

# Brazil country review: regulation in the digital transformation



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- Agência Nacional de Telecomunicações (ANATEL) (National Agency for Telecommunications)
- Ministério da Ciência, Tecnologia e Inovações (Ministry of Science, Technology and Innovations or MCTIC, for its acronym in Portuguese)
- Conexis Brasil Digital

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The country review is part of a series of case studies and country reviews developed in the framework of the ITU work stream on collaborative digital regulation with the financial support of the Republic of Korea.

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# Foreword



I am delighted to present this new study, the tenth in the series of Collaborative Digital Regulation Country Reviews.

The digital age has brought about unprecedented advancements in technology and connectivity, but with it comes a host of new challenges for regulators and policymakers. The International Telecommunication Union (ITU) has made it one of our priorities to support countries in enacting effective, collaborative policy and regulation to ensure that the benefits of digital transformation are shared by all.

For over 20 years, ITU and our partners in the wider global regulatory community have made enormous progress in analysing, mapping and understanding the evolving role that regulation plays in society and in economies. Through this effort, we now have a clear-eyed view of the path ahead for all countries, no matter where they are, in their journey towards Fifth generation collaborative digital regulation, or G5, that has emerged as the gold standard for regulators and policymakers seeking to promote an enabling environment for digital transformation. The G5 framework marks a shift of scope beyond a narrow consideration of telecommunications/ICT to a far broader one of each country's readiness to exploit a fully enabled digital economy and society.

Taking the work one step further, ITU has developed a series of national country reviews on collaborative digital regulation, in partnership with government authorities, national stakeholders and recognized experts. Based on ITU established evidence-based tools, the ICT Regulatory Tracker and the G5 Benchmark, the country reviews offer a comprehensive assessment of the regulatory and governance frameworks, policies, and practices in each studied country.

The country reviews are an important tool for regulators and policymakers as they work to create an environment that promotes investment, competition, digital innovation, protects consumers, and ensures that the benefits of digital transformation are widely shared. They highlight diverse experiences and different policy and regulatory patterns while exploring good practices, challenges and lessons learnt by regulators in navigating digital transformation. The country reviews also help develop a better understanding of the role and impact of collaboration and collaborative governance, and the use of new tools for regulating ICT markets.

Each country assessment is unique in focusing on the specificities of national regulatory and institutional frameworks for digital markets to thrive and on collaborative governance. While all country reviews follow a similar methodology, the process of developing the study is necessarily highly collaborative and tailored to the country's specific needs and priorities. For each country, the reviews capture hard-won gains, and provide actionable insights and pointers of immense value to other countries eyeing a similar path as they navigate the rapidly evolving digital landscape. Equally they deliver a practical and inspiring message of empowerment, of overcoming resistance and securing acceptance of the value of the work and of what it can deliver.

First launched in 2021, the Collaborative Digital Regulation Country Reviews series has been leveraging country-specific experiences in moving the global digital agenda forward and aligning it with the 2030 Sustainable Development Goals (SDGs). The series also plays a central role in ITU efforts to measure the impact and benefits of G5 collaborative digital regulation, and support ITU Members in their journey to achieving SDGs and inclusive, sustainable digital transformation through meaningful policy and regulatory reform that will benefit all.

I hope that this series will serve as a catalyst for further collaboration and the advancement of digital regulation globally. I recommend this study as an enlightening and practical tool together with our regulatory metrics to all national regulators and decision-makers as they work to achieve meaningful connectivity and accelerate an inclusive and sustainable digital transformation through regulation that is open, cross-sector, and above all, collaborative.



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# 1 Introduction

## Digital transformation through collaborative digital regulation

Over recent years, digital transformation has raised to the top of national policy agendas as a path to accelerated social development and economic prosperity.

Digitalization has a far-reaching social and economic impact. It affects all sectors of the economy – from agriculture to industry and trade, and all areas – from household consumption to the provision of public services. Evidence shows that digitization has a positive impact on productivity, employment, skills, and market demand and supply<sup>1</sup>. New digital means of communication and technologies have been transforming production, consumption and lifestyle patterns.

Digital transformation has revealed the need for a new approach to regulation. A new regulatory paradigm has emerged that seeks to fast forward digital transformation for all – and that paradigm is embodied in the concept of collaborative digital regulation.

Based on a broad notion of generations of ICT regulation (see Box 2), G5 collaborative digital regulation marks a fundamental shift in the way regulation is designed and executed. The G5 systemic approach brings together a wide range of stakeholders from policy-makers to single- and cross-sector regulators, and a wide range of market players. In addition, the focus on regulatory behaviour and its impact on markets and development brings to the fore the need to harmonize policy priorities, regulatory rules, and existing institutional frameworks across the sectors to leverage digital and underlines the importance of the interplay between digital infrastructure, services and content across industries and national borders.

This country review is part of a series designed to analyse the current institutional and regulatory framework of countries with different policy landscapes, at various levels of digital development and from different regions. The country reviews explore how the principles and nature of collaborative digital regulation are enshrined in national policy and regulatory frameworks and how those are being implemented (see Box 1).

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<sup>1</sup> ITU, 2020, [How broadband, digitization and ICT regulation impact the global economy](#)



### Box 1: G5 Case study methodology

To better understand the role and impact of collaboration and collaborative governance, ITU has launched a series of case studies to focus on regulatory and institutional frameworks and collaborative governance across different regions. The case studies detail diverse experiences and policy and regulatory patterns and set out challenges, new ideas and lessons learnt by regulators as they journey towards collaborative digital regulation. Each case study follows a similar methodology, reflects regional needs, and has been achieved through stakeholder involvement and cooperation. Each case study is built on two components:

- 1) A [70-indicator dataset on collaborative digital regulation](#) that explores collaboration across government agencies and ministries, the scope and patterns for collaboration, and legislative and policy tools and processes.
- 2) The involvement of other stakeholders, including multiple interviews with key national stakeholders, representatives of the national regulatory authority and the relevant ministry, the private sector and consumer associations where possible. Interviews also explore practical aspects of policy implementation and regulatory reform.

The case studies set out the current policy, regulatory and governance landscape, focus on best practice and highlight areas for future enhancement.

### Box 2: The five generations of regulation

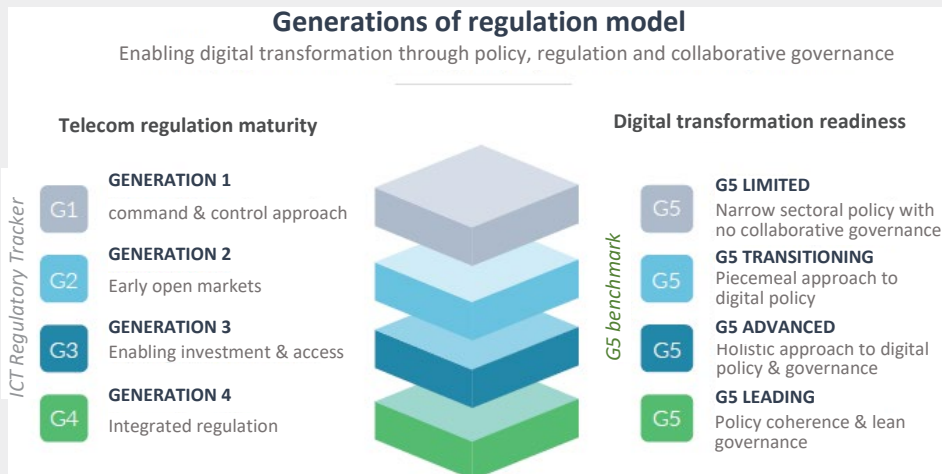
Regulators and policy-makers need evidence to inform their decisions as they seek to build a competitive, inclusive and resilient digital economy – evidence that helps them compare practices across countries and regions against a universal reference frame for regulatory excellence and good governance.

The ‘generations of regulation’ model enables them to do just that. It sets out, at a glance and across five clearly differentiated generations, how policy and regulation have evolved over recent decades – from a narrow focus on telecommunications, to the broader perspective on ICTs and then onto the gold standard for collaborative digital governance. The model has been built with the global community of ICT regulators – annually tuned and enhanced since 2003 by the Global Symposium for Regulators (GSR). The gold standard for digital regulation, Gen 5, embodies the guidance of this expert, high-level community and is framed under the premise ‘collaboration across sectors, cooperation across borders, and engagement across the board’.

One of a kind, Gen 5 models how conducive policy, regulatory and governance frameworks for the digital transformation unfold, from Limited, to Transitioning, to Advanced, to Leading.

## Box 2: The five generations of regulation (continued)

The model is strategic and practical, enabling analysis of and planning for the evolution of national digital governance capacity and regulation. Two associated tools - the ICT Regulatory Tracker and the G5 Benchmark - underwrite the model in assessing the state of maturity of national legal frameworks and their governance, and tracking their progress over time.



Building on the Generations of regulation model, ITU has developed two complementary benchmarking tools, the [ICT Regulatory Tracker](#) and the [G5 Benchmark](#) (see also Box 3). These help understand global trends and identify policy and regulatory gaps. The ICT Regulatory Tracker tracks the evolution of generations of telecommunication sector reform. In parallel, the G5 Benchmark charts the digital transformation journey from its inception to building a thriving digital society and helps countries establish roadmaps to navigate the digital transformation.

As digital markets integrate into core telecommunication infrastructure, legal, policy and regulatory frameworks for telecommunications and digital transformation have evolved in parallel, at different speeds in countries and across regions.

- In the past, two separate frameworks have addressed issues associated with telecommunication and digital ecosystems as each of these areas mature - and two different tools are powerful aids in assessing them - the ICT Regulatory Tracker for telecommunication and the G5 Benchmark for digital markets.
- Increasingly, a new generation of such frameworks, Gen 5, enables digital ecosystems to gain traction and is helping accelerate progress across a broad range of development goals.
- Using both tools mentioned above generates actionable insights and puts national decision-makers in the driving seat as they navigate the digital transformation of their economies and societies.

