various social practices (including school children) to communicate, access and disseminate information, produce knowledge, solve problems and play a leading role in personal and collective life.” The most current curricula developed in educational institutions and responsible local bodies have, in recent years, responded to this demand, and progressively incorporated the orientation of pedagogical use of technologies in schools.

Since 2002, the inputs needed to use these technologies in schools have been the focus of government policies at the national and local levels. This is the case with federal infrastructure

⁶⁶ National Education Plan (PNE), available at http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2014/lei/113005.htm

⁶⁷ National Curricular Common Base (BNCC), available at http://basenacionalcomum.mec.gov.br/images/BNCC_EF_EF_110518_versaofinal_site.pdf

programs that seek to connect schools to the Internet, such as The Electronic Government Service of Attendance to Citizens (GESAC) (2002),⁶⁸ the Broadband Program in Schools (2008),⁶⁹ the Intelligent Brazil program (2016)⁷⁰ and, more recently, the Connected Innovation-Education program (2017).⁷¹ There are also initiatives that seek to qualify teachers and provide quality digital content.

As the following indicator points out, however, it should be noted that these general curricular guidelines and the federal and local programs to provide inputs for the effective educational use of technologies face challenges in promoting the universal use of Internet-connected technologies. In addition to the following F1 indicators, other data corroborate this perception, such as those produced by Cetic.br that indicate that 52% of teachers did not use the Internet at school to carry out activities with students.⁷²

Regarding safe use of the Internet, the available data points out that 44% of students stated they had received guidance from teachers on safe use, and 33% said they had been instructed about what to do if something bothered them on the Internet.⁷³

► **Indicator:** *Proportion of teachers in primary and secondary schools with training in ICTs or ICT-facilitated education*

According to the ICT in Education 2017 survey conducted by Cetic.br, only 23% of Brazilian teachers had participated in training in ICTs or ICT-facilitated education. The numbers were especially low among early elementary school teachers (19%).⁷⁴

68 GESAC is a program of the Federal Government, coordinated by the Ministry of Science, Technology, Innovation, and Communication, that offers free broadband Internet connection, especially by satellite. The main guidelines for this program are available at <https://www.mctic.gov.br/mctic/opencms/comunicacao/SETEL/gesac/gesac.html>

69 The Broadband in Schools Program (PBIE) was launched in 2008 by Presidential Decree n° 6.424, which amended the General Plan of Targets for the Universalisation of Public Switched Telephone Service (PGMU).

70 The Intelligent Brazil program was established by Presidential Decree n° 8.776/2016. Available at http://www.planalto.gov.br/ccivil_03/_Ato2015-2018/2016/Decreto/D8776.htm

71 The Connected Innovation-Education program was established by Presidential Decree n°9.204/2017, available at http://www.planalto.gov.br/ccivil_03/_Ato2015-2018/2017/Decreto/D9204.htm

72 Complete indicator data can be found at <https://cetic.br/tics/educacao/2017/escolas-urbanas-professores/E10B/>

73 Complete indicator data can be found at <https://cetic.br/tics/educacao/2017/escolas-urbanas-alunos/D3/>

74 Complete indicator data can be found at <https://cetic.br/tics/educacao/2017/escolas-urbanas-professores/D6/>

Table 30: Teachers Who Took a Continuing Education Course about Computer and Internet Use in Teaching Activities (2017)

Percentage of the total number of teachers

		YES	NO
TOTAL		23	77
Sex	Female	22	78
	Male	25	75
Grade	4 th grade / 5 th year of elementary education	19	81
	8 th grade / 9 th year of elementary education	24	76
	2 nd year of secondary education	27	72

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian schools: ICT in Education 2017

► **Indicator:** *Proportion of schools with Internet access*

Although there is no specific information on the proportion of schools with computer-assisted instruction, data from IBGE and Cetic.br provides information about the connectivity environment and the pedagogical use of ICTs in Brazilian schools.

According to the School Census conducted by the Ministry of Education, in 2017, considering a total of 144,726 schools for Basic Education, 67% (123,911 schools) had Internet access, but only 55% (101,632 schools) had access to broadband connections. In rural areas, the connectivity scenario was worse: 32% (19,376 schools) had access to the Internet, and 19% (11,677 schools) had access to broadband.

Data collected by Cetic.br through the ICT in Education 2017 survey allows a better look at the connectivity scenario, specifically in urban schools. Although the survey found that a majority of schools had Internet access (97%), lower levels of connectivity were found in the North (92%) and in schools administered by municipalities (93%)⁷⁵.

⁷⁵ Complete indicator data can be found at <https://cetic.br/tics/educacao/2017/escolas-urbanas/D10/>

Table 31: Urban Schools with Computers with Internet Access (2017)

Percentage of the total number of urban schools

		YES	NO
TOTAL		97	3
Region	Southeast	98	2
	Northeast	95	5
	South	100	0
	North	92	8
	Center-West	100	0
Administrative Jurisdiction	Municipal public	93	7
	State public	99	1
	Total - public	96	4
	Private	100	0

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian schools: ICT in Education 2017

Other indicators, however, reveal a scenario of low pedagogical use of ICTs, such as data on the use of computer labs. According to ICT in Education 2017, 44% of Brazilian urban schools used computer labs, while 20% had laboratories but do not use them. Another 36% did not have computer laboratories. The scenario was better in the South, Center-West and Southeast, and, in general, in schools administered by states.⁷⁶ The low rate of use in private schools (33%) suggests a migration of the use of computers to classrooms, with individual computers and mobile labs.

⁷⁶ Complete indicator data can be found at <https://cetic.br/tics/educacao/2017/escolas-urbanas/D31/>

Table 32: Urban Schools by Computer Lab Use (2017)

Percentage of the total number of urban schools

		YES	NO	DOES NOT HAVE A COMPUTER LAB
TOTAL		44	20	36
Region	Southeast	49	21	30
	Northeast	28	19	54
	South	63	17	20
	North	37	30	33
	Center-west	51	19	30
Administrative Jurisdiction	Municipal public	39	25	36
	State public	58	29	12
	Total -public	48	27	26
	Private	33	3	64

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian schools: ICT in Education 2017

Other relevant data are the number of computers available for educational use and the speed of the school's main connection. According to ICT in Education 2017, 47% of urban schools owned up to 5 desktop computers for this purpose, 75% of urban schools owned up to five laptops (19% did not have any laptops), and 18% of urban schools had up to 5 tablets (75% did not have tablets).⁷⁷

In the case of the speed of the school's main connection, 33% had up to 2 MB, 28% from 3 to 10 MB, 13% from 10 to 50 MB, and only 2% more than 50 MB.⁷⁸ It is possible to assume that the indices for all the indicators presented are substantially lower in rural schools, where the challenges to full use of ICTs in schools are certainly greater.

In summary, although there are no specific data on the proportion of schools with computer-assisted instruction, the set of data presented reveals a continuing scenario of low levels of connectivity and low use of ICTs as a pedagogical tool in Brazilian schools.

⁷⁷ Complete indicator data can be found at <https://cetic.br/tics/educacao/2017/escolas/D33>

⁷⁸ Complete indicator data can be found at <https://cetic.br/tics/educacao/2017/escolas-urbanas/D25A/>

► **Indicator:** *Proportion of learners who have access to the Internet at school*

According to the ICT in Education 2017 survey conducted by Cetic.br, 39% of students accessed the Internet at school. The percentage was lower than for those who said they used the Internet in the living room or another room in their house (92%); in someone else's house (89%); in the bedroom (79%); in other places, such as shopping malls, churches or snack bars (60%); and on the move (50%).⁷⁹

Table 33: Students by Location of Internet Access – School (2017)

Percentage of the total number of students who use the Internet

		YES	NO
TOTAL		39	61
Administrative Jurisdiction	Municipal public	19	81
	State public	48	52
	Total - public	37	63
	Private	50	50
Grade	4th grade / 5th year of elementary education	13	87
	8th grade / 9th year of elementary education	42	58
	2nd year of secondary education	60	40

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian schools: ICT in Education 2017

F.3 What proportion of the population and the workforce is skilled in the use of ICTs?

► **Indicator:** *Proportion of Internet users with particular Internet skills, by skill level (basic, intermediate, advanced), aggregate and disaggregated*

According to the ICT Households 2017 survey conducted by Cetic.br, there is a great variation of skills among computer users. As shown in the following table, skills are markedly lower among users in rural areas, women, younger people (10 to 15) and older people (more than 45), and, more incisively, among those with no education.⁸⁰

⁷⁹ Complete indicator data can be found at <https://cetic.br/tics/educacao/2017/escolas-urbanas-alunos/B10/>

⁸⁰ Complete indicator data can be found at <https://cetic.br/tics/domicilios/2017/individuos/11/>

Table 34: Computer Users by Computer Skills (2017)

Percentage of the total number of computer users

	Copying or moving files or folders	Copying and pasting information in documents	Attaching files to emails	Using spreadsheets	Installing new equipment such as modems, printers, cameras or microphones	Installing computer programs or applications	Creating slide presentations	Transferring files between computers and other equipment or devices	Creating computer programs using programming languages	None of these activities
TOTAL	56	50	51	28	23	40	24	42	7	26
Area										
Urban	57	51	52	29	23	40	24	43	7	26
Rural	46	31	34	19	16	24	18	31	5	37
Sex										
Male	60	52	54	34	29	48	27	48	9	22
Female	52	48	49	22	16	31	21	36	5	30
Age Group										
10 to 15	43	29	19	10	15	30	24	30	7	38
16 to 24	70	60	61	31	26	49	35	54	8	13
25 to 34	66	61	64	40	31	53	28	57	8	18
35 to 44	54	54	59	31	22	35	20	37	7	25
45 to 59	45	41	46	24	19	29	13	31	4	37
60 +	34	29	31	19	11	21	7	17	5	49
Level of Education										
Illiterate/ Pre-school	34	15	24	21	16	26	20	16	1	43
Elementary	33	25	19	7	13	25	13	23	5	46
Secondary	53	46	48	24	20	38	20	39	6	27
Tertiary	79	74	82	50	34	53	37	62	10	9

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian households: ICT Households 2017

► **Indicator:** *Proportion of the workforce using ICTs in the workplace, by skill type, aggregate and disaggregated*

The ICT Enterprises 2017 survey conducted by Cetic.br provides an overview of the use of computers and the Internet by Brazilian companies. According to the data, in 7% of companies, up to 10% of the workforce used computers; in 21% of companies, between 11% and 25%; in 29% of companies, between 26% and 50%; in 16% of companies, between 51% and 80%; and in 23%, between 81% and 100%.⁸¹ For this specific indicator, there are no relevant differences between regions. Data related to the use of the Internet, examined in another indicator,⁸² showed no significant variation in relation to the number of computer users.

Table 35: Enterprises by Percentage Range of Employed Persons Who Used Computers in the Last 12 Months (2017)

Percentage of the total number of enterprises using computers

	Up to 10%	11% to 25%	26% to 50%	51% to 80%	81% a 100%	Does not know / Did not answer
TOTAL	7	21	29	16	23	4
Size						
10 to 49 employed persons	10	25	26	13	20	5
50 to 249 employed persons	15	23	22	15	20	6
250 or more employed persons	19	21	20	11	18	12
Region						
Southeast	7	21	28	16	25	4
Northeast	7	17	30	22	20	4
South	9	25	29	13	21	2
North	8	20	31	14	22	5
Center-West	7	21	32	13	25	2

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian enterprises: ICT Enterprises 2017

81 <http://cetic.br/tics/empresas/2017/empresas/A3/>

82 <http://cetic.br/tics/empresas/2017/empresas/B2/>

Existing data do not allow assessing the computer skills of the workforce of Brazilian companies. However, data is available on the type of Internet use carried out by companies,⁸³ although this indicator does not reveal the skills of the workforce.

► **Indicator:** *Proportion of higher education students enrolled in STEM and ICT courses, compared with global averages*

Data from a 2017 report by OECD indicated that 16% of tertiary graduates in Brazil earned degrees in STEM fields, a percentage lower than in other Latin American countries such as Argentina (19%) and Colombia (22%). The OECD average was 23%. ICT tertiary graduates were 3% of total degrees (the OECD average was 4%).⁸⁴ Only 15% of ICT graduates were women, while the average across OECD countries was 20%.⁸⁵

83 <http://cetic.br/tics/empresas/2017/empresas/B5/>

84 OECD Education at a Glance 2017, full report, table A3.1, available at https://read.oecd-ilibrary.org/education/education-at-a-glance-2017_eag-2017-en#page74

85 OECD Education at a Glance 2017 - Brazil Country Note, available at http://download.inep.gov.br/acoes_internacionais/estatisticas_educacionais/ocde/education_at_a_glance/CN_Brazil_OECD_2017.pdf

Policy recommendations for various stakeholders

Government

- Implement an access and telecommunications development policy that addresses infrastructure bottlenecks in localities identified as having little or no service by broadband networks, with a focus on rural areas and locations of low economic attractiveness.
- Update regulatory models to switch the focus from fixed telephony to broadband.
- Enforce the provision of accessibility for persons with disabilities included in the Statute on Inclusion of Persons with Disability and the Brazilian Civil Rights Framework for the Internet.
- Develop sustained and large-scale policies aimed at seeking universal access to the Internet in urban and rural public schools based on high standards of connectivity that overcome bottlenecks in access and use.
- Integrate efforts at different levels of government and private sector in order to supply all the necessary inputs for effective pedagogical use in schools, such as high-speed connections, devices, high-quality digital content, and teacher training.
- Promote public materials for training the workforce on ICT use and development, and increase the percentage of women graduates.

Private Sector and Technical Community

- Enhance 4G coverage in the country, reaching all the municipalities, and enable mobile communication in all the districts.
- Promote materials for training the workforce on ICT use and development.

Academia

- Provide proposals for curricula, activities and training materials regarding the use of ICT at all educational levels.

Civil Society

- Monitor the provision of accessibility for persons with disabilities included in the Statute on Inclusion of Persons with Disability and the Brazilian Civil Rights Framework for the Internet.



M

Multistakeholder
participation

6

CATEGORY M

MULTI-

STAKEHOLDER

PARTICIPATION:

Findings of core indicators, and
policy recommendations for
various stakeholders



THEME A

Policy, Legal and Regulatory Framework

A.1 Is there an overall policy, legal and regulatory framework for Internet development and policymaking which is consistent with international norms?

► **Indicator:** *Existence of an overall framework consistent with relevant international norms*

Regulation of Internet development in Brazil is regulated by different laws and standards, in addition to the general principles established by the Federal Constitution that can be applied to the Internet environment, such as privacy, freedom of expression, and right to information.

The main law governing Internet development is the Brazilian Civil Rights Framework for the Internet (Law n° 12.965/2014)¹, which is considered to be consistent with international standards and other existing references. It includes the following goals: to promote global free flow of information; to promote the open and interconnected nature of the Internet; to encourage multi-stakeholder cooperation in policy development processes; to ensure transparency and accountability; and to strengthen neutrality, privacy and data protection.

