Roadmap for a digitalized Brazil
2023-2026 Agenda

Brazil: A driver of digital strategy

2022 marks 25 years since the creation of Brazil's regulatory framework for the telecommunications sector. Since its privatisation, the mobile industry has made countless contributions[1] to the economy including investment of approximately BRL 1 trillion (4% of its GDP), creation of an average of 500,000 jobs annually, the disbursement of BRL 123 billion for sector funds, and the payment of local and federal taxes. We must celebrate this framework, but we should also discuss strategies to update Brazil's telecommunications public policy with a focus on a new digital and connected world.

In the last few years, Brazil has made significant progress on policy, positioning it at the forefront of digital development and helping it reduce inequalities in communications access. This is evidenced by the fact that 10 out of all 14 recommended proposals[2] by the mobile industry to candidates running for the president in 2018 have been fully achieved or partially discussed in the last 4 years.

Such developments include an updated telecommunications regulatory framework through Law N° 13,879/2019 and a 5G auction non-revenue oriented and focused on bridging the digital gap. Some local councils made efforts to update regional laws on infrastructure deployments, such as passing Law N° 14,424/2022, which governs "administrative silence", and amending Decree N° 10,480/2020, which regulated the Antennas General Law. Other achievements include updating the Universal Fund for Telecommunications Services (FUST) Law (N° 14,109/2020) by creating a Board Council for the use of resources and the policy acknowledgment of the essential[3] nature of telecommunications services with the reduction of ICMS (local tax).

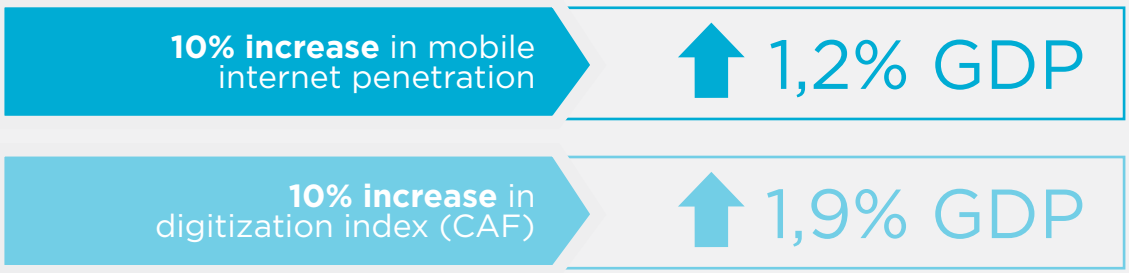
Digital infrastructure needs to be resilient and sustainable to support the growing traffic demand by users, especially during the upcoming 5G era in the country. During the COVID-19 pandemic, we were constantly reminded of the importance of connectivity. It is no coincidence that authorities have considered telecommunications as an essential service for the continuity of work, remote education, telehealth, entertainment, free access to government apps and other activities. The telecommunications sector has made great efforts to remain operational, trying to give users the best possible experience, supporting a 12% increase in the use of fixed broadband and a 10% increase in mobile networks between 2020 and 2021 because of a sudden change in consumer patterns[4].

Investment in the sustainability and expansion of mobile networks needs to be at the top of the public policy agenda to resume the country's growth after the pandemic. This is why it will be imperative to ensure that this sector has the necessary legal certainty to invest in the digital transformation. Building a Brazil 4.0 has the potential to boost the Brazilian economy in the next few years. A study by the United Nations Development Programme (UNDP) and the Ministry of Economy shows that 5G alone will be able to deliver an annual benefit of BRL 590 billion[5] to the Brazilian economy.