## Box 2: The five generations of regulation (continued)

This integrated, augmented approach to the assessment of digital policy, development and implementation based on best practices – and their localization – is rapidly becoming the gold standard for policy and regulation in the era of digital transformation.

Through disruption of markets and the rise of new technologies, building an inclusive digital economy is a priority in national policy agendas. The success of policy implementation will have a multiplier effect on the digital transformation of economies and their sustainability in the future.

		1. Regulatory authority	2. Regulatory mandate	3. Regulatory regime	4. Competition framework
<b>RATIONALE FOR GENERATIONS OF REGULATION</b>	G1	• Consolidated with policy maker and/or industry	• Business as usual	• Doing as we have always done	• State-owned monopoly
	G2	• Separate agency	• First wave of regulatory reform	• Doing more	• Liberalization
	G3	• Separate agency, autonomous in decision making	• Advanced liberalization of ICT sector	• Doing the right things	• Partial competition
	G4	• Separate agency with enforcement power	• Adjacent issues become core mandate	• Doing the things right	• Full competition
	G5	• Separate agency as part of a network of partner regulators	• <b>Active collaboration across the board</b>	• Doing things together	• Intra-modal competition

Source: ITU

Source: ITU, [Global Digital Regulatory Outlook 2023](#).

The country review of Brazil highlights areas of strength and possible improvements as the country journeys towards digital transformation through collaborative digital regulation, enabling it to seize opportunities and address challenges. The analysis and findings are based on publicly available information from official sources (reports, legal acts, studies) and insights obtained during interviews with stakeholders from Brazil's public and private sector.

Gathering information from different perspectives spotlights strengths and opportunities in Brazil, while identifying areas for further consideration in view of accelerating digital transformation. These include a mixture of best practice collaborative digital regulation principles to enhance regulatory maturity, and collaborative digital policy and regulation tools to improve digital market outcomes. While some of these are 'low-hanging fruit' and can be achieved with relative ease, others will demand more reflection and time.

### Box 3: G5 Benchmark guiding regulators through uncertainty and disruption

The 2021 edition of the G5 Benchmark is structured around four pillars:

- **Pillar I: National collaborative governance** measures the breadth and depth of cross-sector collaboration between the ICT regulator, peer regulators and policy-makers. It factors in the institutional set-up (agencies and their mandates) as well as practices around regulatory collaboration, formal and informal, across 16 areas, including consumer protection, spectrum management, education and e-waste.
- **Pillar II: Policy design principles** focus on the design of frameworks and their coherence. As all sectors' regulation shifts from rules to principles, new elements have become paramount in ensuring that regulatory processes and policy implementation are delivering as they should - from applying tools for evidence-based decision-making, to providing space for regulatory experimentation, to strengthening the accountability of multistakeholder policy initiatives, to ethics.
- **Pillar III: Digital development toolbox** focuses on the tools needed by regulators to stimulate development of a sustainable digital economy. It considers new consumer needs, business models and market dynamics. The G5 toolbox spans areas such as cybersecurity, data protection, emergency telecommunications and cross-sector infrastructure sharing. The toolbox also includes universal instruments geared towards the achievement of mid-to long-term social and economic goals - such as youth employment and sustainable consumption and production - where digital has a central role to play.
- **Pillar IV: Digital economic policy agenda** features country policies and interventions for promoting the digital economy, entrepreneurship and investment. The areas covered range from an innovation framework to digital transformation to sector taxation and adherence to international and regional integration initiatives.

The G5 Benchmark features a total of 70 indicators focused on policy and regulatory frameworks that will best enable digital transformation across economic sectors and across society. According to their score, each of 193 countries is associated with one of four levels of national policy and regulatory framework maturity - these are Leading, Advanced, Transitioning, and Limited.

Tuning the Benchmark and its methodology has been a consultative, iterative process. The 2020 pilot version benefited from feedback offered by regulators, regulatory experts and data scientists - this led to the expansion and rebalancing to better respond to the needs of national decision-makers. The updated Benchmark was then reviewed by an external independent expert board bringing together academia, international organizations, think tanks, regulatory associations and industry associations. This independent review provided final revisions and marked the coming of age for the G5 Benchmark.

### Box 3: G5 Benchmark guiding regulators through uncertainty and disruption (continued)

What can be learnt from the 2021 edition of the G5 Benchmark?

- Two-thirds of countries are in their early digital days, with only partially adequate legal instruments in place and underdeveloped collaborative governance practices. Climbing up the digital development ladder will require consistent effort by government and the active involvement of all stakeholder groups aligned around key policy priorities.
- One-third of countries have progressive digital policy and regulatory frameworks. They form the Advanced group of countries on their digital transformation journey, and their population is more likely to enjoy digital dividends, rather than suffer digital divides - because their legal and regulatory frameworks are fit-for-purpose and are rich in best practice.
- According to the Benchmark, only nine leading countries - Australia, Canada, Estonia, Finland, Germany, the Republic of Korea, the Netherlands, Singapore, and the United Kingdom - are reaping the full benefits of the digital transformation, leveraging strong cross-sector policies and delivering on digital development objectives.

National and international best practices and benchmarks are useful in setting out a master frame for understanding the principles of collaborative governance, avoiding a spotlight effect and anchoring. Such frameworks provide context and a broad perspective on cross-sectoral policies, while allowing comparisons across countries and policy areas, and help identify new patterns of collaboration conducive to co-creating an inclusive and innovative digital ecosystem globally.

Source: ITU, [G5 Accelerator](#)

## 1.1 Regulatory evolution in Brazil

The telecommunications market regime in Brazil was originally a government monopoly and markets were served by state-owned incumbent operators. Article 21 of the Federal Constitution of 1988 had established that the operation of telecommunications services could be done directly at the federal level or by authorization, concession, or permit.

In 1995, Constitutional Amendment No. 8<sup>2</sup> opened the way to privatization through the concession of telecommunications. The amendment separated services in telecommunications and public broadcasting and resulted in the creation of an independent regulatory body for those segments. In 1997, the General Telecommunications Law (LGT, Law 9.472)<sup>3</sup> established the general rules of the privatization process and created the national agency for telecommunications (*Agência Nacional de Telecomunicações*, ANATEL) as an independent regulatory body, introducing a competition regime in the provision of the services exposed in the LGT<sup>4</sup>.

<sup>2</sup> [https://normas.leg.br/?urn=urn:lex:br:federal:constituicao:1988-10-05:1988#/con1988\\_03.07.2019/art\\_21\\_.asp](https://normas.leg.br/?urn=urn:lex:br:federal:constituicao:1988-10-05:1988#/con1988_03.07.2019/art_21_.asp)

<sup>3</sup> [http://www.planalto.gov.br/ccivil\\_03/LEIS/L9472.htm](http://www.planalto.gov.br/ccivil_03/LEIS/L9472.htm)

<sup>4</sup> [https://www.apc.org/sites/default/files/Espectro\\_Brasil\\_0.pdf](https://www.apc.org/sites/default/files/Espectro_Brasil_0.pdf)

In April 2013, ANATEL underwent an important change in its organizational structure resulting from the modification of Resolution No. 612/2013<sup>5</sup>, which approved its new internal regulations, with the main objective of increasing the efficiency of regulation and the oversight of telecommunication services in Brazil.

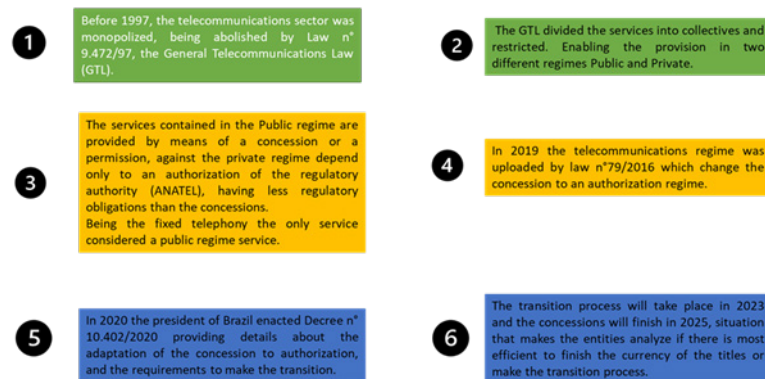
Some of the structural changes of ANATEL under the 2013 Internal Regulations<sup>6</sup> is the creation of the Superintendency of Internal Management of Information (SGI), which is responsible of managing and providing information, network and information technology, networks and services, information systems and communication and information communication and information management, including updating and maintenance of the document collection of ANATEL.

The last major reform was Law 13,879 from October 3, 2019<sup>7</sup>, which modifies the LGT and brings benefits for local industry such as:

- Fixed service licence holders can move from a public to a private regime, which translates into a more flexible model with less control from government, such as the elimination of tariff control, not being subject to reversal of assets and other obligations.
- Removes legal barriers for spectrum licence renewals.
- Creates a secondary spectrum market.

This major reform was followed by several measures that focused on making it easier for telecommunication services to be provided.

**Figure 1: Liberalization of Brazil's telecommunication market**



Source: ITU analysis based on [OECD Telecommunication and Broadcasting Review of Brazil 2020](#)

The Federal Government of Brazil has recognized the importance of the digital transformation. In 2018, the Brazilian Digital Transformation Strategy was launched for the period 2018-2021<sup>8</sup>. In addition, there is a Digital Government Strategy 2020-2022<sup>9</sup> that will guide the actions of all government agencies towards an e-government transformation.