Another part of this framework is the Brazilian Internet Steering Committee (CGI.br)², created in 1995 and revised by Presidential Decree 4.829 of 2003³, to coordinate and integrate Internet service initiatives in Brazil, as well as to promote technical quality, innovation, and dissemination of Internet services. The Committee is made up of 21 members from the government and civil society (the corporate sector, the third sector,⁴ and the academic community). Among its responsibilities are establishing strategic guidelines related to the use and development of the Internet in Brazil and establishing guidelines for the administration of domain name registration using <.br> and Internet address allocation (IPs). Its scope of action does not involve decisions on the implementation of public access policies. This is assigned to the National Telecommunications Agency and the Ministry of Science, Technology, Innovation, and Communication (MCTIC), as pointed out in the following indicators. In the last decade, the Committee has consolidated

1 Law n° 12.695/2014, available at http://www.planalto.gov.br/CCIVIL_03/_Ato2011-2014/2014/Lei/L12965.htm

2 A simplified English version about CGI.br is available at <https://www.cgi.br/about/>

3 Presidential Decree n° 4.829/2003, available at <https://cgi.br/pagina/decretos/108>

4 "Third sector" is a term used to describe the range of organisations that are neither public sector nor private sector, comprising non-governmental and non-profit organizations or associations, generally independent of government.

its position as a significant institutional body for discussion and defining strategic guidelines on relevant aspects of the Internet, such as in the case of the unanimous approval of the Principles for the Governance and Use of the Internet⁵, which was taken as a reference to build the Brazilian Civil Rights Framework for the Internet.

► **Indicator:** *Existence of legal and regulatory frameworks to enable e-commerce, digital signatures, cybersecurity, data protection, and consumer protection*

As mentioned in the previous indicator, the main legislation governing the development of the Internet is the Brazilian Civil Rights Framework for the Internet (Law n° 12,965/2014), which is considered to be aligned with international standards. The Framework reiterates, among other issues, the need for consumer protection, data protection, cybersecurity and the encouragement of electronic commerce.

In a complementary manner, there are specific rules for each of these issues that constitute the regulatory framework, such as the Consumer Protection Code (Law n° 8,078/1990)⁶ and the E-Commerce Law (Federal Decree n° 7,962/2013)⁷, which ensure specific standards for virtual stores and their consumers. In the case of digital signatures, the main standard, still in force, is Provisional Measure 2200-2 of 2001⁸, which regulates digital certification and set the government bodies responsible for certification, such as the National Institute of Information Technology (ITI). In terms of cybersecurity, there are different levels of standards, but the main legislation is Law n° 12,737/2012⁹, which deals with the criminalization of computer crimes, including the financial system.

Finally, in July 2018 the Brazilian Congress approved the Personal Data Protection Law¹⁰, aligned with the General Data Protection Regulation (GDPR), which passed in August 2018, after some of its provisions were vetoed by the President of the Republic. At the time of writing this report (August 2018) it was not possible to know whether vetoed elements, such as the creation of an independent national data authority and the imposition of sanctions for violations, would be reconstituted by the Executive's initiative or by other procedures.¹¹

5 Available at <https://www.cgi.br/resolucoes/documento/2009/003>. A version in English can be found here: <https://www.cgi.br/principles/>

6 Consumer Protection Code available, at http://www.planalto.gov.br/ccivil_03/Leis/18078.htm

7 Federal Decree n° 7962/2013, available at http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2013/decreto/d7962.htm

8 Provisional Measure 2200-2 of 2001, available at http://www.planalto.gov.br/ccivil_03/MPV/Antigas_2001/2200-2.htm

9 Law n° 12.737/2012, available at http://www.planalto.gov.br/ccivil_03/_Ato2011-2014/2012/Lei/L12737.htm

10 Law n° 13.709/2018, available at http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2018/Lei/L13709.htm

11 Editor's Note (August 2019): After the completion of this report, the Personal Data Protection Law has been modified by an Executive Order, which created the Data Protection Authority directly linked to the Presidency, leaving room to a revision in two years which can lead to a switch to indirect administration, with more independency and autonomy.

A.2 Does the government encourage public participation in national policy processes?

► **Indicator:** Value and ranking in UN DESA E-Participation Index

According to the E-Participation Index 2018 produced by the United Nations¹², Brazil is in 12th place among 193 countries, having risen 25 positions between 2016 and 2018, reaching an index of 0.9719.

► **Indicator:** Policy and legal arrangements requiring public consultation and legal and practical arrangements for online consultation processes

Since the promulgation of the Federal Constitution of 1988, Brazil has been developing instruments and mechanisms for social participation, including councils, conferences, ombudsmen, participation processes in the public planning and budget cycle, public hearings, and consultations. The regulatory agency for the telecommunications sector, the National Telecommunications Agency, created in the 1990s, has obligations in relation to public consultations on future regulatory acts, especially on modalities of service provision and plans for grants and universalization¹³, and these consultations are currently carried out almost exclusively on online platforms.

In 2014, Presidential Decree 8,243/2014 established the National Policy of Social Participation (NPSP) and created the National System of Social Participation¹⁴, combining into one framework the policies formulated and implemented in the previous decade.¹⁵ Through its social participation platform, Participa.br, the initiative has engaged in the development of communication tools, discussion forums, chat rooms, videos, participation pathways, and other means of online social consultation. From its creation to 2016, Participa.br hosted over 200 participatory processes and more than 30 public government consultations.¹⁶ Although the number of consultations developed through the platform is an important achievement, there are no sound evaluation of the results obtained by these instruments.

12 E-Participation Index, available at <https://publicadministration.un.org/egovkb/en-us/Data/Country-Information/id/24-Brazil>

13 Law 9.472/1997, articles 19 and 42

14 Federal Decree nº 8,243/2014, available at http://www.planalto.gov.br/ccivil_03/_Ato2011-2014/2014/Decreto/D8243.htm

15 However, the policy was questioned by federal deputies, who voted for its cancellation. The measure against the decree was sent to the Federal Senate, which did not continue the veto, keeping the decree in force.

16 Between 2003 and 2012, during the period of the largest number of national conferences, more than 7 million Brazilian citizens participated in 87 national conferences, covering 40 sectoral areas. Currently, under the federal government, there are more than 120 councils, of which about 40 have in their composition a significant presence of representatives of civil society, including the Internet Steering Committee and the Consultative Council of Anatel. More data information about this issue at <http://www.participa.br/participacaosocial/politica/a-politica-nacional-de-participacao-social-pnps>

Currently, sectors of civil society such as consumer associations complain about low engagement by the federal administration concerning to the National Policy of Social Participation, and the set of instruments for social participation. According to these sectors, despite the establishment of the National Social Participation Policy, social participation policies have been discredited since 2016, and have begun to be limited to consultations and hearings required by law. Civil society organizations have also reported the suspension of activities of councils and committees, as well as increases in the difficulty of participating in meetings.

In 2018, Brazil established a revised version of its Digital Governance Strategy¹⁷, first approved in 2016. One of its strategic objectives is to expand social participation in the policy life cycle and public services, with the target of increasing the number of public bodies that hold online consultations from 17% (Mar 2018) to 22% in 2019.¹⁸

The Brazilian Open Data Policy, instituted by Decree n° 8.777 in 2016¹⁹, is another relevant standard in this field, having among its objectives the promotion of transparency and social participation and the development of government services.

It is important to point out that these initiatives are mostly applied to the federal public administration, but many processes relevant to citizens occur at the state and municipal levels, where the stage of development and institutionalization of public consultation processes are, in general, less developed than in the federal administration.

► **Indicator:** *Number and range of government consultation processes and opportunities available online*

Despite the launch of the National Social Participation Policy and its obligations, the processes of online public consultation are carried out in a heterogeneous manner, and government institutions generally have autonomy in determining the contours of their social participation mechanisms. Regardless of the effectiveness of these consultations – a question to be evaluated in the following indicators – more than 30 federal agencies conduct public consultations through online platforms, such as Anatel, which has two different systems for the participation of citizens. While the first system is focused on consultation about normative instruments (known as the “Interactive Public Consultation Tracking System” - SACPI), the agency also maintains a communication channel with citizens to receive suggestions through an interactive tool (called the “Anatel Dialogue”)

The only available figure is that only 17% of federal public bodies carried out online consultations in 2017.²⁰ Although the National Social Participation Policy calls for the production of annual

17 Available at <http://www.planejamento.gov.br/EGD/arquivos/revisao-da-estrategia-de-governanca-digital-2015-2019.pdf>

18 As reported in the document cited above.

19 The Brazilian Open Data Policy is best addressed in indicator E2, on Openness Category.

20 See the Digital Governance Strategy, at <http://www.planejamento.gov.br/EGD/arquivos/revisao-da-estrategia-de-governanca-digital-2015-2019.pdf>

reports on the actions implemented by government agencies, there is no record that these reports were produced in 2016 and 2017, which reinforces the perception of actual lack of valuation of the policy.

At the state and municipal levels, reports of consultations are even scarcer, but some state and municipal bodies hold online public consultations, even though these processes are conducted heterogeneously.

► **Indicator:** *Evidence of participation by diverse stakeholder groups in online consultation processes which are not Internet-related*

There are no consolidated numbers on the participation of various stakeholder groups in online consultation processes that are not Internet-related.

In general, there is great heterogeneity in the participation of these groups in online public consultation processes. According to representatives from the third sector, the participation of non-business groups in these processes is limited, since, among other reasons, there are not enough human resources to monitor and participate in all public consultations. This perception is confirmed by reports about queries already done, for example, by the Brazilian Electricity Regulatory Agency (ANEEL)²¹ and the National Supplementary Health Agency (ANS)²², which show broad majority participation of companies and their representative entities.

► **Indicator:** *Evidence of participation by diverse stakeholder groups in Internet-related policy-making processes*

In the Brazilian context, participation by stakeholder groups in Internet-related policymaking processes is heterogeneous. In the processes carried out by Brazilian Internet Steering Committee (CGI.br), multisectoral participation occurs within the body itself, which is made up of representatives from government and civil society (business, the third sector, and the scientific and technological community) who are directly elected by their peers. In the case of the National Telecommunications Agency, there are institutional participation bodies, such as the Committee for the Defense of Users of Telecommunications Services (CDUST) and the Consultative Committee. Both bodies, however, are consultative and considered ineffective by individuals from the third sector, such as consumer organizations. In general, consultations are already carried out at Anatel with majority participation of the business sector.²³

21 Reports of consultations carried out by ANEEL are available at <http://www.aneel.gov.br/consultas-publicas>

22 Reports of consultations carried out by ANS are available at <http://www.ans.gov.br/participacao-da-sociedade/consultas-e-participacoes-publicas/consultas-publicas-encerradas>

23 More on the composition of the committee and the perception of the sectors in indicator B2 of the Multistakeholder Participation Category.

The Ministry of Science, Technology, Innovation and, Communication, which is responsible for the formulation of universal access policies, offers no institutional spaces of citizen participation. The engagement of the sectors depends on public consultations opened by the body, which occur sporadically.

It is important to note, however, that even in this scenario, in the last decade, there has been substantial participation of various sectors, including business and the third sector, in the central regulatory processes regarding telecommunications and the Internet. This was the case in discussions that culminated in the approval of new pay-TV legislation, adopted in 2011; in debates about the adoption of the Brazilian Civil Rights Framework for the Internet, in 2014; in discussions of the reformulation of the telecommunication model (without a definite vote by Congress as of August 2018); and in the adoption of a national policy for the protection of personal data, approved in 2018.

A.3 Is government accountable to citizens and stakeholder groups?

► **Indicator:** *Constitutional and institutional arrangements for government accountability, and evidence from credible and authoritative sources that these are implemented in practice*

Development of institutional arrangements for government accountability in Brazil began in 1988 with the current Federal Constitution and, subsequently, the Fiscal Responsibility Law²⁴, in force since 2000, which called for wide dissemination by electronic means of budgets and expenditures at the federal, state and municipal levels.

In 2004, the Federal Government's Transparency Portal²⁵ was launched, where citizens can find information about how federal public money is used, as well as information on matters related to public management in Brazil. Since its creation, the Portal has gained new resources, increased the data supply year after year, and consolidated as an important instrument of social oversight. The data disclosed in the Portal comes from several sources of information, among which are the great structural systems of the Federal Government, such as: the Integrated System of Federal Government Financial Administration (SIAFI)²⁶ and the Integrated Human Resources Administration System (SIAPE)²⁷, social security benefit databases, Federal Government Payment Card invoices, and functional property databases.

24 Complementary Law n° 101/2000, available at http://www.planalto.gov.br/ccivil_03/LEIS/LCP/Lcp101.htm

25 Available at <http://www.portaltransparencia.gov.br/>

26 Available at <http://www.tesouro.fazenda.gov.br/siafi>

27 Available at <http://www.siapenet.gov.br/Portal/Servico/APresentacao.asp>

In 2011, the Access to Information Law (LAI)²⁸ came into force. It is perhaps the most important legislation in this field, giving a great stimulus to accountability practices in public administration, providing for procedures to be observed at all levels of the federation, and ordering guaranteed access to information provided for in the Federal Constitution. The law establishes deadlines for sending information and states that motivation for requests is not required, in addition to establishing on-site and online forms for receiving requests.

The Open Data Policy of the federal administration, initiated in 2016²⁹, reinforced the instruments for monitoring public administration, requiring federal agencies to take a proactive stance in the provision of data and information of public interest.

The development of this framework established a new environment of accountability, especially in federal public administration bodies and states and municipalities with greater management capacity. But despite these institutional advances, experts and civil society organizations have pointed out serious shortcomings in the implementation of some of these instruments, in particular, the Access to Information Law, even five years after it took effect.

Research conducted in 2017 by Cetic.br on federal and state agencies that had websites pointed out that although most federal agencies had a service for requesting access to online information (89%), as determined by the LAI, this index was 64% at the state level. There is no similar data on municipal governments, and there is strong evidence that these rates tend to be significantly lower than those found in federal and state agencies.

Another investigation, conducted by Transparency Brazil in 2017³⁰, confirmed the need to improve the implementation of the standards. In the first half of 2017, the organization sent requests for information to 206 public agencies of all branches and federative spheres. Among these agencies, 93 (45%) simply ignored the request, a serious breach of the LAI. Another 36 (17%) denied access to information, 47 (23%) partially granted access, and only 30 (15%) fully granted access to the requested information. Once more, there is substantial evidence that in medium-sized and small cities, where there are major management limitations, enforcement is still more precarious.

When evaluating government accountability, Transparency Brazil³¹ considers that accountability has decreased in the last few years, mentioning three examples:

- The Public Transparency and Anti-Corruption Council, which had a key role in creating the Access to Information Law, has not met again since 2014.

28 Law nº 12,527/2011, available at https://www.planalto.gov.br/ccivil_03/_ato2011-2014/2011/lei/l12527.htm

29 Presidential Decree nº 8,777/2016

30 Survey conducted by Transparency Brazil is available at https://www.transparencia.org.br/downloads/publicacoes/Relat%C3%B3rio_LAI_16022018.pdf

31 Interview to this application process.

- Important data, such as on expenses made by public authorities through corporate credit cards, have been closed or not updated.
- Classified document lists, such as those classified by the Federal Police, have not been updated since 2015.

