

Costa Rica
2030: Policies for
the Digital
(R)evolution

October 2025





The GSMA is a global organisation unifying the mobile ecosystem to discover, develop and deliver innovation foundational to positive business environments and societal change. Our vision is to unlock the full power of connectivity so that people, industry and society thrive. Representing mobile operators and organisations across the mobile ecosystem and adjacent industries, the GSMA delivers for its members across three broad pillars: Connectivity for Good, Industry Services and Solutions, and Outreach. This activity includes advancing policy, tackling today's biggest societal challenges, underpinning the technology and interoperability that make mobile work and providing the world's largest platform to convene the mobile ecosystem at the MWC and M360 series of events.

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Costa Rica 2030: Policies for the Digital (R)evolution

Mobile connectivity has become the most effective tool for democratizing access to the opportunities of the digital world. Four years ago, the mobile industry in Costa Rica came together through the GSMA, a global association representing mobile operators¹ and companies in the digital ecosystem, to outline a series of proposals for the incoming government. On this occasion, the mobile industry has re-connected to **share the progress of the last few years and highlight what is still expected from public policy decisions to expand and consolidate an enabling environment for the country's digital transformation.**

For the next step, it is essential that authorities recognize the telecommunications sector as an essential service provider —such as healthcare, education, productivity, financial inclusion, and others—, a pillar of any national development strategy.

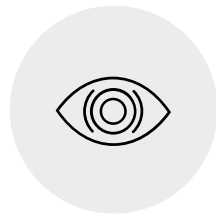
The efforts made by decision-makers in Costa Rica to advance the digitalization process in recent years are remarkable. The country has become an emerging leader in Latin America, as a result of a strategic alliance between the public and private sectors. Mobile operators have undoubtedly assumed an active role in the investment in and deployment of infrastructure. Technological evolution with the expansion of 4G networks and early deployments of 5G has not only contributed to closing connectivity gaps, but has enabled more than 4 million active mobile connections and a 9% contribution to the GDP in the second quarter of 2025².

1. Our members in Costa Rica include: Claro, ICE and Liberty.
2. Source: GSMA Intelligence.

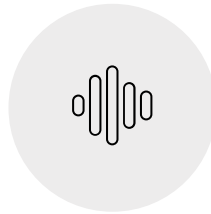
It is essential for authorities to recognize the telecommunications sector as an essential service provider, a pillar of any national development strategy.

This document invites us to **reflect on the regulatory framework and the current situation of the telecommunications market**, as well as look toward the future, to **promote public policies that drive the sustainability of investments and an industry capable of developing and strengthening the necessary infrastructure for a more connected and inclusive Costa Rica.**

Below is a roadmap based on four strategic pillars and nine specific recommendations for Costa Rica to become a digital leader in the region.



Policies for the Digital (R)evolution



Spectrum as the backbone of connectivity



Decisions to foster digital inclusion



Future economic development

Costa Rica’s digital future is not a given, but a result of informed, coordinated and consistent decisions. To move toward that future, it is fundamental for telecommunications networks to be modern, robust and accessible to all. Achieving this involves designing policies that promote investment and respond to the sector’s current context.



Costa Rican Digital Landscape: Developments, Gaps, and Challenges

The digital transformation roadmap for Costa Rica requires legal certainty, an environment that promotes investment, and the elimination of asymmetries.

In Latin America, mobile operators play a strategic role in expanding connectivity and access to essential services such as education, healthcare, and emergency care. Their commitment to innovation is reflected in the promotion of smart city initiatives, where technologies like artificial intelligence (AI) and the Internet of Things (IoT) enable resource optimization and improved urban efficiency. This joint effort not only strengthens the digital ecosystem but also contributes to the economic and social development of the region.

In the last four years, Costa Rica has achieved a steady increase in 4G coverage, reaching 98% of the population in 2025. **However, there is still a significant challenge in closing the usage gap (demand), i.e., people who are covered by services but do not access them due to various barriers.**

The analysis shows that, in recent years, Costa Rica has made significant progress in digitalization, driven by the collaboration between the public and private sectors. This coordination has allowed for the creation of spaces for dialogue, resulting in good practices recognized at the regional level. Among recent milestones, the enactment of Law No. 10.216, “*to incentivize and promote the construction of telecommunications infrastructure in Costa Rica,*” stands out, along with its technical regulation, which establishes procedures and specifications for the development of digital infrastructure. Similarly, Costa Rica’s 5G spectrum auction, based on a non-exclusively revenue-driven model, is a step toward a more efficient and development-oriented allocation policy.

To extend the reach of connectivity across Costa Rica, and thus boost economic development, authorities need to create an environment that guarantees legal certainty, promotes sustained investment, and eliminates barriers and asymmetries that hinder the sustainable growth of digital transformation.