Brazil is taking specific actions towards building a national digital economy. An example is the government cooperation with the OECD with the project Going Digital in Brazil, which seeks “to ensure a coherent and cohesive whole-of-government approach to better respond to the

<sup>5</sup> [Anatel - Resolução n° 612, de 29 de abril de 2013](#)

<sup>6</sup> <https://informacoes.anatel.gov.br/legislacao/resolucoes/2013/450-resolucao-612#tituloVIIcapVIIsecaoVII>

<sup>7</sup> [http://www.planalto.gov.br/ccivil\\_03/\\_ato2019-2022/2019/Lei/L13879.htm](http://www.planalto.gov.br/ccivil_03/_ato2019-2022/2019/Lei/L13879.htm)

<sup>8</sup> [ESTRATÉGIA BRASILEIRA PARA A TRANSFORMAÇÃO DIGITAL \(www.gov.br\)](#)

<sup>9</sup> [Digital Government Strategy 2020-2022 - Portuguese \(Brazil\) \(www.gov.br\)](#)

digital transformation and make it work for growth and well-being.”<sup>10</sup> In this cooperation, OECD issued specific recommendations in the Telecommunication and Broadcasting Review of Brazil 2020 (see Box 4).

#### **Box 4: OECD Telecommunication and Broadcasting Review of Brazil 2020**

The importance of digital connectivity for the public sector, households and firms has been magnified by the COVID-19 pandemic. The OECD Telecommunication and Broadcasting Review of Brazil 2020<sup>1</sup> found that:

- Brazil’s geography creates challenges for inclusive digital transformation;
- Brazil has strengthened its legal and regulatory communication framework in recent years;
- Brazil’s institutional structure for Internet governance is a strength;
- free-to-air broadcasting television remains the audio-visual medium that reaches the most people and the greatest distance;
- several important weaknesses persist that call for regulatory reform.

The findings allowed formulating a set of recommendations for a more convergent environment, an independent regulator, harmonization of tax regime, an increase in competition, a reduction of entry barriers and the expansion of broadband networks. As part of Brazil’s public policy, some OECD recommendations were implemented.

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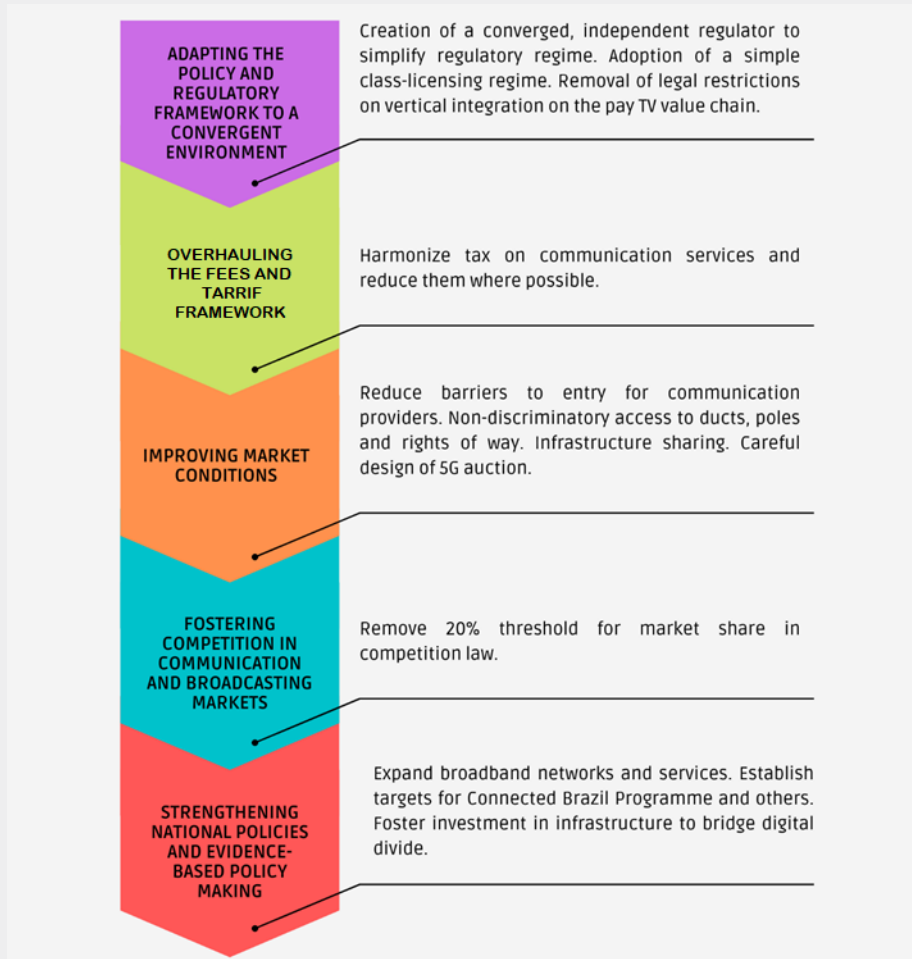
<sup>1</sup> [OECD Telecommunication and Broadcasting Review of Brazil 2020 | OECD iLibrary \(oecd-ilibrary.org\)](#)

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<sup>10</sup> [Going Digital in Brazil | OECD iLibrary \(oecd-ilibrary.org\)](#)

**Box 4: OECD Telecommunication and Broadcasting Review of Brazil 2020 (continued)**

**Figure 2: Main areas of focus for government efforts**



Source: ITU analysis, based on [OECD Telecommunication and Broadcasting Review of Brazil 2020](#)

In addition to the specific broadcasting and telecommunication sector recommendations, OECD (2020) *Going Digital in Brazil*<sup>1</sup> also provides a set of recommendations aimed to increase digital uptake by individuals and businesses, foster digital innovation and enhance data governance and privacy<sup>2</sup>.

<sup>1</sup> OECD, 2020, [Going Digital in Brazil](#), OECD Reviews of Digital Transformation

<sup>2</sup> See [Active with Brazil by OECD](#)

## 1.2 Brazil's regulatory evolution

According to the ICT Regulatory Tracker<sup>11</sup>, Brazil is one of the most advanced countries in Latin America in terms of policy and regulatory frameworks for the telecommunication/ICT sector. The country's path through the digital transformation enabled by G5 collaborative digital regulation

<sup>11</sup> [ITU, ICT Regulatory Tracker \(gen5.digital\)](#)



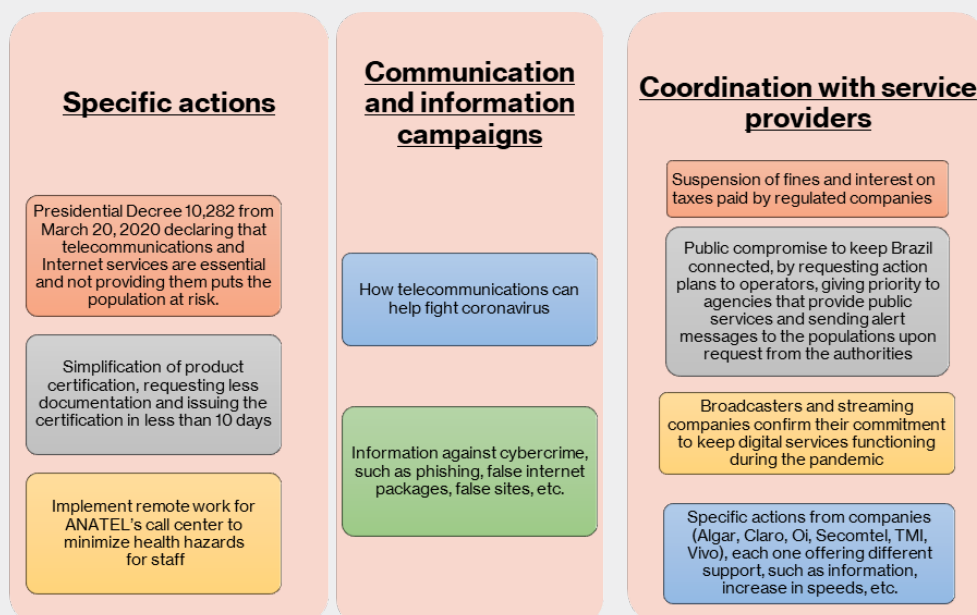
can be traced back decades and Brazil has been setting an example for its peers through an agile and cross-sector approach.

ANATEL has been driving Brazil’s regulatory evolution, in particular during the time of the COVID-19 pandemic. The regulator has been fast to respond, coordinate with industry and other stakeholders and is open enough to take measures to benefit all Brazilians. ANATEL has taken specific actions in response to the COVID-19 pandemic to enhance the resilience of national telecommunication markets and support both service providers and consumers (see Box 5).

### Box 5: Brazil’s response to the COVID-19 pandemic

Several measures were taken to guarantee the availability of telecommunication services to face the increasing Internet demand during the pandemic. Some of the main initiatives are described below.<sup>1</sup>

Figure 3: COVID-19 telecommunication initiatives



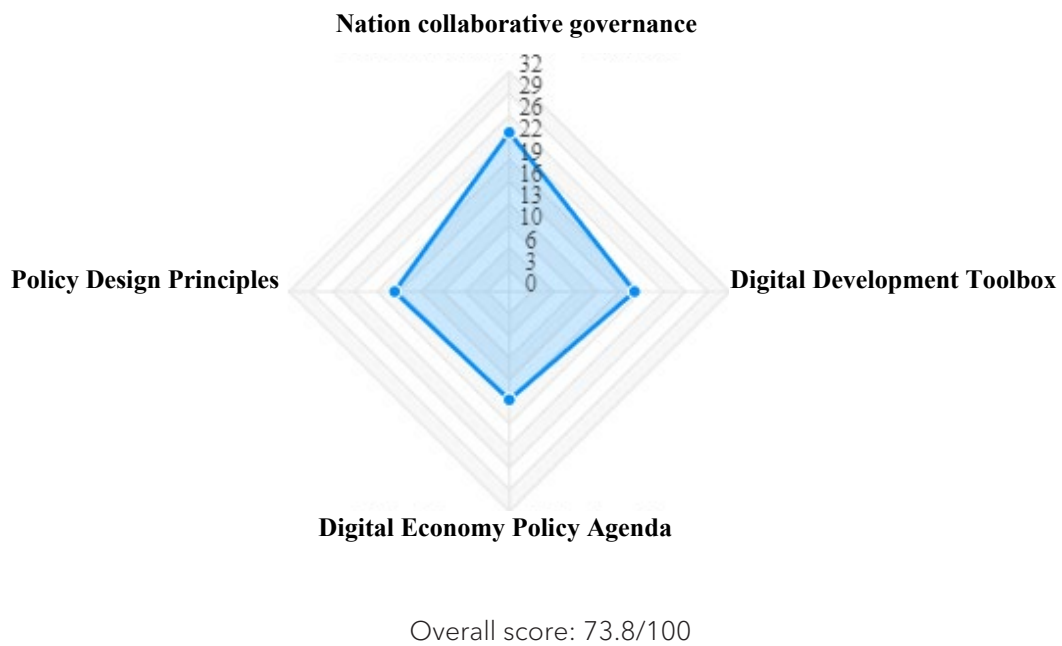
Source: ITU research and analysis, based on official government sources