According to them, there have been specific advances, but generally speaking there has been regression on government accountability.



THEME B

National Internet Governance

B.1 Are there active associations of professionals (including Internet professionals), consumers and other stakeholder groups that focus on or engage with Internet-related policy and governance issues?

► **Indicator:** *Existence, membership data (aggregate and disaggregated by gender) and level of activity of relevant associations*

A growing network of civil society organizations in Brazil is working on Internet-related topics, including consumer protection groups such as the Brazilian Institute of Consumer Protection, the Brazilian Association of Consumer Defence, and the Brazilian Association of Attorneys for Protection Defense of Consumers (Procon). Organizations that have traditionally worked with media issues and freedom of expression, such as Intervozes, Barão de Itararé and Article 19, and professional entities such as the Interstate Federation of Telecommunications Workers, began to act progressively on subjects related to the Internet.

The last 15 years has seen the emergence of organizations that focus exclusively on the digital environment, such as InternetLab, the Nupef Institute, the Digital Collective, SaferNet, Internet without Borders Brazil, and Coding Rights, as well academic groups such as the Technology Center and Society of FGV, the Institute of Technology and Society (ITS Rio), and the Latin American Network of Studies on Surveillance, Technology and Society (Lavits). These and other organizations from the third sector have gathered especially in two networks, known as the

Internet is a Right Campaign, created in 2011, and the Coalition for Network Rights³², active since 2016.

The business sector relies on organizations such as the National Union of Telephony and Mobile Service Companies (Sinditelebrasil), the Brazilian Electrical and Electronics Industry Association (Abinee), the Brazilian Association of Competitive Telecommunications Services Providers (TelComp) and the Brazilian Association of Internet Service Providers (ABRANET). These associations participate actively in the formulation of telecommunications and Internet policies, and have, especially in the first two cases (Sinditelebrasil and Abinee), the greater operational capacity to participate in regulatory processes in general.

These organizations actively participate in the institutional spaces open to civil society, such as the Internet Steering Committee and the Consultative Council of the National Telecommunications Agency, although there are, in all cases, questions about the effectiveness and composition of these organs (more at indicator B2). In any case, as mentioned in indicator A2, the main organizations of Brazilian civil society have actively participated in the debates about and formulation of relevant sectoral legislation that came to make up the regulatory framework in the last decade, such as the new law on Pay-TV in 2011, the Brazilian Civil Rights Framework for the Internet, in 2014, and the Personal Data Law in 2018.

No data have been compiled on membership of these groups and associations, including gender disaggregation. In any case, women are present in directing and coordinating a significant proportion of third sector associations,³³ as well as in the emergence of groups that act on issues involving the Internet and gender, such as InternetLab and Coding Rights. The boards of the mentioned business associations are made up exclusively of men.³⁴

B.2 Does the government actively involve other stakeholder groups in developing national Internet policies and legislation?

► **Indicator:** *Existence of arrangements for multi-stakeholder consultation and involvement in national policymaking institutions and processes concerned with the evolution and use of the Internet*

The institutional environment related to Internet policies in Brazil can be evaluated, particularly on two fronts. The first refers to the responsibilities of the Brazilian Internet Steering Committee, created in 1995 and revised by Presidential Decree 4.829 of 2003. The Committee is responsible for

32 More information on the two networks is available at <http://campanhabandalarga.redelivre.org.br/> e <https://direitosnarede.org.br/>

33 This is the case for some of the organizations cited: Interozoes, Barão de Itararé, Digital Collective, Article 19, InternetLab and Coding Rights.

34 Survey conducted on 08/13/2018 on the website of the institutions.

establishing strategic guidelines related to the use and development of the Internet in Brazil and for carrying out domain name registration, Internet protocol allocation and administration of “.br” domains. It also promotes studies, recommends procedures for Internet security, and proposes research and development programs that allow the maintenance of levels of technical quality and innovation in the use of the Internet. The Committee includes representatives from the government sector, the business sector, the third sector, and the scientific and technological community. All representatives of civil society are directly elected by the organizations from its sectors.

In 2017, the Ministry of Science, Technology, Innovation, and Communication opened a public consultation for the improvement of the Internet Steering Committee, in which analyses and proposals were discussed. The third sector proposed strengthening the committee’s deliberative nature concerning governance issues, while the business sector focused on the need to review the composition of the Committee and incorporate the participation of new sectors that are part of the Internet economy. The results of these discussions concluded in the Brazilian section of the Internet Governance Forum, were forwarded to the federal administration.³⁵

Although there are divergent views on specific topics, and even though CGI.br has no regulatory power on the Internet, it has great legitimacy among the different sectors. Since its creation, it has played a highly relevant role in issues such as the formulation of consensus, as in the case of the Principles for Internet Governance and Use, which were approved in 2009³⁶ and inspired the proposal of the legislation for the Brazilian Civil Rights Framework for the Internet. The telecommunications sector is the most outspoken critical voice since they consider the business sector to be underrepresented (considering its role and economic size).

The National Telecommunications Agency and the Ministry of Science, Technology, Innovation, and Communication are at the forefront of the formulation and implementation of public access policies and have specific instruments for social participation. In addition to public consultations, Anatel has two auxiliary councils. The first is the Consultative Council³⁷, composed of representatives from the Federal Government, Congress, and civil society, designated by decree of the President of the Republic. Among its duties are giving opinions on plans for grants and universalization, evaluating reports, and advising the Agency. The second is the Committee for the Defense of Users of Telecommunications Services³⁸, made up of representatives of Anatel, public and private institutions, telecommunications users, and consumer protection entities, chosen by the Board of Directors, after suggestions from organizations. The Committee’s role to propose improvements for regulatory activities, and advise the Board of Directors of the agency on issues related to the defense and protection of user rights.

35 Final reports of this process are available at <https://consulta.cgi.br/docs/reports>

36 Available at <https://www.cgi.br/resolucoes/documento/2009/003>

37 More on the Consultative Council: <http://www.anatel.gov.br/institucional/conselho-consultivo/sobre-o-conselho-consultivo>

38 More on CDUST: <http://www.anatel.gov.br/consumidor/sobre-o-comite>

The Ministry of Science, Technology, Innovation and Communication has no institutional body that internalizes multisectoral participation in the formulation of policies for the Internet, including universal access policies. Consultations with civil society are carried out through online public consultations and public hearings in a heterogeneous manner.

The third sector is mostly critical of the effectiveness of these arrangements for multi-stakeholder involvement in national policymaking processes, especially regarding the formulation of universalized access policies, pointing out, in the case of Anatel, secondary participation of these bodies in the definition of policies and, in the case of MCTIC, the absence of multisectoral participation bodies.

► **Indicator:** *Numbers of non-governmental stakeholders actively participating, by stakeholder group, disaggregated by sex*

The Brazilian Internet Steering Committee consists of nine representatives from the government sector and 12 from the civil society (four from the business sector, four from the third sector, three from the scientific and technological community, and one appointed Internet expert recognized for its knowledge in the field). Out of a total of 21 members, 19 are men and two are women, both representing the third sector.³⁹ The figures for multisectoral participation in the Brazilian section of the Internet Governance Forum (IGF) is presented in the next indicator, B3.

The Consultative Council of Anatel is composed of 12 members: four representatives of the National Congress; two of the federal government; two of the private sector; two of users; and two of the private sector. There is currently only one woman (August 2018) from a user organization.

The Committee for the Defense of Users of Telecommunications Services of Anatel is made up of 16 members: four Anatel representatives; five representatives of public and private institutions; and seven representatives of telecommunications users or public or private non-profit consumer organizations. Of the current 16 members, six are women (37%).⁴⁰

No data has been compiled on multisectoral participation in the public consultations conducted by these bodies. However, based on reports on concluded processes⁴¹, it is possible to note substantial participation capacity for the private sector, since many of these processes require a great deal of technical specificity and dedicated human resources. This same report showed that of the individuals participating in these consultations, the vast majority were also men. Reports on consultations conducted by MCTIC are not available.

39 Composition as of August 2018: <https://cgi.br/membros/>

40 Composition as of August 2018: <http://www.anatel.gov.br/consumidor/membros>

41 ANATEL online public consultations available at <http://www.anatel.gov.br/institucional/sobre-as-consultas-publicas>

B.3 Is there a national Internet Governance Forum which is open to all stakeholders, with active participation from diverse stakeholder groups?

► **Indicator:** *Existence of national IGF and/or other multi-stakeholder forum concerned with Internet governance*

The Brazilian Internet Forum (IGF Brazil)⁴² has been hosted annually by the Brazilian Internet Steering Committee since 2011 as a preparatory activity for the Internet Governance Forum (IGF). In the 2018 edition, programming was developed collaboratively, with the proposal of workshops by civil society, in a model similar to the global IGF.

► **Indicator:** *Participation data, aggregate and disaggregated by gender and stakeholder group, with particular attention to participation by selected groups (e.g. education ministries, SMEs, NGOs concerned with children, trades unions), and including arrangements for remote participation*

The Brazilian Internet Forum 2017 had total registration of 603 people, of whom 409 were effectively present during the event, numbers similar to previous editions. Of the total number of participants, 165 (40%) were from the scientific community, 74 (18%) from the business sector, 68 (17%) from the government, and 101 (25%) from the third sector. Of those present at the event, 175 (42%) said they were female and 181 (44%), male. Three participants reported “other genders” and 50 did not report their gender.⁴³ There is no data on the participation of selected groups, but there are records of activities coordinated by organizations concerned about different areas of human rights.

All activities of the official program were broadcast by live webcast and allowed remote participation.

Evidence from national IGF reports filed with global IGF Secretariat

IGF Brazil is recognized by the IGF Secretariat as part of the process of developing the global IGF.⁴⁴ After completion of the Brazilian section of the IGF, detailed reports on participation and debates in the different activities are produced⁴⁵ and shared in the regional IGF (LAC IGF)

42 Brazilian Internet Forum: <https://forumdainternet.cgi.br/>

43 Data on participation can be obtained in the report available at <https://forumdainternet.cgi.br/files/relatorioVIIIForum.pdf>

44 <http://www.intgovforum.org/multilingual/content/national-igf-initiatives>

45 Reports of all Brazilians IGFs available at <https://forumdainternet.cgi.br/bibliotecas>

and in global IGF meetings, including the National and Regional IGF Initiatives (NRIs) sections addressed to share the results of national IGFs.

The organizers of the Brazilian IGF also regularly participate in the (bi) monthly virtual meetings where the NRI Coordinators share updates and collaborate on the engagement of NRIs for the annual IGF meeting.

B.4 Does the national domain name registry involve all stakeholders in its decision-making processes?

► **Indicator:** *Constitution and practice of domain name registry*

Registration and maintenance of domain names using .br, as well as the IPv4 and IPv6 address distribution service and autonomous system numbers (ASNs) in Brazil, are carried out by Registro.br, a department of the Brazilian Network Information Center (NIC.br). Strategic issues in domain management are discussed and defined within the Brazilian Internet Steering Committee (CGI.br), as in cases of the technological transition from IPv4 to IPv6.



THEME C

International and Regional Internet Governance

C.1 Does the government actively involve other stakeholder groups in developing policy towards international Internet governance?

● **Indicator:** *Evidence that government encourages and facilitates multi-stakeholder preparation for international meetings*

In Brazil, preparation for international meetings, especially global IGF, is essentially carried out in the process of preparing for IGF Brazil, which has been conducted by the Brazilian Internet Steering Committee since 2011. An innovation of the 2018 edition of the IGF Brazil was the organization of programming based on proposals from the various segments. Of the 78 proposals submitted, 21 workshops were selected by a multi-stakeholder Evaluation Committee external to CGI.br. To facilitate participation in IGF Brazil, CGI.br provides material support to

enable the presence of organizations and sector representatives. IGF Brazil 2017 supported 84 speakers, organizers, moderators, and workshops.

Concerning international events, since 2012, grants have been awarded to over 23 civil society members for participation in LAC IGFs and 17 for participation in global IGFs. More than 100 young people have already received grants from the Youth@IGF Program, in partnership with other organizations.⁴⁶

There is less intense facilitation of preparation for the participation of different sectors in other international meetings, such as those of the International Telecommunication Union. Such facilitation comes primarily from the Brazilian Telecommunications Commission, linked to the Anatel, which coordinates participation and positions in the governing bodies of the various international entities related to telecommunications. Currently, various sectors participate in the Brazilian Communications Commission 1 (CBC-1), which is discussing the Brazilian position on the regulation of over-the-top services (OTT).

C.2 Do government and other stakeholders from the country actively participate in major international fora concerned with ICTs and the Internet?

● **Indicator:** *Number of government submissions to international fora concerned with ICTs and the Internet*

Data not available. [Information requested from the Ministry of Foreign Affairs and not received by the deadline for this application]

● **Indicator:** *Extent of involvement by government and other stakeholders in international standard-setting processes concerned with communications and the Internet*

The involvement of the government and other stakeholders in international standard-setting processes regarding communications and the Internet can be considered high in recent regulatory environments of a multistakeholder nature, such as Internet Governance Forums. As pointed out in earlier indicators, Brazil was the first country in the region to establish a national section of the IGF, in 2011 and has a significant presence in different sectors in regional and global issues of the IGF.

46 Information provided by Executive Secretary of the Brazilian Internet Steering Committee on August 16, 2018.

Other similar forums, such as the NETmundial Initiative in 2014, involved wide mobilization of Brazilian civil society, in addition to a strong presence of the Brazilian government. At ICANN, as the C3 indicator points out, ICANN involves less intense Brazilian participation. Federal administration and telecommunications companies have traditionally participated more effectively in ITU.

● **Indicator:** *Number of participants from different stakeholder groups participating in global and regional IGFs, aggregated and disaggregated by stakeholder group and sex*

At the 12th annual meeting of the Internet Governance Forum (IGF 2017), 235 (11.6%) of the 2,019 onsite participants were from Latin America and the Caribbean. There is no data on civil society participation disaggregated by country, but the list of civil society participants reveals the participation of at least 25 Brazilians in this segment, 14 men and 11 women. The delegation of the Brazilian government was made up of seven people, four women and, three men. According to the global IGF 2017 report, Brazil was one of the countries with the most participants among the 1,661 online participants. Of the total number of online participants, 250 (15.1%) were from Latin America.⁴⁷

No data has been compiled on participation in the regional IGF (LAC IGF) of 2017.⁴⁸ In the 2016 edition in Panama, the list of participants shows at least 20 Brazilians, 10 men, and 10 women. There is no disaggregation data by the stakeholder group.⁴⁹

● **Indicator:** *Participation or otherwise of non-government stakeholders in official delegations to ITU, aggregated and disaggregated by stakeholder group and sex*

There are informal records of the presence of civil society members in delegations to CWG-Internet at ITU, but there is no systematic and reliable data for an objective response to the indicator.

