

MARKET STUDY

Digital Tech Sector in Panama

Business
Opportunities for
Dutch companies

Remco de Bruijn

Executive Summary

Panama is a **high income & high growth Trade, Financial & Logistics Hub** with the 2nd highest growth forecast in Latin America for 2023.

Panama is the **easiest country in Latin America to start a business** and **2nd easiest in trading across borders**

The Netherlands is among the **top foreign investors in Panama worldwide**. The ICT sector is the second largest investment sector for Dutch companies. Investment in that sector rose 29% in 2019-2020, while overall investment declined due to covid.

Panama's most important strengths are its **high purchasing power** (link with selling price), **the many fiscal, labor & migration incentives for foreign companies, dollarized economy, stability and excellent connectivity**. The main weaknesses are the **difficulty of finding skilled personnel**, the relatively small market size as a country and weak rule of law.

In terms of digital highlights Panama has **2nd highest fixed broadband speed in Latin America and a high number of mobile subscriptions** (138 per 100 people). There is **excellent physical infrastructure to house knowledge intensive sectors**.

The **ICT market** in Panama amounts to 1.42 B. USD as contribution to GDP. There are about 549 ICT companies in Panama (2019), mostly focused on software distribution/implementation and development of e-commerce apps. The vibrant **City of Knowledge** techpark is the most important **tech ecosystem**.



Executive Summary

Promising Sectors for Dutch Tech Businesses

- **Logistics:** Digital transformation is seen as key to **improving the competitiveness of the Panama Canal and its ports**. The Panama Canal **plans to invest \$500 million in projects that use new technologies** (sensors, AI, AR/VR) to improve efficiency. At ports there is a need for (improvement of) information systems, real-time tracking & tracing, security solutions for ports, green tech, big data and cyber security solutions.
- **Banking/Fintech:** Panama has one of the highest percentages of **unbanked people** in Latin America. This provides opportunities for IT solutions aimed at the financial inclusion of the population (market of USD 2.61 B. & CAGR of 16.8% 2022-2027). **In terms of technology solutions for financial institutions**, there is a need for online banking platforms, data analytics, digitization of KYC & cybersecurity solutions. There are ±70 banks in Panama.
- **Digital Health:** The total revenue in the eHealth segment is \$43.79 million in 2022 with an annual growth rate of 18.50% (CAGR) from 2022-2027. Panama is **implementing a comprehensive digital health system**, consisting of a Digital Clinical History System; Digital System of Medical Prescriptions; Digital Medical Appointment System; Digital Telemedicine System and Digital Hospital Management System. **A state-of-the-art City of Health** is currently being completed in Panama City at a cost of USD 1 billion.
- **Government:** The government has an **ambitious digital transformation strategy** with which it made progress in setting up digital platforms and digitization of procedures. There is a need for tools for data-exchange, digitizing documents & procedures, biometric solutions, software & mobile apps for government departments, among others.

Entering the Panamanian market can be done by finding a local representative, an alliance with a local partner or setting up your own office. To build up a local network you can attend trade fairs & conferences.

Visual Summary

Panama's Main Assets



High Purchasing Power



High Growth



Tech Parks



Incentives (tax, labor)



Connectivity & Hub function



Stability & Safety



Panama

Promising Sectors for Dutch Tech



Logistics



Banking / Fintech



Health



Government

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01

MARKET OVERVIEW

Panama in a nutshell

General Data: Population & GDP per head

- Panama has the **2nd highest GDP per head in current prices** in Latin America
- Panama has **the highest GDP per head in PPP** in Latin America



4.4
Million people

LATAM: Top-5 countries GDP p. head, current prices (USD, 2022)



LATAM: Top-5 countries GDP per head PPP (int. dollars, 2022)



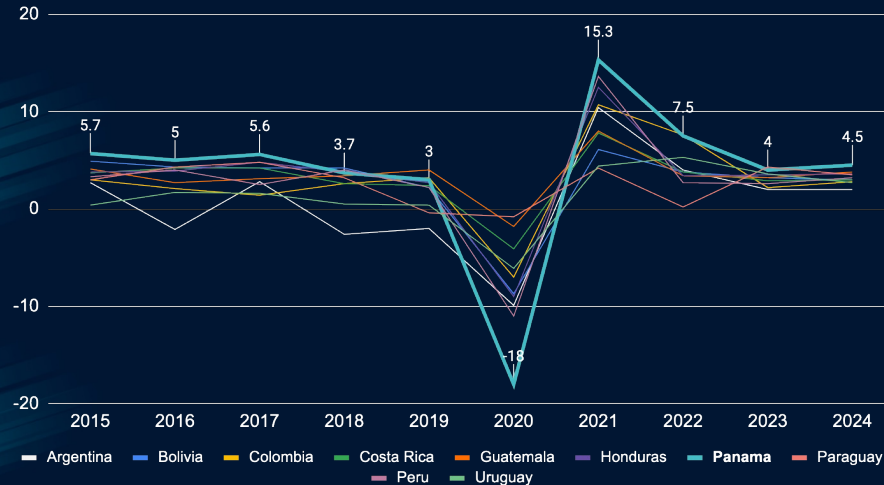
General Data: GDP & Growth

- Panama has the **2nd highest economic growth forecast** in Latin America for 2023 (after Paraguay) and highest for 2024
- **Highest growth in 2021 & 2022: 15.3% & 7.5%** (2022 with Colombia)
- Highest average pre-covid growth in LATAM (2014-2019): 4.6%

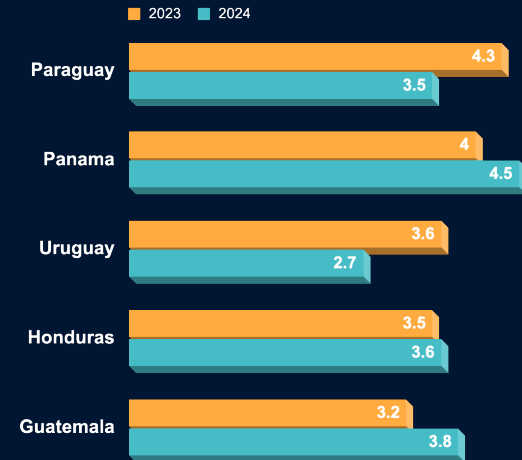


60.6
B. USD
GDP
(2021)

Latin America: Real GDP growth selected top countries (%)



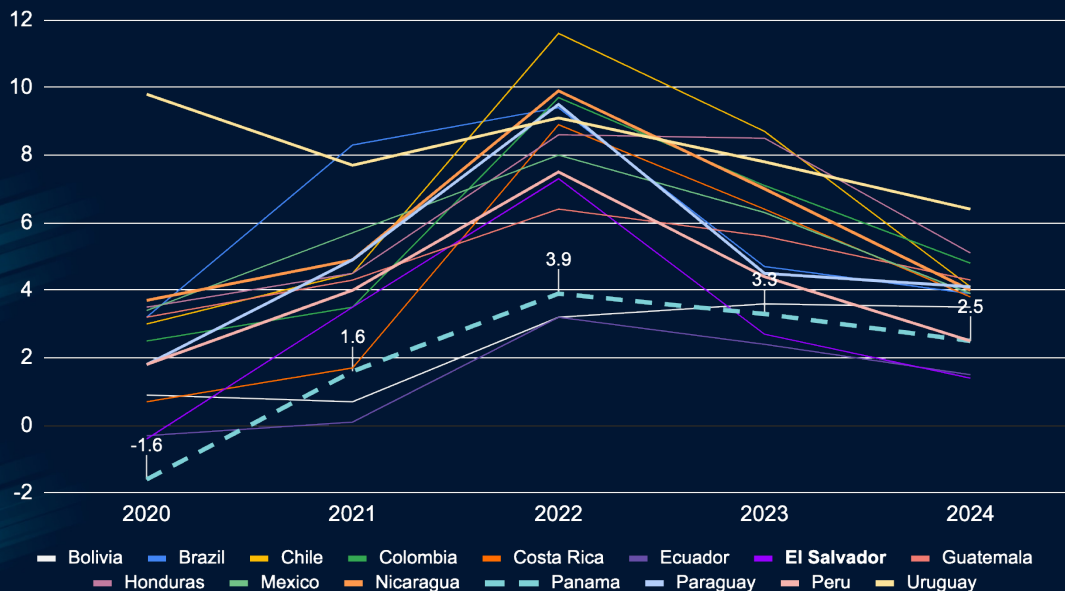
LATAM Growth Outlook - Top Countries (Real GDP)



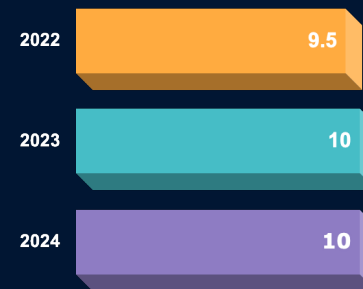
General Data: Inflation & Unemployment

- Panama has one of lowest inflation figures in Latin America (3.9% in 2022)
- Unemployment is at 9.5% in 2022 & 10% in 2023

Latin America: Inflation (Avg.)



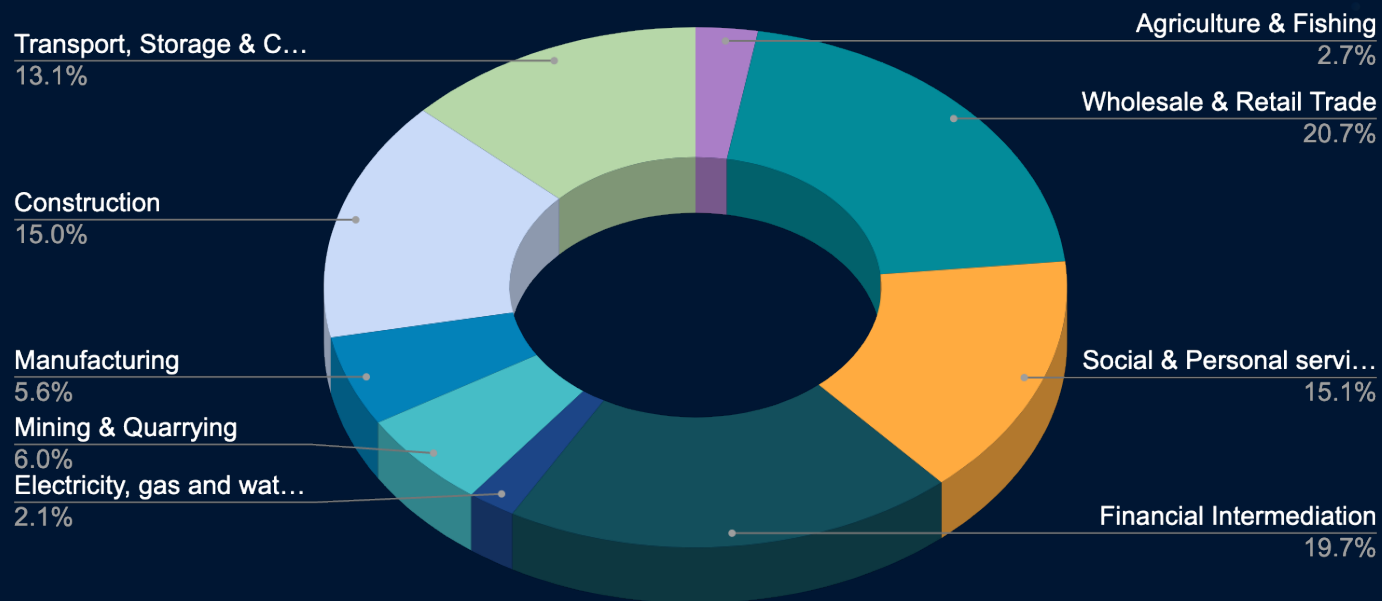
Panama: Unemployment (%)



Note: Inflation excl. Argentina & Venezuela

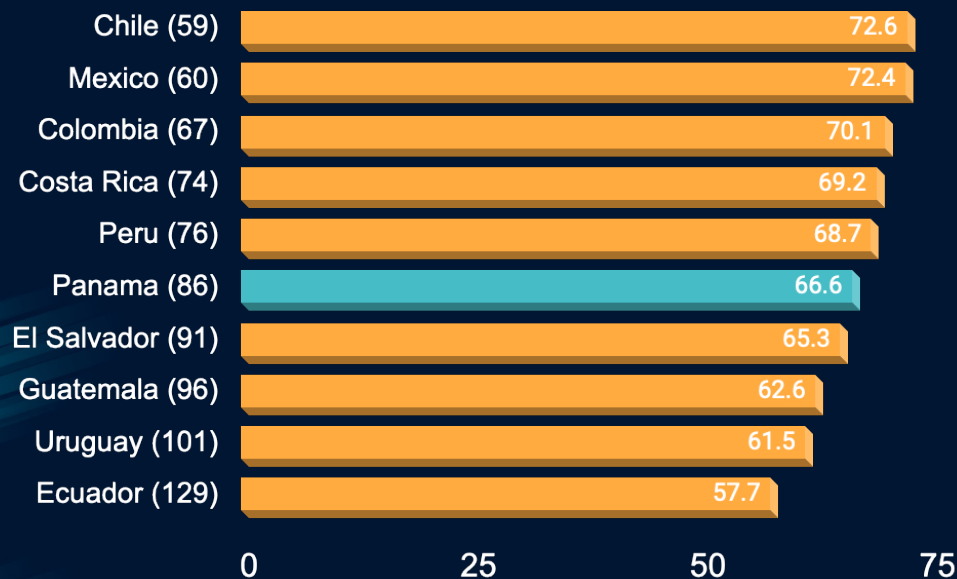
General Data: Composition of GDP

Total value added of GDP by economic activity (current prices, 2021)



Doing Business

Top-10 Ease of Doing Business Ranking & Scores 2020 LATAM (scores 0-100 best)



Note: world ranking in parentheses (1 = best)