A 10% increase in mobile internet penetration contributes to a 1.2% rise in GDP, while a 10% increase in the digitization of a country can deliver a 1.9% rise in GDP.[6]

Increase in GDP

Source: ITU



1. Sector data. Conexis. 2021.
2. What should the public policy of the next president include, to integrate Brazil into the digital economy? GSMA. 2018.
3. Pursuant to a 2021 Federal Supreme Court (STF) decision.
4. Report on the Impact of the COVID-19 Pandemic on the Telecommunications Sector in Brazil, 2nd Edition, Anatel. 2021.
5. Report on Brazil's 5G Ecosystem. Deloitte, Ministry of Economy and UNDP. 2022.
6. The economic contribution of broadband, digitisation and ICT regulation. ITU. 2019

In light of the above-mentioned changes, Brazil has proven its commitment to this digital agenda. The next government should further strengthen the inclusion strategy and lead the way for the country's economic and social development. Bringing this public policy agenda to the center of discussions will result in greater investment and employment opportunities, an increase in GDP, and a rise in competition, innovation and development.

In order to face the challenge of expanding connectivity, it is essential for policymakers and the private sector to cooperate and work together to build affordable and sustainable infrastructure. Therefore, the telecommunications industry provides the following recommendations for expanding Brazil's digital economy.

Future-proof policies

Designing future-proof public policies and regulations will promote investment and create new opportunities for growth and innovation. This can be achieved through dialogue among the Executive and Legislative Branches and the private sector, with enough flexibility to avoid becoming obsolete in the short term[7].

The proposal for modern regulation needs to consider the challenging dynamics of the digital ecosystem. To accomplish this mission, it is necessary to reflect on the rules to which the Brazilian telecommunications sector is subject when compared to other equivalent services. All constituents in the internet value chain[8] must have regulatory symmetry to allow for innovative businesses with equivalent regulatory burdens.

A comprehensive public policy framework should reflect the dynamics of the digital environment, while reducing the costs of and lowering the barriers to network deployment. Future-proof regulation is necessary for markets to avoid becoming distorted and harming competition, slowing down innovation or depriving consumers of the benefits brought about by technological progress[9].

There is a constant need for technological updates and the expansion of network capacity and coverage. In order to meet the demands, the ecosystem requires ongoing large-scale investment. Debates on how to encourage investment are being held all over the world and Brazil should be no exception in order to achieve the listed objectives in a fair, balanced and sustainable manner.

Understanding the impact of regulation is also extremely relevant. To ensure positive effects, some tools for regulatory improvement should be established, such as the Regulatory Impact Analysis (RIA), including in relation to amendments of decrees and bills submitted before the National Congress, and the Regulatory Result Assessment (RRA). With these mechanisms, the cost-effectiveness of a new regulation can be better assessed to ensure its deployment is effective.

New obligations should also include preliminary analyses of regulatory impact, especially when they stem from bilateral or multilateral agreements. Such obligations create new costs for the entire telecommunication chain. Policies that are ill-timed and focused on the short term without consulting the impacted sectors, risk having a negative impact on both the sustainability of the industry and consumers.

SPECIFIC RECOMMENDATIONS

1. Promoting regulatory symmetry for the sustainability of services and the promotion of innovation.
2. Establishing tools for regulatory improvement, such as the Regulatory Impact Analysis (RIA) and the Regulatory Result Assessment (RRA) to understand the impact of regulation.
3. Engaging the sector in prior discussions in relation to agreements between Brazil and other countries involving telecommunications.

7. Mobile Economy in Latin America 2020, GSMA.
8. Internet Value Chain. GSMA. 2022.
9. Mobile Policy Handbook, Business Environment. GSMA. 2022.

Tax rationalization

The increase in GDP, productivity and the creation of jobs largely rely on tax policy encouraging investment for post-pandemic economic recovery. There are some principles contributing to an effective tax system, which are based on recommendations by the World Bank[10], the International Monetary Fund (IMF)[11], the International Telecommunication Union (ITU)[12] and the Organization for Economic Co-operation and Development (OECD)[13]. Such principles attempt to minimize distortions caused by tax policy[14].