<sup>1</sup> A full list of ANATEL actions can be consulted at [Ações da Anatel e do setor de telecomunicações no combate ao coronavírus – Português \(Brasil\) \(www.gov.br\)](http://www.gov.br)

- Presidential Decree 10,282 – [D10282 \(planalto.gov.br\)](http://planalto.gov.br)
- [Product certification has simplified actions in the pandemic - R&D Brazil \(pedbrasil.org.br\)](http://pedbrasil.org.br)
- [Anatel provides emergency code for use by the Ministry of Health - Communication Law Portal \(direitodacomunicacao.com\)](http://direitodacomunicacao.com)
- [Call center da Anatel trabalha remotamente - TeleSÍntese \(telesintese.com.br\)](http://telesintese.com.br)
- [Telecommunications helping fight against coronavirus](http://folhageral.com)
- [Anatel suspende, entre 20/3 e 10/4, multas e juros em tributos pagos por empresas reguladas \(folhageral.com\)](http://folhageral.com)
- [Sector telecom en Brasil firma compromiso para garantizar conectividad durante coronavirus | DPL News](http://DPL News)

Building on the sound telecommunication/ICT sector regulatory framework and mandates, Brazil’s policy, regulatory and governance mechanisms are at an Advanced readiness level for digital transformation, according to the 2021 G5 Benchmark (see Box 2). Brazil is equipped with strong collaborative governance mechanisms, sound policy design principles and a consistent digital development and digital economy policy agenda. The key building blocks of the G5 Benchmark have been used below to frame the analysis of the country’s digital policy and regulatory landscape.

**Figure 4: Readiness of Brazil’s policy, regulatory and governance frameworks for digital transformation, G5 Benchmark**



Source: ITU, [www.gen5.digital](http://www.gen5.digital)

## 2 National collaborative governance

When dealing with collaborative governance in the area of telecommunications and the digital economy, it is imperative to involve multiple groups of national stakeholders. Government is a key stakeholder and effective, fluid collaboration among the various government agencies and ministries is required to achieve a balance between social and economic goals.

Collaboration is considered as the watermark of digital regulation (see Box 3). The first pillar of the G5 Benchmark, national collaborative governance, measures the breadth and depth of cross-sector collaboration between the ICT regulator and other government agencies. It also measures how the institutions are set up, that is, the agencies and their mandates and the practices around the regulatory collaboration. An ideal scenario would combine the greatest number of agencies collaborating with the highest official status of collaboration.

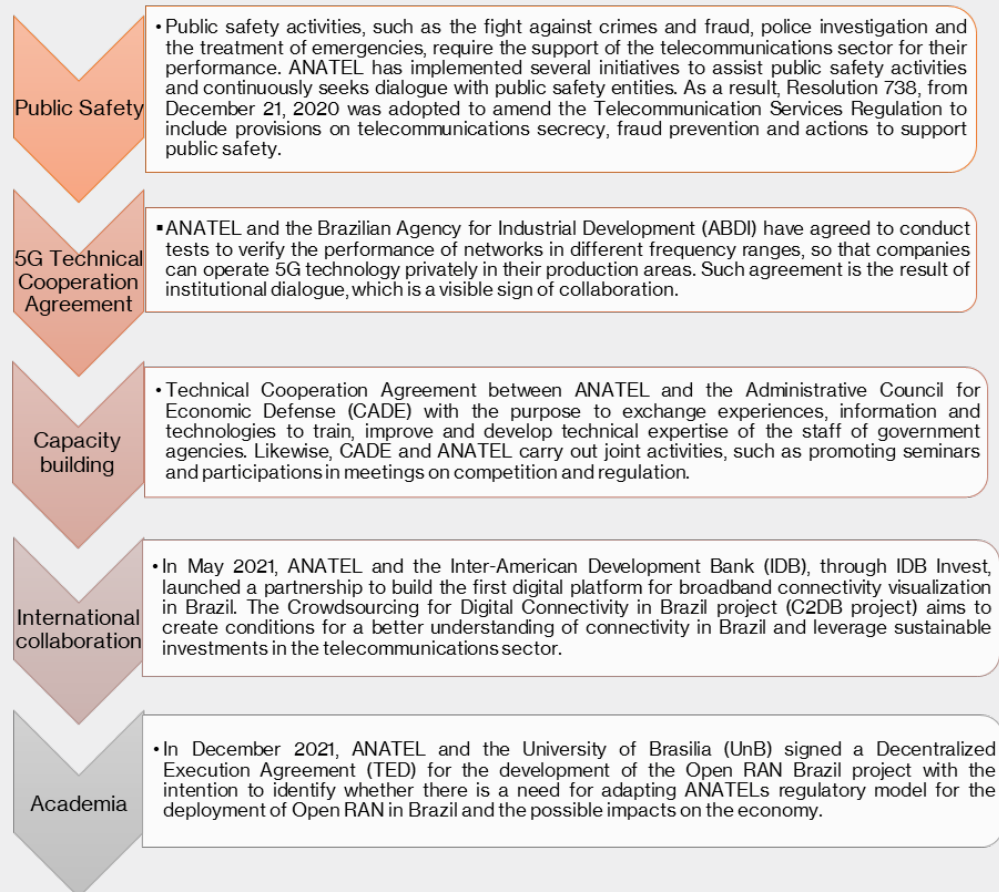
Since its creation in 1997, ANATEL has been operating as an autonomous agency in terms of decision-making and financing. Its administrative decisions can only be challenged in court. Such an autonomy has granted ANATEL the mandate to build its own approach to regulation and carry it out in collaborating with other government entities, and with market players and the public, notably through public consultations (see Boxes 6 and 7).

### **Box 6: ANATEL role in collaborative digital regulation in Brazil**

Collaboration between government entities is a key factor for Brazil to achieve a vibrant digital economy. It has also been fundamental for reaching advanced maturity of legal and regulatory frameworks for the digital transformation. ANATEL has played an active role in building synergies across the board and examples of collaboration initiatives are:

## Box 6: ANATEL role in collaborative digital regulation in Brazil (continued)

Figure 5: Collaboration initiatives in several sectors



### ANATEL collaboration in numbers, 2021<sup>1</sup>

- Participated in more than 744 events and institutional meetings all over Brazil.
- 14 public hearings in its relationship with National Congress.
- 1803 legislative proposals monitored by ANATEL.
- Open Letter<sup>2</sup> to Brazilian Municipal Authorities inviting them to re-evaluate municipal legislation and administrative procedures for the installation of telecommunications infrastructure.
- Five cooperation agreements with public agencies on matters of spectrum monitoring.
- Partnership with three companies specialized in data collection to access information on performance, coverage, international benchmarking and infrastructure of fixed broadband services.

<sup>1</sup> [Relatório Anual de Gestão - Anatel 2021](#)

<sup>2</sup> [da327f137039c7c312b74d89fb3d7470 \(anatel.gov.br\)](#)

### Box 6: ANATEL role in collaborative digital regulation in Brazil (continued)

ANATEL carries out many activities in collaboration with other government agencies, private sector and congress. However, this is part of its normal activities and not the result of a specific ANATEL plan to identify stakeholders and matters that require collaboration.

Source: ITU analysis based on official government sources<sup>1</sup>

<sup>1</sup> Sources include:

- [Anatel - Resolução nº 738, de 21 de dezembro de 2020](#)
- [Anatel - Resolução nº 73, de 25 de novembro de 1998](#)
- [ABDI - ABDI e Anatel firmam acordo para testar redes privadas de 5G](#) Anatel and ABDI sign agreement to test private 5G networks - Portuguese (Brazil) ([www.gov.br](http://www.gov.br))
- <https://digitalpolicylaw.com/reguladores-de-brasil-firman-acuerdo-de-cooperacion-tecnica-para-el-sector-telecom/>
- <https://www.gov.br/cade/pt-br/assuntos/noticias/cade-e-anatel-promovem-o-seminario-plataformas-digitais-teoria-economica-direito-antitruste-e-regulacao-1>
- [Cade Attorney's Office promotes meeting on Competition and Regulation - Portuguese \(Brazil\) \(www.gov.br\)](#)
- [Anatel e BID firmam parceria para mapear a demanda de banda larga no Brasil - Portal Direito da Comunicação \(direitodacomunicacao.com\)](#)
- <https://noticias.unb.br/76-institucional/5422-unb-e-anatel-assinam-acordo-para-desenvolvimento-do-5g-no-brasil>

ANATEL is not the only government entity engaging in broad multi-stakeholder collaboration. The E-Digital initiative was coordinated by the Ministry of Science, Technology, Innovations and Communications<sup>12</sup> with the participation of nine government bodies, the interaction of over 30 entities across the Federal Government of Brazil and a broad engagement of private sector, scientific and academic community, as well as civil society<sup>13</sup>. The outcome is the Brazilian Digital Transformation Strategy, which also requires collaboration for its implementation. The strategy is supported by a steering committee in which several government entities participate. The committee also has a multi-stakeholder advisory body, with representation from the private sector, academia and civil society.