6th

in Latin America

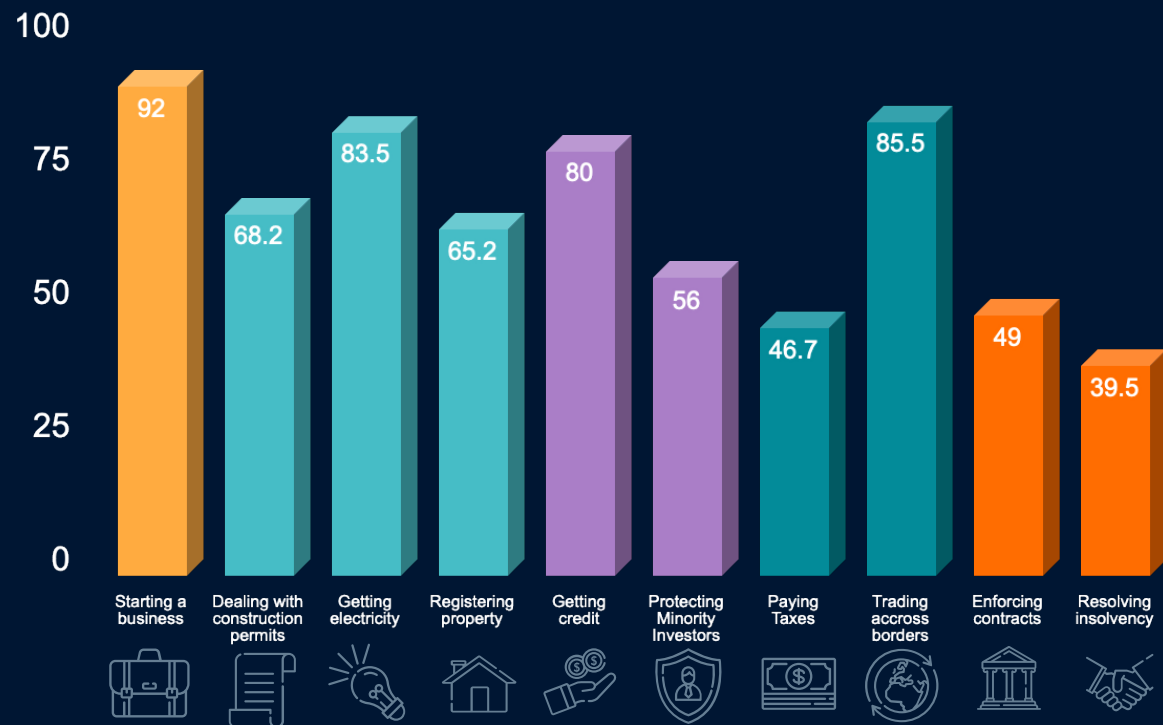
86th

Out of 190 nations worldwide

Doing Business measures business regulations for local firms in 190 economies

Doing Business


Ease of Doing Business Topic Scores Panama (0-100 best)




- Highlights are the **Ease of Starting a Business** and **Ease of Trading Across Borders**
- **Paying Taxes** and **Enforcing Contracts** is not so easy in Panama (time & cost)


Doing Business


Top-5 Ease of Starting a Business in Latin America

 1. Panama (rank 51)

 2. Chile (rank 57)

 3. Uruguay (rank 66)

 4. Colombia (rank 95)

 5. Guatemala (rank 99)

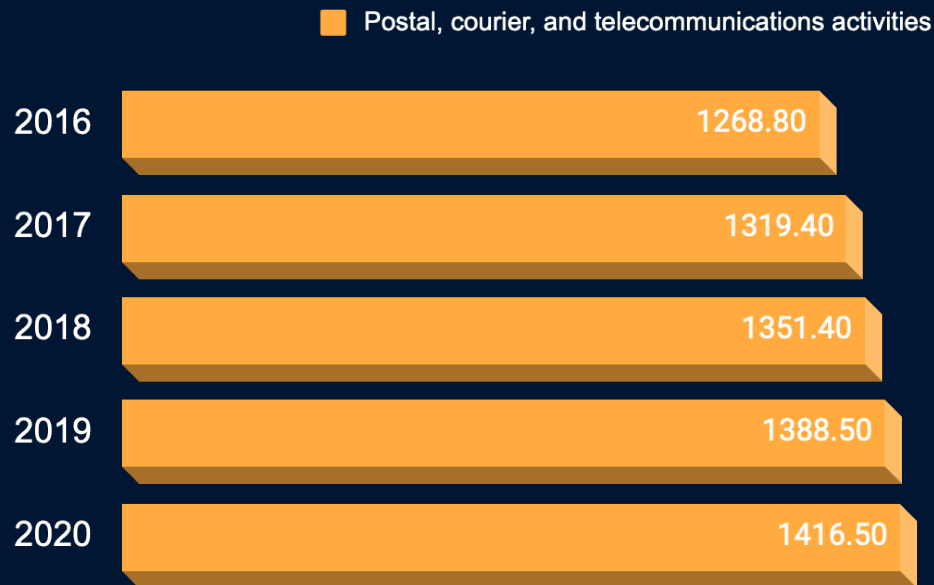
- Incorporation: 5-6 business days
- Overall cost: ± 2.500 USD


Panama is the
Easiest Country
to Start a
Business in
Latin America

The topic measures the number of procedures, time, cost, and paid-in minimum capital to start a limited liability company.

Market Size ICT

ICT Sector GDP, million USD



2.8%

CAGR (2016-2020)

123 M.

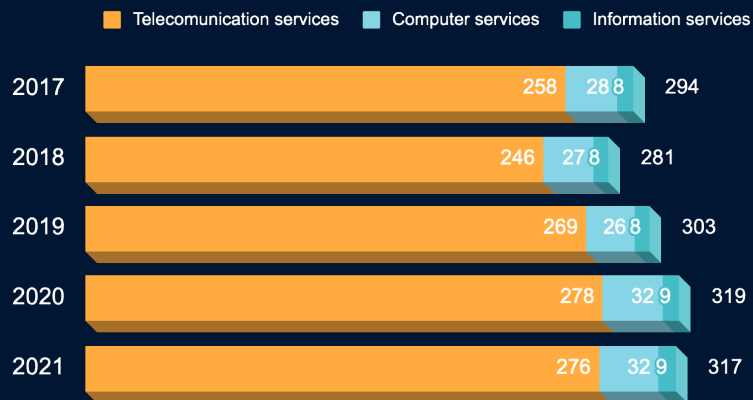
Software spending* (2021; ↑ 11%)

Postal, courier and telecommunications activities (ICT) are a subbranch of Transport, Storage and Communication.

*Software spending includes the total value of purchased or leased packaged software, such as operating systems, database systems, programming tools, utilities and applications. It excludes expenditures for internal software development and outsourced custom software development.

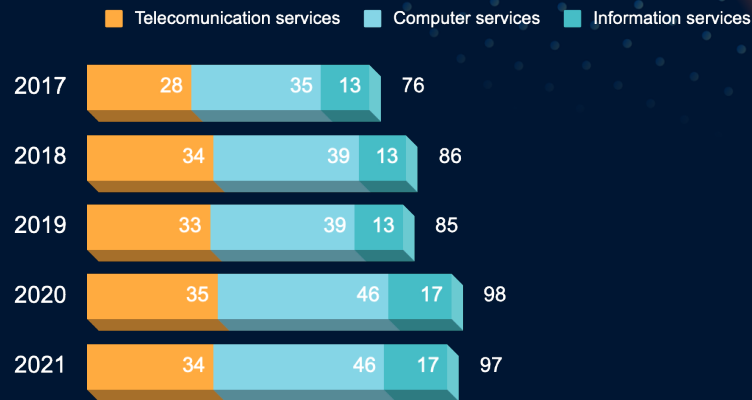
ICT Services Exports & Imports

Panama: ICT Services exports, million USD



3.4%
CAGR
2017-2021
(Computer services)

Panama: ICT Services imports, million USD



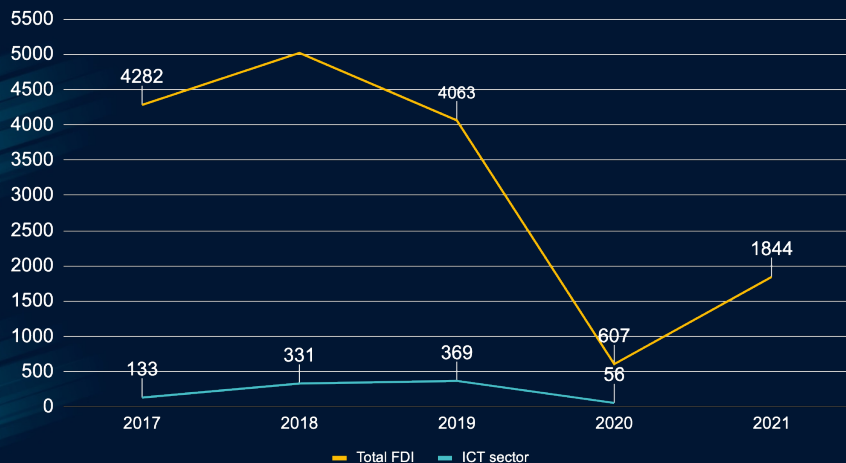
7.1%
CAGR
2017-2021
(Computer services)

Computer services include software and software implementation
Information services: news agency services, database services and web search portals

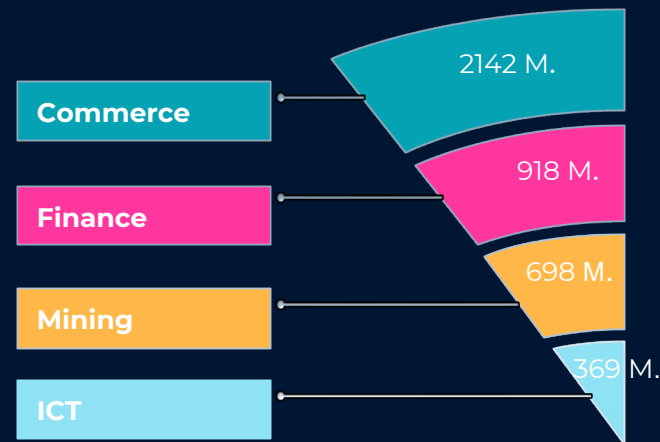
Foreign Direct Investment

- Panama is among the world's **top receivers of FDI as % of GDP** (No. 10 in 2019)
- There are more than **186 regional multinational HQs** in Panama
- Investment in the ICT Sector **increased with 67% 2017-2019** (CAGR)
- ICT is the **4th largest investment sector in 2019** (pre-covid)

Inward FDI Panama 2017-2021 (flows, in M. USD)



Investment flows top sectors 2019



Dutch investment

The Netherlands is among the top foreign investors in Panama worldwide (flows 2017-2020)

Top Foreign Investors in Panama 2019 (flows)

-  1. Canada (1427 M.)
-  2. United States (899 M.)
-  3. Colombia (782 M.)
-  4. Netherlands (435 M.)
-  5. Ecuador (227 M.)

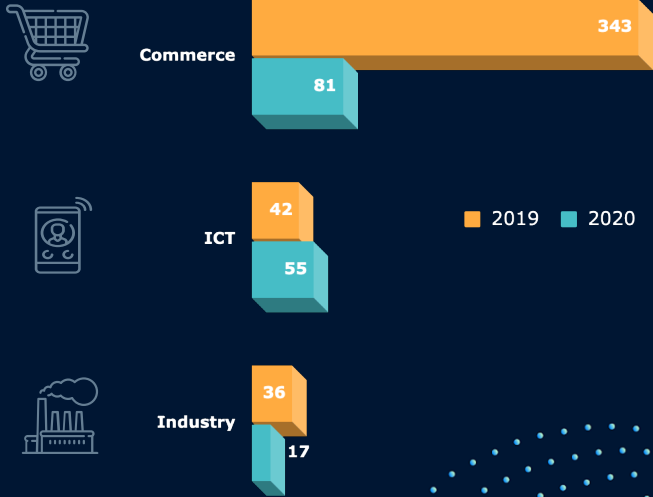
Dutch investment in the ICT sector grew with 29% in 2020



The Netherlands was the 4th largest foreign investor in Panama in 2019

Companies such as Philips, Heinek n, KLM, Van Oord, Boskalis have offices in Panama

Top-3 Sectors Dutch FDI in Panama (M. USD)



Source: INEC, 2022d

Panama's Key Strengths & Weaknesses

Strengths

	High GDP per capita
	High GDP Growth
	Political & Economic Stability
	Dollarized Economy
	Fiscal, Labour & Migration Incentives for Foreign Companies
	Connectivity
	Ease of Starting a Business

Weaknesses

	Small Market Size
	Ease of Finding Skilled Personnel
	Quality of Education
	Rigid Labour Laws
	Bureacracy
	Rule of Law
	Corruption



02

DUTCH DIGITAL TECH STRENGTHS

Key Strengths & Rankings

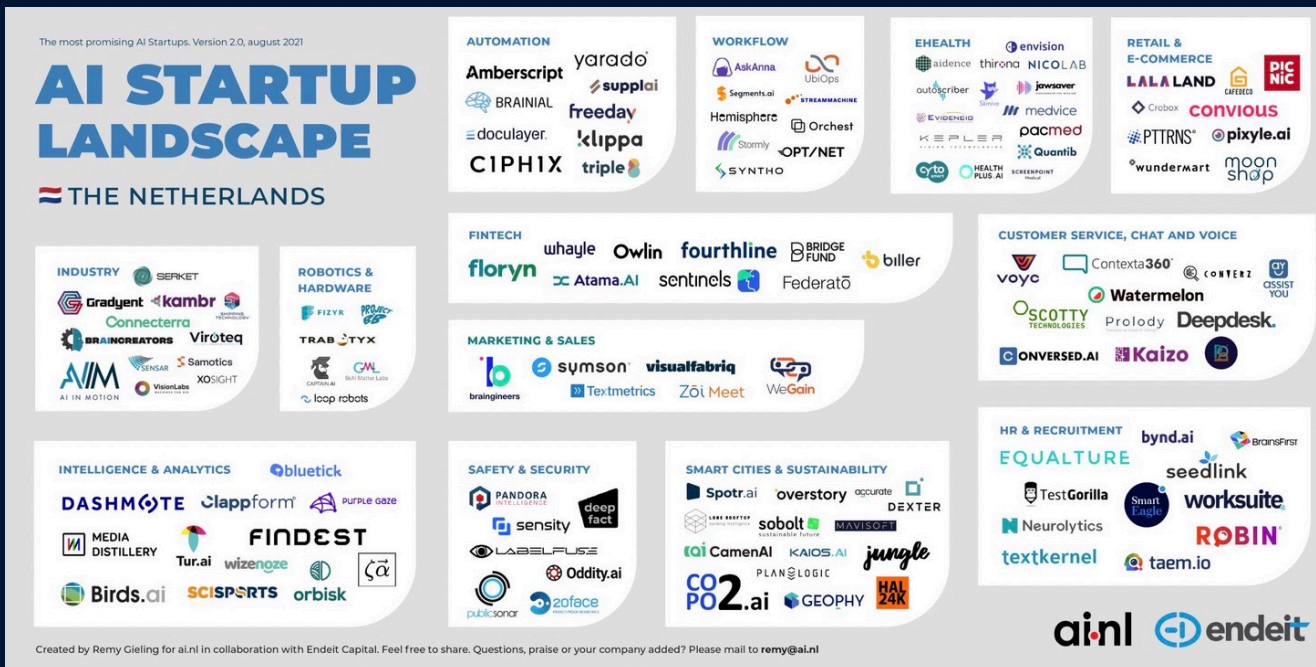
Dutch Digital Tech Strengths

Key Strengths

- The Netherlands is known for its advanced technologies for **Smart Grids, Infrastructure Security, Cybersecurity Software and Defense and Security System Design**
- In **Cybersecurity**, the Netherlands is especially strong in Cyber Threat Intelligence (CTI), IoT/OT Security and Data Protection
- The **Dutch Digitalization Strategy's** focus is on the following areas: **Blockchain, AI, Cybersecurity, Big Data, Data Centers and Cloud Computing, Internet of Things & Future Networks beyond 5G.**
- The Netherlands is an advanced country in **E-health solutions**, having the highest adoption rate in hospitals and clinics globally.
- Other strong application sectors are **Agriculture (e.g. precision farming, glass house horticulture, precision farming) & Logistics / Maritime-Ports (e.g. Smart Ports)**
- Leading companies are : **Booking.com, TomTom, Adyen, Coolblue, WeTransfer, Bunq & PayU**

Dutch Digital Tech Strengths

According to research by McKinsey (2020), the **Netherlands ranks 11th globally** in terms of **AI readiness**, with top scores for **automation, digital readiness and innovation**



Dutch Digital Strengths: Rankings

Ranking of the Netherlands in key indexes

- **6th in the World Digital Competitiveness Ranking 2022** (IMD World Competitiveness Center) The WDCR measures the capacity and readiness of 63 economies to adopt and explore digital technologies as a key driver for economic transformation in business, government and society (Knowledge, Technology and Future Readiness) .
- **5th in the Global Innovation Index GII 2022** (WIPO, INSEAD, Cornell University) The GII measures the innovation performance of 132 countries around the world based on innovation inputs and outputs.
- **3rd in the EU's Digital Economy & Society Index (DESI) 2022** (European Commission) DESI monitors Europe's overall digital performance of EU countries on connectivity, digital skills, internet use, integration of digital tech, digital public services.