This document is meant to serve as a tool for new authorities to continue driving an inclusive, competitive and resilient digital ecosystem that is capable of responding to current challenges and building a better future for society.

01.

Policies for the Digital (R)evolution of Costa Rica

1. Adopting regulations based on general principles and innovative tools

For a sustainable digital transformation, Costa Rica needs to **promote public policies based on general principles that have specific objectives and are designed with an ex-post vision**. This approach prevents regulation from becoming a barrier, and allows it to act as an enabler of innovation, efficiency, and legal certainty.

Prioritizing principles such as technology neutrality, proportionality, and minimal intervention can create a flexible environment that can adapt to a changing digital ecosystem without losing coherence or predictability. This approach will be essential to attract investment, foster competition, and ensure that public decisions respond to the real needs of the market and citizens, thus strengthening the State's role as a facilitator of digital development.

Ex-post regulation fosters competition and digital development.

More efficient regulations, based on principles such as minimal intervention and proportionality, are widely used in mature markets. Authorities should intervene only when market conditions alone do not guarantee effective competition. They should also avoid imposing obligations whose cost exceeds the expected benefits. **In this sense, it is important to create spaces for self-regulation derived from effective competition, and to promote the use of regulatory sandboxes to test innovative solutions in controlled environments.**

However, some recent developments, such as the End User Protection Regime (RPUF) regulation, have caused effects that are inconsistent with regulatory purposes. This type of regulation tends to transfer operational obligations to operators in an unbalanced manner, such as the registration of prepaid lines. To avoid this type of distortion, it is necessary to **systematically incorporate cost-benefit analyses when developing regulatory obligations, ensuring that the proposed measures create adequate incentives and that regulatory compliance is more beneficial than non-compliance.** This will help achieve a regulatory environment that supports the transition to a competitive and sustainable market.

2. Conducting Regulatory Impact Assessments to design evidence-based regulation

Implementing Regulatory Impact Assessments (RIAs) represents a key opportunity to strengthen regulatory quality in the digital ecosystem. This tool, promoted by international entities such as the Organisation for Economic Co-operation and Development (OECD), allows for the systematic evaluation of the effectiveness, efficiency, and relevance of each regulation before its adoption, ensuring that public decisions are supported by evidence and cost-benefit analyses.

This process would contribute to improving transparency, reducing unnecessary burdens for businesses, and fostering a more predictable environment for investments. Furthermore, it would enable Costa Rica to align with international good practices by adopting a modern, inclusive, and sustainable digital policy for development.

02.

Spectrum as the backbone of connectivity

3. Designing and publishing a spectrum roadmap to strengthen effective planning

Decisions on planning and publishing public policies for spectrum use and management will be key to unlocking the socio-economic benefits of digital transformation. Fundamental considerations include **long-term spectrum roadmaps, the availability of strategic bands to respond to the growing demand from users, costs that reflect the market reality, and a constant dialogue with the private sector.**

Establishing a long-term spectrum roadmap favors the transformative potential of mobile technologies for Costa Rican citizens.

Mid-bands are essential to provide the capacity needed by various 5G applications. By securing the 3.5 GHz range for 5G, Costa Rica made a decision in line with the international development of mobile telecommunications, but that is not enough: it is estimated that 5G will need 2 GHz of mid-band spectrum over the next decade to meet the IMT-2020 (5G) specifications of the International Telecommunication Union (ITU)³. To meet demand, additional bands such as the 6 GHz band will also be required. In addition, 5G also requires spectrum in low (<1 GHz)⁴ and high bands (>24 GHz)⁵. These support different use cases and are critical to 5G success.

Only countries with robust spectrum policies will be able to fully unlock the transformative potential of new technologies and position themselves as leaders in the evolving digital economy.

Technological advancements are creating opportunities to extend mobile coverage beyond terrestrial limits through direct-to-device (D2D) satellite connectivity. This technology can enhance national resilience and provide supplementary coverage in rural, mountainous, and coastal areas. However, its success will depend on a balanced regulatory approach that fosters innovation without compromising the continuity of existing mobile services. In line with the decisions adopted by the ITU at WRC-27, Costa Rica can prepare for this new phase by incorporating guidelines into its spectrum planning that enable commercial agreements between operators and satellite providers, while ensuring protection against interference with terrestrial mobile services.

3. 5G mid-band spectrum needs - Vision 2030. GSMA, 2021.

4. Socio-economic benefits of 5G - The importance of low-band spectrum. GSMA, 2023.

5. Vision 2030: mmWave spectrum needs. GSMA, 2022.

03.

Decisions to foster digital inclusion

4. Understanding the usage gap to achieve meaningful connectivity

Only 2% of Costa Ricans are not covered by mobile connectivity, but 82% of them are effectively connected to mobile internet (over 4 million people). **This means 16% of the population does not access the benefits of the internet despite being covered.**

This is the so-called usage gap and is closely linked to factors such as device affordability⁶ and a lack of digital skills.