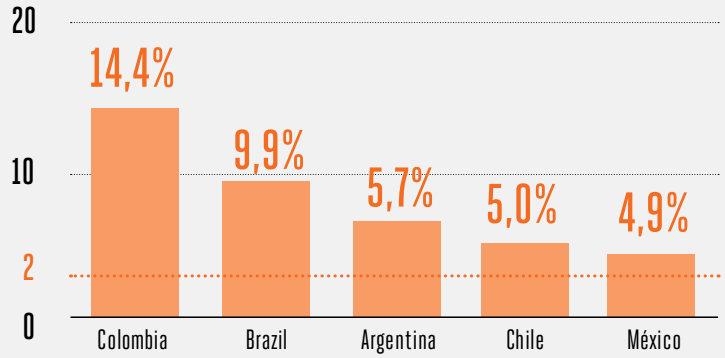
In 2020, the OECD[15] carried out a sector assessment that included some recommendations for Brazil, including overhauling the taxation, fees and tariffs framework with the purpose of reducing inefficiencies. The assessment also suggests that contributions to connectivity funds be used for further development of the digital economy rather than their original purposes, such as financing the public deficit.

In a recent mapping, GSMA[16] has identified the Total Cost of Mobile Ownership (TCMO) in Brazil. This cost is an inhibitor of adoption, mainly for low-income populations, and is also high as a result of heavy tax burdens imposed on users. The TCMO as a proportion of monthly income for the two lowest income quintiles in Brazil is 10%; well in excess of the UN target benchmark of 2%. Mobile tax reform should ensure taxes are not an inhibitor of adoption of mobile services by those with low incomes.

It is extremely important for the next government to adopt a comprehensive and simplifying tax reform, aiming at greater symmetry among all players in the digital economy and prioritizing investment in infrastructure.

Redressing the distortions in Brazil's tax system can lead to an increase in investment and competition in the domestic industry. Through tax reform, the Government can simplify and restore the balance of taxation, thus creating a better environment for businesses.

TCMO as a proportion of monthly income for the lowest 20% of the income distribution (1GB data basket), selected countries



The UN target of 2% is based on gross national income per capita, a measure of the average income of the total population. When considering specific income groups, therefore, it should be taken as a benchmark only. Lower income groups having a TCMO or tariff cost above 2% does not mean that mobile usage is unaffordable by the UN's measure.

Source: Mobile Taxation in Brazil, GSMA, 2020.

SPECIFIC RECOMMENDATIONS

4. Reducing taxes on access to connectivity.
5. Promoting tax reform with a focus on investment sustainability.
6. Creating incentives for investment in 5G infrastructure, such as accelerated tax depreciation/amortization and the elimination of PIS/COFINS taxes for the entire chain.

10. Introduction to Tax Policy Design and Development, Bird and Zolt, 2003.
11. Taxing Principles. IMF. 2014.
12. Taxing telecommunication/ICT services: an overview. ITU. 2013.
13. "Fundamental principles of taxation" in Addressing the Tax Challenges of the Digital Economy. OECD. 2014.
14. Mobile Economy in Latin America 2020, GSMA.
15. OECD Telecommunication and Broadcasting Review of Brazil 2020. OECD.
16. Mobile Taxation in Brazil. GSMA. 2020.

Network development

Public policy for the development of the mobile sector must consider a long-term network investment strategy. Less bureaucratic and expensive conditions need to be created for infrastructure deployment in Brazilian municipalities, within the context of joint work between federal authorities and under the Antennas legal framework. Local fees that create barriers to deployment need to be revised as well.

The right allocation of Universal Fund for Telecommunications Services (FUST) resources by its Board Council has a great importance. There needs to be ongoing allocation of resources targeted at closing the digital gap, so as to avoid contingencies in the federal budget. FUST resources must be managed in a transparent and organized manner. Their allocation must be competitive, technologically neutral and should aim to have the best impact possible[17]. The following practices are recommended: (a) clear targets that ensure effective and timely disbursement of funds; (b) independent fund structure; (c) administered effectively to avoid excessively bureaucratic structures or insufficient oversight; (d) analysis of investment gaps and the impact of fees on affordability and adoption in order to set appropriate contribution fees; (e) deepening and promoting the development of a pay-or-play model that enables mobile operators to choose to make financial contributions to implement projects aligned with the fund's goals; and (f) making sure investment in coverage is efficiently made.