World Digital Competitiveness Ranking 2022



Dutch Digital Tech Organizations

Key Dutch Tech Organisations

Dutch Digital Delta (Topsector ICT) – brings together companies, governments, knowledge and educational institutions in innovation coalitions around key enabling technologies and societal challenges, to work on ICT research up to commercialization.

FME - Largest Business Organization for the Tech Industry. FME represents the interest of Dutch tech companies and help their members with entrepreneurship, research and innovation.

The Netherlands AI Coalition - public-private partnership in which governmental authorities, the business sector and educational and research institutions, as well as civil society organizations, collaborate to accelerate and connect AI developments and initiatives.

Dutch Blockchain Coalition - Public-Private Network to increase both knowledge and use of blockchain in the Netherlands, speeding up the decentralization of digital infrastructure.

Security Delta (HSD) – Dutch Security Cluster of companies, governmental organizations and knowledge institutions working on innovative (cyber)security solutions.

Dcypher - Dcypher is the cybersecurity partnership platform for research and innovation in the Netherlands.

TNO - independent research organization aimed at innovation of business and society.

“The Netherlands is renowned for its advanced technology for smart grids, infrastructure security, cyber-attack simulation software, and defense and security system design”

— Netherlands Enterprise Agency, 2021



03

DIGITAL PANAMA

Key Digital Development & Digital
Competitiveness Indicators

Digital Development Dashboard

Population covered by mobile-cullular network (2021)



96%

Population covered by at least a 3G mobile network (2021)



95%

Population covered by at least a 4G mobile network (2021)



84%



Panama

Households with internet access at home (2019)



71%

Households with a computer at home (2019)



37%

Percentage of population using the internet (2020)



64%

Fixed Broadband subscriptions per 100 people (2021)



13

Mobile celular subscriptions per 100 people (2021)



138

Mobile broadband subscriptions per 100 people (2021)



78

Agenda Digital Nacional 2022

Panama's Digital Transformation Strategy

Key features

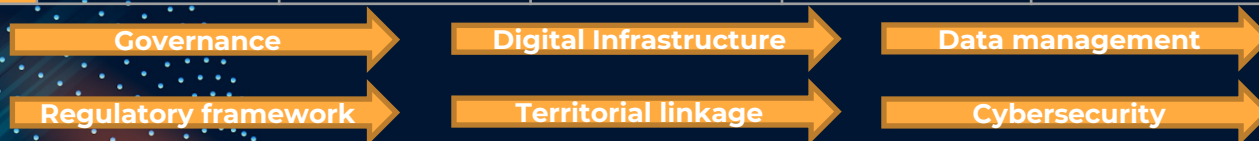
- Key instrument for achieving the country's digital objectives
- Government Modernization & Digitalization
- Digital Transformation of strategic sectors: Logistics, Health, Justice, Finance & Education
- Roadmap with goals, priorities and actions
- Economic reactivation & closing digital divide of citizens and companies



Agenda Digital Nacional 2022: main outline

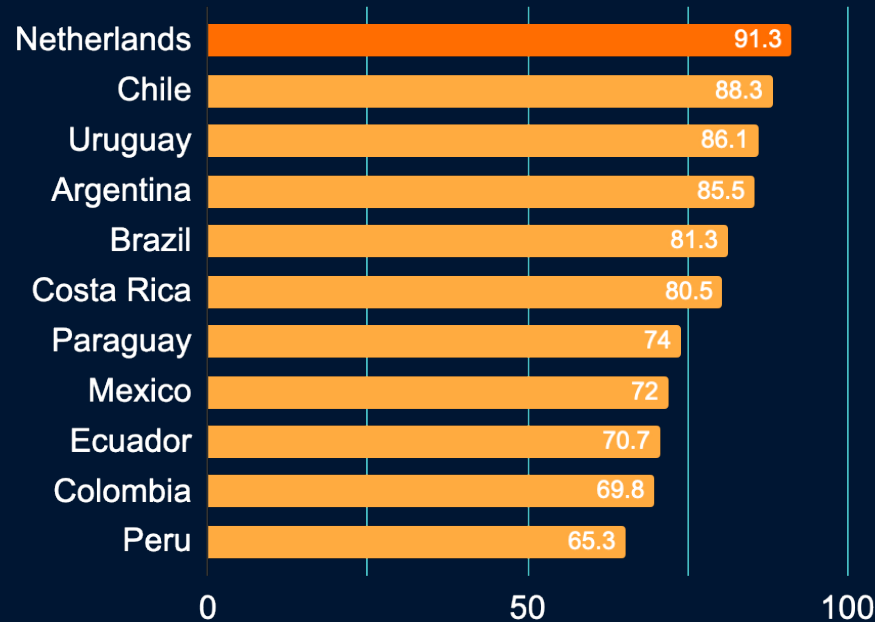
Strategic sector pillars	LOGISTICS	HEALTH	JUSTICE	FINANCING	EDUCATION
Strategic axes					
SOCIAL & CULTURAL PANAMA	Logistics for small farmers	E-Health / assistance in rural areas	Emergency services & early warning apps (violence, bullying)	Social Bank / Opportunities	Cyberbullying Cybersecurity on internet Girls in tech
ENTREPRENEURIAL PANAMA	E-Commerce for SMEs	Cooperation between laboratories and companies for medical research	Simplification of legal procedures for businesses	Financing of entrepreneurs and small businesses, financing of the ICT sector	ICT training/ Professional courses
INNOVATIVE PANAMA	Blockchain & Big Data for logistical ends	Technology and research for digital hospitals	Big data for justice, digital trials	Fintech Laws & Sandboxes	New education methodologies 5G deployment in hospitals
SUSTAINABLE PANAMA	Modernization of customs Single Export Window	Virtual appointments Unique Electronic Patient File	Paperless justice (notifications, lockers)		5 G deployment in schools

Enablers



ICT Access & Use

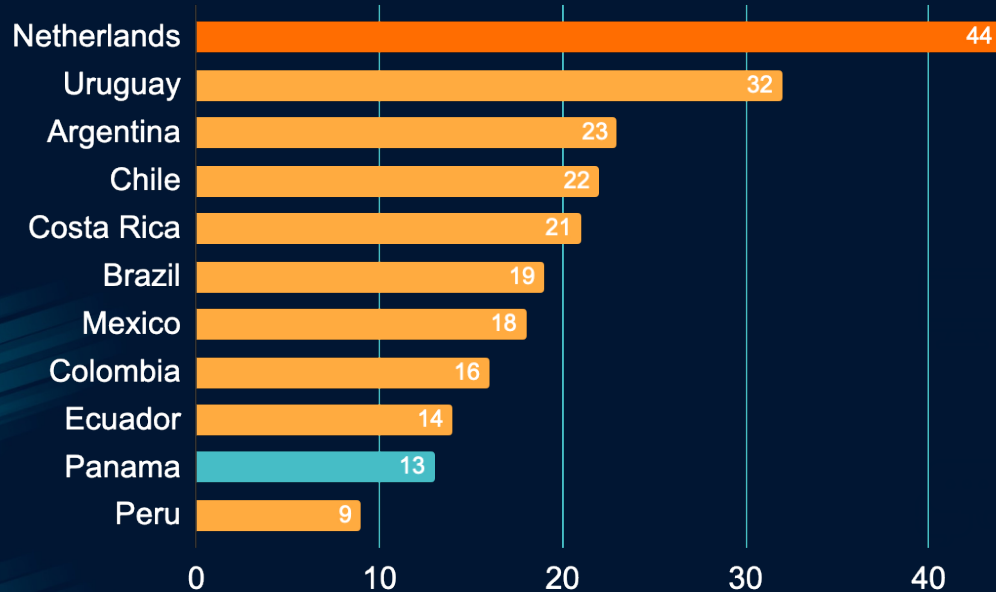
% of population using the internet (2020)



- With 64.25%, Panama is ranked **11th out of 17** Latin-America countries (not in top-10 on the left)
- The percentage amounts to **2.8 million internet users** in total (2020)

ICT Access & Use

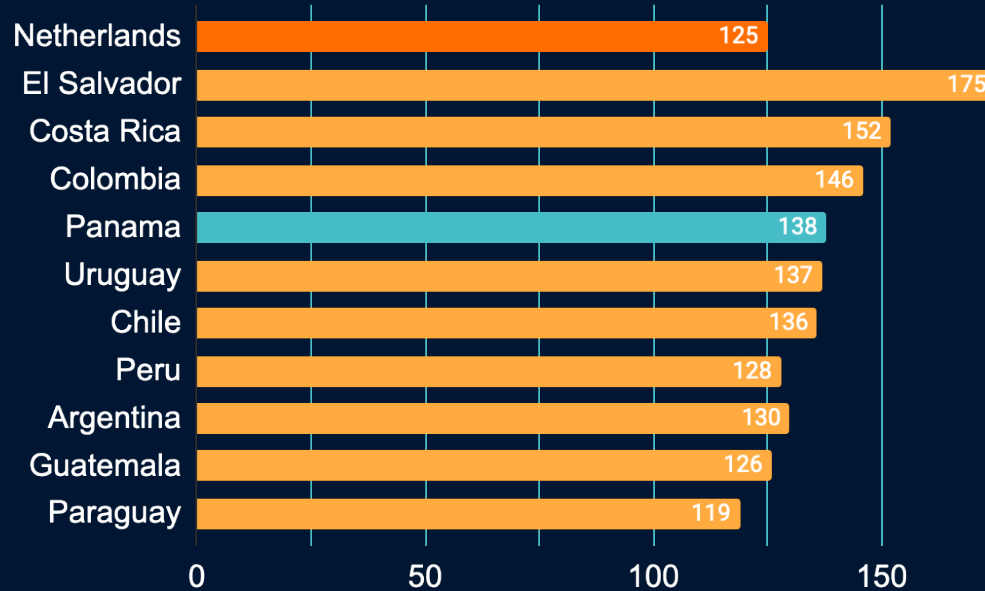
Fixed broadband subscriptions per 100 people (2021)



- Panama is ranked **9th** out of 17 Latin-American countries
- In Central-America Panama ranks **2nd** after Costa Rica

ICT Access & Use

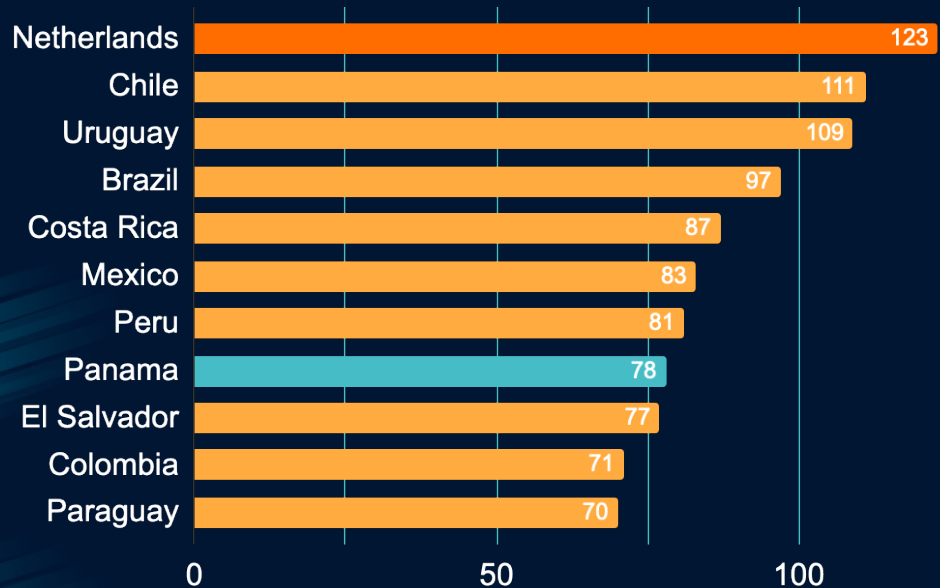
Mobile cellular subscriptions per 100 people (2021)



- Panama is ranked **4th** out of 17 Latin-American countries (2021).
- In Central-America Panama ranks **3rd** after El Salvador & Costa Rica

ICT Access & Use

Mobile broadband subscriptions per 100 people (2021)



- Panama is ranked **7th** out of 17 Latin-American countries (2021).
- In Central-America Panama ranks **2nd** after Costa Rica.