47 IGF 2017 statistics are available at <http://www.intgovforum.org/multilingual/content/igf2017-attendance-programme-statistics>

48 LAC-IGF report, which does not include data about participation, is available at http://www.intgovforum.org/multilingual/index.php?q=filedepot_download/3568/1194

49 LAC-IGF 2016 statistics are available at <https://archive.lacigf.org/pt/lacigf9/asistentes.html>

C.3 Does the government and do other stakeholders participate actively in ICANN?

6

► **Indicator:** *Membership of and active participation in ICANN's Governmental Advisory Committee (GAC)*

Brazil has 3 out of 176 GAC members, all from the Ministry of Foreign Affairs. One of them, Thiago Jardim, served as vice-chair, from April 2018 to March 2019.⁵⁰

► **Indicator:** *Membership of and active participation in ICANN constituencies, working groups and other fora*

In the Noncommercial Users Constituency (NCUC) of ICANN, Brazil is represented by four Organizational Members. Among the Individual Members, Brazil has 26 members, 18 men and 8 women.⁵¹ Of 21 members of the Generic Names Supporting Organization Council, one is Brazilian (male), from the gTLD Registries Stakeholder Group.⁵² The country has no members on the Non-Commercial Stakeholder Group Executive Committee, GNSO Council Representatives⁵³ or Not-for-Profit Operational Concerns.⁵⁴ The composition of all the mentioned councils is as of August of 2018.

There is relatively active Brazilian participation within institutional spaces that are porous to multistakeholder participation. However, this positive assessment of the participation of the government and other Brazilian sectors does not encompass a broader analysis of the limits of this participation and its results such as on the institutional process of ICANN. The third sector in Brazil is especially critical about what it calls the excessive influence of economic players that act in the management of domains.⁵⁵

50 GAP members at <https://gacweb.icann.org/display/gacweb/GAC+Representatives>

51 NCUC members at https://members.ncsg.is/ncuc_members_public

52 GNSO Council members at <https://gnso.icann.org/en/about/council>

53 NCSG members at <https://gnso.icann.org/en/about/stakeholders-constituencies/ncsg>

54 NPOC members at <https://www.npoc.org/about/members/>

55 Interviews conducted during the application process.

Policy recommendations for various stakeholders

All Stakeholders

- Consolidate and develop the national multistakeholder governance model, expanding the participation of the various sectors and of women in forums and organizations related to Internet governance and telecommunications policy and regulation in Brazil.
- Record and publish quantitative and qualitative data on the participation of the different sectors (private, public and third sector) in IGF (including LAC IGF), ITU and ICANN.
- Develop research and evaluation strategies to monitor the impact of multisakeholder public consultations implemented.

Government

- Strengthen the instruments for online participation and consultation on topics of social interest in all institutional bodies at all levels of government.
- Extend and accelerate the digitalization of public services and strengthen the application of the Access to Information Law in all public agencies of all units of the federation, overseeing compliance comprehensively at the federal level and promoting enforcement at the state and municipal levels.
- Record and publish government submissions to international forums concerned with ICT and the Internet.



X

Cross-cutting

7

CATEGORY X **CROSS-CUTTING INDICATORS:**

Findings of core indicators,
and policy recommendations
for various stakeholders



THEME A

Gender

A.1 Are the interests and needs of women and girls explicitly included in national strategies and policies for Internet development, and effectively monitored?

► **Indicator:** *National strategies include explicit consideration of a) women's needs relating to the Internet and b) the potential of the Internet to support women's empowerment and gender equality*

In the main national strategies and policies for Internet development, there is little consideration of women's needs relating to the Internet, and there are no mentions of the potential of the Internet to support women's empowerment and gender equality. The most recent policy for Internet development is the Brazilian Strategy for Digital Transformation, called E-Digital. In this document, women are superficially considered in the section entitled "Education and Professional Training" as one of the strategic actions among nine listed:

"To prioritize, in the new high school model, intensification of the disciplines of the STEM group (mathematics, science, technology and engineering) and the technical training tracks to work in sectors of the digital economy, taking into account the importance of stimulating girls and women to search for careers in ICT-related areas".¹

In the version of the National Broadband Plan (PNBL) published in 2010 and ended in 2016, there were no specific digital inclusion policies for women. This subject is not addressed in the Presidential Decree that created the PNBL and is also not mentioned in *Brasil Conectado*, which is the plan that operationalizes the Decree. The Brazilian broadband policy, called the National Connectivity Plan (PNC), is in the process of being updated, but the content, which was in public consultation at the end of 2017, has not yet been published by the Brazilian government.

Specifically, this subject is addressed in the National Plan of Policies for Women 2013 to 2015, published by the Special Secretariat for Women's Policies. The action plan calls for of "Promotion of women's access to cultural goods and information technologies and support for free and alternative media" in the following ways: (1) "Contribute to the access of women to the benefits of Broadband"; and (2) "Promote training for the digital inclusion of women, broadening

1 BRASIL. Decreto nº 9.319, de 21 de março de 2018. Institui o Sistema Nacional para a Transformação Digital e estabelece a estrutura de governança para a implantação da Estratégia Brasileira para a Transformação Digital (E-Digital). Diário Oficial da República Federativa do Brasil, Poder Executivo, Brasília, DF, 22 mar. 2018. Seção 1.

access to ICTs, considering ethics, race, sexual orientation, gender identity, generation, and women with disabilities”.²

► **Indicator:** *Numbers of women and men in senior policymaking positions in government concerned with ICTs/Internet*

There are three important Federal agencies concerned with ICT and the Internet: (1) The National Telecommunications Agency (Anatel); (2) the Ministry of Science, Technology, Innovation and Communication (MCTIC); and; (3) the Internet Steering Committee (CGI.br). Anatel is managed by a Board of Directors composed of five members (five-year term) selected and appointed by the President after approval by the Senate. There are currently no women participating in this ongoing Board. Since its creation, there have been 18 members of the Board, and only one woman (with a specific term from 2008 to 2012). The management framework of MCTIC is composed of one minister and six immediate assistance agencies.³ There were no women in leadership positions in these bodies. In August 2018 when this research was conducted CGI.br is composed of 21 members (terms of 3 years) from the government (four members), the corporate sector (four members), the third sector (four members), and the academic community (four members). There were only three women on the Committee at the time of writing. Considering the make-up of the last three Committees (from 2011 to August 2018), around 10% of these positions were held by women.

► **Indicator:** *Extent of disaggregation of available data on ICT access and use by sex*

There are two major longitudinal surveys in Brazil that provide data on access to and use of the Internet disaggregated by gender: (a) the *Survey on the use of information and communication technologies in Brazilian households: ICT Households*, carried out by CGI.br/Cetic.br; and (b) the *Continuous National Household Sample Survey (PNAD)*, produced by IBGE.

The research produced by Cetic.br⁴ shows data on computer use and Internet access disaggregated by gender for the following issues:

- Individuals who used computers by last access;
- Individuals who accessed the Internet by last access;
- Internet users;
- Internet users by frequency of access;

2 BRASIL. Presidência da República. Secretaria de Políticas para as Mulheres. Plano Nacional de Políticas para as Mulheres. Brasília: Secretaria de Políticas para as Mulheres, 2013.

3 As it can be seen at http://www.mctic.gov.br/mctic/opencvms/institucional/paginas/Estrutura_Organizacional.html

4 <https://cetic.br/publicacoes/indice/pesquisas/> Accessed on August 08, 2018.

- Internet users by location of access;
- Internet users by location of more frequent individual access;
- Internet users by activities carried out on the Internet - communication;
- Internet users by activities carried out on the Internet - looking up information;
- Internet users by activities carried out on the Internet - multimedia;
- Internet users by activities carried out on the Internet - education and work;
- Internet users by activities carried out on the Internet - downloads and content creation and sharing;
- Individuals who have never accessed the Internet, by reasons for never having used it;
- Individuals who have never accessed the Internet, by main reason for never having used it;
- Internet users by device used;
- Internet users by device used exclusively or simultaneously.

Related to the IBGE survey⁵, the most recent issue of the *Continuous National Household Sample Survey* (published in 2018 with data from 2016⁶) for the first time provided specific information on ICT (previous editions provided only general data about Internet access). This publication includes topics such as access to the Internet and television at home, access to the Internet, and possession of mobile phones among people over 10 years old.

This research presents the following data disaggregated by gender:

- Percentage of men and women using the Internet by region;
- Percentage of men and women using the Internet by age group;
- Percentage of men and women using the Internet by level of education;
- Percentage of men and women using the Internet for work (employed or unemployed);
- Percentage of men and women who have mobile phones for personal use;
- Percentage of men and women who do not have a mobile phone.

5 <https://www.ibge.gov.br/estatisticas-novoportal/sociais/trabalho/9173-pesquisa-nacional-por-amostra-de-domicilios-continua-trimestral.html?=&t=downloads> Accessed on August 11, 2018.

6 <ftp://ftp.ibge.gov.br/Trabalho_e_Rendimento/Pesquisa_Nacional_por_Amostra_de_Domicilios_continua/Anual/Acesso_Internet_Televisao_e_Posse_Telefone_Movel_2016/Analise_dos_Resultados.pdf> Accessed on August 12, 2018.

► **Indicator:** *Existence of national mechanisms to monitor women's inclusion in strategies for Internet access and use*

There are no specific national mechanisms to monitor women's inclusion in strategies for Internet access and use. However, there are periodic surveys that provide information that shows the evolution of indicators related to the digital inclusion of women. The report *Survey on the use of information and communication technologies in Brazilian households: ICT Households 2016* developed by Cetic.br and the *Continuous National Household Sample Survey* produced by IBGE are mechanisms to monitor citizen inclusion in strategies for Internet access and use, for both men and women. These studies are produced by state bodies through public funding whose main purpose is to produce information and indicators to advance public policies.

A.2 Is there a gender digital divide in Internet access and use and, if so, is this gender divide growing, stable or diminishing?

► **Indicator:** *Proportions of individuals using the Internet, disaggregated by gender, compared with gender gaps in income and educational attainment*

Data from ICT Households 2017 survey by Cetic.br showed that 67% of women and 68% of men were Internet users.⁷ IBGE data indicated a similar pattern: 65.5% of women and 63.8% of men as Internet users.⁸ In Brazil, gender inequality is a reality in several fields and at several levels. For example, women are more than half of the working population, but men hold more jobs: 57.5%. Regarding income, in 2016, on average, women earned 22.9% less than men (IBGE, 2017). In Brazil, women have higher education levels than men. According to IBGE, 16.9% of women 25+ have undergraduate degrees, while only 13.5% of the men of the same age have completed undergraduate studies.⁹

7 <https://cetic.br/tics/domicilios/2017/individuos/C2/>

8 The Brazilian Institute of Geography and Statistics (IBGE). Continuous National Household Sample Survey. Rio de Janeiro: IBGE, 2018. Available at <<https://www.ibge.gov.br/estatisticas-novoportal/sociais/trabalho/17270-pnad-continua.html?=&t=oque-e>> Accessed on August 11, 2018

9 IBGE. Gender statistics - Social indicators of women in Brazil. Available at <https://www.ibge.gov.br/estatisticas-novoportal/multidominio/genero/20163-estatisticas-de-genero-indicadores-sociais-das-mulheres-no-brasil.html?=&t=resultados>

Data from IBGE disaggregated by gender presents clusters divided by educational level. In these clusters, the percentage of Internet users is quite similar when comparing men and women, as shown in the table below:

Table 36: Percentage of People Using the Internet (Last 3 Months) (2016)

Population over 10 years old

	Tertiary education	Secondary education	Elementary education
Men	95.3 %	84.1 %	66.7 %
Women	96.2 %	85.1 %	66.9%

Source: Continuous National Household Sample Survey, IBGE, 2018.

► **Indicator:** *Proportions of adult women and men with mobile broadband subscriptions disaggregated by gender, compared with gender gaps in income and educational attainment*

Accessing the Internet on mobile networks is widespread in Brazil. In 2017, the percentage of individuals using the Internet through some type of mobile subscription was 70% in the case of men and 71% in women.¹⁰ About 45% of men and 53% of women only used broadband mobile to access the Internet.

Data from IBGE also corroborate that differences between men and women regarding broadband mobile use are not significant.¹¹ Regarding economic inequality, in Brazil there is a significant income imbalance concerning gender: In 2016, women's income was 22.9% lower than men's income.¹²

► **Indicator:** *Survey data on Internet awareness and on patterns of Internet use, disaggregated by sex*

Regarding patterns of Internet use, there is no relevant difference between men and women, except in specific indicators. For activities involving online communication, a survey produced by Cetic.br demonstrated that 54% of women and 62% of men sent or received e-mails; 68% of women and 65% of men used voice or video calls over the Internet; 77% of women and 76% of men used social media; 8% of women and 12% of men participated in discussion areas;

10 Available at < <https://cetic.br/tics/domicilios/2017/individuos/15/>> Accessed on August 21, 2018.

11 Continuous National Household Sample Survey (PNAD). Rio de Janeiro: IBGE, 2018. Available at <<https://www.ibge.gov.br/estatisticas-novoportal/sociais/trabalho/17270-pnad-continua.html?=&t=o-que-e>> Accessed on August 11, 2018

12 IBGE. PNAD. Available at < <https://www.ibge.gov.br/estatisticas-novoportal/sociais/trabalho/9173-pesquisa-nacional-por-amostra-de-domicilios-continua-trimestral.html?=&t=downloads>> Accessed on August 21, 2018.

6% of women and 11% of men used microblogs, such as Twitter (this item presented the highest proportional difference between men and women).¹³ There were also differences in the use of online multimedia content: 65% of women and 77% of men watched online videos, shows, movies or TV series; and 67% of women and 75% of men listened to online music. In these indicators, the most significant difference was the use of online games: 26% of women and 43% of men had used this kind of multimedia content in the three months before completing the survey.

The research also evaluated the online activities of men and women concerning work and study. 44% of both women and men carried out school activities or searches on the Internet; 8% of women and 9% of men attended e-learning courses; 34% of women and 41% of men studied through the Internet on their own. In this item, the biggest difference was the use of the Internet for professional activities: about 28% of women carried out online work activities, while the percentage for men was 37%.

Online content download activities showed relevant differences: 17% of women and 29% of men downloaded movies; 35% of women and 49% of men downloaded music; 18% of women and 35% of men downloaded games; 17% of women and 30% of men downloaded software or applications; 12% of women and 15% of men downloaded digital books (the latter had the smallest difference in these indicators).

► **Indicator:** *Perceptions of barriers to Internet access and use, and of values of Internet access and use, disaggregated by gender*

There are no data on values of Internet access and use, but Cetic.br has produced a survey on perceptions of barriers to Internet access. There are, in general, very similar perceptions about the barriers of use between men and women (among the group of non-Internet users, who in the 2017 survey represented an estimated 26% of the Brazilian population): 46% of women and 48% of men answered that they did not use the Internet because of lack of need; 63% of women and 64% of men cited lack of interest; 72% of women and 73% of men mentioned lack of computer skills; 37% of women and 33% of men cited not having access; and 51% of women and 45% of men cited the expensiveness of the service.¹⁴

Regarding online security indicators, the survey identified greater differences between men and women who were not Internet users: 48% of women and 36% of men considered security and privacy as a concern; 38% of women and 48% of men were concerned about avoiding contact with dangerous content.¹⁵

13 Available at <https://cetic.br/tics/domicilios/2017/individuos/C5/> Accessed on August 9, 2018

14 Available at <https://cetic.br/tics/domicilios/2017/individuos/C15/> Accessed on August 21, 2018.

15 Available at <https://cetic.br/tics/domicilios/2017/individuos/C15/> Accessed on August 21, 2018.

A.5 Do the law, law enforcement and judicial processes protect women and girls against online gender-based harassment and violence?