<sup>12</sup> Since separated into two ministries: the Ministry of Communications, and the Ministry of Science, Technology and Innovations

<sup>13</sup> OECD. 2020. [Going Digital in Brazil](#), OECD Reviews of Digital Transformation

### 3 Policy design principles

The design of policy and regulatory frameworks and the implementation mechanisms they provide are of primary importance because they can trigger the multiplier effect of digital by providing predictability and direction. This is reflected in Pillar 2 of the G5 Benchmark, Policy Design Principles, which encompasses two main components:

- Regulatory design procedures - for this component the evaluation is oriented to how regulation is prepared and adopted, if there is any public consultation, if there is any assessment on regulatory impact, if the regulatory decisions are reviewable, if regulatory frameworks are technology and service-neutral, if there is innovative and room for regulatory experimentation, such as sandboxes and if regulation and policy are subject to revision and updates.
- Transparency - benchmarking seeks to set a standard in which information and regulation are available to all and focus on ethical issues for regulators.

With regards to transparency, Law 13,874 from 30 September 2019<sup>14</sup> introduces the obligation for all government entities to implement a regulatory impact analysis (RIA) while Decree 10,411 from 30 June 2020 defines the terms to be applied when conducting RIA. The two laws introduce the term 'social participation' as the process that aims to listen to specific groups directly impacted by the regulatory proposal or to society in general<sup>15</sup>. Nevertheless, some government entities, like ANATEL, have been carrying out public consultations for more than 20 years. It is important that such good practices are implemented consistently across all government entities.

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<sup>14</sup> [L13874 \(planalto.gov.br\)](https://planalto.gov.br)

<sup>15</sup> [AIRModelodegovernana20210921\\_English.pdf \(www.gov.br\)](https://www.gov.br/air/Modelodegovernana20210921_English.pdf)

## Box 7: Public Consultations

Public consultation was institutionalized by Decree 9191 of 2017<sup>1</sup> as a normative act at the Federal level. Law 13,848 of 2019 on Federal Regulatory Agencies<sup>2</sup> establishes the conditions for agencies in relation with public consultations and the involvement of economic agents, consumers and users.

OECD has been following up the engagement of interested parties when developing new regulations in Brazil and OECD states that “Brazil has strengthened the requirements for citizen and stakeholder participation, although the consultations were not always conducted or were not given any follow up.”<sup>3</sup>

Participa Mais Brasil is a centralized digital participation platform created with the purpose of promoting and qualifying the process of social participation, from the provision of modules for the dissemination of consultations and public hearings, research and the promotion of best practices.<sup>4</sup>

According to OECD,<sup>5</sup> since its creation as of December 2021, public institutions such as ministries and specialized agencies have published 172 consultations and 44 opinion polls, gathering 34 063 contributions from 25 154 users registered. As a good practice, the platform can provide feedback to public authorities for each consultation, however, this tool is rarely used. Feedback has been provided only in 8 of the 142 closed processes in the platform. A wider use of Participa Mais Brasil across the Federal Government of Brazil is needed to continue to harmonize practices among public institutions to enable the participation of citizens and stakeholders.

Source: ITU analysis based on official government sources

<sup>1</sup> [Decreto nº 9.191, de 1º de Novembro de 2017 - DEC-9191-2017-11-01 - 9191/17 :: Legislação::Decreto 9191/2017 \(Federal - Brasil\) : \(lexml.gov.br\)](#)

<sup>2</sup> [Base Legislação da Presidência da República - Lei nº 13.848 de 25 de junho de 2019 \(presidencia.gov.br\)](#)

<sup>3</sup> OECD. 2022. ‘Citizen participation in Brazil: Involving citizens and stakeholders in policy making and service delivery’, in *Open Government Review of Brazil: Towards an Integrated Open Government Agenda*

<sup>4</sup> [Governo Federal - Participa + Brasil - Página Inicial \(www.gov.br\)](#)

<sup>5</sup> OECD. 2022. ‘Citizen participation in Brazil: Involving citizens and stakeholders in policy making and service delivery’, in *Open Government Review of Brazil: Towards an Integrated Open Government Agenda*

In addition to public consultations, innovation is seen as an enabler of the work of several Brazilian entities, such as the Brazil Central Bank (BCB), which has implemented the BCB Sandbox,<sup>16</sup> a controlled testing environment for financial and payment innovations.

<sup>16</sup> [Regulatory Sandbox \(bcb.gov.br\)](#)

## Box 8: Brazil Central Bank (BCB) Sandbox

The BCB Sandbox was created in 2020 and the first seven projects were released in November 2021.<sup>1</sup> Once selected projects have been considered by the BCB Sandbox strategic management committee, they may be implemented on a permanent basis.

The seven initial projects included:

- 1 Loan with real estate collateral, with payment at maturity and without periodic amortizations, coupled with the contracting of specific insurance to reduce the relevant risks (Himov Negócios e Participações SA).<sup>2</sup>
- 2 Technological solution for the execution of multi-currency payment orders, for exclusive use between institutions authorized by the Central Bank to operate in the foreign exchange market for the purpose of immediate exchange of reserves (J.P. Morgan SA - Projeto JPM Coin).
- 3 Realization of digital financial transactions with credit granting, revolving or installment, using Pix features (Banco Itaucard SA).
- 4 Platform for issue and secondary trading of private fixed income securities (SEP Sociedade de Empréstimos entre Pessoas Ltda.).
- 5 Development of a secondary market for Bank Credit Notes - CCBs (Inco Plataforma Eletrônica de Investimentos Participativos Ltda.).
- 6 Implementation of a network of physical points offering the service of in-kind contribution of resources (Mercadopago.com Representações Ltda).
- 7 Platform capable of moving amounts between two or more accounts, by transferring amounts to 'temporary' or 'liquidation' accounts, on demand, for the execution of an operation under previously signed conditions (lupi Mobilecard Serviços de Processamento de Dados Ltda.).

<sup>1</sup> [Sandbox BC divulga projetos selecionados \(bcb.gov.br\); Comunicado 003 divulga a classificação.pdf \(bcb.gov.br\)](#)

<sup>2</sup> [Brazilian innovators get to play in regulatory 'sandbox' | S&P Global Market Intelligence \(spglobal.com\)](#)



## Box 8: Brazil Central Bank (BCB) Sandbox (continued)

Figure 6: BCB sandbox overview



Source: Banco Central Do Brasil, [Banco Central do Brasil \(bcb.gov.br\)](http://Banco Central do Brasil (bcb.gov.br))

## 4 Digital development toolbox

Promoting sustainable development through the digital transformation of society has a positive impact on consumers, the entrepreneurial ecosystem, and social and market dynamics. Pillar III of the G5 Benchmark (digital development toolbox) features key elements of legal and regulatory frameworks that support digital transformation, including a native digital strategy oriented to achieving social and economic goals, rules and instruments to handle data privacy, e-waste management, cybersecurity, infrastructure sharing, emergency situations, public services, and persons with disabilities.<sup>17</sup>

To enable digital transformation, regulation has to address multiple areas at a time. As issues related to digital technologies and markets across all economic sectors are not exclusively under the purview of the telecommunication regulator, implementation requires joint action by multiple authorities. Thus, it is important that regulation addresses the short-to-medium term outlook for national and global markets and includes long-term strategies that involve government agencies along with all stakeholders. Such strategies should be developed with the largest possible participation of government entities. A national plan or strategy should include common goals and implementation mechanisms and serve as a guide for the activities of government entities. National plans also need to consider cross-cutting themes such as sustainability and inclusiveness and be linked to broader development goals such as SDGs.

The Brazilian Digital Transformation Strategy (E-Digital)<sup>18</sup> proposes strategic actions under the Sustainable Development Goals (SDG)<sup>19</sup> of the 2030 Agenda of the United Nations, often involving collaboration between government and private stakeholders. It also follows several of the best practice guidelines shaped by the global community of regulators and published by ITU<sup>20</sup>, including:

- good governance and effective institutions with appropriate mechanisms in place for collaborative regulatory approaches (GSR-20);
- policy and regulation should be consultation and collaboration based (GSR-19);
- focus on business; digital regulation should be used as a lever for the development of business opportunities for all kinds and sizes of market players (GSR-20);
- data is the silver bullet of digital regulation, as the input for decision making (GSR-21);
- investment is the cornerstone of digital transformation (GSR-21).

E-Digital aims to harness the potential of digital technologies to promote sustainable and inclusive economic and social development, with innovation, increased competitiveness, productivity and levels of employment and income in the country (See Box 9).

<sup>17</sup> <https://sdgs.un.org/es/goals>

<sup>18</sup> [ESTRATÉGIA BRASILEIRA PARA A TRANSFORMAÇÃO DIGITAL \(www.gov.br\)](http://www.gov.br)

<sup>19</sup> [Take Action for the Sustainable Development Goals - United Nations Sustainable Development](https://www.un.org/sustainabledevelopment/)

<sup>20</sup> <https://gen5.digital/best-practice>

### Box 9: Brazil’s E-Digital: strategic goals and actions

The thematic axes for E-Digital are defined by the relationship between the government and the private sector in the economy (see Figure 7).

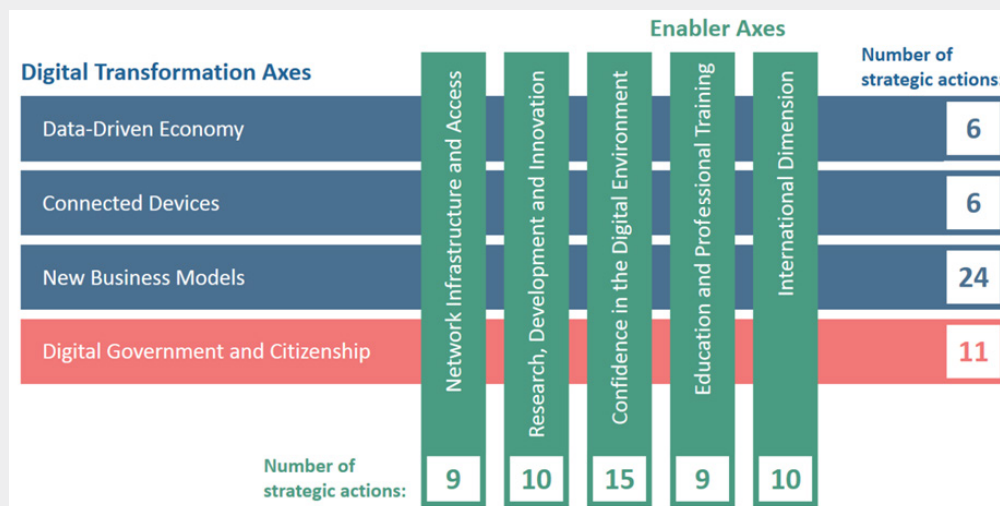
Figure 7: Scope of Brazil’s Digital Transformation Strategy



Source: [E-Digital](#)

Under E-Digital, there are a total of 100 strategic actions with defined metrics to track progress. The strategic actions are defined along two thematic ‘axes’: core areas of digital transformation and enablers (see Figure 8).