According to a global GSMA report⁷, the cost of a basic internet-enabled device represents up to 41.3% of the monthly GDP per capita for the lowest-income 20% of the population in Latin America, which highlights

6. The International Telecommunication Union (ITU) establishes a goal that the total cost of mobile ownership (TCMO) does not exceed 2% of the user's monthly income level.

7. The State of Mobile Internet Connectivity. GSMA, 2025.

the urgent need for public policies that address this dimension of digital exclusion.

To achieve universal connectivity, it will be key to incentivize demand through digital literacy programs and create mechanisms that fully or partially cover the cost of devices and services for the lowest-income sectors. According to a regional GSMA report, achieving 99% coverage would require an estimated investment of USD 2,000-3,500 per additional person covered, and more than USD 20,000 per person in the most remote areas.⁸

Developing a public policy that seeks to close the usage gap, understanding its causes, will be a vital step toward meaningful connectivity for the population. Supporting the development of digital skills and rethinking short-term fiscal policies will be fundamental to expanding demand for mobile services.

5. Evaluating the effectiveness of tools such as the National Telecommunications Fund (FONATEL)

The Universal Service Funds (USFs) have traditionally been public policy tools chosen by some countries in the region, with the purpose of closing the connectivity gap. However, they have not proven to be an effective mechanism for achieving it. An econometric analysis⁹ by the United Nations indicates that the cumulative effects of the USFs on internet connectivity are either null or even counterproductive (i.e., the USFs reduce connectivity).

The Universal Service Funds are in need of urgent reforms, regarding both their financing model and their investment selection and execution, as well as the assessment of final results of the projects supported by Funds resources¹⁰.

A comprehensive review of the FONATEL model would strengthen its effectiveness and align it with the current needs for connectivity and digital inclusion. This implies rethinking its funding mechanisms, as well as establishing a framework of indicators to evaluate not only budgetary execution, but also the real impact of its projects on targeted communities. Success must be measured through concrete results, such as improvements in access, service quality, and the closing of digital gaps.

8. Brechas de Conectividad en América Latina, GSMA (2023), link

9. "The Impact of Universal Service Funds on Fixed-Broadband Deployment and Internet Adoption in Asia and the Pacific" Asia-Pacific Information Superhighway (AP-IS) Working Paper Series

10. Brechas de Conectividad en América Latina, GSMA (2023), link.

04.

Future economic development

6. Analyzing digital ecosystem asymmetries to promote responsible network use

Between 2016 and 2023, mobile data traffic in Latin America increased 14-fold¹¹. Between 2024 and 2030, traffic will triple, which means that each year, the volume of mobile traffic will surpass that of the previous year. Exponential growth in traffic jeopardizes the sustainability of the current network funding model that supports connectivity. Only three companies—Meta, Alphabet and TikTok—generated 80% of the total download traffic in Costa Rica in 2024, with Meta alone accounting for 45%.

Robust and reliable mobile networks are the backbone of economic growth

11. Uso de redes móviles en América Latina. Tráfico de datos en la actualidad y proyecciones a 2030. GSMA, 2024.

The digital future is not a guaranteed destination. It is vital to create the appropriate conditions for sustained investment.

and digital inclusion. To guarantee the digital future, it is vital to create the appropriate conditions for investment in infrastructure and the efficient use of telecommunications infrastructure.

Due to the growth in data traffic, the costs of network operators increase year after year, but revenues have been stagnant or falling for several years. In contrast, that small number of large companies generating most of the traffic develop their business models with great success and profitability, without participating in the efforts to strengthen the networks on which their services are based and without having incentives to use the networks efficiently.

On top of this, there are other asymmetries, including regulatory, fiscal, and commercial disparities, as well as the problem of high costs for spectrum use. Under these unequal conditions, the funding model for infrastructure networks is neither sustainable nor scalable, which jeopardizes the ability to seize the opportunities of the digital world. **In this sense, there should be debates on efficient network use, so that the links in the internet value chain that benefit from the intensive use of digital infrastructure can contribute to its sustainability.**

Starting the conversation about the most efficient mechanism to generate the proper incentives for efficient network use may involve public consultations, multisectoral round tables, and analyzing the dynamics of traffic usage by large generators. This will allow for the necessary measures to promote efficient use and enhance the sustainability of investments in Costa Rica.

7. Fostering an environment that enables the expansion of new technologies such as artificial intelligence

In the last few years, operators have been intensely searching for solutions that improve their operational efficiency, enable them to respond to increasingly sophisticated threats, and live up to their costumers' growing expectations. In this context, the artificial intelligence (AI) landscape continues to evolve rapidly, driven by innovations from operators, network providers, cloud service companies, and digital ecosystem players in general.