Internet Speed

Fixed Broadband Speed (Mbps, median)

Download

1. Chile (219.34)
2. **Panama** (110.96)
3. Uruguay (97.48)
4. Brazil (95.95)
5. Colombia (87.24)
6. Paraguay (68.21)
7. Peru (59.79)
8. Costa Rica (59.54)
9. Mexico (49.88)
10. Argentina (49.33)

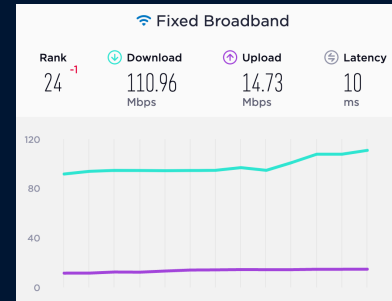
Netherlands (117.74)

Upload

1. Chile (130.71)
2. Brazil (65.53)
3. Ecuador (42.94)
4. Uruguay (31.93)
5. Colombia (31.92)
6. Peru (30.94)
7. Paraguay (25.13)
8. Argentina (20.48)
9. Mexico (18.13)
10. Nicaragua (15.95)

Netherlands (36.36)

- Panama has **2nd the highest fixed broadband speed in Latin America** (17 countries).
- Panama ranks **24th out of 180 countries worldwide** in download speed (NL 21th)



Internet Speed

Mobile Internet Speed (Mbps, median)

Download

1. Uruguay (32.71)
2. Brazil (32.17)
3. Chile (25.63)
4. Mexico (25.28)
5. Guatemala (24.19)
6. Honduras (24.06)
7. El Salvador (21.82)
8. Argentina (21.36)
9. Ecuador (19.58)
10. Nicaragua (18.01)

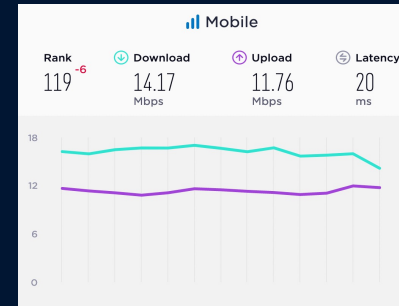
Netherlands (109.45)

Upload

1. Guatemala (15.90)
2. **Panama** (11.76)
3. Peru (12.48)
4. Chile (12.29)
5. Honduras (11.04)
6. Brazil (10.81)
7. El Salvador (10.68)
8. Ecuador (10.38)
9. Mexico (10.08)
10. Uruguay (10)

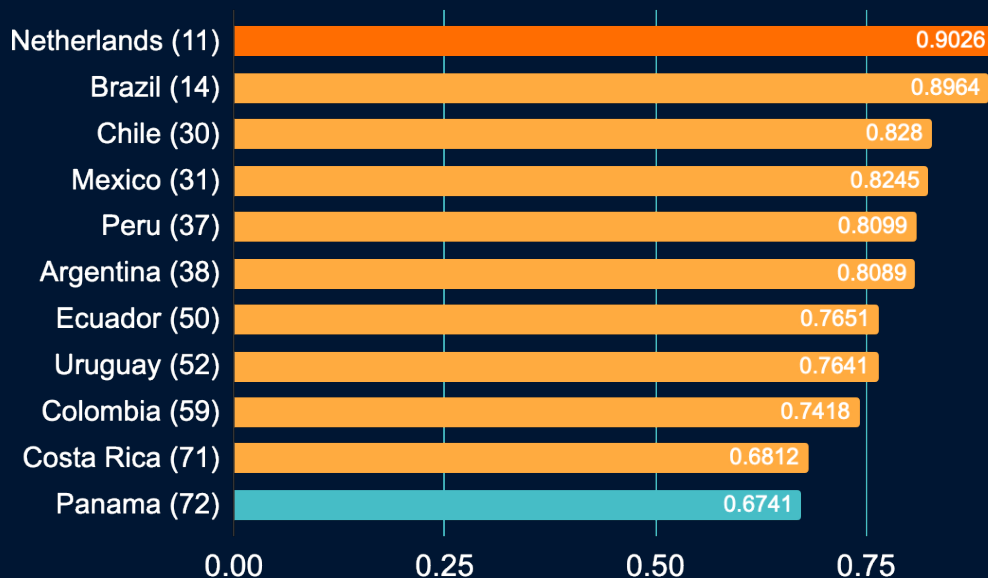
Netherlands (16.12)

- Panama has one of the slowest mobile internet download speeds in Latin America (**14th** out of 17 countries).
- Panama ranks **119th** out of 141 countries worldwide in mobile internet download speed (reference: NL ranks 6th)



Online Government

Online Service Index (0-1 highest, 2022)

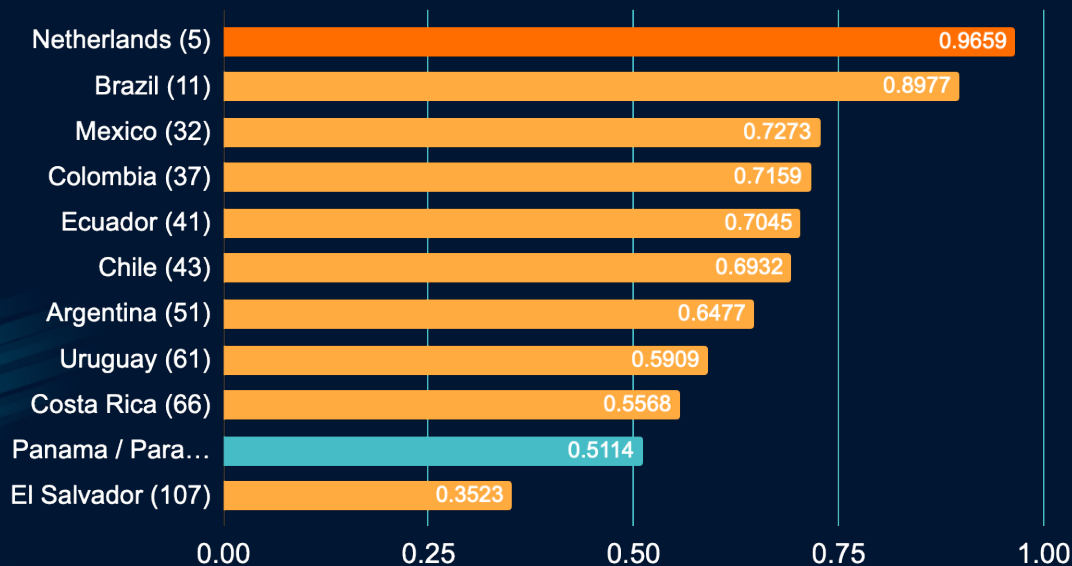


Note: world ranking in parentheses

- Use of ICT by governments in delivering public services at the national level.
- Panama ranks **10th** of 17 Latin America countries and 72 out of 193 countries worldwide
- Panama rose **+14** places in the ranking compared to 2020 (+8% higher index score compared to 2020)
- Panama is classified in the “High OSI” Group (0.50 to 0.75) as are Colombia and Costa Rica.

Online Government

E-Participation Index (0-1 highest; 2022)

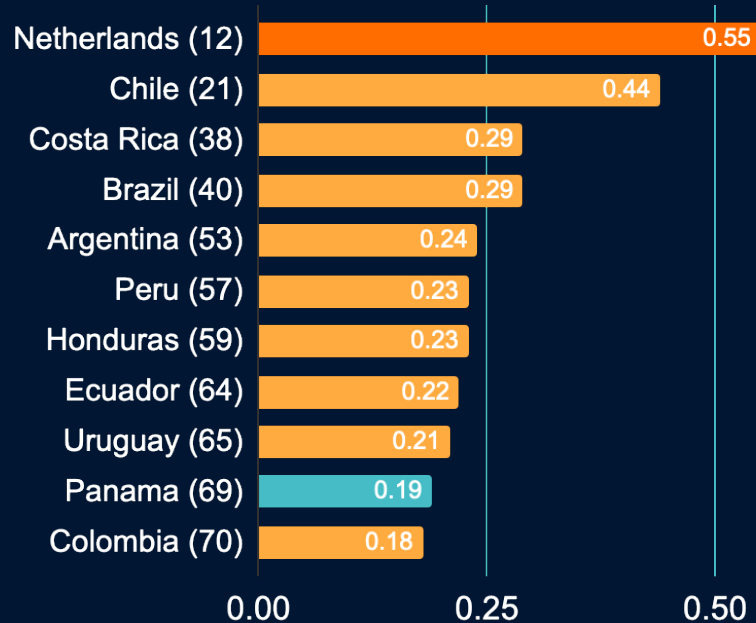


Note: world ranking in parentheses

- E-participation is the use of ICT to engage people in public decision-making & service-delivery
- Panama ranks **9th** out of 17 Latin American countries
- Panama ranks 76th out of 193 countries worldwide
- Panama rose **+17** places in the ranking compared to 2020 (however with a lower score)

ICT Acquisition

Software Spending as % of GDP (2021)

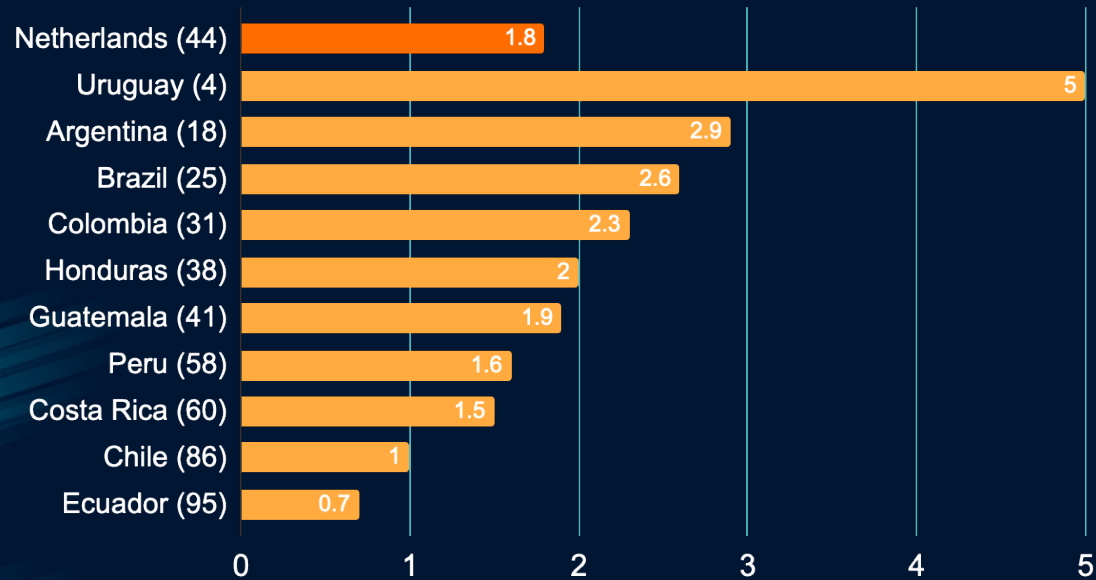


Note: world ranking in parentheses

- Panama ranks **9th** out of 15 Latin America countries
- Panama ranks 69 out of 132 countries worldwide

ICT Acquisition

ICT Service Imports % of total trade (2020)

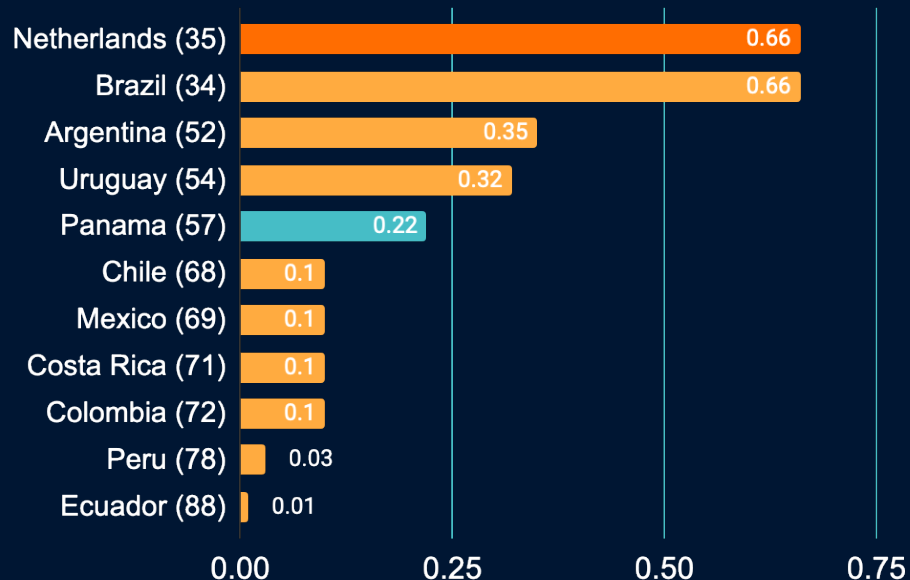


- Panama (0.52%) ranks **12th** out of 15 Latin American countries
- Panama ranks 111th out of 132 countries worldwide

Note: world ranking in parentheses

ICT Creation

Mobile app creation bn PPP\$ GDP (2021)

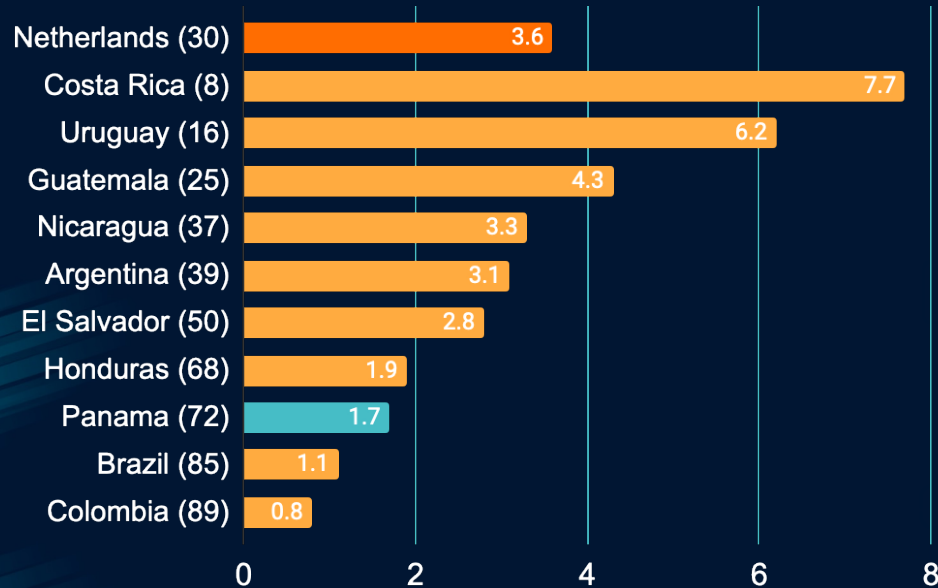


Note: world ranking in parentheses

- Global downloads of mobile apps, by origin of the headquarters of the developer/firm, scaled by PPP\$ GDP (billions)
- Panama ranks **4th** in Latin America and 57th worldwide

ICT Creation

ICT Service Exports % of total trade (2020)

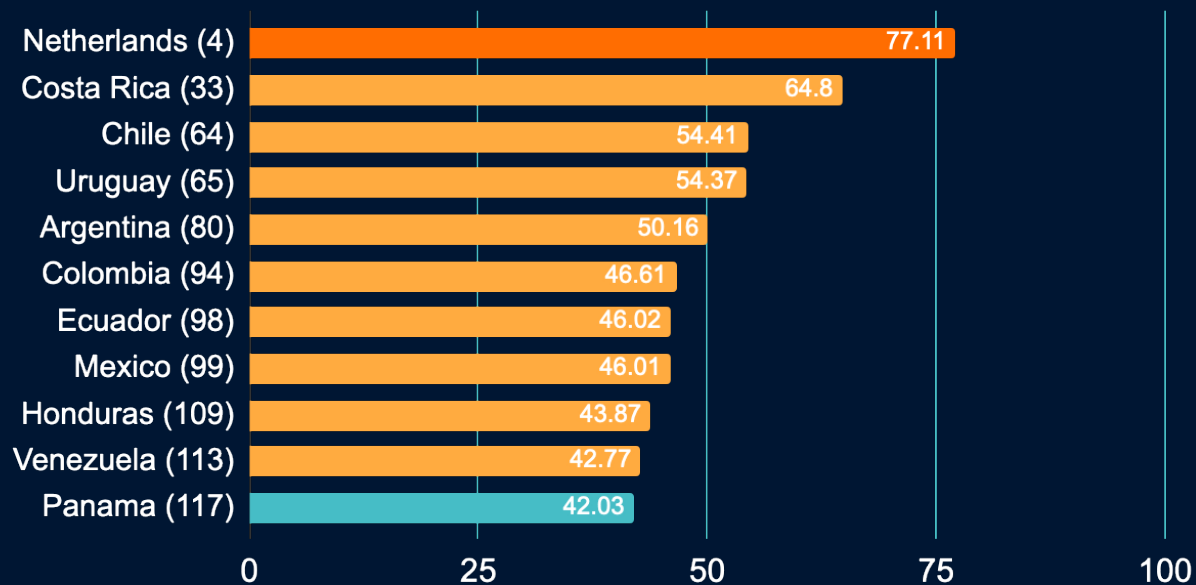


Note: world ranking in parentheses

- Panama **8th** out of 15 Latin American countries
- Panama ranks 72th out of 132 countries worldwide