► **Indicator:** *Existence of a relevant legal framework and judicial processes*

Brazil ratified the UN Convention on the Elimination of All Forms of Discrimination against Women in 2002.¹⁶ However, the most important legislation in this area arose in 2006, Law 11.340/06, known as “Maria da Penha Law”. There are also indirect protection mechanisms in the Brazilian Civil Code. In general, experts recognize the Brazilian legal framework to protect women against violence and abuse, but the biggest problem is its applicability because of endogenous problems in the judicial system and public security. The InternetLab, an NGO that has been producing a series of studies on this subject, has found that Brazil does not have a legal framework gap, but the country has a severe problem around law enforcement. This NGO considers the way crime against women is classified as a big problem since it is considered private criminal action and therefore excludes a large portion of society that is not able to access public and free legal services. The Public Defender’s offices are designed for defense, not prosecution, and the Public Prosecutor’s Office has no jurisdiction to prosecute private criminal cases. In practice, although there is a relevant legal framework, there is inequality and lack of access to justice.

The NGO SaferNet has a similar analysis: It considers that in Brazil there are laws that recognize online harassment of women as a crime, but they note problems of applicability. They give the example of Law 13.642, which provides for punishment for online misogyny, typifying it as a federal-level infraction, but this legislation still faces application problems because it does not concretely define the crime, generating different interpretations and allowing the existence of cases where the police use this to ignore some violations.

► **Indicator:** *Incidence of online gender-based harassment and violence experienced by women and girls*

A survey based on online social networks posts, conducted in 2017, showed that 8% of mentions were related to harassment experienced on the Internet. About 86% of mentions analyzed by the survey pointed that women had already chosen to be anonymous on the Internet (by creating fake profiles on social media) to report the violence they suffered.¹⁷

¹⁶ Decree 4.377/2002

¹⁷ Available at <http://dev-institutoavon.adtemp.com.br/uploads/media/1523996951055-infografico_forum_aprovado.pdf> Accessed on August 8, 2018.

There are no reliable statistical data on the incidence of online gender-based harassment and violence experienced by women and girls. According to InternetLab, endogenous and operational problems of public security in Brazil make it impossible to collect more accurate data. For example, when a victim goes to a police station to file a report on harassment online, the police record system does not provide for this category of crime, so the system forces a more generic record, losing its specificity.

Data from the NGO SaferNet about care for victims of online violence (both men and women) showed that women represented 67% of incidents of cyberbullying/ offensive speech; 62% of appointments reporting violence related to inappropriate/ violent content; 70.6% of consultations involving sexting/intimate exposure; and 75% of requests for materials and content about protection and the Internet.¹⁸

► **Indicator:** *Evidence of government, law enforcement and judicial action to provide protection to women against online gender-based harassment and violence*

In 2015 the Brazilian federal government (through the Ministry of Human Rights - MDH) created a specific initiative to combat human rights violations on the Internet, called Humaniza Redes.¹⁹ The project has three lines of action: reporting mechanisms for users, prevention and security.

In turn, in 2018, the Brazilian Federal Police became responsible for investigating online crimes committed against women. Specifically, according to Law 13.642/2018²⁰, the Federal Police will investigate and combat actions that “disseminate misogynist content, defined as those that propagate hatred of or aversion toward women.”

In 2003 and 2006, the Federal Public Prosecution Service (MPF) created two working groups on Combating Cyber Crimes (in the states of São Paulo and Rio de Janeiro). The MPF declared that the main objective was to restrain the increase of crime encouraged by the insecurity of the network. Some of the functions assigned to the two groups were acting in judicial/extrajudicial proceedings; promoting suppression activities in cooperation with the Federal Police; and conducting preventive (educational) activities on the safe use of the Internet. With a focus on internal training, the MPF also created the Cyber Crimes Group.

18 The organization had performed 15,983 calls by August 2018. Available at <<https://www.helpline.org.br/indicadores>> Accessed on August 15, 2018.

19 The initiative was created by Portaria Interministerial nº 3. Available at <<http://www.humanizaredes.gov.br/>> Accessed on August 22, 2018.

20 Available at <<http://www2.camara.leg.br/legin/fed/lei/2018/lei-13642-3-abril-2018-786403-publicacaooriginal-155161-pl.html>> Accessed on August 22, 2018.

► **Indicator:** *Existence of online services which intended to protect women against online gender-based harassment or support those affected by it*

The Human Rights Ombudsman (an office that operates within the Ministry of Human Rights) provides a reporting mechanism for online human rights violations. This includes harassment and abuse (there are no specific mechanisms for this). On the Web, there is a specific initiative for human rights violations called Humaniza Redes.²¹ This initiative is aimed at increasing online security by disseminating educational information and receiving complaints. The MDH also has other service channels for complaints about all kinds of human rights violations (a free 24-hour telephone service and online applications). The Brazilian Federal Police had a specific service to report cases of violence or crimes online, but this initiative was closed in 2016 due to a lack of infrastructure and resources to maintain it.

Outside the state, there are also reporting mechanisms for online violence in non-governmental initiatives, such as the Helpline Service by the NGO SaferNet.²² Mechanisms are also maintained by online platforms like Google,²³ Facebook²⁴ and Twitter²⁵ that receive accusations of violence and other abuses related to their users. The project called APP School, a project supported by MDH in partnership with the University of Brasília, takes a more educational approach. The goal is to teach girls to deal with harassment and other online violence. However, information and data about the project are not yet published and the project was still in the pilot application phase at the time this research was conducted.

21 The initiative was created in 2015 by Portaria Interministerial nº 3.

22 Available at <<http://www.helpline.org.br/>> Accessed on August 18, 2018.

23 Available at <<https://support.google.com/plus/answer/6320425?co=GENIE.Platform%3DDesktop&hl=pt-BR>> Accessed on August 22, 2018.

24 Available at <<https://www.facebook.com/communitystandards/harassment>> Accessed on August 22, 2018.

25 Available at <<https://help.twitter.com/pt/safety-and-security/report-abusive-behavior>> Accessed on August 22, 2018.



THEME B

Children

7

B.3 How do children²⁶ perceive and use the Internet?

► **Indicator:** *Perceptions of the Internet among children derived from surveys, including barriers to use, value of use and fears concerning use, aggregate and disaggregated*

According to data for 2016 from Cetic.br, 23% of children experienced offensive treatment on the Internet in the last 12 months – corresponding to an estimate of 5.6 million children. This percentage was slightly higher for girls (24%) than for boys (22%).²⁷ The survey also mentioned that 41% of Internet users between 9 and 17 years old witnessed someone being discriminated against online, for color/race, physical appearance, or same-sex attraction. 7% mentioned having suffered some type of discrimination on the Internet.²⁸

Regarding young people's perception of the value of the Internet, the survey asked if "there are a lot of things on the Internet that are good for children the same age as you." The results showed that 81% agreed; 9% neither agreed nor disagreed, and 10% disagreed. The percentage of agreement for the question was 85% for young boys and 78% for young girls. The disaggregated data showed higher rates for this perception as the family income increases, and also as age increases (variations of 4 to 6 percentage points).²⁹

The survey also estimated that, in 2016, 5.2 million children were not Internet users, and of these, 2.9 million had never accessed the Internet – corresponding to 10% of the population aged 9 to 17 years. An estimated 1.4 million children in rural areas and 2.4 million in low socioeconomic classes (DE)³⁰ had never accessed the Internet – corresponding to 27% and 22% of children, respectively. The main reason for not using the Internet in 2016 was still lack of Internet availability in the household (11%) – corresponding to 3.4 million children. This was

26 Article 1 of the CRC defines a child as 'any human being below the age of eighteen years unless, under the law applicable to the child, majority is attained earlier.'

27 Cetic.Br. ICT Kids Online Brazil: Survey on Internet Use by Children in Brazil. São Paulo: Brazilian Internet Steering Committee), 2017, p. 285.

28 Idem, p. 209

29 Idem, p. 270.

30 Social Class is based on the criteria for economic classification defined by the Brazilian Association of Research companies (Abep). This classification, based on ownership of durable goods for household consumption and level of education of the head of the household, results in a scoring system that divides households into classes A through E. The share that each class represents in 2017 is the following: A, 2%; B, 20%; C, 43%; and DE, 35%.

the most prevalent reason given by those who lived in rural areas (24%), those whose family income was up to one minimum wage (21%), and those belonging to classes DE (22%).³¹

Another relevant factor was the perception of lack of skills for using the Internet: an estimated 6%, or 1.9 million children, said they did not know how to use the Internet, especially younger children (15% of those aged 9 to 10 years) and those belonging to classes DE (13%). Other reasons for lack of Internet access were: no Internet in other places they usually go (6%); lack of permission to use the Internet at school (5%); lack of interest in using the Internet (5%); permission not given by parents or legal guardians (5%); perception that the Internet is not intended or appropriate for children (5%); because friends do not use the Internet (3%); for religious reasons (2%); and, last, negative online experiences in the past (2%).³²

► **Indicator:** *Data on use of the Internet by children, aggregate and disaggregated, compared with other age groups (e.g. data on location, frequency and type of use)*

In 2016, an estimated eight out of ten children aged 9 to 17 years were Internet users (82%), corresponding to 24.3 million users throughout the country. Of these, 91% accessed the Internet via mobile phones, according to data from Cetic.br.³³ There were no significant gender differences according to this indicator data: 83% of girls and 81% of boys used the Internet in the three months before the survey. These indices have been increasing gradually in recent years. Throughout its time series, the ICT Kids Online Brazil survey has shown intensification of Internet use by children. Whereas in the first year of the survey, in 2012, 47% of young Internet users accessed the Internet every day or almost every day, this proportion reached 81% in 2014. The 2016 edition of the survey, however, indicated that the frequency of Internet use by children remained stable concerning the previous year: 84%.³⁴

Regarding age group, the greater the age, the higher the frequency of use: 68% of young people between 9 and 10 years old used the Internet in the last three months; this percentage rose to 76% in the age group of 11 to 12 years old, 88% in the group of 13 to 14 years old, and 91% for young people between 15 and 17 years old.³⁵

Regarding the location of use in the three months before the survey, the proportion of users who connected at home in 2016 was 85% of female users and 82% of male users; at school, 34% of female users and 30% of male users; at someone else's house, 79% of female users and 80%

31 Idem, p. 212.

32 Idem, p. 213.

33 Cetic.Br. ICT Kids Online Brazil: Survey on Internet use by children in Brazil. São Paulo: Brazilian Internet Steering Committee, 2017.

34 Idem, p. 213.

35 Idem.

of male users; at paid public access centres, 85% of female users and 79% of male users; and at free public access centres, 8% of female users and 12% of male users.³⁶

Regarding the types of activities carried out on the Internet in the last three months, 81% of young people surveyed looked up information on the Internet for homework; 68% looked up information on the Internet out of curiosity or personal interest; 47% read or watched news online; 80% used instant messaging; 78% used social media; and 30% used video calls.³⁷

In relation to activities involving producing and sharing content, and consuming multimedia and entertainment: 56% of young users surveyed posted photos or videos on the Internet in which they appeared; 54% shared texts, images, or videos on the Internet; 40% posted texts, images or videos they created; 31% posted or shared their locations on the Internet; 64% watched online video clips, shows, movies or TV series; 59% listened to online music; 47% played online games without other players; and 40% played games online with other players.³⁸

B.4 Is there a legal and policy framework to promote and protect the interests of children online, and is this effectively implemented?

► **Indicator:** *Existence of a policy framework and legal protections consistent with the Convention on the Rights of the Child (CRC), and evidence that this is implemented by government and other competent authorities*

Brazil has a policy framework and legal protections consistent with the UN Convention on the Rights of the Child (CRC). This includes the Statute of the Child and Adolescent (Law 8.069/90) and, for more general issues of user protection, the Brazilian Civil Rights Framework for the Internet (Law 12.965/14). Assessment by the NGO SaferNet has found that Brazil now has a legal framework for the protection of children that is very advanced, including online violations such as transmission and storage of intimate images and online harassment. However, they note that the biggest problem is the lack of structure – both infrastructure and human resources – within the Brazilian police to adequately investigate crimes and the applicability of the laws in practice.

36 Idem.

37 Idem.

38 Idem.



THEME C

Sustainable Development

C.1 Do national and sectoral development policies and strategies for sustainable development effectively incorporate ICTs, broadband and the Internet?

► **Indicator:** *Existence of a recent, comprehensive policy for the development of ICTs, broadband and the Internet, which includes consideration of likely future developments in these fields*

The most recent and important document that addresses policy for the development of ICTs, broadband and the Internet in Brazil is the Brazilian Strategy for Digital Transformation.³⁹ It emerged from recommendations by the Economic and Social Development Council (CDES) and it was developed by an Interministerial Working Group coordinated by the Ministry of Science, Technology, Innovation, and Communication during 2017 and published in 2018. It is also a proposal for a long-term strategy for the digital economy.

From the viewpoint of sustainable development, the document is placed within a normative framework linked to UN directives and agendas. An important focus of E-Digital is the contextualization of strategic actions in the major international agendas for development. Among them, the Sustainable Development Goals of the United Nations Agenda 2030 stand out.⁴⁰

The plan has four axes that create an environment to improve the digital transformation of the Brazilian economy: infrastructure and access to ICTs; research, development and innovation; a trustworthy digital environment; education and professional training; and an international dimension.

Although in the axis “infrastructure and access to ICTs” E-Digital includes some digital inclusion guidelines concerning a recent and comprehensive policy for broadband and Internet access, the country has not yet updated the National Broadband Plan that was launched in 2010 and officially ran until 2016. The Brazilian government held a public consultation at the end of 2017 for the creation of a new policy for broadband called the National Connectivity Plan (PNC). However, as of August 2018, there had not been any public release of the document.

39 BRASIL. Decreto nº 9.319, de 21 de março de 2018. Institui o Sistema Nacional para a Transformação Digital e estabelece a estrutura de governança para a implantação da Estratégia Brasileira para a Transformação Digital (E-Digital). Diário Oficial da República Federativa do Brasil, Poder Executivo, Brasília, DF, 22 mar. 2018. Seção 1

40 Idem, p. 6

C.7 What proportion of businesses, including small and medium-sized businesses make use of the Internet and e-commerce?

7

► **Indicator:** *Proportion of SMEs using the Internet, by type of access*

The research produced by Cetic.br shows the computer and Internet access is very widespread today in Brazilian companies. In 2016, 98% of companies had accessed the Internet during the previous 12 months. Among small and medium companies, these figures were 99%.