Figure 8: Strategic focus of Brazil’s Digital Transformation Strategy



Source: [E-Digital](#)

### Box 9: Brazil's E-Digital: strategic goals and actions (continued)

Examples of the 100 strategic actions to achieve digital transformation include:

1. Connecting 22 000 public schools with high-speed broadband access under the Connected Education Program.
2. Allowing the use of resources from various sources for the construction of data transport and broadband access networks.
3. Accelerating the process of implementing 4G networks using the 700 MHz radio frequency band, especially in municipalities that do not rely on the launch of this band in the transition to digital television.
4. Encouraging state governments to implement tax relief policies to internalize coverage of personal mobile services networks, as some states have already done.
5. Reformulating the Telecommunications Universalization Fund (FUST) legislation to enable its expanded application of broadband access and the expansion of its use, both in urban settings and in rural and remote areas.
6. Promoting permanent dialogues between government, academia and industry representative entities, in order to ensure that research, development and innovation policies and initiatives associated with digital transformation are comprehensive, convergent and coordinated.
7. Supporting the approval of specific legislation for the protection of personal data.
8. Stimulating cooperation and partnership mechanisms between public institutions and market players with a view to protect human rights on the digital network, with special attention to the rights of children and teenagers, in order to ensure the principles provided for in the Civil Rights Framework for the Internet and the Federal Constitution.
9. Strengthening the instruments of international cooperation between authorities and between access and content providers operating in different countries, in order to ensure law enforcement in the digital environment.
10. Creating or designate a national authority with competencies related to personal data protection and international data flow.
11. Spreading the adoption of digital technology in the validation of transactions and electronic documents produced in the digital environment.
12. Stimulating the definition and adoption of standards and certification of privacy by design and by default and security by design and by default.

Source: ITU analysis based on official government sources

As there is no publicly available evaluation on the overall progress of the mentioned 100 strategic actions, it is currently difficult to make a detailed assessment on the impact of e-Digital. However, based on official reports, 15 000 schools of the 22 000 schools established as a goal have been connected through the Wi-Fi Brazil programme.<sup>21</sup>

The Federal Government of Brazil has been working towards updating E-Digital for the 2022-2026 period. A preliminary diagnosis, followed by workshops in September 2021 and a public consultation that ended in February 2022 have been carried out.<sup>22</sup>The E-Digital Document

<sup>21</sup> [Programa Wi-Fi Brasil – Português \(Brasil\) \(www.gov.br\)](http://www.gov.br)

<sup>22</sup> [Brazilian Strategy for Digital Transformation - Update Period 2022-2026 - Portuguese \(Brazil\) \(www.gov.br\)](http://www.gov.br)

2022-2026 was published at the end of 2022, and it maintains the same digital transformation axes and enabler axes, recognizing the importance of a collaborative, multi-institutional and multi-sectorial efforts.<sup>23</sup>

During this public consultation, some industry stakeholders sent their comments and made them public. The Information Technology Industry Council (ITI), a global tech association, expressed some concerns with regards to the e-Digital progress in implementation. The main concern is related to the need to meaningfully consult and engage with national stakeholders, an area where private sector would expect further efforts by the government.<sup>24</sup>

## 4.1 Digital Government Strategy for 2020 to 2022<sup>25</sup>

The Federal Government of Brazil aspires to enable its citizens to access better quality, simpler services, which are accessible at any time and place, and at a lower cost. As a consequence, it has adopted the Digital Government Strategy 2020-2022 and its 2022-2026 update, which is organized into principles, objectives and initiatives that guide the transformation of government through digital technologies.

The vision for a digital future is based on six principles:

- I. **Citizen-centric**<sup>26</sup> – a government concerned with offering high-quality digital government services that meet citizens’ expectations and improve user experience.
- II. **Integrated**<sup>27</sup> – a government that provides duty of care for all citizen through integrated data and online government services (federal, state and municipalities), reducing costs, expanding the supply of digital services and sparing citizens the hassle of commuting to central government offices, queuing and dealing with paper documents.
- III. **Smart**<sup>28</sup> – a government that implements effective policies based on data and evidence, proactively anticipates and meets the needs of citizens and organizations and fosters a competitive and investment-friendly business environment.
- IV. **Reliable**<sup>29</sup> – a government that respects the freedom and privacy of citizens and ensures the appropriate response to the risks, threats and challenges that arise from the use of digital technologies in the delivery of government services. A national digital system reinforces this pillar.
- V. **Transparent and open**<sup>30</sup> – a government that proactively makes data and information available and enables the monitoring and participation of stakeholders in the various stages of designing public policies and digital services.
- VI. **Efficient**<sup>31</sup> – a government that trains its professionals in best practice, makes rational use of its workforce, and applies technology platforms and shared services intensively to operational activities across several public entities. It also optimizes infrastructure and technology contracts, seeking to reduce operational costs and expand service offerings.

<sup>23</sup> [e-digital ciclo 2022-2026.pdf \(www.gov.br\)](#)

<sup>24</sup> [ITI Offers Guidance on Brazil's Digital Transformation Strategy - Information Technology Industry Council \(itic.org\)](#)

<sup>25</sup> <https://www.gov.br/governodigital/pt-br/EGD2020>

<sup>26</sup> <https://www.gov.br/governodigital/pt-br/EGD2020/centrado-no-cidadao>

<sup>27</sup> <https://www.gov.br/governodigital/pt-br/EGD2020/integrado>

<sup>28</sup> <https://www.gov.br/governodigital/pt-br/EGD2020/inteligente>

<sup>29</sup> <https://www.gov.br/governodigital/pt-br/EGD2020/confiavel>

<sup>30</sup> <https://www.gov.br/governodigital/pt-br/EGD2020/transparente-e-aberto>

<sup>31</sup> <https://www.gov.br/governodigital/pt-br/EGD2020/eficiente>

Each of these six principles has its objectives and each objective has one or more initiatives, which are specific actions that can be measured. Progress on the Digital Government Strategy is transparent and public<sup>32</sup>, and a high-level overview of implementation activities by principle or objective is available online along with the overall level of implementation.

Figure 9: Digital government strategy indicators<sup>33</sup>



Source: [Indicadores da Estratégia de Governo Digital – Governo Digital \(www.gov.br\)](https://www.gov.br/governodigital/pt-br/sisp/indicadores-da-estrategia-de-governo-digital/)

The information available on the official government portal shows which initiatives have been concluded, how many are in execution and how many have not started. Setting measurable targets is in line with international good practice, in particular the GSR-21 Best Practice Guidelines principle of defining priorities, responsibilities and setting measurable targets and metrics for markets and the regulatory authority.

<sup>32</sup> <https://www.gov.br/governodigital/pt-br/sisp/indicadores-da-estrategia-de-governo-digital/>

<sup>33</sup> Idem.

## 5 Digital economy policy agenda

Another feature of the G5 enabling policy and regulatory framework for the digital transformation requires the promotion of the development of the digital economy, generating a level playing field in which the development of business opportunities for market players of any size is allowed. It is important to have policies that support vulnerable sectors, such as indigenous groups or very small enterprises and contribute to the development and improvement of inequality between citizens and among regions. This cluster of enabling features focuses on how to achieve a thriving digital economy through policies and interventions that range from an innovation framework to targeted policies for the digital transformation, to sector taxation and international linkages.

In Brazil, there are 11.5 million legally incorporated micro and small enterprises, representing 27 per cent of GDP, 41 per cent of the total payroll and 98.5 per cent of all legal incorporated companies.<sup>34</sup> Currently, 14 per cent of the Brazilian population lives in more than two thousand cities that do not have optical fibre. This data reflects the need to break all digital barriers that could stop growth and generate greater inequalities in the region. In an effort to bring SMEs online and enhance their business models and operations, ANATEL has created the Structural Plan for Telecommunications Networks (PERT). In addition to presenting a diagnosis of the situation of fixed and mobile broadband in the country, ANATEL proposals bring together a set of actions that could be adopted in the next ten years with the aim of reducing digital inequality.

According to the plan, potential project financing from diverse sources include ANATEL Terms of Adjustment of Conduct (TAC), balances arising from the possible revision of the concession model, tax exemptions, the sale or renewal of radio frequencies, and the Fund for the Universalization of Telecommunications Services (Fust).<sup>35</sup>

The Digital Economy Policy Agenda is the pillar where most work is required to get policy and regulatory frameworks to match the needs of stakeholders in the digital transformation, as shown in Box 9 above.

### Artificial Intelligence

Importantly, some of the frameworks for new technologies have already been put in place. According to the OECD Artificial Intelligence Policy Observatory, Brazil has implemented several policy initiatives that will help improve Brazil's readiness for the digital transformation<sup>36</sup> (see Box 10).

