Panama: ICT SECTOR FICHE

1. Sector overview

The ICT market in Panama reached an estimated US$1,647 million in 2018 and, even though multinationals in the sector such as Dell, CrimsonLogic and others have a presence in this country, the local industry is practically based on the implementation of solutions and development of home delivery and collaborative economy applications.[1]

There are Panamanian sectors with needs for technological solutions such as:

- Logistics: there is a need to modernize the postal system, port infrastructure to connect it with telephone and internet penetration, as well as needs in transportation companies that could be leveraged in the supply of solutions.
- Banking: the dynamic of the sector (use of digital technologies, entry of fintech and mergers and acquisitions) represent opportunities for the demand of ICT solutions that add value to its proposal and encourage the financial inclusion of the unbanked population.
- Construction: as it seeks to recover growth from previous years, opportunities could be explored with the use of cutting-edge technology and solutions in automation, traceability, planning, costing, visualization, complementary applications compatible with Autodesk.
- Retail: e-commerce has put pressure on the sector and statistics on pre-purchase internet searches by consumers could represent an opportunity for digital marketing solutions, web development, e-commerce platforms and big data.
- Legal services, insurance, private healthcare, agriculture, telecommunications, and education. In addition, other cross-cutting solutions with opportunities are digital invoicing, 4.0 solutions (data mining, cybersecurity), digital marketing and agile methodologies.

Internet access

One of the key factors contributing to the growth of internet access in Panama is the government's commitment to investing in the country's digital infrastructure. In recent years, the Panamanian government has implemented various initiatives aimed at expanding internet coverage and
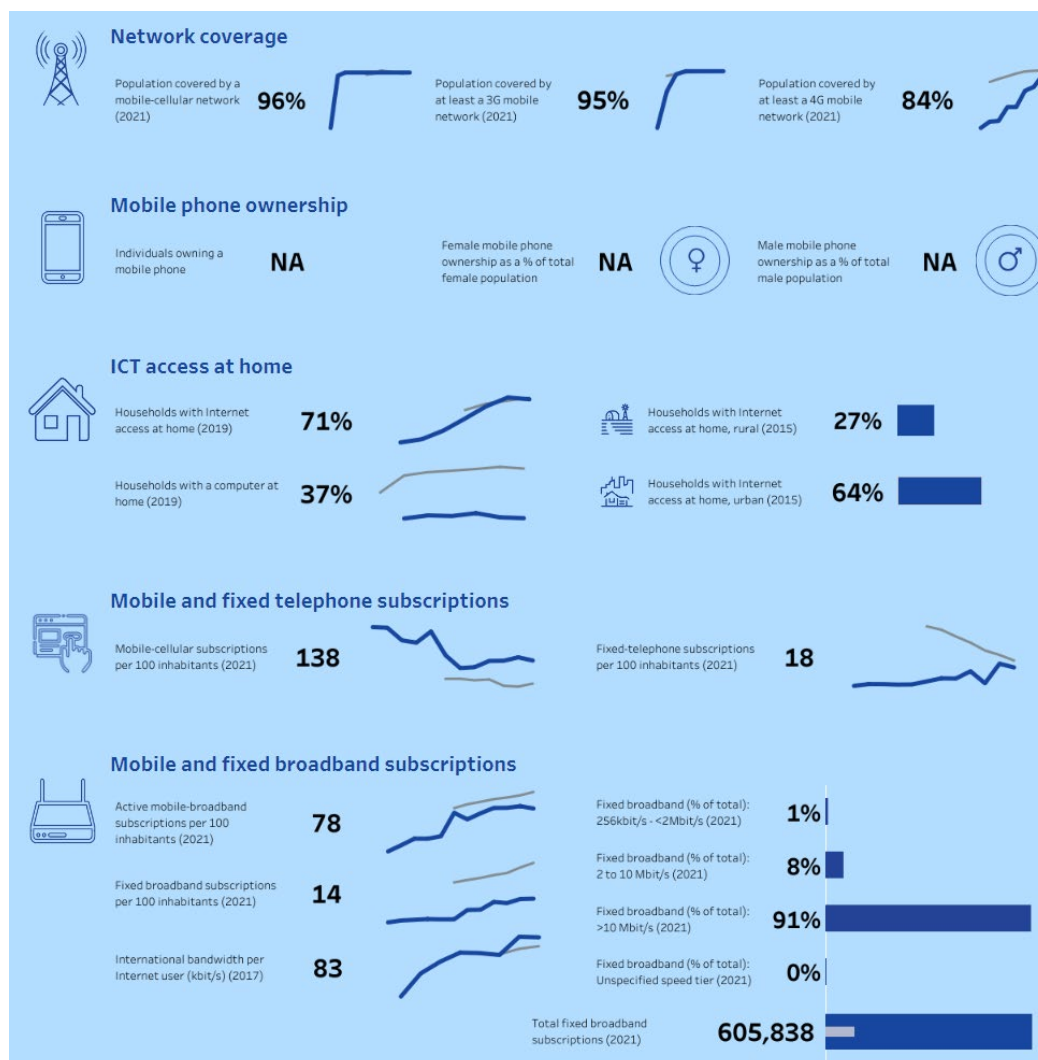
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[1] Panama: potential market for the IT sector, PROCOMER, 2020

improving connection speeds. For instance, the National Broadband Plan, launched in 2016[2], increased broadband penetration to 70% by 2021.