Regarding the type of access, the table below presents an overview of this indicator, and it shows that technologies such as cables and fiber optic cables and digital modems via telephone lines (DSL) predominated in Brazilian companies in 2017:

Table 37: Enterprises with Internet Access by Type of Connection in the Last 12 Months (2017)

Percentage of the total number of enterprises with Internet access

Technology	TOTAL	Small enterprises	Medium enterprises
Digital modem connection via telephone line (DSL)	63	62	57
Fiber optic connection	49	53	67
Cable connection	51	51	53
3G or 4G modem connection	47	47	51
Radio connection	20	20	32
Satellite connection	8	7	5
Dial-up connection	5	4	4

Source: CGI.br/NIC.br, Regional Center for Studies on the Development of the Information Society (Cetic.br), Survey on the use of information and communication technologies in Brazilian enterprises: ICT Enterprises 2017⁴¹

● **Indicator:** *Volume of business-to-business and business-to-consumer activity as a proportion of total relevant activity*

A survey conducted by Brazilian Micro and Small Businesses Support Service (SEBRAE) showed that small businesses represented about 75% of all virtual stores in Brazil. The survey also pointed out that 90% of e-commerce companies exclusively operating on the Internet (without physical

41 Available at <<https://cetic.br/tics/empresas/2017/empresas/B3/>> Accessed on August 22, 2018.

stores) were small businesses.⁴² Data from Cetic.br showed that in 2017, 61% of small Brazilian companies offered services, information or assistance to consumers via the Internet; and 42% delivered products or services in digital format through the Internet.⁴³ About 68% of small Brazilian companies bought through the Internet in the last 12 months; 22% reported that they sold (either to businesses or consumers) via the Internet in the same period.⁴⁴

► **Indicator:** *Perceptions of value of Internet use by SMEs*

Generally, small and medium enterprises (SMEs) in Brazil evaluate the Internet's role as positive. A survey carried out by SEBRAE showed that 85% of entrepreneurs rated the importance of the Internet as high for their business. Only 3% considered it to be of medium importance; 9%, low importance; and 3%, no importance.⁴⁵ The higher the educational level, the greater the number of hours spent on the Internet for business matters. Small entrepreneurs with undergraduate degrees use the Internet 6 times more than those who had only elementary education.⁴⁶



THEME D

Trust and Security

D.1 Is there a national cybersecurity strategy, with multistakeholder engagement, including a national computer emergency response team (CERT) or equivalent?

► **Indicator:** *Existence of cybersecurity strategy, with multistakeholder involvement, which is consistent with international rights and norms*

In Brazil, the main cybersecurity strategies are focused on three dimensions. First, in the national security area, there is the National Defense Strategy that created the Center for Cyber Defense

42 Available at < <http://datasebrae.com.br/varejo-online/#participacao> > Accessed on August 14, 2018.

43 Available at < <https://cetic.br/tics/empresas/2017/empresas/B5> > Accessed on August 22, 2018.

44 Available at < <https://cetic.br/tics/empresas/2017/empresas/E1> > and < <https://cetic.br/tics/empresas/2017/empresas/E2> > Accessed on August 22, 2018.

45 Sebrae. Serviço Brasileiro de Apoio às Micro e Pequenas Empresas. A Tecnologia da Informação e Comunicação (TIC) nas MPE Brasileiras. Brasília: Sebrae, 2015, p. 80. Available at < [https://bibliotecas.sebrae.com.br/chronus/ARQUIVOS_CHRONUS/bds/bds.nsf/79461b2314b6d80a40a76844ee0985bf/\\$File/5981.pdf](https://bibliotecas.sebrae.com.br/chronus/ARQUIVOS_CHRONUS/bds/bds.nsf/79461b2314b6d80a40a76844ee0985bf/$File/5981.pdf) > Accessed on August 12, 2018

46 Idem, p. 158

and the Cyber Defense Command (both linked to the Brazilian Army). In this document, cybersecurity is focused on issues such as the development of technologies that allow the planning and execution of cyber defense; the development of computer-based defense systems based on high-performance computing; and protection of strategic infrastructures. This strategy does not take into account multistakeholder involvement.

Second, the institutional approach is embodied by the Information Security and Communications and Cybersecurity Strategy in Federal Public Administration. This initiative is part of the general strategic planning of the Brazilian government. It was published by the Office of Institutional Security of the Presidency of the Republic in 2015 and provided guidelines for the following four years (it will end in 2018). In this case, it is also not possible to say there was a multistakeholder involvement process. In an analytical report related to this subject, the NGO Article 19 summarized some problematic issues. There were no relevant consultations with different stakeholders in the development of the Strategy, only discussion within the Federal Administration and CGI.br. Although the content formally establishes the cybersecurity strategy of the Federal Administration and recognizes the main responsibilities of public institutions, it should not be considered as a simple set of internal rules.⁴⁷

Finally, in the broader field of cybersecurity involving Internet users, there are cybersecurity strategies within the activities of the CGI.br and its executive branch, NIC.br, especially with the creation of the National Computer Emergency Response Team (CERT.br). One of the responsibilities of CGI.br is to promote studies and recommend procedures, rules and technical and operational standards for the security of the network and services on the Internet, as well as for its growth and adequate use by society. Related to participation, CGI.br has members from the government, the corporate sector, the third sector, and the academic community, to help develop their guidelines for cybersecurity with multistakeholder involvement.

► **Indicator:** *Establishment of national CERT or equivalent, and evidence concerning its effectiveness*

The Brazilian Network Information Center (NIC.br), the executive branch of CGI.br, includes the Brazilian National Computer Emergency Response Team (CERT.br), whose main functions can be summarized in three action axes: (a) incident handling (support for the analysis of compromised systems and their recovery process; establish collaborative relationships with other entities and companies; maintain public statistics on incidents handled and spam complaints received); (b) training and awareness (provide training in incident response, develop support documentation

47 ARTIGO 19. Brasil: Análise da Estratégia de Cibersegurança Abril de 2016. Legal analysis. São Paulo: Artigo 19, 2016. Available at <http://artigo19.org/wp-content/blogs.dir/24/files/2016/05/Brasil-An%C3%A1lise-da-Estrat%C3%A9gia-de-Ciberseguran%C3%A7a.pdf>. Accessed on August 14, 2018.

in Portuguese, promote meetings among key stakeholders); and (c) network monitoring and analysis of spammer trends.

CERT.br is supported by a network of Computer Security Incident Response Teams (CSIRTs) that generally operate in universities, private companies, financial institutions, government agencies, and state-owned companies. On its website, CERT.Br has published a list of some CSIRTs, providing basic information such as their location.⁴⁸

D.4 Have there been significant breaches of cybersecurity in the country within the last three years?

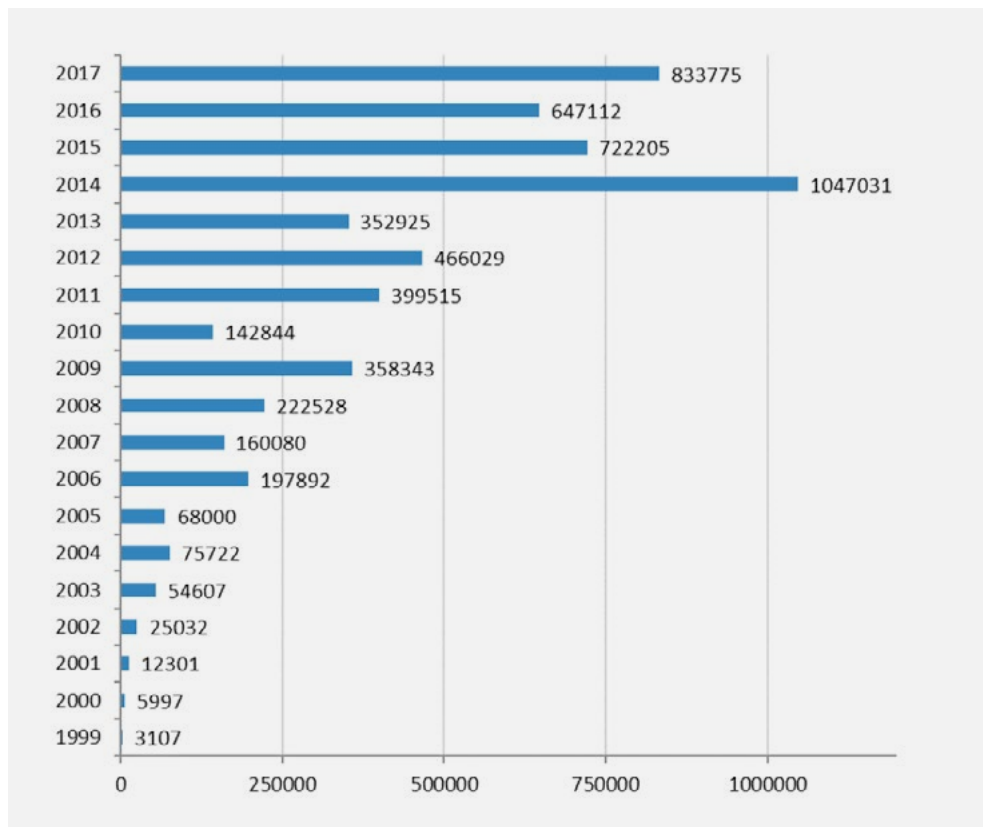
► **Indicator:** *Incidence and nature of breaches reported, and numbers of individuals and businesses affected*

There is no complete data on all breaches that occur in the country and it is also not possible to reliably indicate the number of individuals and businesses affected. The statistics from CERT.br give us a picture of occurrences of breaches but cannot capture the whole problem. According to the CERT.br manager, the entity receives voluntary computer security incident notifications, coming from system administrators and end-users. CERT.br has comparable data since 1999, but it cannot extrapolate the actual number of incidents that have occurred, as there is no obligation to report incidents.

The chart below presents an overview of the total reported incidents and their evolution from 1999 to 2017:

48 Available at < <https://www.cert.br/csirts/brasil/> > Accessed on August 20, 2018.

Chart 16: Total Number of Incidents Reported to the CERT.BR per Year (1999-2017)



Source: CGI.br/NIC.br, Brazilian National Computer Emergency Response Team (CERT.br)

► **Indicator:** *Perceptions of Internet security among users, businesses and other stakeholder groups*

Brasscom, which gathers ICT companies such as IBM, Microsoft, Accenture, Cisco, Oracle, Tivit, Totvs and Unisys, considers that the current national policy should be updated, and has been acting at the national level, trying to set up a locus for permanent information exchange on cybersecurity, still maintaining the principles of confidentiality and caution.

The Latin American Association of the Internet (ALAI) highlights that the Internet of Things and 5G bring new challenges for security. In their view, it is important to maintain equipment certification and security guidelines as strong as those currently in force, taking into account not only the relevance to information integrity but also critical infrastructure security.

Dinamo, a startups coalition, is concerned about avoiding blanket rules that create entry barriers for startups.

It is worth mentioning that, internationally, Brazil is proposing changes to a cybersecurity resolution at ITU, trying to establish obligations to report security incidents.

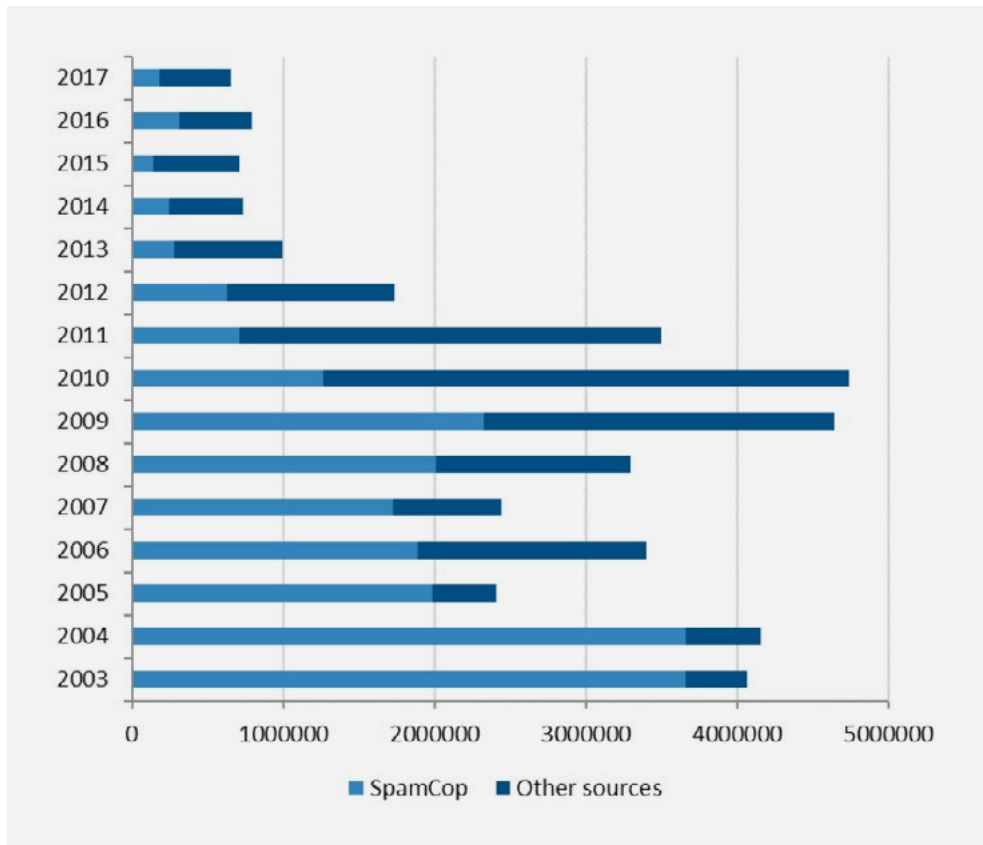
► **Indicator:** *Data concerning phishing, spam and bots in national level domains*

There are no available data in Brazil able to capture all occurrences of phishing, spam, and bots in national-level domains. CERT.br receives voluntary computer security incident notifications, but there is no obligation to report incidents. However, data produced by CERT.br can offer information about the types of incidents most often reported by users, even though it does not refer to all incidents.

In 2017, 833.775 incidents were reported. 53.16% of the reports were on scan (notifications involving scanning of systems/networks); 26.41% on DoS (denial of service attacks), 7.29% web (attacks against web servers and web services); 7.11% on fraud (incidents involving phishing and banking malware are in this category); 5.41% on worms (incidents involving scanning performed by malicious code); 0.5% on intrusions (incidents in which it system/network compromises were confirmed); and 0.57% on other incidents that do not fall into the other categories.