<sup>34</sup> OECD. 2022. [Financing SMEs and Entrepreneurs 2022: An OECD Scoreboard](#)

<sup>35</sup> <https://www.gov.br/ANATEL/pt-br/assuntos/noticias/ANATEL-realiza-audiencia-publica-sobre-plano-de-redes-em-fortaleza-ce>

<sup>36</sup> [Policy initiatives - OECD.AI](#)

## Box 10: Strong focus on artificial intelligence and IoT

The Brazil Artificial Intelligence Strategy<sup>1</sup> (EBIA) was launched by the MCTI in July 2021 with the purpose of guiding the actions of the Federal Government of Brazil to stimulate research, innovation and development of AI solutions. EBIA also deals with ethical issues related to AI.

EBIA is made up of nine thematic axes:

Legislation, regulation and ethical use	<ul style="list-style-type: none"> <li>• Need for legal, regulatory and ethical principles to guide development and application of technology.</li> <li>• Study the impact of AI on different sectors.</li> <li>• Avoid unnecessary regulation: the use of AI solutions must consider from their conception to the verification of their effects on the reality of citizens, human dignity and the enhancement of human well-being</li> </ul>
AI governance	<ul style="list-style-type: none"> <li>• Establish mechanisms that allow prevention and elimination of biases in data and algorithms.</li> <li>• Stages of machine learning process are traceable and immutable.</li> <li>• Variables in the decision-making of machine learning processes should be transparent, traceable and scrutinized.</li> <li>• Accountability and AI governance structures should be implemented.</li> </ul>
International aspects	<ul style="list-style-type: none"> <li>• Seeks to expand Brazil's presence in the world, either from an economic perspective or an R&amp;D one.</li> <li>• Promote the free flow of knowledge, trade, finance, people, data and communications between countries.</li> <li>• Adopt a proactive and purposeful stance at international discussions, forums, bodies and negotiations between countries and blocs.</li> <li>• Promote international cooperation to facilitate economic integration, valuing the privacy of users and protection of personal data.</li> </ul>
Education	<ul style="list-style-type: none"> <li>• Prepare current and future generations for AI changes and impacts with education based on robotics and computing based on principles and methods used by AI.</li> <li>• AI solutions require human development courses that can teach philosophical and ethical skills for the development and management of AI solutions.</li> <li>• Citizens should have basic digital skills for the different professional activities</li> </ul>

<sup>1</sup> [ebia-summary\\_brazilian\\_4-979\\_2021.pdf \(www.gov.br\)](#) and [BRAZILIAN AI STRATEGY Policy Initiative - OECD.AI](#)



**Box 10: Strong focus on artificial intelligence and IoT (continued)**

Workforce and training	<ul style="list-style-type: none"> <li>• Growing demand for digital skills</li> <li>• Job creation and destruction driven by digital transformation and technology evolution.</li> <li>• Adapting academic curricula to the new requirements of job markets, in particular with regards to advanced digital competencies</li> </ul>
RD&I and entrepreneurship	<ul style="list-style-type: none"> <li>• Interdisciplinary and cross-sector efforts to promote innovation</li> <li>• Focus on technical challenges, as well as on social, legal and ethical implications associated with AI</li> <li>• Enable investments in open data to promote AI R&amp;D and improve interoperability on standards</li> <li>• AI R&amp;D must adopt ethical design approaches to make systems and their outcomes more reliable</li> </ul>
Application in the productive sectors	<ul style="list-style-type: none"> <li>• AI has the potential to make businesses more effective, reduce costs and reduce operational error rates</li> <li>• AI can be used across all sectors</li> <li>• Need to identify the market areas where AI can generate the best results</li> <li>• Good results can give visibility to the country and can attract IT companies, generate jobs and generate AI products for the benefit of public and private sectors</li> </ul>
Application in public governance	<ul style="list-style-type: none"> <li>• AI solutions help improve public services</li> <li>• Public Administration information can be transformed through AI, improving decision-making processes</li> <li>• Public institutions play a key role in promoting adoption of AI</li> <li>• Government has to adopt AI technologies for transparency, efficient interaction with citizens and increase the level of public trust in government</li> </ul>
Public security	<ul style="list-style-type: none"> <li>• AI systems have potential applications in security and defense for the public and private sectors</li> <li>• Measures need to guarantee technological development and protection of personal data</li> <li>• Issue guides and recommendations to assist regulators in applying regulation</li> <li>• Adoption of technical standards for the guidance of industry in the development and implementation of technological solutions</li> <li>• Data protection regulations applied to public safety and national security</li> <li>• Implementation of a regulatory sandbox</li> </ul>

Source: ITU analysis based on the Brazil Artificial Intelligence Strategy<sup>1</sup>

<sup>1</sup> [ebia-summary\\_brazilian\\_4-979\\_2021.pdf \(www.gov.br\)](#) and [BRAZILIAN AI STRATEGY Policy Initiative - OECD.AI](#)

## Spectrum innovation

Another measure Brazil has taken is related to 5G. Brazil decided to think more on long-term commitments instead of maximizing government revenues from auctioning spectrum in the short term<sup>37</sup>. Cost-oriented spectrum pricing for new technologies allows market players to leverage their resources for infrastructure investments. Such investments would bring connectivity to unfavoured regions and will result in more economy and more benefits for the people.

Brazil's 5G auction focused mainly on the prospective investments as the main component to define the winning bidders. Upfront payments were not the main component, and such upfront payments were only 10.3 per cent of the total economic value of the spectrum awarded (USD 8 496.7 millions).<sup>38 39</sup>

Part of the investment commitments for the winners of the 3.5 GHz frequencies are for the Programa Amazônia Integrada e Sustentável ("Pais")<sup>40 41</sup>, a programme for the provision of quality broadband service to the population of the Amazon Region. Pais will take advantage of the rivers in the Amazon Region, which will be used to install a high-capacity fibre optic transport network for the connection of public institutions, such as health units, hospitals, libraries, courts and public security institutions.<sup>42</sup>

Brazil is changing the tide on spectrum auctions and, the decision to make non-monetary compromises an important factor in the auction makes it possible for the investments that come from service providers to be directly focused on telecommunication infrastructure, instead of having money going to the central government budget. It will be a challenge to ensure those investments are made and properly credited. Work has started and has already established a dashboard for the monitoring and control of 5G commitments.<sup>43</sup>

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<sup>37</sup> <https://www.gov.br/anatel/pt-br/assuntos/5G/leilao-de-espectro-5g>

<sup>38</sup> <https://telconomia.com/analisis-resultados-de-la-licitacion-5g-de-brasil/>

<sup>39</sup> <https://www.gov.br/anatel/pt-br/assuntos/noticias/leilao-da-tecnologia-de-quinta-geracao-alcanca-r-47-2-bilhoes>

<sup>40</sup> <https://www.gov.br/casacivil/pt-br/assuntos/noticias/2021/setembro/instituido-o-programa-amazonia-integrada-e-sustentavel>

<sup>41</sup> [Subasta 5G Brasil: en busca del equilibrio \(substack.com\)](https://www.substack.com/p/subasta-5g-brasil-en-busca-del-equilibrio)

<sup>42</sup> <https://www.gov.br/anatel/pt-br/assuntos/noticias/anatel-realiza-leilao-do-5g>

<sup>43</sup> <https://informacoes.anatel.gov.br/paineis/acompanhamento-e-controle/5g>

## 6 Recommendations

Drawing on interviews, consultations, and the findings from the analysis above, the following recommendations have been prepared in view of developing an outcome-oriented collaborative approach to digital regulation that will accelerate digital transformation in Brazil:

### Collaborative governance

A digital economy involves agile and coherent policy and regulation across all economic and government sectors based on consultation and outcome-oriented collaboration, as recognized by global good practices.<sup>44</sup>

In Brazil, collaboration with stakeholders for the creation of regulation through the Participa Mais Brasil platform has given positive results to date, however, as OECD has pointed out, the platform has not been used to its full potential, with a low percentage of feedback from authorities on the results of the public consultation.

- It is recommended that Participa Mais Brasil should be adopted across all authorities and participation from all stakeholders should be further encouraged. This inclusive approach to regulation would have higher acceptance by national stakeholders and ensure smoother and more impactful implementation.

ANATEL has adopted a collaboration approach with a broad basis of government entities and other national institutions such as the congress as well as with the private sector and academia. Collaboration has materialized in a large number of activities and agencies involved, however the rules around and the practice of consulting with stakeholders can be further structured and better integrated in regulatory decisions. ANATEL 2023-2027 Strategic Plan<sup>45</sup> recognizes that technological convergence requires a multidisciplinary and collaborative regulation in which the market agent's voice is needed but such plan does not go into details about how to be collaborative.

- It is recommended that an operational roadmap should be prepared related to the ANATEL 2023-2027 Strategic Plan that identifies the stakeholders involved in the different strategic objectives and goals, their roles, responsibilities and expected delivery measurements. This roadmap would strengthen good governance and create appropriate mechanisms for evidence- and consultation-based decision-making, as recognized in global good practices.<sup>46</sup>

### Transparency of public information

The consolidation of government online presence under a unique domain, [www.gov.br](http://www.gov.br), provides a one-stop-shop for government information allowing better information sharing between citizens, business and government entities. The content found in the respective sections owned by the different agencies or ministries on the current domain, however, seems to be limited. For some, historic information is either not available or very difficult to find while for others, information may not have been updated over a long period of time.

- It is recommended that, as the gov.br domain develops, for comprehensive and timely public information, each entity should handle the development of their portion

<sup>44</sup> ITU.2019. [GSR-19 Best Practice Guidelines 'Fast Forward Connectivity for All'](#)

<sup>45</sup> <https://www.gov.br/anatel/pt-br/assuntos/noticias/anatel-aprova-plano-estrategico-2023-2027>

<sup>46</sup> ITU.2020. [GSR-20 Best Practice Guidelines 'The gold standard for digital regulation'](#)

of the website. This will ensure relevant, timely and outcome-oriented information on government activities is available.

## Monitoring and evaluation of government activities and policy implementation

Monitoring and evaluation of government agency efforts stand out as an important area in need of further attention and improvement. Without a clear understanding of implementation levels, the challenges and changing contexts, regulatory compliance and the achievement of policy goals may be at risk. Today, governments have more data, evidence and evaluation tools at their fingertips than ever before – and using them to guide policy implementation can improve not only public governance outcomes, but also benefits citizens and business alike.