Human Capital

Digital skills among active population (score 0-100 best; 2019)

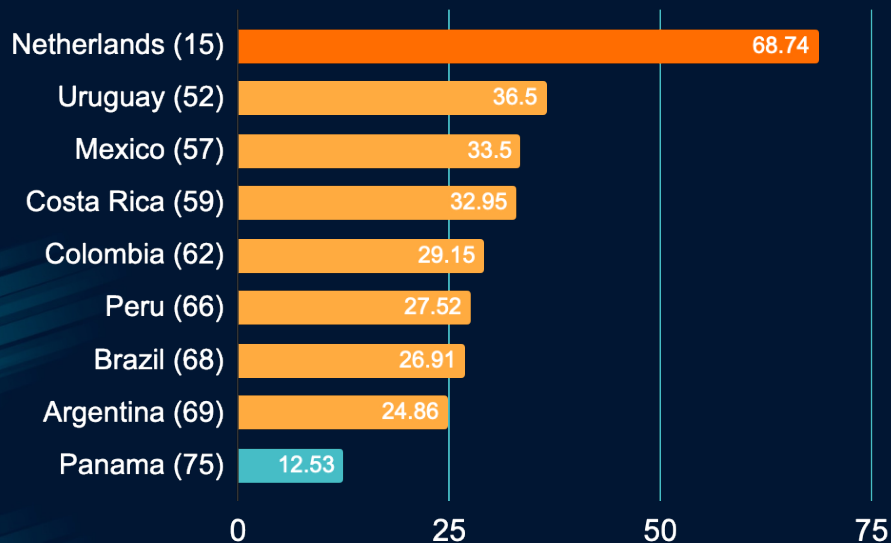


Note: world ranking in parentheses

- Panama is ranks **10th** out of 17 Latin-American countries.
- In Central-America Panama ranks 3rd after Costa Rica & Honduras.

Human Capital

PISA scales in Reading, Maths & Science (score 0-100 best; 2018)

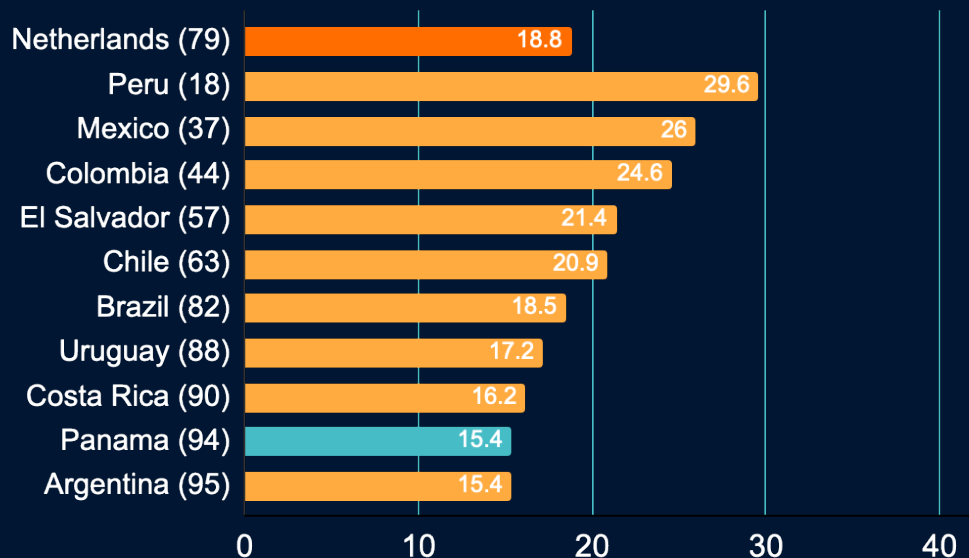


- Panama is ranked **8th** out of 8 Latin American countries on average PISA scores for Reading, Maths & Science (no scores available for the other countries)

Note: world ranking in parentheses

Human Capital

Graduates in Science & Engineering, % total tertiary graduates (2020)

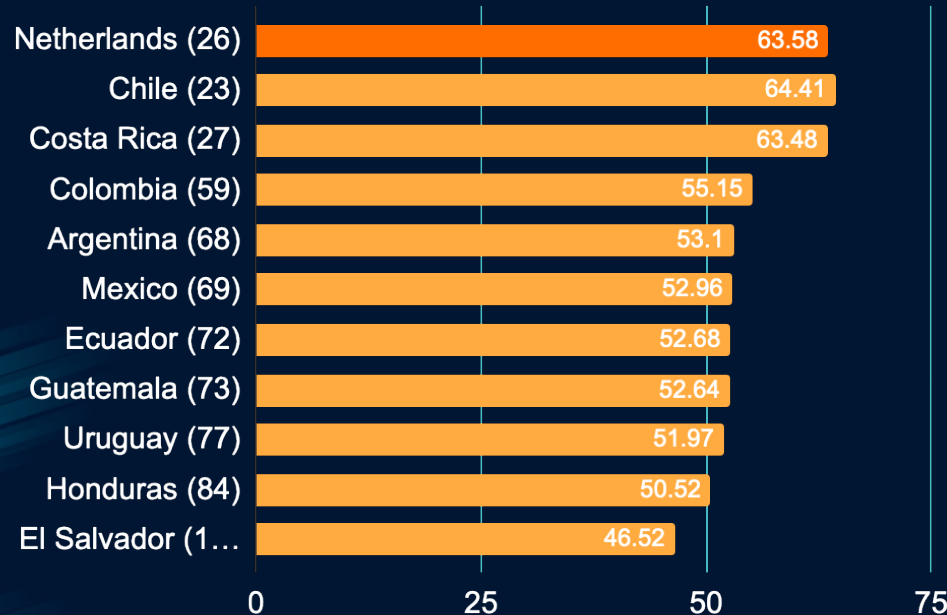


- Panama is ranked **9th** (out of 13) in Latin America in Graduates in Science & Engineering as % of total tertiary graduates

Note: world ranking in parentheses. Panama 2016 data, Peru 2017, Colombia & Chile 2020 data. Other countries 2019.

Human Capital

Ease of finding skilled employees (score 0-100 best; 2019)

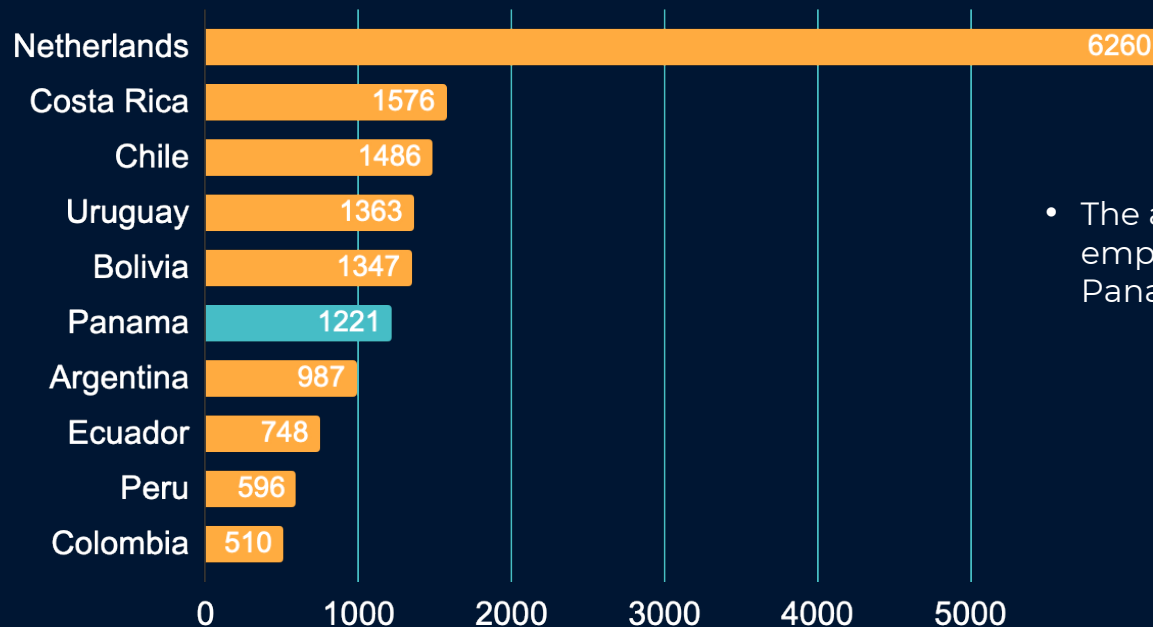


- Panama (118) is ranked **13th** out of 17 Latin-American countries (score: 43.57)
- It is difficult to find skilled employees in Panama
- There are

Note: world ranking in parentheses

Human Capital

Average Monthly Earnings in ICT sector (USD, 2021)

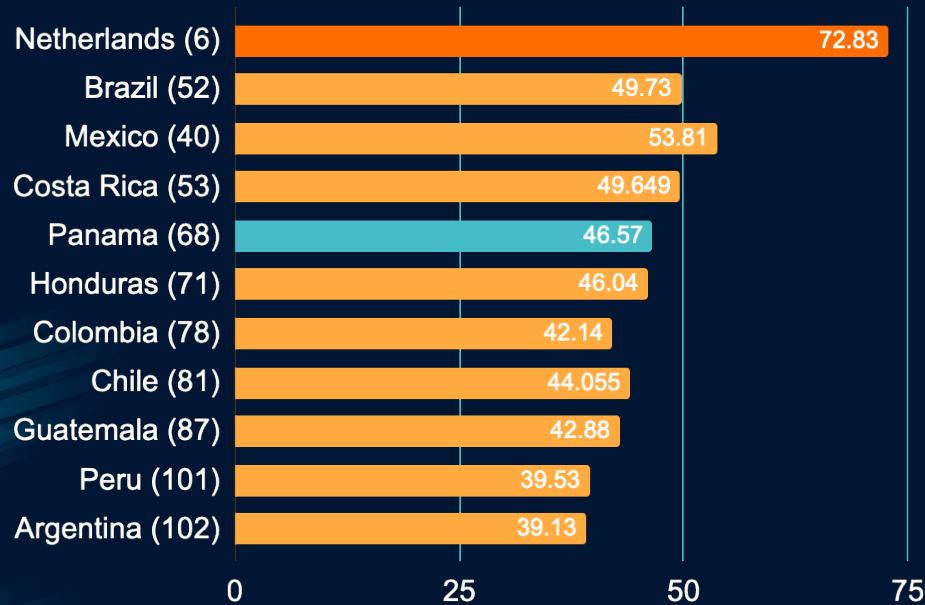


- The average monthly earnings by employees in the ICT sector in Panama are **1221 USD**

Note: Earnings exclude employers contributions to social security & pension and before tax (gross). Uruguay is 2020 data.

Innovation Capability

State of Cluster Development (0-100 best; 2019)

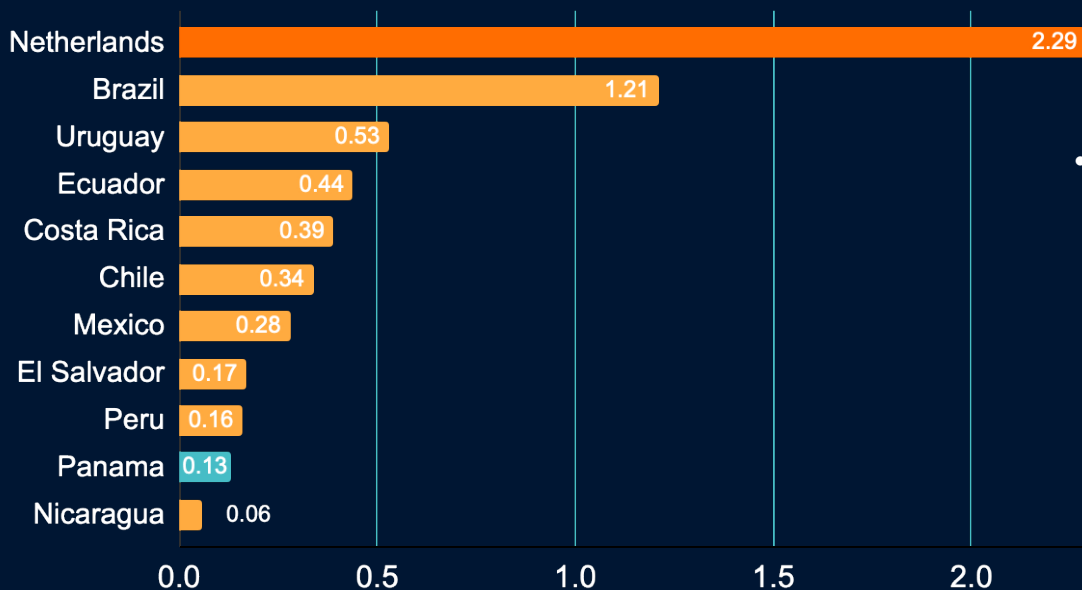


- Panama ranks **4th** out of 17 Latin American countries in State of Cluster Development

Note: world ranking in parentheses

Innovation Capability

Gross Expenditure on R&D (% of GDP; 2019)










- Panama ranks **9th** out of 14 Latin American countries on R&D expenses as % of GDP


Note: Chile (2018 data), Netherlands (2020). Rest 2019; Bolivia, Ecuador and Venezuela omitted due to aged data or no data.