The National Artificial Intelligence Strategy 2024-2027, designed by the

Ministry of Science, Innovation, Technology and Telecommunications (MICITT), marks a milestone in the digital transformation of Costa Rica and positions the country as a regional leader in the responsible use of AI. This strategy establishes an ethical framework to promote the adoption of artificial intelligence in a safe, inclusive, and sustainable way, aligned with the Sustainable Development Goals. Among its lines of action, the creation of a regulatory sandbox, the development of a National Center of Excellence in AI, and policies that foster innovation, equality, and personal data protection stand out.

The National Strategy on Artificial Intelligence of Costa Rica (ENIA-CR) has the potential to start conversations that enable an environment favoring investment, technological development, and improved public services. Promoting an AI transformation that benefits society and the economy requires an environment of flexible regulations, shared ethical principles, and public-private collaboration that guarantees both innovation and its responsible development and use.

8.

Strengthening the national cybersecurity and critical infrastructure strategy

Digital ecosystem players should work with authorities to jointly respond effectively to malicious attacks targeting mobile networks and devices, and to identify the perpetrators. **This collaboration can be strengthened through participation in security incident response teams to detect vulnerabilities and enhance the reaction capacity to critical incidents.**

Cybersecurity regulation should be applied consistently to all players in the digital value chain, maintaining technology and service neutrality. It is key to preserve the multi-stakeholder internet governance model, enabling its evolution without compromising innovation or security. **A balanced and collaborative approach will be essential to create a resilient and reliable digital environment prepared for future challenges.**

With this in mind, mobile network operators should follow these fundamental premises¹²: ensuring the security of the network infrastructure they operate and control; promoting partnerships between the public and private sectors to minimize the risk of hacking or malicious network use through global and coordinated strategies. In

12. Seguridad y privacidad a lo largo del ecosistema móvil. GSMA, 2023.

this sense, it is essential to clearly define which part of the infrastructure is the responsibility of operators and where the boundaries with other services or infrastructure lie, to properly allocate responsibilities.

9.

Enabling a green and sustainable future

The mobile industry is adopting sustainable practices that reinforce its commitment to environmental development¹³. One strategic priority is to increase the use of renewable energy, especially in remote areas where the electricity grid is limited. Operators have begun to integrate solutions such as solar panels in data centers, efficient cooling systems, and clean energy purchase agreements. These initiatives not only reduce the environmental impact but also improve operational efficiency and reduce costs.

The results are evident¹⁴: between 2019 and 2022, emissions from operators in the region decreased by 30%, while mobile data traffic tripled and connections increased by 8%. During that time, electricity use per connection fell by 4%, while the energy needed to transmit a byte of data fell by 50%.

To attain the net-zero emissions goal, operators, providers, and governments must voluntarily work together, adhering to climate policies with common objectives, sufficient incentives, and regulatory frameworks that encourage investment in networks and clean energy.

13. Mobile Net Zero: State of the Industry on Climate Action. GSMA, 2025.

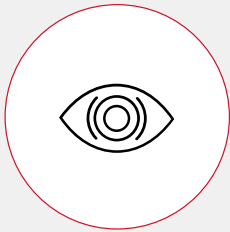
14. Cero emisiones netas en el sector móvil: América Latina La acción por el clima en la región. GSMA, 2024.

The next Costa Rican administration has a strategic opportunity to strengthen national connectivity by continuing policies that proved to be successful in achieving the proposed objectives and by reviewing obsolete ones that require updates to drive digital transformation. This process should be carried out in close dialogue with the private sector, to maximize benefits for all of society and close the digital gaps that still persist.

It will be key to have a modern, efficient, and adaptable institutional framework in place for the future digital ecosystem, which allows for swift response to the technological and social challenges of the next decade. The mobile industry can be a strategic ally for a more connected and inclusive Costa Rica.

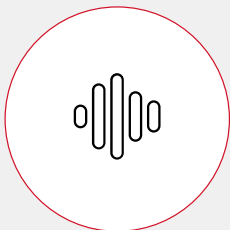


Recommendations for a digital and connected **Costa Rica**



Policies for the Digital (R)evolution of Costa Rica

- 1.** Adopting a regulation based on general principles and innovative tools.
- 2.** Conducting Regulatory Impact Assessments to design evidence-based regulation.



Spectrum as the backbone of connectivity

- 3.** Designing and publishing a spectrum roadmap to strengthen effective planning.



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Future economic development

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- 7.** Fostering an environment that enables the expansion of new technologies such as artificial intelligence.
- 8.** Strengthening the national cybersecurity and critical infrastructure strategy.
- 9.** Enabling a green and sustainable future.

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