With regards to digital government in particular, Brazil has a transparent compliance framework consisting of E-Digital indicators.<sup>47</sup> Recent action taken in this area have placed the country high on the World Bank GovTech maturity index.<sup>48</sup>

- Nevertheless, to ensure adequate and timely monitoring and evaluation of policy implementation at all levels, it is recommended to update and refine the list of indicators to include the concrete actions taken or the government entity that took such actions. In addition, separate agencies may need to define their own set of implementation and impact indicators and their own monitoring and evaluation frameworks, complementing generic government-wide compliance frameworks. In addition, thorough outcome-oriented reporting would increase transparency and enable verification of what was carried out and the impact generated.

## Cybersecurity

The promotion of the security of the digital infrastructure fosters confidence and trust not only for the sector but for the digital whole ecosystem. ITU GSR-21 Best Practice Guidelines<sup>49</sup> emphasize the importance of national regulator and policy-maker participation in regional and international forums in the areas of data privacy and cybersecurity initiatives, in addition to adopting and implementing national strategies.

- It is recommended that the National Cybersecurity Strategy (E-Ciber) is implemented with clear transparency and accountability mechanisms, as this would allow Brazil to learn from its implementation and further enhance it. E-Ciber is the first unified government attempt to address cybersecurity issues in Brazil and a significant step towards having a holistic and coordinated approach towards cybersecurity in Brazil. The E-Ciber establishes national and international cybersecurity actions to be taken by government and has specific objectives, along with strategic actions that will allow different government entities to work towards a common goal.

While governance of cybersecurity issues is a multistakeholder matter,<sup>50</sup> E-Ciber will help unify goals, criteria, terms and the mindset of government over time.

- E-Ciber has started to be implemented across all sectors, to upgrade the strategy to recognize the role of and involve civil society stakeholders in a meaningful way. A more detailed governance structure is also suggested in the area of cybersecurity to help

<sup>47</sup> <https://www.gov.br/governodigital/pt-br/sisp/indicadores-da-estrategia-de-governo-digital/>

<sup>48</sup> World Bank. 2022. [GovTech Maturity Index, 2022 Update: Trends in Public Sector Digital Transformation. Equitable Growth, Finance and Institutions Insight - Governance](#)

<sup>49</sup> ITU. 2021. [GSR-21 Best Practice Guidelines 'Regulatory uplift for financing digital infrastructure, access and use'](#)

<sup>50</sup> [The Rio Times, An Overview of Cybersecurity Regulations in Brazil](#)

government entities share information and allow for future standards and regulatory measures.<sup>51</sup>

## Spectrum innovation

The 5G auction carried out in 2021 was designed to guarantee an effective use of spectrum through moderate pricing and prioritizing expansion of networks over maximizing of revenues for the government. This approach to spectrum valuation is expected to result in a significant impact on the digital economy, on infrastructure investment and on remote and disadvantaged areas. This design is aligned with global good practices in spectrum innovation as a key to a digital future.<sup>52</sup>

Brazil's innovative model of spectrum valuation, auction, and allocation, which considers long term goals and all stakeholders, is a best practice example for other countries. However, the details of the regulatory consultations and decisions (e.g. the compromises made by the companies that were awarded 5G spectrum) are only available in Portuguese.

- It is recommended that the information on how the auction was carried out, along with the activities that followed, should be available in English and Spanish to allow a much greater number of regulators elsewhere to learn from the ANATEL experience. The impact of this auction on national markets in the mid- to long term can further enhance highly specialized and scarce information sharing on new regulatory approaches and serve as a tool for Brazil to increase its collaboration with other national regulators and policy-makers.<sup>53</sup>

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<sup>51</sup> [The Rio Times, An Overview of Cybersecurity Regulations in Brazil](#)

<sup>52</sup> ITU. 2021. [GSR-21 Best Practice Guidelines 'Regulatory uplift for financing digital infrastructure, access and use'](#)

<sup>53</sup> Idem.

## 7 Conclusions

A series of recent initiatives have sustained progress in Brazil's digital transformation, leveraging G5 collaborative digital regulation to achieve ambitious policy goals. The Federal Government of Brazil has embarked on a path towards the complete digitalization of its services, a wide-ranging process triggered by the COVID-19 pandemic.

- Brazil's mature government structures provide a clear mandate for the different government agencies to work on enabling digital transformation. Key actors in this field such as the Ministry of Communications, the Ministry of Economy and ANATEL have a clear understanding of the future strategic policy direction and what is required for the country to build an inclusive and sustainable digital economy. They are equipped with strategic plans, have engaged in several programs and to a large extent, have clear accountability mechanisms. Other government agencies are following these examples, further accelerating Brazil's transition to a digital economy.
- Investment in infrastructure continues to be an important factor in digital transformation, especially considering the size of Brazil's territory and the significant cost of achieving universal connectivity. Government agencies have also developed strong people-centred approaches, focusing on elements such as consumer protection and data privacy, which are also reflected in the strategic plans such as the ANATEL 2023-2027 Strategic Plan.
- Key digital policies and strategies are in place and implementation has been led by the relevant entities and agencies. A number of complementary policies are also being developed to address gaps and ensure a future-oriented approach to digital challenges and opportunities.<sup>54</sup> In addition, Brazil's digital policies are holistic and cross-sector, and the national digital strategy targets multiple sectors of the economy, such as education and agriculture. Sector-specific plans exist in key areas, such as the National Digital Health Strategy Action, Monitoring and Evaluation Plan<sup>55</sup>.
- Fine-tuning the current approach in collaborative governance, transparency of public information, monitoring and evaluation of policy implementation across agencies and key areas such as cybersecurity can boost the coherence and effectiveness of national policy, governance and regulatory frameworks, and accelerate the achievement of policy goals. In addition, building better visibility at the international level and pro-actively sharing good regulatory practices from Brazil's experience can raise the profile of national government agencies and the country's international standing.

Brazil's digital economy requires adequate tools and processes to stimulate its development. The ongoing digital transformation of public service is well advanced and provides the foundation for its sustainability, witnessed by Brazil's seventh rank in the World Bank GovTech Maturity Index out of 198 countries.<sup>56</sup> Another area in which Brazil takes a positive approach towards a sustainable digital economy is the National Cybersecurity Strategy<sup>57</sup>, which is a first step in government efforts towards creating a safe digital environment.

In addition, Brazil is in the process of becoming an OECD member<sup>58</sup> and to do so, it needs to adhere to 251 normative instruments and carry out a considerable amount of work.<sup>59</sup> The

<sup>54</sup> <https://www.gov.br/governodigital/pt-br/estrategias-e-politicas-digitais>

<sup>55</sup> [https://www.gov.br/saude/pt-br/assuntos/saude-digital/material-de-apoio/copy\\_of\\_PlanodeAoMentoramentoeAvaliaoPAMAdaEstratgiadeSadeDigitalparaoBrasil20192023EnglishVersion.pdf](https://www.gov.br/saude/pt-br/assuntos/saude-digital/material-de-apoio/copy_of_PlanodeAoMentoramentoeAvaliaoPAMAdaEstratgiadeSadeDigitalparaoBrasil20192023EnglishVersion.pdf)

<sup>56</sup> Agência Brasil, [Brazil ranks seven in digital transformation in public service](#)

<sup>57</sup> [DECRETO Nº 10.222, DE 5 DE FEVEREIRO DE 2020 - DECRETO Nº 10.222, DE 5 DE FEVEREIRO DE 2020 - DOU - Imprensa Nacional](#)

<sup>58</sup> <https://www.gov.br/en/government-of-brazil/latest-news/2022/oecd-invites-brazil-to-the-path-towards-formal-membership#:~:text=The%20OECD%20Council%20unanimously%20decided,for%20a%20sound%20economic%20system>.

<sup>59</sup> <https://www.gov.br/casacivil/pt-br/assuntos/noticias/2022/junho/roadmap-oecd-accession-process-brazil-en.pdf>

government will have to juggle multiple priorities and success will require ambition, consistency and strong synergies with national, regional and international stakeholders. A strong focus on collaboration, such as identifying relevant stakeholders, participation throughout the policy and regulatory cycles and holistic cross-sector approaches to policy implementation will enhance the efficiency of government institutions, achieve greater impact of policy implementation and succeed in building a thriving national digital economy.

As in other country reviews from this series, a set of key take-aways from this country review summarize the patterns of Brazil's approach to digital policy and regulation and lessons learnt from the country's digital transformation journey (see Box 11).

### **Box 11: Brazil's digital transformation journey**

*This section is based on qualitative feedback provided by the interviewed national stakeholders on their efforts and progress towards collaborative governance, policy and regulation for the digital transformation. While these insights are not intended as a comprehensive or neutral reference nor as an official position of national stakeholders, they summarize their collective experience and the practical wisdom shared during the interviews.*

#### **The single most difficult challenge in moving towards collaborative regulation**

As a large country with several states and municipalities, the communication between federal, state and local authorities and communication even within state powers is a difficult challenge.

#### **Key counterparts/interlocutors:**

- Casa Civil (Chief of Staff of the Presidency);
- ANATEL (telecommunication regulator);
- Ministry of Communications (telecommunication and broadcasting policy)
- Ministry of Economy (national strategy for digital government)

#### **Three most important actions a regulator can undertake:**

- 1 Reduce bureaucracy required for the installation of infrastructure.
- 2 Strengthen the regulatory impact assessment culture across all government entities and authorities.
- 3 Identify stakeholders and specific areas of the digital economy that require coordination amongst stakeholders.

#### **Single most important lesson learned**

A digital economy mindset amongst all authorities is required.

#### **Advice to regulators engaging on a journey towards digital collaborative regulation**

Connectivity is the basis for a digital economy. Work with local authorities to create infrastructure installation friendly regulation.

Source: ITU, based on stakeholder interviews carried out between January and May 2022

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