Additionally, the government has been working with international organizations such as the World Bank and the InterAmerican Development Bank to secure funding for digital infrastructure projects.

These efforts have paid off, as Panama now boasts some of the highest internet penetration rates in Central America. According to data from the International Telecommunication Union (ITU)[3], approximately 67,51% of Panamanians had access to the internet in 2021, up from just 32% in 2010.

ITU's Digital Development Dashboard: Panama[4]

[2] https://aig.gob.pa/descargas/2019/06/PlanEstrategicoBandaAncha.pdf
[3] https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx
[4] https://www.itu.int/en/ITU-D/Statistics/Dashboards/Pages/Digital-Development.aspx

Furthermore, Panama's average internet speed has increased significantly over the past decade, with Ookla's Speedtest Global Index ranking the country 61st out of 177 countries in terms of mobile internet speed and 86th in terms of fixed broadband speed in 2020.

As internet access has become more widespread in Panama, various options have emerged for those looking to get connected. The country's main internet service providers (ISPs) include Cable & Wireless Panama, Cable Onda, and Claro, which offer a range of plans to suit different needs and budgets.

In addition to traditional wired connections, mobile internet has also become increasingly popular, with 4G networks now available in most urban areas. Furthermore, the Panamanian government has launched a program called Internet for All (Internet Para Todos, IPT), one of the most prominent initiatives geared towards increasing internet penetration rates by providing free broadband internet across the nation. This project is administered by AIG and is part of the strategies of modernising the infrastructure.[5].

Panama Digital Agenda

Since 2020, Panama, through the National Authority for Government Innovation (AIG), has established the Digital Agenda[6] whose guideline is aimed at the digital transformation of the State, which has among its objectives to reduce the inequality gap, increase competitiveness and the resilience of public entities.

The new 2022-2023 Agenda is conceived as a strategic instrument to boost economic reactivation, involving entities in improvement processes, and increase innovation and collaboration between the public and private sectors. The document establishes that Panama will work on six main enabling elements to boost digital transformation: governance, regulatory framework, digital infrastructure, territorial articulation, data management and cybersecurity.

Other objectives include encouraging each sector to create a digital agenda coordinated with the Digital Agenda; improving the competencies and coordination of the steering role in digital transformation; strengthening cooperation with large companies; defining standards and conditions for the use of ICTs, especially the Cloud and 5G; as well as updating the National Broadband Plan.

In the field of digital infrastructure, the Agenda identifies important challenges, including securing critical infrastructure and services; boosting private investment in the digital ecosystem; and strengthening national and sectoral interoperability platforms.

It also proposes that more mobile telephone base stations should be installed to increase coverage, especially in rural areas; deploy fiber optics and Internet connection in schools; promote the creation of a new National Internet for All Network; establish a rural public telephony project; as well as contract a National Multiservice Network, which provides access to telecommunications to public entities.

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[5] https://www.datosabiertos.gob.pa/dataset/aig-puntos-de-acceso-de-la-red-nacional-internet-internetparatodos-vigente-al-6-de-marzo-2022
[6] https://aig.gob.pa/documentosaig/agenda-digital/

The territorial articulation line of action aims to equalize the degree of digitalization and appropriation of technologies at the subnational level, optimizing and rationalizing available resources. Therefore, the Agenda proposes standardizing portals, applications, and collection systems among the municipalities; implementing a cadastral management project to digitize plans, files, and other documents; and having an integrated land use planning system.

In data management, the agenda proposes to improve the collection, storage, and analysis of data, from their use to their protection, since they are a strategic asset for the digital government and the private sector. The actions to be taken include the creation of an electronic catalog to store and synchronize information, and the development of a strategic plan for data governance that promotes proper and responsible management.

Finally, in the field of cybersecurity, AIG highlights that it is a key enabler in the global context, due to the fact that the constant and new cyber threats require quick and agile action to prevent and combat vulnerabilities that cross national borders.

AIG points out that, in this context, it will seek to create an Information Security Incident Response Team; develop a National Cybersecurity Strategy; develop a manual of cybersecurity protocols and standards; and sign a collaboration agreement on the subject with the government of Israel.