Moreover, the telecommunications industry lacks an intersectoral framework when it comes to infrastructure sharing. The General Telecommunications Law together with the Antennas General Law and its regulatory decree have established guidelines on matters such as infrastructure sharing, administrative silence, non-onerous right of way and dig-once policies. These provisions encourage, for instance, taking advantage of ongoing public works (e.g., highways, gas and oil pipelines) to deploy telecommunications infrastructure while optimizing resources and reducing costs. National regulatory frameworks should facilitate voluntary infrastructure-sharing arrangements[18].

The sector calls for a national critical infrastructure security policy to prevent robbery and theft of network equipment, which results in everyday damage to consumers. Crimes against digital infrastructure have had severe impacts on both the quality and continuity of services.

Similarly, it is crucial for the Government to ensure the security of investments made by the companies, such as avoiding changes to the plans of connectivity expansion in the the last radiofrequencies auction.

SPECIFIC RECOMMENDATIONS

7. Harmonizing public policy with Antennas General Law (Law N° 13,116/15) and collaborating with local governments in the development of policies to simplify, update and reduce the bureaucracy of network deployment in municipalities.
8. Constantly planning, implementing and using the resources from the Universal Fund for Telecommunications Services (FUST) in efforts to reduce the digital gap.
9. Formulating a security public policy in co-ordination with the private sector to mitigate robbery and theft of telecommunications equipments.
10. Developing an intersectoral infrastructure framework in co-ordination with the private sector.
11. Ensuring the security of investment in radiofrequencies purchased in auctions for connectivity expansion.

17. Mobile Policy Handbook, Universal Service Funds. GSMA. 2022.
18. Mobile Policy Handbook, Infrastructure Sharing. GSMA. 2022.

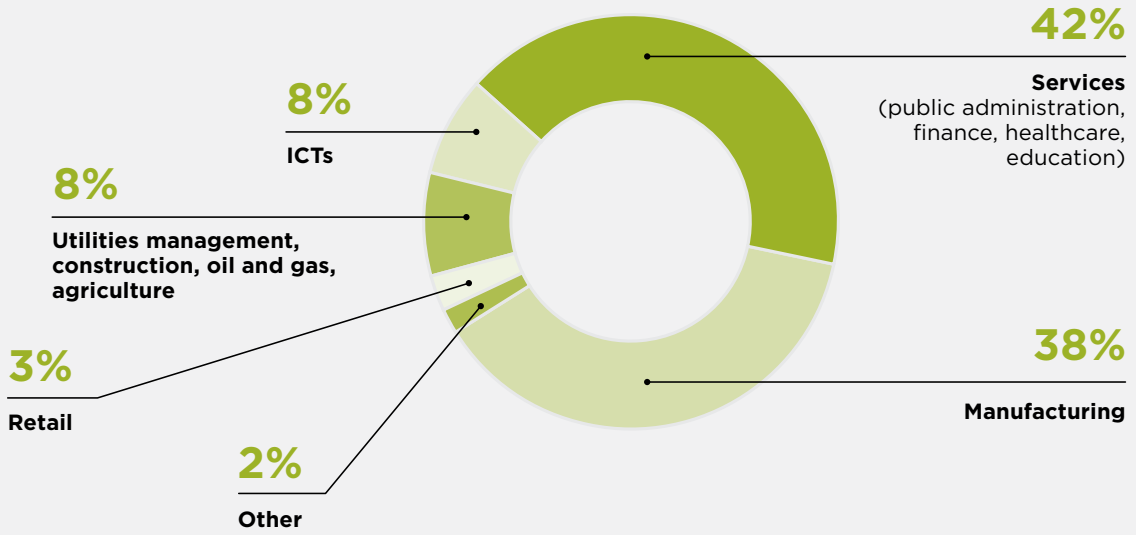
Training and expansion of 5G productivity

It is imperative for the public and private sectors to work together on the development of the skills necessary for the future job market. With the boom of 5G in the business sector, there will be an increasing demand for professional workers in the operation of both industry verticals (e.g., mining, automobile, etc.) and other sectors (e.g., agribusiness, medicine, education and so on).