In the case of anti-spam actions, CERT.Br carried out a project involving stakeholders whose objective was to reduce the high volume of spam in Brazil. In the chart below, there is an overview of the spam amount reported to CERT.br:

Chart 17 Spams Reported to the CERT.BR per Year (2003-2017)



Source: CGI.br/NIC.br, Brazilian National Computer Emergency Response Team (CERT.br)

The sharp decrease since 2013 is due to the adoption in Brazil of Port 25 Management. This is a concrete effort by the CGI.br and several people and organizations to fight spam.⁴⁹ CT-Spam worked to implement different policies and technologies dealing with different aspects of the spam problem. This was the result of an earlier multistakeholder discussion. The main areas elaborated were:

[...] A Web Portal was created with information for end-users, e-mail and connectivity providers. [...] [Port 25 Management]. To prevent broadband infected computers to perform direct delivery of spam, our studies showed that the most effective countermeasure would be to implement Port 25 Management.[...] Anti-Spam Legislation. CT-Spam promoted a legal study of all international anti-spam laws, as well as all the laws being proposed in the Brazilian Congress. At the end

49 More information about this process is described in *Fighting Internet spam in Brazil: Historical overview and reflections on combating spam and managing port 25*, coordinated by the Brazilian Internet Steering Committee. Available at < <http://cgi.br/publicacao/fighting-internet-spam-in-brazil-historical-overview-and-reflections-on-combating-spam-and-managing-port-25-coordinated-by-the-brazilian-internet-steering-committee> > Accessed on August 13, 2018.

of this study, a new text for legislation was proposed, based on the opt-in principle. This text is the basis of the anti-spam bill being currently considered in Congress.[...] E-mail Marketing Self-Regulation Code. This initiative arose from the perception that more than working on new legislation, there was a need to establish standards and best practices to guide e-mail marketing companies. This Code details how to send e-mail marketing while respecting opt-in principles, e-mail reputation best practices, and data privacy and protection related to e-mail address lists⁵⁰



THEME E

Legal and Ethical Aspects of the Internet

E.3 How do individuals perceive the benefits, risks and impact of the Internet within the country?

► **Indicator:** *Perceptions of the benefits, risks and impact of the Internet, derived from household or opinion surveys, disaggregated by sex*

In Brazil, the surveys that deal with the risks of the Internet are about the perception of non-users about the reasons for non-use. In 2017, among individuals who did not use the Internet (corresponding to an estimate of 46.7 million people), 42% (36% of men and 48% of women) said that they did not use the network because they were concerned about security and privacy; 43% (38% of men and 48% of women) did not use the Internet because they wanted to avoid contact with dangerous content.⁵¹

A survey published in 2017 by Cetic.br, on the Internet and young people, presented the following picture based on a research sample of 3.102 individuals:

50 Available at <http://antispam.br/en/>

51 Available at < <https://cetic.br/tics/domicilios/2017/individuos/C15/> > Access August 21, 2018.

Table 38: Children by Type of Sensitive and Self-Harm Content They Had Been Exposed To On the Internet in the Last 12 Months, by Sex of Child (2016)

Total number of Internet users from 11 to 17 years old (%)

TYPE OF CONTENT	TOTAL	Female	Male
Ways to hurt oneself	13	17	9
Ways to commit suicide	10	13	7
Ways to become very thin	20	27	12
Drug use experiences	10	11	9
None	56	52	61
Does not know	9	8	10
Did not answer	5	4	5

Source: ICT Kids Online Brazil 2016, Cetic.br⁵²

According to the same survey, 41% of Internet users between 9 and 17 years old witnessed someone being discriminated against online. Within this group of users, the main reasons for discrimination were: color or race (24%); physical appearance (16%); and same-sex attraction (13%).⁵³

Cetic.br does not have data that specifically deals with benefits, but there are data about daily activities most carried out by users: 57% of users (58% of men and 57% of women) used the Internet to “search for information about products and services”; 44% (40% of men and 47% of women) sought information related to health or health services; 29% (32% of men and 27% of women) sought information on travel and accommodations; 30% (33% of men and 27% of women) sought information on virtual encyclopedia sites; 28% (31% of men and 24% of woman) made consultations, payments or other financial transactions; and 21% (23% of men and 19% of women) sought employment or sent resumé.⁵⁴

52 Cetic.br. ICT Kids Online Brazil: Survey on Internet use by children in Brazil. São Paulo: Brazilian Internet Steering Committee, 2017, p. 231.

53 Idem, p. 211.

54 Available at <<https://cetic.br/tics/domicilios/2017/individuos/C6/>> Access on August 22, 2018.

E.4 Do Internet users report experiencing significant harassment or abuse at the hands of other Internet users which deters them from making full use of the Internet?

► **Indicator:** *Availability of reporting mechanisms for online harassment or abuse, including reporting arrangements by online service providers*

The Ministry of Human Rights, through the Human Rights Ombudsman, provides a reporting mechanism for online human rights violations. This includes harassment or abuse. At the same time, there is a specific initiative for human rights violations on the Internet called Humaniza Redes.⁵⁵ This project aims to increase online security by disseminating educational information and receiving complaints.

The ministry also has other service channels for complaints about all kinds of human rights violations (a free 24-hour telephone service and online applications). In addition to these channels maintained by the state, there are also reporting mechanisms for online violence in non-governmental initiatives, such as the Helpline Service by the NGO SaferNet. There are also the mechanisms maintained by online platforms like Google⁵⁶, Facebook⁵⁷ and Twitter⁵⁸ that receive accusations of violence and other abuses related to their users.

► **Indicator:** *Data on the extent to which Internet users report harassment or abuse, with particular attention to specific demographic and social groups (including women, ethnic and other minorities, and civil activists)*

In 2017 the Human Rights Ombudsman of the Ministry of Human Rights registered 142,665 complaints of human rights violations, including all types of complaints, not just Internet violations. Of this total, 6,838 (about 5% total) reported violations that occurred on the Internet. As explained in the previous indicator, there are no official channels to report online harassment or abuse, but there are mechanisms for reporting human rights violations (in general, including online and offline issues). These initiatives are concentrated in the Humaniza Project through a service called Online Ombudsman (Ouvidoria online, in Portuguese).

55 The initiative was created in 2015 by Portaria Interministerial nº 3.

56 Available at <<https://support.google.com/plus/answer/6320425?co=GENIE.Platform%3DDesktop&hl=pt-BR>> Accessed August 22, 2018.

57 Available at <<https://www.facebook.com/communitystandards/harassment>> Accessed on August 22, 2018.

58 Available at <<https://help.twitter.com/pt/safety-and-security/report-abusive-behavior>> Accessed on August 22, 2018.

The table below presents the numbers and types of complaints received by this project between 2015 and 2017, disaggregated by type of violation:

Table 39: Violations Against Human Rights Reported by the Humaniza Project (2015-2017)

Total number of cases

Violations	2015	2016	2017
Glorification and incitement to crimes against life	1,547	1,233	1,051
Homophobia	758	688	378
Religious intolerance	314	362	184
Neonazism	217	131	147
Child pornography	452	1,503	2,686
Racism	892	814	452
Human trafficking	31	21	139
Violence or discrimination against women	1,535	2,008	1,705
Xenophobia	270	204	96
Total	6,016	6,964	6,838

Source: Ombudsman's office/MDH/ Humaniza Project

In addition to this government initiative, the organization SaferNet has published data including numbers and characteristics of assistance to victims provided through email or chats. The data shows that up to August 2018, almost 16,000 people were served by this service. This number has been growing every year (in 2010, about 5,000 visitors were registered). People who need help come from all the Brazilian states. Of this total, 2,269 (14%) were children or adolescents; 1,751 (11%) were parents or educators; and 11,963 (74%) were other adults⁵⁹. There are no data on social or demographic aspects such as gender, ethnicity, social class or political activity.

⁵⁹ Available at < <https://www.helpline.org.br/indicadores> > Accessed on August 16, 2018.

Policy recommendations for various stakeholders

Government

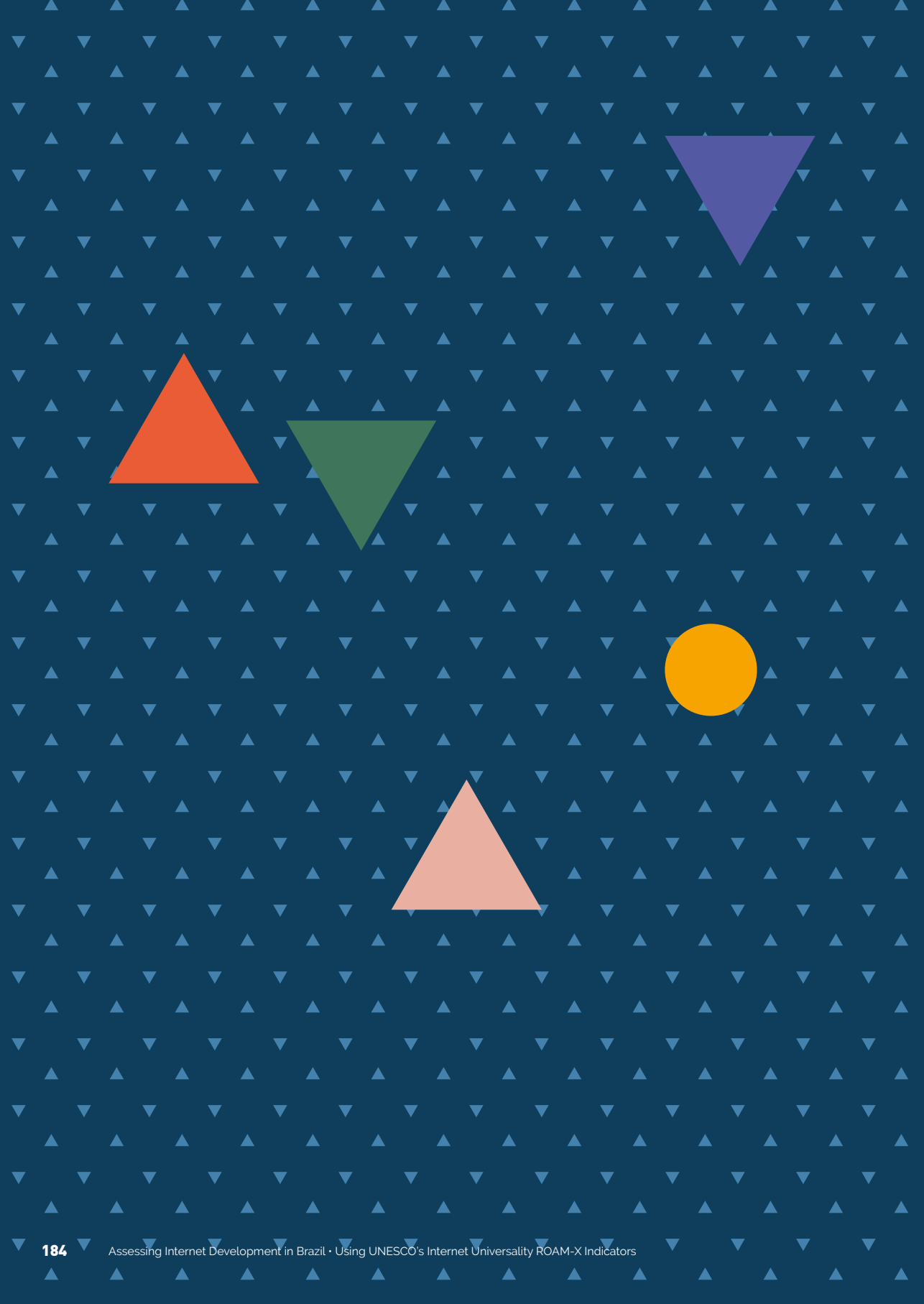
- Promote initiatives for receiving claims and gathering data about human rights violations on the Internet, particularly abuses committed against children and women, and promote a culture of peace and respect in the online environment.
- Include the private sector, technical community, and civil society in the debate on cybersecurity, maintaining the principles of caution and confidentiality.
- Private Sector and Technical Community
- Deepen and strengthen existing initiatives for monitoring and combating human rights violations on the Internet, particularly abuses committed against children and women, and promote a culture of peace and respect in the online environment.

Civil Society

- Deepen and strengthen existing initiatives for monitoring and combating human rights violations on the Internet, particularly abuses committed against children and women, and promote a culture of peace and respect in the online environment.
- Report on the incidence of breaches and the numbers of individuals and businesses affected.

Academia

- Promote studies and recommend procedures, rules and technical and operational standards for the security of the network and services on the Internet.
- Monitor and publicly report on the incidence of breaches and the numbers of individuals and businesses affected.



8

CONCLUSIONS AND KEY PRIORITY RECOMMENDATIONS

The development of the national environment of the Internet in Brazil is strong and positive, and in line with international standards, when considering the regulatory framework. However, there are enforcement problems in some areas and significant shortcomings in access and connectivity for citizens.

Although there has been increasing access to the Internet by the Brazilians, there are still inequalities in the conditions for use and appropriation of ICT, which can be pointed out as one of the most critical national issues for Internet development.

Major findings and challenges, categorized by ROAM-X indicators, are as follows:

CATEGORY R: Rights

Brazil has a structured sectorial regulatory framework. Its guiding principles are present in the Federal Constitution of 1988 and can be applied to the digital environment. This is the case for individual rights and guarantees, such as freedom of expression, right to information, and privacy. Brazil is a signatory of 16 international treaties, including all major human rights treaties.

Since 2014, the Brazilian Civil Rights Framework for the Internet¹ has been the main Internet sectorial legislation approved. The Civil Rights Framework can be considered an international reference for its novel approach, which clearly defines the civil rights that are to be protected online. It is strongly aligned with human rights standards and affirms that access to the Internet is essential to the exercise of citizenship. The law also provides strong protection for net neutrality and freedom of expression.

There are, however, enforcement challenges for the guarantees contained in the Brazilian Civil Rights Framework for the Internet, such as freedom of expression, which is sometimes curtailed by decisions of the Judiciary or online platforms.

Intermediary liability is another point of concern. Although the Brazilian Civil Rights Framework for the Internet establishes that Internet Service Providers will not be deemed liable for damages arising from third-party content, there have been a few cases of conflict with the Consumer Protection Code in which Article 19 of the Framework has not been applied. One of these cases reached the Supreme Court and was considered to have general repercussions. This means that the case will decide the constitutionality of the intermediary liability provision.

¹ Law nº 12.695/2014, available at http://www.planalto.gov.br/CCIVIL_03/_Ato2011-2014/2014/Lei/L12965.htm

Although Brazilian legislation does not provide for sanctions such as blocking or filtering, since 2015 there have been nine judicial cases requesting the blocking of applications such as WhatsApp and Facebook; four were carried out, mostly justified by non-compliance with judicial orders for data delivery.

The Access to Information Law (LAI)² has been in force since 2011. The LAI has heralded a new culture of transparency and accountability in the public sector, especially in federal administrative bodies. However, its application is still fragile in certain federal administration bodies and, more emphatically, in other federation units (states and municipalities). In recent years, there have also been cases of threats, intimidation, harassment and constraint for seeking public information through this law.