Panama Digital Hub

As part of Digital Agenda 2020, Panama launched the Panama Digital Hub[7] with hopes of turning the country into an international centre for digital innovation. It is a public policy intended to make Panama the most competitive country in Latin America in terms of knowledge and technology. Also, it is part of the "Strategy for the Development of the ICT Sector 2025" and has four pillars: human talent physical and social infrastructure, financial resources, and legal, regulatory framework.

The strategy creates a roadmap of coordinated programs and projects to achieve the strategic objectives to promote clusters and sufficient resources to make the ICT sector internationally competitive.

The foreseen activities include:

- Education
    - Training of EU human resources for Industry 4.0.
    - Amazon Web Services certifications for programming.
- Infrastructure: Panama's technological structure is strengthened with:
    - Interoperability platforms
    - Research and development
    - Google Curie submarine cable
    - Internet Exchange Point (IXP).
- Legal Framework: Creation or modification of laws necessary to promote and encourage the use of technology, business attraction and research and development.

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[7] https://panamahub.digital/es/panama-hub-digital/acerca-de

The EU Global Gateway strategy[8] in Panama[9]

Panama´s Digital Hub is one of the flagship projects of the Global Gateway Investment Agenda.

In March 2023, the EU and Latin America signed a Digital Alliance to boost cooperation and investment in areas such as connectivity, regulatory environment, digital skills, innovation, digital entrepreneurship, digitization of public services and use of Earth observation data.

The BELLA initiative[10] aims to connect both region´s scientific, innovative communities, as well as to put in place the necessary infrastructure to consolidate and expand a digital ecosystem in science, technology, education in innovation.

The BELLA initiative is supporting a range of opportunities in Panama, such as the new regional Copernicus hub[11], or the promotion of the digital economy and scientific cooperation.

Panamá Digital programme

The Government of Panama and the Inter-American Development Bank (IDB) signed a $60 million operation ("Panama Digital") in May 2022 to boost the digital transformation of public management and services in the country.

This initiative aims to increase efficiency of procedures and services, improve cybersecurity, and raise demand for digital procedures and services, especially in low-income sectors. The operation also seeks to prioritize the most vulnerable populations, especially indigenous women.

"Panama Digital" gives continuity to the work started in 2016 through the operation "Panama Online", with which the IDB is supporting the country in making available to citizens and businesses around 400 online procedures nationwide. In addition, digital financial management tools were implemented in 68 municipalities to increase efficiency and transparency in the management of public resources.

The project signed in 2022 includes financing for the design, construction, and start-up of the headquarters of the Government Digital Innovation HUB, which will house the technical areas linked to the digital transformation process and cybersecurity.

In digital talent training, the IDB financing will support a pilot ICT career plan program, with a gender and diversity approach in three public entities, as well as the development of ICT skills focused on the economic empowerment of indigenous women with the potential for adaptation to other groups.

The project will also finance mobile structures for training activities in competencies, digital procedures, and ICT skills with a gender perspective, to reach areas with a greater presence of vulnerable populations.

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[8] https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/stronger-europe-world/global-gateway_en
[9] https://international-partnerships.ec.europa.eu/system/files/2023-07/EU-Panama-partnership_en.pdf
[10] https://www.bella-programme.eu/index.php/en/
[11] https://www.copernicus.eu/en/news/news/observer-successes-copernicus-and-central-america-initiative

With these resources, improvements will be made to the Single Citizen Portal, integrating more public entities. In addition, support will be provided in the design and implementation of a National Data Strategy, and training in information and communication technologies (ICT) and cybersecurity in public administration.

Cybersecurity

Panama has ratified the Budapest Convention and began to implement its cybersecurity strategy in March 2013 with the issuance of Resolution No. 21, the National Cybersecurity Strategy and Protection of Critical Infrastructure[12], with the slogan "Panama, Reliable in Cyberspace: Everyone's Job." The pillars of the cybersecurity strategy are protection of privacy; prevention and detention of crimes in cyberspace; strengthening of critical infrastructure; promotion of private-sector development; expansion of the culture of cybersecurity, of training, innovation, and adoption of standards; and improving the capacity of public agencies to respond to incidents.

The Computer Security and Incident Response Team of Panama (CSIRT) operates under the Government Innovation Authority (AIG). In addition to preventing, treating, identifying, and solving cybersecurity incidents, CSIRT Panamá also has the task of increasing the country's general knowledge about cybersecurity. CSIRT Panamá is a member of CSIRT Americas.

Additionally, the government aims to move beyond awareness and actively combating cyber threats and online services disruption. In March 2019, Panama's national assembly passed the Personal Data Protection Law, effective as of 2021. This law regulates the principles, rights, obligations, and procedures regarding personal data protection and compensates individuals for the improper use of their data.