Panama's Key Digital Strengths & Weaknesses

Strengths

	Fixed broadband download speed (2nd in LATAM)
	Number of mobile cellular subscriptions)
	Tech Parks with incentives (e.g. Ciudad del Saber)
	State of Cluster Development
	Ease of Starting a (Tech) Business
	Fiberoptic cables crossroads, IXP under development
	Online Creativity (Mobile app creation)

Weaknesses

	Mobile download speed
	% of the population using the internet
	Skillset of graduates
	Finding skilled personnel
	Legal frameworks adaptability to digital business models
	Venture Capital availability for Tech Start Ups
	Software spending as % of GDP



04

MARKET STRUCTURE

Overview of the Local
Ecosystem & Offering

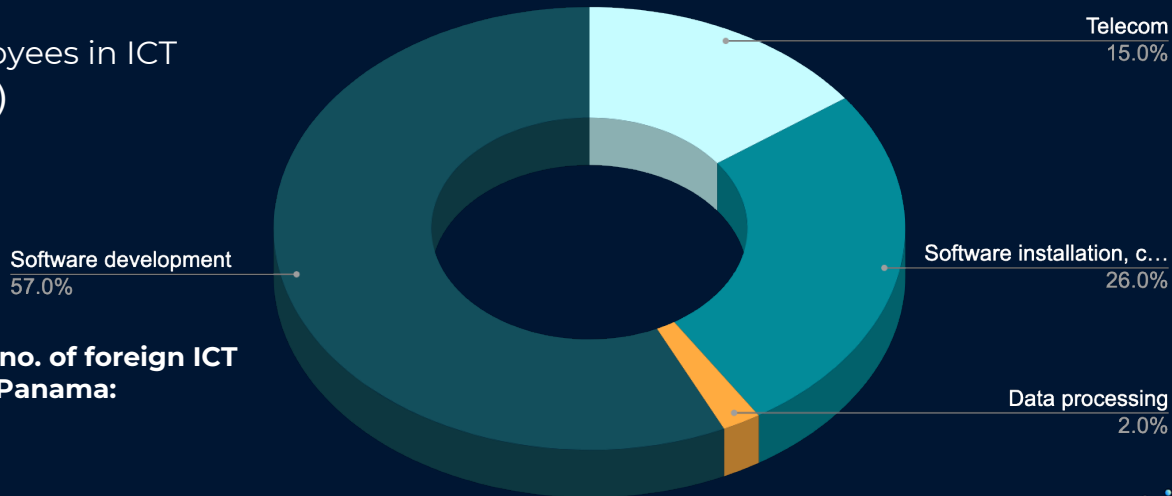
Market Structure

549 ICT companies in Panama

ICT companies per category



18.995 employees in ICT sector (2022)



Top countries no. of foreign ICT companies in Panama:

- Colombia
- Venezuela
- Spain
- United States

Local Ecosystem

Digital Technology Chamber of Panama

- Promote & strengthen the development of the ICT sector in Panama

CAPATEC

CÁMARA PANAMEÑA DE TECNOLOGÍAS DE INFORMACIÓN,
INNOVACIÓN Y TELECOMUNICACIONES

> **60 members**



Panama Hub Digital

Strategy for the development of the Panamanian ICT Sector 2025

Roadmap with programs & projects to turn Panama into a Digital Innovation Center

4 pillars: Human Talent, Infrastructure, Legal Framework, Financial Resources
<https://panamahub.digital/>



Biz Fit Panama

Technology Sector Exhibition

Promotion of the Panama-brand

Business opportunities & networking with local and international tech companies



Tech Cafes & Breakfasts

Thematic talks, roundtables and networking

Connecting members & ecosystem actors

Local Ecosystem Organisations

City of Knowledge (Techpark)

- Innovative community of academic organizations, technology companies and non-governmental organizations
- Former US Military Base (Headquarters South)
- 108 companies
- 120 hectares, 200 buildings
- Parks, shops, restaurants, sports facilities, convention center
- Innovation Center for Tech Start-Ups
- Eastern bank of Panama-Canal
- <https://ciudaddelsaber.org/>

Fiscal, migratory and labour incentives for tech companies

- Exoneration of taxes
- Special visas for foreign staff
- Possibility of hiring staff from abroad

More info

Law No. 6 10 Feb 1998



Local Ecosystem Organisations

Panama Pacifico (Techpark)

- Mixed business and residential community
- Former Howard U.S. Air Force Base
- 1.400 hectares, 58 hec. international business park
- 300 companies (e.g. Dell, 3M, Fedex)
- Logistics (warehouses), data centers, software, services
- Extensive parks, open spaces, shops and entertainment areas
- Western bank of Panama Canal
- <https://panamapacifico.com/comercial/>

Fiscal, migratory, labour, administrative incentives

- Headquarters & services
- High tech manufacturing
- Movie industry
- Logistics & distribution
- Maritime sector & aviation

[More info on benefits](#)

[Law 41 20 July 2004](#)



Digital Free Zone

BPOS Panama

Digital Free Zone

BPOS Panama is a private digital free zone with global reach, designed, organized, and structured as a digital business technology platform with business operational support.

- Datacenter (data storage & processing)
- Digital & Physical Business Residence
- Services platform (e.g. BPO, KPO, ITO, E-commerce, Fintech)

Science, Technology & Innovation



Secretaría Nacional de Ciencia, Tecnología e Innovación



Mission: Strengthen & promote the development of Science, Technology and Innovation to raise Panama's level of competitiveness & modernization.

- National Strategic Plan for Science, Technology and Innovation (PENCIYT) 2019 – 2024. Towards the Transformation of Panama
- Funding for Innovation & Entrepreneurship projects for local businesses (contests)

<https://www.senacyt.gob.pa/fondos-para-innovacion-y-emprendimiento/>

REPÚBLICA DE PANAMÁ
SENACYT 30
BID
PANAMÁ el GRAN PAÍS

Convocatoria pública de
SENACYT
Aplicar ya!

**CONVOCATORIA PÚBLICA
PARA EMPRENDIMIENTOS
INNOVADORES 2022**

FECHA DE APERTURA DE LA CONVOCATORIA: 19 DE OCTUBRE DE 2022.
FECHA MÁXIMA PARA ENTREGA DE PROYECTOS: 7 DE NOVIEMBRE DE 2022 (hasta las 3:00 p.m.) HORA EXACTA.

Blockchain Chamber



CAMARA DE COMERCIO DIGITAL Y BLOCKCHAIN

Mission: to promote disruptive digital innovation and develop technological ecosystems

- Events
- Networking
- Courses

<https://www.camaradigitalblockchain.org/>





Key Players

Selection of Digital Tech Companies in Panama

The following more than 100 listed Digital Tech companies are not a representative sample but meant for reference. They are companies located in the main tech cluster City of Knowledge Tech Park, members of CAPATEC, complemented by a few other well-known companies.

Local Offer

AI, Big Data & Data Analytics

Services & Solutions: Geographic Information Systems (GIS), big data & data analytics solutions



Local Offer

Blockchain

Services & Solutions: education, training and certification in Blockchain programming, Blockchain project management, Blockchain consultancy, Digital Identities, Electronic Invoicing, E-signature, Due Diligence, Decentralized Autonomous Organizations (DAOs), Buying & Selling of Crypto Currencies, Bitcoin ATMs, Worldwide Mobile Phone Top-ups, Giftcard options, remittance services



Local Offer

Cybersecurity

Services: security awareness programmes, surveillance services, events management, risk management, incident response plans, early warning systems, delegated administration, monitoring, strategic consulting, security & forensic audits, application, data center and public cloud protection, Security O365 & Azure, AWS security, Security Operations Centres (SOCs), VAR (Value-Added Reselling).



Local Offer

Digital Agencies

Services & Solutions: E-commerce shop building sites & apps, webdesign, web & webshop development, digital strategies, hosting, digital marketing & SEO,



Local Offer

IT & Digital Transformation Consultancies

Services & Solutions: IT consulting companies: specialized in advisory services, auditing, project management and training, strategic management of innovation and the digital transformation of businesses.



Local Offer

Software

Services & Solutions: Software development, ERP, Consulting, Software Distribution, Agile Scrum & DevOps, UX design, IT Outsourcing, Invoicing & Accounting, Cloud Solutions, CRM, HR & Payroll Management, Sports Software, Chatbots, Electronic and Digital Administration Solutions, Software for Digital and Interactive Advertising, SaaS

The logo for ADMIOS, featuring the word "ADMIOS" in a bold, sans-serif font. The "A" is orange, and the rest of the letters are white.The logo for BIOS software, with "BIOS" in large, bold, yellow letters and a globe icon integrated into the letter 'O'. The word "software" is in a smaller, white, lowercase font to the right.The logo for BUSINESS CoreSolutions, featuring a stylized 'S' icon made of blue and green curved lines, followed by the word "BUSINESS" in small caps and "CoreSolutions" in a larger, lowercase font.The logo for Consultia it, with "Consultia" in a bold, sans-serif font and "it" in a smaller font inside a blue square.

Local Offer

Software

Services & Solutions: Software development, ERP, Consulting, Software Distribution, Agile Scrum & DevOps, UX design, IT Outsourcing, Invoicing & Accounting, Cloud Solutions, CRM, HR & Payroll Management, Chatbots, Electronic and Digital Administration Solutions, Software for Digital and Interactive Advertising, SaaS



Local Offer

Software

Services & Solutions: Software development, ERP, Consulting, Software Distribution, Agile Scrum & DevOps, UX design, IT Outsourcing, Invoicing & Accounting, Cloud Solutions, CRM, HR & Payroll Management, Sports Software, Chatbots, Electronic and Digital Administration Solutions, Software for Digital and Interactive Advertising, SaaS



Local Offer

Software

Services & Solutions: Software development, ERP, Consulting, Software Distribution, Agile Scrum & DevOps, UX design, IT Outsourcing, Invoicing & Accounting, Cloud Solutions, CRM, HR & Payroll Management, Chatbots, Electronic and Digital Administration Solutions, Software for Digital and Interactive Advertising, SaaS

DATUM REDSOFT



sia.

Silice softwareONE



sophos
solutions

stefanini
GROUP

syndesi.

TopManage

xplor

WEM

Local Offer

Service & E-commerce platforms

Services & Solutions: Maritime Services Coordination, E-Commerce platforms, Computer Programming Courses, Restaurant selection, Online Marketplaces (for real estate, cars, jobs), Delivery, Courier Services





05

**MARKET
TRENDS,
INSIGHTS &
OPPORTUNITIES**

Market Size & Growth Drivers in
Key Sectors

Sector Selection & Business Opportunities

Four **Key Opportunity Sectors** have been identified in Panama based on the following factors:

1. Dutch Digital Tech Strengths
2. Market Size & Growth
3. Needs & concrete Business Opportunities

Below mentioned **Trends, Insights and Business Opportunities** were compiled by holding more than **20 interviews** and reviewing more than **50 secondary sources**, such as:

- Panama's National Digital Agenda 2022 (AIG)
- National Logistics Strategy of Panama 2030 (Logistics Cabinet & IDB, 2017)
- Strategic Plan of Maritime & Port Development of Panama Mision-Vision 2040.
- National Plan of Science, Technology and Innovation PENCYT (SENACYT)

For a full overview, see the reference list at the end of this market study:

Besides the opportunities in selected sectors, there is a cross-sectoral need for professional web and app development, webdesign, e-commerce platforms, big data analysis and digital (transformation) consultancy in e.g. retail, tourism.

Key Opportunity Sectors



Logistics



Fintech



Digital Health



Government



Logistics

Trends, Insights &
Opportunities

Logistics

Key Trends & Insights

- **Transport & Storage market size: 6.52 B. USD** (2019); 10% of GDP; CAGR (2014-2019): 6.4%
- 6% of world trade passes through the Canal (14.000 ships pass the canal annually)
- Digital transformation is seen as key to improve **competitiveness of the Panama Canal and Ports** (see e.g. National Logistics Strategy 2030)
- Panama is already using a variety of different digital systems, needing expansion and further improvements (e.g. PORTCEL & Maritime Single Window VUMPA)
- The Panama Canal plans to allocate **USD 500 million in projects that incorporate new technologies** (sensors, AI, AR/VR) to improve efficiency
- High need for **State-of-the-Art Training** in Digital Transformation of Ports/Logistics

30%

of Panamanian GDP

22

No. of Ports in the Panama Canal

24

No. of free zones & Special Economic Zones

8.6 M

Containers handled by Canal Seaport (2021; 11%)

Logistics

Key Trends & Insights

- Various emerging technologies can be applied to the logistics sector such as Blockchain, AI, Machine Learning & Big Data for e.g. **better stock management, distribution system optimization, risk management and customer service.**
- **Port security** is an area of opportunity: **traceability & cybersecurity solutions.** Cybersecurity incidents in logistics chains have more than doubled in Latin America in 2020 compared to 2018 (Diaz, 2021)
- Colon Free Trade Zone is the **largest free trade zone in the Americas** and the 2nd in the World. It hosts over 1800 companies. In 2020 the FTZ implemented an E-Commerce module in the Electronic Commercial Movement Declaration system (DMCE 2.0).
- Panama's potential as an **E-commerce redistribution hub** creates opportunities for tech companies that focus on the digitalization and automation of processes such as **Warehouse Management Systems (WMS), Digital Freight Marketplaces (DFM) and IoT applications.** E-commerce retail sales in Latin America (85 B. in 2021) are expected to rise with an annual growth rate of 17% (CAGR 2021-2025).
- The transport sector represents around **50% of Greenhouse Gas Emisions.** The Canal and Ports are making important investments to “get green”. Smart Digital Solutions are seen as an important way of achieving that.

Logistics

Adoption of advanced technologies in two main Panamanian ports

Port	TEU (Millions)	Automation & Robotic Systems	Internet of Things	Artificial Intelligence	VR/AR	Blockchain	Data Analytics	Drones	Private 5G networks
Balboa	2.90	No	Yes	Yes	Yes	No	IMP	No	No
Colon	4.38	Yes	Yes

Notes: TEU: Twenty-Foot Container Equivalent; IMP: Under implementation

Logistics

Logistics Sector challenges

- Reduce transportation and logistics costs through infrastructure improvement and trade facilitation.
- Ensuring there is no duplication: reducing traditional trade costs and costs associated with repetitive procedures through robust and integrated systems.
- Standardization of information, reducing costs derived from the lack of harmonization.
- Commercial barriers derived from the health crisis: transport controls and protocols that increase bureaucracy.
- Complex and long customs procedures to complete foreign trade operations (i.e., speed, simplicity and predictability of formalities by customs)

Logistics

Needs of the sectorsof

Harmonization of Logistics Sector proesses	Exchange of information between institutions	Improved Multimodal Connectivity	Accelerate Customs Processing & Eliminate bureauctacy
Document Implementation Manager in every institution	Centralized system & national risk portal	Strengthen interoperability of transport systems	Expansion of Single Window funcionalities (Customs, OGAS)
Interoperability between institutions for clients	Map/inventory of data flows of comercial operations	Optimize transport infrastructure with emerging tech; smart management systems	Evolution of SIGA (medium & long term)
Institutional processes that interact with the new EMMA Regime	Expansion of open data for the logistics sector	More active Central American Technology integration	Control cell of digitization projects between entities

Logistics

Upcoming Government Logistics initiatives (e.g. tender opportunities)

- ANA - The ANA (Customs) wishes to modernize the **Integrated Customs Management System (SIGA)**, integrating all operations movements of cargo, people and means of transport. The following work will be done on different addenda to the project:
 - **Conceptual design of a new SIGA system**, to replace the existing one, through the hiring of experts, international support for gap analysis, action plan and technological architecture.
 - Improve the **exchange of information** with entities related to the ANA DGI, ATTT, CGR, and initiatives such as PORTCEL, PILA and PDCC.
 - Put into operation the **SIGA interface with the Colon Free Zone System - DMCE** to provide interconnection in a joint project to achieve traceability, loading, control and expediting procedures for the entry and exit of goods in the ZLC.
 - **Adoption of the GTIN standard in SIGA** – Pilot Plan to improve the presentation of declarations, identifying merchandise or products with the greatest distortion at the level of use of tariff codes for their incorporation into the pilot.
 - Systematization of the **Courier Cargo process in the SIGA** in favor of electronic commerce
 - **Integration of Tocumen Airport with SIGA**