The Personal Data Protection Law (LGPD) was approved in 2018. It is in line with international standards, in particular, the European General Data Protection Regulation (GDPR); however, it is not clear how the implementation of the law will be carried out since there was a presidential veto of some of its provisions when the Law was approved. At the time of writing this report (August 2018), it was unknown whether the vetoed elements, such as the creation of an independent national data authority, would be reconstituted by the initiative of the Executive branch or other procedures.³

CATEGORY O: Openness

Regarding innovation, the legal and regulatory framework is to some extent conducive to innovative practices and the establishment of new businesses. The situation differs depending on the perspective analyzed. The legal framework for the Internet is considered positive for fostering innovation. The general framework for business is bureaucratic and is criticized by the private sector. Policies to foster innovation have recently been changed and cannot yet be assessed.

The Brazilian Open Data Policy, enacted in 2016⁴, has strong foundations. Its objectives include the promotion of transparency and social participation and the development of government services. There are also specific laws in the areas of e-commerce, security and digital signatures.

2 Law nº 12,527/2011, available at http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2011/lei/112527.htm

3 Editor's Note (August 2019): After the completion of this report, the Personal Data Protection Law was modified by an Executive Order. It created the Data Protection Authority directly linked to the Presidency, leaving room for a revision in two years that can lead to a switch to indirect administration, with more independence and autonomy.

4 Presidential Decree nº 8.777/16, available at http://www.planalto.gov.br/ccivil_03/_Ato2015-2018/2016/Decreto/D8777.htm

Network neutrality is established in Article 9 of the Brazilian Civil Rights Framework for the Internet, which provides that “the person responsible for transmission, switching or routing must treat any data packet in an isonomic manner without distinction by content, source, and destination, service, terminal, or application”. Exceptions are made for technical requirements essential to the adequate provision of services and applications and prioritization of emergency services.

CATEGORY A: Accessibility to All

Internet connectivity is a critical point of the Brazilian digital scenario. Although Brazil has an increasing number of Internet users, there is still a large population without any type of access, especially among the poorest, those more than 60 years old, and those living in rural areas.

National data has shown that 61% of Brazilian residences are connected. In rural areas, only 34% of households have Internet access. While the Internet is present in only 30% of low-income households (socioeconomic status DE⁵), in high-income households (A and B) the proportions are 99% and 93%, respectively,⁶ revealing large inequalities in terms of access. Data also indicates that fixed access, especially among groups with lower rates of connection, has not evolved to the point of being considered as contributing to universalization, being that mobile connections are the main driver of Internet diffusion.

Another area of concern is the use of ICT in schools. According to Cetic.br/NIC.br, in 2017 only 39% of students in urban areas used the Internet in schools.⁷ In rural areas, the connectivity scenario was worse: Only 36% of schools had access to the Internet.⁸ As findings for this set of indicators reveal, although some specific public policies have been implemented over the last decade, access to and use of ICT in Brazilian schools have not yet progressed satisfactorily.

Different sectors that have been interviewed for this research have pointed out that persistent challenges to universalization in the last decade are related to: lack of effectiveness of government telecommunication development policies, especially in poorer regions and those not served by high-speed networks; failure to invest resources, especially sectorial funds, in universalization

5 Social Class is based on the criteria for economic classification defined by the Brazilian Association of Research companies (Abep). This classification, based on ownership of durable goods for household consumption and level of education of the head of the household, results in a scoring system that divides households into classes A through E. The share that each class represents in 2017 is the following: A, 2%; B, 20%; C, 43%; and DE, 35%.

6 Complete indicator can be accessed at <https://cetic.br/tics/domicilios/2017/domicilios/A4/>

7 Available at <http://cetic.br/tics/educacao/2017/escolas-urbanas-alunos/B10/>

8 Available at <http://cetic.br/tics/educacao/2017/escolas-rurais/B2A/>

policies; lack of support for small Internet Service Providers (ISPs) operating in regions of low commercial interest; and continued influence of a model – whose normative reference is the General Telecommunications Law of 1997⁹ – that places fixed telephony at the centre of sectorial regulation. As shown by data for the indicators, the discontinuity of plans and policies, and their replacement by other programs that are equally weak has been the repeated narrative over the last 20 years. Discrepancies in access and use by women and men have also been observed.

Accessibility for people with disabilities is another issue where enforcement is far from complying with the law. Although the Brazilian Inclusion Law and the Brazilian Civil Rights Framework for the Internet define a clear reference for government and the business sector in this field, in neither case is accessibility a reality.

CATEGORY M: Multi-Stakeholder participation

The Internet governance environment, led by the Brazilian Internet Steering Committee (CGI.br)¹⁰, is worthy of note. CGI.br was created in 1995 and revised by Presidential Decree 4.829 of 2003¹¹, to coordinate and integrate Internet service initiatives in Brazil and promoting technical quality, innovation and dissemination of Internet services. The committee is made up of representatives from the government, the corporate sector, the third sector, and the academic community, and has been directly electing representatives from civil society since 2004.

Even though different sectors interviewed have pointed out the need to develop some aspects of the committee (the telecom sector is especially critical of its composition and the topics covered), during the last decade, CGI.br has consolidated its position as a significant body for discussion and definition of strategic guidelines on relevant aspects of the Internet, such as in the case of the unanimous approval of the Principles for the Governance and Use of the Internet.¹²

The multisectoral environment anchored in CGI.br also allowed the development and consolidation of the national Internet Governance Forum¹³, in 2018 its seventh edition, which has increased Brazilian participation in international governance forums, especially the Regional IGF (LAC IGF) and global IGF.

9 Law n° 9,472/1997, available at http://www.planalto.gov.br/ccivil_03/LEIS/l9472.htm

10 Information in English about CGI.br is available at <http://www.cgi.br/about/>

11 Presidential Decree n° 4.829/2003, available at <http://cgi.br/pagina/decretos/108>

12 Available at <https://www.cgi.br/resolucoes/documento/2009/003>. A version in English can be found here: <https://www.cgi.br/principles/>

13 Brazilian Internet Forum: <http://forumdainternet.cgi.br/>

CATEGORY X: Cross-cutting indicators:

Although the Internet opens up new possibilities for participation, emancipation, and promotion of human rights, new types of human rights violations also find fertile ground in the digital environment. From this perspective, data on online abuse and harassment are worrying.

According to extrapolations from survey conducted by Cetic.br/NIC.br, 41% of Internet users between 9 and 17 years old had witnessed someone being discriminated against online, based on color or race (24%), physical appearance (16%), or same-sex attraction (13%).¹⁴

Another Cetic.br/NIC.br survey found, as generalisable situations, that among individuals who did not use the Internet, 42% (36% of men and 48% of women) said they did not use the network because of concerns about security and privacy; and 43% (38% of men and 48% of women) did not use the Internet because they wanted to avoid contact with dangerous content.¹⁵ A survey conducted by another organization showed that, in 2017, 8% of women in that research reported that they had experienced harassment on the Internet.¹⁶

In general, experts recognize the existence of a Brazilian legal framework to protect women against violence and abuse and some policies implemented by the federal administration. However, there are still problems in its applicability because of endogenous problems with the judicial and public security systems.

14 Cetic.Br. Survey on Internet Use by Children in Brazil: ICT Kid Online Brazil 2016. São Paulo: Brazilian Internet Steering Committee, 2017, p. 211.

15 Complete indicator can be found at <https://cetic.br/tics/domicilios/2017/individuos/C15/>

16 Survey conducted by Instituto Avon, available at http://dev-institutoavon.adttemp.com.br/uploads/media/1523996951055-infografico_forum_aprovado.pdf

Key Recommendations for Action by stakeholder groups

All Stakeholders

- Consolidate and develop the national multi-stakeholder governance model, expanding the participation of the various sectors in forums and organizations related to Internet governance and telecommunications policy and regulation in Brazil.
- Record and publish quantitative and qualitative data on the participation of the different sectors (private, public and third sector) in IGF (including LAC IGF), ITU and ICANN forums.

Government

Category R – Rights:

- Create an independent National Personal Data Protection Authority and a National Council for the Protection of Personal Data, complementing the normative framework put into force with the enactment of the Personal Data Protection Law.¹⁷
- Expand and improve policies for the preservation and promotion of cultural heritage online.

Category O – Openness:

- Promote policies and regulations focused on overcoming barriers to new digital businesses and start-ups.
- Guarantee full accessibility for persons with disabilities on government portals and public websites.
- Ensure adequate levels of resources for the monitoring and supervisory activities of regulatory bodies.
- Ensure that telecom norms and regulations avoid unnecessary and bureaucratic rules and properly enforce those that guarantee public interest.
- Promote technical measures for ensuring technical monitoring of network neutrality.

¹⁷ Editor's Note (August 2019): Since the completion of this report, the Personal Data Protection Law has been modified by an Executive Order, which created the Data Protection Authority directly linked to the Presidency, leaving room for a revision in two years that can lead to a switch to indirect administration, with more independence and autonomy.

- Fully apply the open data policy, publishing open data plans and all databases or information not protected by law.
- Make all public websites, especially those that support public services, available on any browser.

Category A – Access:

- Implement an access and telecommunications development policy that addresses infrastructure bottlenecks in localities identified as having little or no service by broadband networks, with a focus on rural areas and locations of low economic attractiveness.
- Update regulatory models that switch the focus from fixed telephony to broadband.
- Enforce the provision of accessibility for persons with disabilities included in the Statute on Inclusion of Persons with Disability and the Brazilian Civil Rights Framework for the Internet.
- Seek universal access to the Internet in urban and rural public schools based on high standards of connectivity that overcome bottlenecks in access and use.
- Supply all the necessary inputs for effective pedagogical use in schools, such as high-speed connections, devices, high-quality digital content, and teacher training.
- Promote public materials for training the workforce on ICT use and development.

Category M – Multistakeholder:

- Strengthen the instruments for online participation and consultation on topics of social interest in all institutional bodies at all levels of government.
- Extend and accelerate the digitalization of public services and strengthen the application of the Access to Information Law in all public agencies of all units of the federation, overseeing compliance comprehensively at the federal level and promoting enforcement at the state and municipal levels.
- Improve the gender balance in regulatory bodies and other fora that impact on Internet Universality.
- Record and publish government submissions to international forums concerned with ICT and the Internet.

Category X – Cross-Cutting Issues

- Enhance law enforcement against the crime of online harassment and violence against women.

- Promote initiatives for receiving claims and gathering data about human rights violations on the Internet, particularly abuses committed against children and women, and promote a culture of peace and respect in the online environment.
- Include the private and third sectors in the debate on cybersecurity, maintaining the principles of caution and confidentiality.

Judiciary

Category R – Rights:

- Avoid over inclusive first-instance decisions that generate blocking of apps or entire Internet segments.
- Protect freedom of association online and refrain from considering illegal any situation that conforms to the right of peaceful assembly and association.

Private Sector and Technical Community

Category R – Rights:

- Report on governmental or judicial attempts to hold companies liable for content that infringes on third parties, in conflict with the Brazilian Civil Rights Framework for the Internet.
- Include in their global reporting on governmental or judicial requests for content removal, platforms should differentiate judicial and executive orders, and separate all the different cases (such as IP infringement) by country.

Category O – Openness:

- Guarantee full accessibility for persons with disabilities on private portals and apps, with special attention to public service providers.

Category A – Access:

- Enhance 4G coverage in the country, reaching all the municipalities, and enable mobile communication in all the districts.
- Promote materials for training the workforce on ICT use and development.

Category M – Multistakeholder:

- Deepen and strengthen existing initiatives for monitoring and combating human rights violations on the Internet, particularly abuses committed against children and women, and promote a culture of peace and respect in the online environment, as well as reduce the gender gap in representations to governance related fora.

Category X – Cross-Cutting Issues:

- Report on the incidence of breaches and the numbers of individuals and businesses affected.

Civil Society

Category R – Rights:

- Monitor and report periodically on violations of all the rights supported by the Brazilian Civil Rights Framework for the Internet.

Category O – Openness:

- Monitor and periodically report on accessibility for persons with disabilities on public and private websites and apps.
- Monitor and periodically report on network neutrality violations through citizens' assessment of their connections.

Category A – Access:

- Monitor the provision of accessibility for persons with disabilities included in the Statute on Inclusion of Persons with Disability and the Brazilian Civil Rights Framework for the Internet.

Category M – Multistakeholder:

- Deepen and strengthen civil society participation, on a gender-sensitive basis, in multistakeholder processes of Internet governance.

Category X – Cross-cutting Issues:

- Deepen and strengthen existing initiatives for monitoring and combating human rights violations on the Internet, particularly abuses committed against children and women, and promote a culture of peace and respect in the online environment.

Academia

Category R – Rights:

- Develop systematic research on new challenges to ensuring freedom of expression, access to information and privacy in the digital realm.

Category O – Openness:

- Evaluate the positive and negative effects of different billing models on the democratization of access to the Internet.

Category A – Access:

- Monitor and periodically report on accessibility for persons with disabilities on public and private websites and apps.
- Provide proposals for curricula, activities and training materials regarding the use of ICT at all educational levels.

Category X – Cross-cutting Issues:

- Promote studies and recommend procedures, rules and technical and operational standards for the security of the network and services on the Internet.
- Monitor and publicly report on the incidence of breaches and the numbers of individuals and businesses affected.

Annex 1:

List of Multi-stakeholder Advisory Board Members

BRAZILIAN INTERNET STEERING COMMITTEE (CGI.br), April 2019

Coordinator: Maximiliano Salvadori Martinhão

Counselors:

Antônio José Barreto de Araújo Júnior

Demi Getschko

Eduardo Fumes Parajo

Eduardo Levy Cardoso Moreira

Flávia Lefèvre Guimarães

Francilene Procópio Garcia

Franselmo Araújo Costa

Henrique Faulhaber Barbosa

José Luiz Ribeiro Filho

Leonardo Euler de Moraes

Luis Felipe Salin Monteiro

Luiz Fernando Martins Castro

Marcos Dantas Loureiro

Nivaldo Cleto

Percival Henriques de Souza Neto

Rafael Henrique Rodrigues Moreira

Sergio Amadeu da Silveira

Tanara Lauschner

Thiago Camargo Lopes

Thiago Tavares Nunes de Oliveira

Executive Secretary: Hartmut Richard Glaser

Annex 2:

List of National Peer Reviewers

Danilo Doneda - Instituto Brasiliense de Direito Público (IDP)

Graziela Castello - Brazilian Center of Analysis and Planning (Cebap)

Maria Alexandra Cunha - Getulio Vargas Foundation of São Paulo (FGV-SP)

ASSESSING INTERNET DEVELOPMENT IN BRAZIL

Using UNESCO's Internet
Universality ROAM-X Indicators

Aiming for an Internet that promotes human right standards, supports inclusive Knowledge Societies and advances sustainable development: such is the foundation of the concept of Internet Universality, which has guided UNESCO's positioning on Internet issues since 2015.

Through Internet Universality, UNESCO stands for the ROAM principles – for a human Rights-based Internet that is Open, Accessible to All, and nurtured by Multistakeholder participation.

The first step to enable progress of a national Internet environment towards respect of these ROAM principles is to map the situation in the country in these four areas.

Such is the rationale behind UNESCO's Internet Universality Indicators. This is a holistic tool to assess the state of Internet development in a given country, enabling new insights, and evidence-based policy improvements to emerge which, in turn, can advance Internet Universality as a positive factor for sustainable development.