Regarding legislation, Panama's criminal code has some provisions that deal with cybercrime. In addition, Bill No. 558 of 2017 seeks to modify the criminal code to "comply with international cybersecurity standards," including the Budapest Convention on Cybercrime, approved by Panama in 2013.

There is a bill for the protection of personal data, which will apply to both the public and private sectors once it is approved. Lastly, Panama has an e-government strategy and other important guidelines related to cybersecurity and ICT governance in its Strategic Government Plan and in the Digital Agenda.

2. Regulatory framework

Although the country has made significant progress in the regulatory framework, the Digital Agenda warns that it is necessary to update and harmonize regulations to adapt them to the new conditions of digital transformation and rethink regulations in the face of the emergence of new technologies and innovative service offerings, such as 5G, Artificial Intelligence, robotics and the Internet of Things.

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[12] https://www.ccn-cert.cni.es/en/gestion-de-incidentes/lucia/23-noticias/571-estrategia-nacional-de-seguridad-cibernetica-de-panama.html

Key Regulatory authorities

- The National Public Services Authority (Autoridad Nacional de los Servicios Públicos, ASEP) is an autonomous state agency, managing its funds separately from the Central Government. The head of the ASEP is the General Administrator, who is appointed by the Executive and ratified by the Legislative Branch for a seven-year term, and three directors that verify and supervise the following sectors: energy, waterworks and sewage, user relations, and telecommunications. ASEP, through the National Telecommunications Directorate, has the purpose of effectively regulating and supervising the operation and administration of telecommunication services, radio, and television services, as well as the radio spectrum. Regulatory enforcement is carried out by ASEP.
- The Consumer Protection and Competition Defense Authority (Autoridad de Protección al Consumidor y Defensa de la Competencia, ACODECO) is the public institution entitled to perform investigations on anti-competitive practices and apply sanctions. Nonetheless, the ASEP has the power to issue resolutions and rules to promote fair and efficient competition, as well as to prevent anti-competitive practices in the provision of services. In fact, under the current legal framework, ASEP and ACODECO have a joint jurisdiction, in the sense that the competition authority is entitled to make the final decision concerning monopolistic, and anticompetitive or discriminatory practices, while the telecommunications regulator assists ACODECO in the investigations, recommends precautionary measures and denounces possible anti-competitive practices.
- National Authority for Government Innovation (Autoridad Nacional para la Innovación Gubernamental or AIG), has the authority to plan, coordinate, issue guidelines, supervise, collaborate, support, and promote the optimal use of ICTs in the government for the modernization of public management. AIG is also in charge of the adoption of national policies, plans, and strategic actions.

General Regulation framework[13]

- Law No. 31, 1996, which has the fundamental objective of accelerating the modernization and development of the sector, extend their access, improve the quality of the services provided, promote low user fees and fair competition in the provision of telecommunications services.
- Law No. 24, 1999, which establishes the legal and technical basis for the operation of Radio and Television services and additionally indicates the functions that the ASEP has as the regulatory body in this matter.
- Law No. 17, 1991, by which Articles 8, 10 and 11 of Law No. 14, 1987, Article 2 of Law No. 38 are amended, and dispositions are dictated on the cellular telephony.
- Spectrum Regulation: It is regulated through the National Radio-Electric Spectrum Frequency Attribution Plan[14] (PNAF), and resolutions issued by ASEP. The PNAF is the main tool that includes the legal and regulatory elements for the national administration of frequencies. It also has the purpose of establishing the norms and parameters necessary to carry out an adequate administration of the radio spectrum.

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[13] https://www.asep.gob.pa/?page_id=12464
[14] https://www.asep.gob.pa/wp-content/uploads/telecomunicaciones/consultas_publicas/2019/cp_009-2019/documento_pnaf.pdf

- Strategic Plan for Broadband – 2022, managed by AIG, it contains the following objectives: (i) universality of connectivity, (ii) increase the adoption and use of ICTs, (iii) foster broadband affordability and ICTs, (iv) promote the creation of contents and local innovation through entrepreneurship, (v) promote competition, (vi) boost Panama´s economy, (vii) increase in the competitiveness of companies, and (viii) improve public services related to government, education and health.
- Competition: operators with a dominant position must provide access to their infrastructure at non- discriminatory prices and conditions. In 2006, the ASEP decided that the local basic telecommunication service operator (operator with a dominant position) must establish in its network the technical means necessary for the provision of the local loop to all concessionaires who so request. Access is also promoted by the imposition of a tariff system for concessionaires, in which prices for telecommunications services offered under an effective competition regime are set by the concessionaires. Despite being under a regime of limited competition, tariffs for mobile telephony services are set freely by the two existing concessionaires; however, in exceptional cases, such as in the existence of restrictive practices to competition, the ASEP may impose competitive tariffs to the concessionaires. Also, mobile number portability has encouraged access through more competition in the mobile sector.

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