Logistics

- AAUD - Acquisition of the service that allows **the real-time monitoring of the waste collection vehicle fleet**, tracing and compliance with routes.
- ANA - a pilot for the **adoption of the GTIN (Global Trade Item Number) standard**
- Expansion of **PORTCEL**: project to integrate the **logistics and foreign trade systems of the State**, including ANA, the Ministry of Agricultural Development (MIDA), the National Bank of Panama (Banconal), the Panama Maritime Authority (AMP), the Panama Canal Authority (ACP), and private ports
- AIG - Together with the Colon Free Zone, the **new perimeter security system for the Free Zone** will be designed, tendered and awarded.
- AIG - The ANA will address various initiatives:
 - **Business Intelligence** - Establish a real-time **consultation system on customs information** to aid decision-making
 - **Monitoring Center** - allowing the analysis and evaluation of the data and images received from all the scanners of containers, vans and vehicles that ANA has.
 - **Implementation and Design of the Technological Platform** for the Integration and Inter-institutional Coordination of Entry and Exit Control Posts of people and cargo in Panama. **RFID of container information**

Logistics

- Development of the **Logistics Integration Program - PILA**, through different phases: (1) PILA Management Control System (2) PILA Risk Control System (3) Strengthening of the Single Window for Foreign Trade (VUCE) (4) System for Authorized Economic Operator.
- AMP - **Improvement of the Maritime Single Window of Panama (VUMPA)**. Implement electronic payment for the advance disbursement of vessels and unify the collections
- MICI - Generate synergy to **create a Single Window for Foreign Trade and Logistics**, expanding and integrating the technological applications of this facility, the VUCE, VUMPA and PORTCEL available at the MICI.
- CGR - The Comptroller General of the Republic will design and implement a **Customs Declaration Control System (FIDA)** to support the National Customs Authority (ANA)
- **Optimization of security and protection** through industry 4.0: development of early warning products, detection or remediation of emergencies, remote sensing products on land, sea or air, intrusion remote detection products; physical or digital risk management optimization systems, control automation
- Promotion of **infrastructure control and verification systems**, supported by sensorization and the implementation of new technologies, with the aim of optimizing the maintenance of assets and the monitoring of their useful life
- Implementation of new technologies that allow the **automation and centralization of the access control and security system of the port facilities** (CCTV, license plate readers, proximity sensors, etc.).

“Within a few years, I expect most terminal operations will be linked to customers and stakeholders’ systems. We look at major investments to upgrade our systems and planning for ultimate destination and make the global chain more efficient”

— Jared Zerbe, President Panama Ports Company
(Hutchison Ports)

Examples of tech companies active in the Logistics & Ports Sector





Fintech

Trends, Insights &
Opportunities

Fintech

Key Trends & Insights

- Banking Sector Market size: **4.21 B. USD** (Financial Mediation), **7.4% of GDP**. CAGR: (2016-2021): +2.4%
- Panama is an international financial center. There are **±70 banks** in Panama. The largest banks in Panama are: Banco General, Banco Nacional de Panamá, Banistmo, BAC & Global Bank (in value of total assets)
- The market's **largest Fintech segment will be Digital Payments (USD 2.61 B., CAGR 16.8%)** e.g. digital payment platforms, electronic wallets.
- The segment with the **largest growth** will be Digital Investments with a CAGR of 23.02%; (2022-2027) and 34.8% growth expected in 2023.
- In Latin America **Business Technology Solutions for Financial Institutions & Digital Banks** have the highest average annual growth overall in Latin America (no data available for Panama). E.g. **Digital Banking platforms and services, Data Analytics, KYC and Smart Contracts.**

2.61 B

Market Size Digital Payments (2022)

16.8%

CAGR (2022-2027)

55%

Panama's unbanked population

20

Fintech companies in Panama

Fintech

Fintech Segments in numbers

	Market Size 2022 transaction value (USD)	CAGR 2022-2027 transaction value	Projected total amount 2027	Av. Transaction value Per user (2022)
Digital Payments	2.61 B.	16.82%	5.68 B.	2.28k
Mobile POS Payments	494.70 M.	11.59%	856.10 M.	0.74k
Digital Remittances	149.10 M.	12.82%	272.50 M.	13.90k
Digital Commerce	1.97 B.	18.27%	4.55 B.	0.84k
Digital Investment	136.10 M.	23.02%	383.50 M.	2.28k

Fintech

Key Trends & Insights

- The conservative **Panamanian banking system** has been **losing competitiveness** in recent years and has significant shortcomings to serve certain business and population segments. Fintech is seen as a way to strengthen the positioning of Panama as an international financial center
- Panama has one of the **highest unbanked populations in Latin America** (55% of 15+ population does not have a bank account). This provides opportunities for Fintech companies to **expand financial access and usage among the unbanked** by lowering barriers
- **66.7%** of Fintech Startups in Panama are focused **on financial inclusion solutions for the unbanked population**
- Panama's established financial center, is giving the country's fintech's sector "good prospects" for future growth, according to an IDB study (Astudillo et al. 2021). "The [fintech] ecosystem ... is still nascent, but with good prospects."
- **APIFED** - Asociación Panameña de Innovación, Fintech y Economía Digital (previously PanaFintech) is **Panama's Fintech Association**

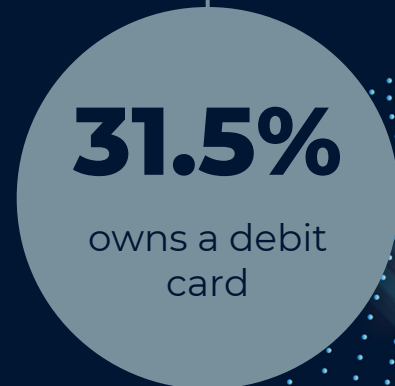


Fintech

Financial inclusion in Panama



29.2% of the 15+ population made or received digital payments



Fintech

- In July 2021 **Millicom International** (main brand: Tigo) announced that it will invest 250 million dollars in the expansion of its fixed and mobile internet services in Panama and the creation of a "**Fintech Hub**" offering Fintech services to the region
- In May 2022 **Towerbank** launched a "Crypto Friendly" account scheme for transactions up to 5000 USD monthly
- **Banistmo (Bancolombia)** launched the first Digital Bank in Panama (Nequi) and recently made it possible to withdraw Paypal payments locally
- Online banking has experienced a **strong increase in cyber attacks** during the pandemic and exposure to cyberattacks represents a significant challenge for the financial sector, providing opportunities for **cybersecurity solutions in banking**.
- **A Draft Crypto & Fintech law** (Bill No. 697) was approved on 28 April 2022 by Panama's assembly, enabling the use of crypto assets for civil or commercial transactions, adoption of blockchain by the state, paying taxes with cryptocurrencies, issuance of digital securities, tokenization of precious metals e.o.
- Panama's President Laurentino Cortizo **has partially vetoed the bill in June 2022** saying it requires more work to prevent money-laundering

Fintech

Financial Sector Challenges

- Low training and understanding of emerging technologies in banking entities, compliance officers and the public sector
- Bureaucracy in public and private financial institutions. Application of obsolete processes, when more agile and secure digital processes are available to improve the relationship with customers through digital means (digital file, digital signature, among others)
- Banking gaps (territorial, gender and income) in dimensions such as having a bank account, debit or savings card. **54% of the 15+ population does not have a bank account**, providing potential for Fintech solutions (Findex database), 29.3% of 15+ has a debit card; 8% a credit card
- Intermediation and high transaction costs
- Regulator that prevents innovation in the sector. Investor protection in new innovation environments and changing ecosystems
- Data exchange and interoperability of financial actors (public-private)

Fintech

Needs of the sector

Legislative Harmonization	Optimization of the Technological Infrastructure	Bureaucracy Reduction
Standardization of processes with best practises at international level	Dynamic interoperability: mapping of actors & processes, data sharing objectives	Adoption of technologies & solutions on already existing platforms
Promotion of Transparency of the banking sector: digitalizar KYC	Training in Emerging Tech & Data Analytics of bank departments	
Review of the agreement on simplified accounts.	Electronic Wallet project Caja de Ahorros – Extension to other areas	
Promote Fintech Law / Include Fintech as part of the ecosystem	Repository of work proceures for easy access by staff	

Fintech

Fintech companies

Segments & companies: Payment Gateways/Aggregators (Cuanto, PayU LATAM, Nequi,/Paypal Pagadito, PagueloFacil), Mobile Payment Platforms & Digital Wallets (Viacarte, Zinli), Crypto Currencies Payment Platforms (Cryptobuyer, Binance Pay), Crowdfunding & Crowdfactoring (Fortesza), Shopping on Credit (Crediviva), Online Store Solutions (Fygaro), Personal Loans (Adelantos,, Pluscred, TuCrecimiento, Venmetro), Mobile Point-of-Sale Solutions (MPOS Global), Digital Banks (Nequi)



Fintech

Examples of companies in Financial Technology Solutions for Financial Institutions

Digital banking platforms and services, Business infrastructure, Smart contracts, Data analytics, KYC solutions, Chatbots



Fintech

Upcoming Financial Sector Government Initiatives (e.g. tender opportunities)

- AIG - Advance with the "**Digital Wallet**" project that will allow citizens to make payments from an electronic device (mobile phones, computers and tablets) or with prepaid cards. An alliance is made with Caja de Ahorros and MasterCard to launch with IFARHU
- AIG - Operationally **launch a platform** that can provide a mix of repository and interoperability, so that all financial and non-financial reporting entities **can access the "know your customer" regulations** and transparency required by international entities
- AIG - Tender for the **updating of the infrastructure for the "banking core" of the state banking systems** (Agricultural Development Bank, Mortgage Bank and Single Treasury Account)
 - Aligned with the AIG initiative, Banco Hipotecario Nacional will initiate the **change of infrastructure, data migration and update of the E-IBS DATAPRO version** and adding new functionality
 - Aligned with the AIG initiative, the Banco de Desarrollo Agropecuario will initiate the change of infrastructure, data migration and **update of the E-IBS DATAPRO version** and adding new functionality
- CGR - **New Bank Reconciliation System** to balance Banconal P checks and issued checks (HISPAG) with the purpose of generating **bank reconciliation of the different bank accounts** managed by the National Directorate of Accounting Methods and Systems



Digital Health

Trends, Insights &
Opportunities

Digital Health

Key Trends & Insights

- Revenue in the **Digital Health market** is projected to reach **USD 83.23 M.** in 2022.
- Revenue is expected to show an annual growth rate (CAGR 2022-2027) of **15.9%**, resulting in a projected market volume of USD **173.90 M.** by 2027. The average revenue per user (ARPU) is expected to reach **USD 33.97**
- The **market's largest segment** will be **eHealth** with a total revenue value of **USD 43.79 M.** in 2022
- Revenue is expected to show an **annual growth rate** (CAGR 2022-2027) of **18.50%**, resulting in a projected market volume of USD **102.30 M** by 2027
- **User penetration** will be **29.29%** in 2022 and is expected to reach **36.36%** by 2027. **The average revenue per user** (ARPU) is expected to reach USD 33.62

83.23 M.

Market Size Digital Health

15.9%

CAGR (2022-2027)

43.79 M.

Market Size E-Health

18.5%

CAGR (2022-2027)

Digital Health

Key Trends & Insights

- The Digital Health market covers a broad scope of technologies, such as mobile health apps, connected wearable devices, health information technology and telemedicine. The market can be segmented in Digital Fitness & Well-Being (Wellness management) and eHealth (Health condition management).
- E-Health is considered a strategic priority in government policy **to improve access, coverage in remote areas and education**
- Digital Health in Panama was given a big impulse during the pandemic with initiatives such as **ChatBot, R.O.S.A, Plataforma, SARA, Vale Digital, Protégete, CAMAPP, Sistema, Corecovid and the Vaccination Passport**, driven by AIG and other Health Actors.
- Panama is implementing a **Comprehensive Digital Health System**, which consists of the following technological programs: Digital Clinical History System; Digital System of Medical Prescriptions; Digital Medical Appointment System; Digital Telemedicine System and Digital Hospital Management System.
- A **Telehealth Law** was adopted on 18 March 2022 ([Law 203](#))

Digital Health



City of Health

- A City of Health is being built in Panama-City with state of the art equipment. It will include robotic surgery and, among other things, a research center.
- It includes the Cardiovascular and Thoracic Institute, the Transplant Center, the Institute of Nephrology, Gastroenterology, Hematology, the Blood Bank and robotic surgery
- Built by a consortium of: Riga Services, S.A., Construcción Magnament Group (CMG) y Administradora de Proyectos de Construcción, S.A. (Aprocosa) under responsibility of the Caja de Seguro Social (CSS)
- Total cost: 1 B. USD. Planned completion date: 16 December 2023.

219000

Square meters

43

Operating rooms

1235

Beds

72

Intensive care units

Digital Health

Health Sector Challenges

- Relocation and lack of access to quality medical services in rural areas (concentration of health services in urban areas).
- Rise of cyber attacks on medical centers, hospitals and research centers.
- Challenges derived from the pandemic: saturated systems and beds, among others.
- Budget reduction: reduce costs without impacting the quality and access of healthcare services.
- Attention to unprotected population or at risk of digital exclusion.

Digital Health

Needs of the sector

Digital Health Services & Modernisation	Interoperability of Medical Systems	Innovation & Emerging Technologies
Disability System (Document Digitalization)	Comprehensive Traceability Platform Pharmacy & Drugs (Pharmacovigilance)	eHealth System / remote attention (chatbot, web, apps)
ePrescription Portal	Single Medical Record System (with right of access for citizens)	Review of the Purchasing Law / State Purchasing processes
Digital literacy training of primary medical staff	Creation of working group to define national interoperability standards	Improve open data processes to help & promote medical research
Esignature projects for medical means	Change management strategy for data management in public health institutions	Training & Leverage in Blockchain, IoT, Machine Learning & other tech

Examples of companies active in the Health Sector



Digital Health

Upcoming Government Health Initiatives (e.g. tender opportunities)

- AIG - Virtual Office for the CSS and MINSA with the purpose of decongest the emergency rooms of the health system and provide medical care to citizens from their homes. This system will have special emphasis on remote areas of the country where there are no medical and hospital services.
- MINSA – Citizen’s Electronic Clinical Record
- AIG - Medic App (Medical App for drug prices)
- AIG - Continue with the "core" project of **SIS 2.0 Medical Applications** (Single File, Teleradiology, Telemedicine, Laboratory System) to improve care for CSS policyholders and modernize their infrastructures.
- MINSA – Unique Medical Record System (interoperability of social and private security and the right of citizens to see their medical records).
- MINSA - Disability System (digitization of medical disabilities documents)
- MINSA - Electronic Prescription Portal.
- MINSA - **Comprehensive Pharmacy and Drug Traceability Platform** (pharmavigilance, supervision of critical situations).