There is a growing need for a state policy that ensures research, development and innovation of Information and Communication Technologies (ICTs). Training and talent development focused on future competitiveness will result in an increase in productivity, gains from economies of scale, the development of the global technology value chain and further investment.

The crosscutting digitization of government services can potentially promote digital citizenship, while fostering the demand for mobile services. FUST resources could be channeled into this type of policy. Another strategy could be the cooperation with the private sector in relation to sponsored access to government services and access to educational platforms with a fair pay for services.

5G is expected to enable a new generation of applications and to benefit the global economy by more than USD 960 billion in 2030, adding value in several sectors



Source: The Mobile Economy 2022, GSMA.

SPECIFIC RECOMMENDATIONS

12. Speeding up and expanding the allocation of FUST resources to efforts to reduce the digital gap, including educational initiatives and the promotion of mobile services use.
13. Fostering the digitization of production sectors, especially in the mobile, agribusiness and logistics industries. Developing digital skills.
14. Thoroughly designing an electronic government strategy, encouraging general user knowledge and creating incentives for sponsored access to services.

Specific recommendations

1. Promoting regulatory symmetry for the sustainability of services and the promotion of innovation.

2. Establishing tools for regulatory improvement, such as the Regulatory Impact Analysis (RIA) and the Regulatory Result Assessment (RRA) to understand the impact of regulation.

3. Engaging the sector in prior discussions in relation to agreements between Brazil and other countries involving telecommunications.

4. Reducing taxes on access to connectivity.

5. Promoting tax reform with a focus on investment sustainability.

6. Creating incentives for investment in 5G infrastructure, such as accelerated tax depreciation/ amortization and the elimination of PIS/COFINS taxes for the entire chain.

7. Harmonizing public policy with the Antennas General Law (Law N° 13,116/15) and collaborating with local governments in the development of policies to simplify, update and reduce the bureaucracy of network deployment in municipalities.

8. Constantly planning, implementing and using FUST resources in efforts to reduce the digital gap.

9. Formulating a security public policy in co-ordination with the private sector to mitigate robbery and theft of telecommunications equipment.

10. Developing an intersectoral infrastructure framework in co-ordination with the private sector.

11. Ensuring the security of investment in radio frequencies purchased in auctions for connectivity expansion.

12. Speeding up and expanding the release of FUST resources to efforts to reduce the digital gap, including educational initiatives and the promotion of mobile services use.

13. Fostering the digitization of production sectors, especially in the mobile, agribusiness and logistics industries. Developing digital skills.

14. Thoroughly designing an electronic government strategy, encouraging general user knowledge and creating incentives for sponsored access to services.

Brazil in numbers: toward a connected society

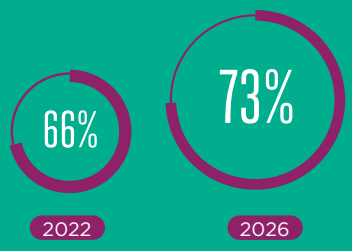
Source: GSMA Intelligence

Mobile Internet subscribers

2022
≈154 million

2026
≈164 million

Mobile Internet subscriber penetration



Investment by operators (BRL)[19]

› Last 4 years

≈R$ 30 billion/year

5G (%) › 2022 / 2026

5G

2022
≈4 million

2026
≈87 million

In 2022

86% 4G connections

1% 5G connections

By 2026

28% 5G connections

With the ongoing expansion of the mobile ecosystem and the increase in productivity, the economic contribution to mobile in Latin America will exceed USD 30 billion by 2025.

19. Sector Data, Conexis, 2022.

GSMA Latin America
Av. Del Libertador 6810 Piso 15
(Edificio Square Libertador)
C1429BMO, Buenos Aires, Argentina
Teléfono: +54 11 5367-5400
Mail: Infolatam@gsma.com
Sitio web: gsmala.com