E-Government

Trends, Insights &
Opportunities

E-Government

Key Trends & Insights

- Panama has a **strong & sound governance framework** of digital government and institutional modernization led by the governing body, the AIG, according to the different indices of multilateral organizations such as the UN e-Government Index and an OECD review in 2019.
- Panama has a **comprehensive Digital Transformation Agenda** and made substantial progress in digital government platforms & digitalization of procedures before and during the pandemic. Examples: Panama Digital, 311 Citizen's Attention Center & Municipio Digital.
- Latin American Development banks are also heavily committed to Panama's Digital Transformation with loans of **350 million USD by CAF** for **e-government, internet connectivity and digital inclusion** and **60 million USD by IDB** to advance **digital transformation of management & public services (incl. cybersecurity)**.
- Panama is working **on the design of a roadmap for the transition to 5G**, with the support of CAF.

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Cybersecurity

With Panama being an important trade, financial and logistics center, Panama has a large number **of critical infrastructures to protect from cyberattacks** such as:

- The Panama Canal
- The Undersea Cables
- Production and distribution of energy
- The Management of Water Resources
- Health
- The Financial System
- Transport
- Industry

Given the increase of cyberattacks on critical State infrastructures and the theft of data, Panama has strengthened its capacities in this field by reinforcing CSIRT and a new National Cybersecurity Strategy 2021-2024 approved on September 2021.

Further strengthening is planned by a **Business Continuity Planning and Technology Disaster Recovery System for State Mission Critical Institutions (DRP/BCP)** and the improvement of **early warning tools and systems to improve backup and restoration after incidents**, as well as record the events that have occurred and follow-up tests.

E-Government

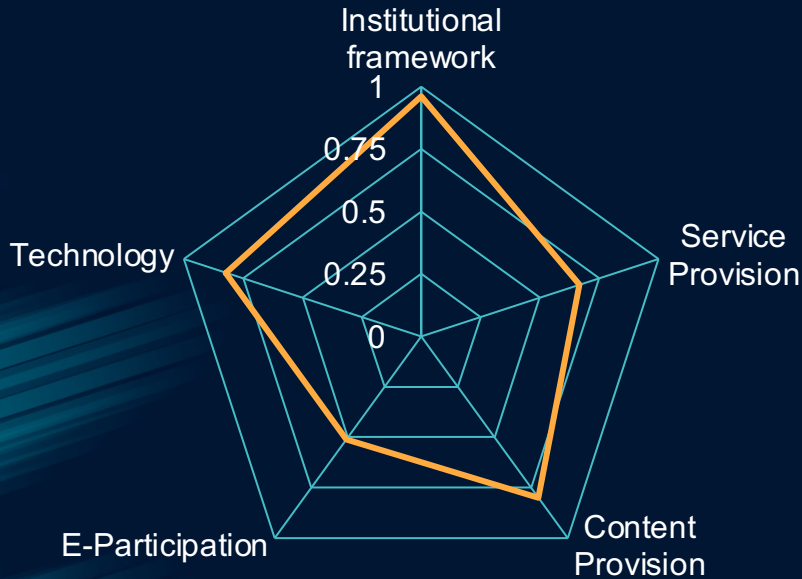
E-Government Challenges & Needs

- Higher readiness, engagement, skills and empowerment across the public sector regarding their digital transformation agendas, e.g. municipalities.
- Using data to enable **better monitoring, forecasting and delivery** of public services.
- Rising expectations of service users. **The quality, responsiveness and sustainability of public services can be improved.** Promotion of a user-centred culture throughout the public sector.
- More & better **Data Exchange across the administration** and the once-only principle.
- Panama ranks **10 out of 17 Latin American countries** and 72 out of 193 countries worldwide on the **Government Online Services index** (Score: 0.67410 of 1 best) with high scores on Institutional Framework & Technology but weak scores on Service Provision and E-participation (see next slide).
- Panama ranks **8th among 17** Latin American countries (82 out 160 countries worldwide) on how prepared government is to use AI in public services AI Readiness. (score: 42.98 of 100) with weak scores on **human capital, AI infrastructure, size of the AI tech sector and vision** (see next slide).

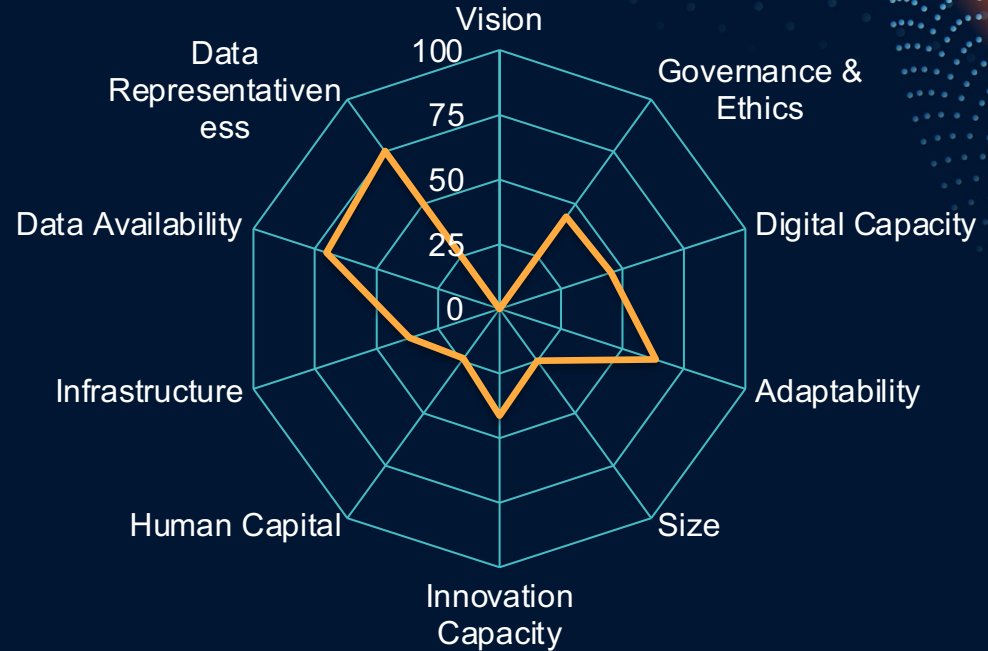
This indicator shows the long way to go by government institutions for the use of emerging technologies such as AI and its implementation in public services offered by the state.

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Online Service Index 2022



Government AI Readiness Index 2021



Examples of companies active in the E-Government sector



E-Government

Upcoming E-Government initiatives (e.g. tender opportunities) – AIG Agenda Digital

Initiatives in Governance

- AIG - Create a prioritized **catalog of ICT standards** at the Government level. Five (5) standards will be developed at the ICT level for the Government.
- AIG - Establish the **Governance and administrative scheme** for the implementation of a **Regional Internet Traffic Exchange point in Panama (IXP-R)**, in cooperation with CAF.
- AIG - design, tender and implement the **new Technological Infrastructure for the operation of the eSignature**, in cooperation with the Panamanian Public Registry.
- AIG - Establish the **terms, standards and conditions of use** of the **Government Cloud Service** with Government Institutions.
- AIG - Design and implement the **catalog of services** of the Directorate of Information Sciences.
- MEF - **Project Data Warehouse MEF 2021-2022** that centralizes, integrates and refines the information that it collects from all the addresses of the MEF.

E-Government

Initiatives related to the Digital Infrastructure in Panama

- JAS - Project for a **New National Internet Network for All** (RNI 3.0).
- JAS - **Installation of infrastructure of Radio Bases** to give access to cellular mobile telephony in the rural communities.
- JAS - **Deployment of fiber optics and Internet connection in 151 Schools nationwide**, to benefit more than 40,000 students, mainly in rural and difficult areas access.
- JAS - Bring communications and internet access through **Fiber Optic to remote communities in the country**.
- JAS - **Rural Public Telephone Project**, as part of the 100% National Digital Coverage Program of the JAS, to implement community wide internet and internet in schools in the Chimán district.
- AIG - Implement an **IPv6 protocol pilot** in the RNMS (Multiservices Network).
- AIG - **Purchasing Agreement for productivity tools** (Cloud) with the aim of facilitating, through local providers, the acquisition of Cloud services that are not currently supported by the Government Cloud Computing.

E-Government

- AIG - Implement and extend the use of an **inter-institutional interoperability BUS** and **Centralized Process Platform (PCP)** that will allow connectivity and effective interaction between all institutions.
- TE - Implementation of the **Digital Identity Project with eSignature**, based on a cellphone app at the Electoral Tribunal (TE).
- AIG - Design and Bid for the **Document Digitization Program** for the government with a view to achieving Streamlining Processes and document management in the state institutions.
- AIG - Optimization of the **Panama Digital platform** through the implementation of the **Virtual Assistant project**.
- AIG - Continue with the **Implementation of four hundred (400) procedures** in Panama Digital, facilitating the simplification & automation of processes and the reduction of information requested.
- MOP – Boost the **geographic information platform**, with emphasis on public road infrastructure data and a system of road assets.

E-Government

- CGR - Integration of **SCAFID Platforms** - ISTMO I and II PHASE. These systems already are implemented in 16 institutions of the government sector, the goal is to extend it to more public entities.
- DGI – Development of the **Tobacco and Alcohol Traceability Platform**. Provision and implementation of a technological platform for the traceability of tobacco, liquors and fuel as products of phase I.
- AIG/ ITI - ADA eLearning Platform (Digital Learning Environment). Developing a **platform for virtual learning of Government institutions** by the ITI (Institute of Technology and Innovation).
- MICI - Implement the technological platform for the **registration of the national industry** and the digitalization of procedures of the Law of Industrial Promotion.
- MICI – Development of the **Panama Emprende Web Platform** (version 2.0) and migration of the computer system of the General Directorate of Industrial Property Registration from MICI to IPAS.
- ANTAI - **Anti-Corruption Observatory** - a web platform that allows the publication of actions against corruption, and monitor the implementation of the Convention Inter-American against Corruption – MESICIC.
- APA - Improvement to the **Integrated System of Procedures of the Panamanian Food Agency** (APA)- a technological platform to offer food information to consumers. Panamanian importers and exporters, and citizen information, improving online processes, use of food trade statistics.

E-Government

Initiatives related to Territorial Linkage

- AIG - **Expand the Digital Municipality (MUNET) project** through the standardization of portals, municipal apps and collection systems, to give citizens information related to transparency, municipal management, and being able to make debt payments with payment buttons. Adding new municipalities and business and tourist content is also foreseen.
- ANTAI - Implement and extend to all municipalities the **Cadastral Management System** with the purpose of having an **inventory of land** in the country. This project includes digitization, indexing and file management and integration with other registers (public, fiscal).
- MIVIOT - **Integrated Land Management System**, providing the user with online tools for submitting requests for procedures, together with the digitization of plans and documents from the MIVIOT Single Window.
- MIVIOT - **Intelligent Contractor System**, allowing the supervision, management, dissemination and instantaneous interaction of the information of projects contracted by MIVIOT.
- MUPA - **Specialized Apps** for the Mobile City Hall, and for City Tourism.

E-Government

Initiatives related to Data Management

- AIG - Creation of an **electronic catalog** that allows the storage and synchronize reliable information between public and private entities, maintaining reliable, consistent and updated information, for the identification and traceability of products, using GSI standards.
- AIG - Develop and implement a **strategic plan for Data Governance** at AIG that allows good management, protection and use of data through policies, procedures and rules, which serve as a model for the rest of the institutions.
- AIG - **Train** five (5) people in the AIG in terms of **Data Governance and acquisition of software** that allows auditing the data of the institutions in at least five (5) platforms.
- AIG - **Interoperability of the information systems of public entities** for the exchange of data and documentation required around natural and legal persons. Map the entities that must be integrated in the interoperability.
- AIG - **Strengthen the Panama Open Data Portal (DAP)** to improve its design and content, allowing citizens to display statistics and graphics, generated from the data sets uploaded to the Portal.
- AIG - Start an **e-Learning project** for the training of eighty (80) institutions in matter of loading data in the Open Data portal and physical monitoring in twenty (20) institutions.
- DGI - Implement a **Tax Intelligence Solution**., Through the integration of information from other sources and the DGI database, it will be possible to view the information, with the possibility of carrying out planning, control and inspection actions in real time.

E-Government

Initiatives related to Cybersecurity

- AIG - Development of the 1st **Standardized Manual of National Government Cybersecurity Regulations** and protocols.
- AIG - Reinforcement of the capacities of **CSIRT-Panama**, which allow to improve the strategies and the effectiveness in the cybersecurity of the country for the prevention and mitigation of attacks, vulnerabilities, bad practices and cyber terrorism.
- AIG - Development of a **SOC** (acronym in English for **Cybersecurity Operations Center**) for entities. Team specialized in detection and mitigation of cyber attacks.
- AIG – Signing of a **collaboration agreement** between the **AIG and the Government of Israel on Cybersecurity**.

Initiatives related to Social Panama

- National Assembly - **Modernization and citizen participation projects such as Electronic Voting, online document consultation, app for consulting laws and projects, and automation of legislative procedures** such as the process of discussion of approval of bills and bills.
- Mitradel - Design, optimization of processes and implementation of the **Online Procedures of the Ministry's Operational Services** in aspects of employment, work, eradication of child labor, labor migration, Panamanian Institute of Labor Studies, Board of Conciliation and Free Defense of Workers.

E-Government

Initiatives related to Enterprising Panama

- MICI (AIG/AMPYME) - **Evolution of the Panama Emprende 2.0 Platform**. Quick and easy business creation through the digitization of the procedures. Updated version being developed that allows system migration computer of the General Directorate of Industrial Property Registry from MICI to IPAS.
- AIG - **Single Business Registration System (RUE)**. This project led by the AIG aims to promote the **digitization of the Single Register of Companies**.
- AMPYME - Launch of the **National Electronic Commerce Plan for Panama** for the training of SMEs that sell online and promoting their international integration in marketplaces.
- INADEH – Set-up an **education and training programs** that promote an innovative culture, strengthening hard and soft skills to innovate in companies and startups.
- CAPATEC - Establish an **e-commerce solution for shipments of merchandise** with schemes that generate trust between the parties (buyer-seller) for example: **blockchain**. This is an initiative of CAPATEC, derived from the commitments of the CNC; supported by AMPYME, Ministry of Government (MinGob), MICI, ACODECO and AIG.
- AMPYME - Develop an **information system** on projects of entrepreneurial development and SMEs in Panama.

E-Government

- MICI - **Modernize and streamline institutional processes and procedures** to improving the country's competitiveness. Design of Microsoft **Azure infrastructure** and Development of the Technological Platform for the General Directorate of Exports to automate the following processes.
 - **Technological Portal of Foreign Trade and Logistics** (SEM Directorate).
 - **Development of Platforms for the strengthening of MSMEs** (Micro, Small & Medium Enterprises), namely: Digital Checking, Learn Digital, Single Windows, Certification Processes of Free Zone.

Initiatives related to Innovative Panama

- AIG - **Blockchain Laboratory and Training Pilot Program**. Specialists will be trained to lead the adoption of this new technology in each institution, and the laboratory will act as a catalyst for the creation of applications that have an impact on improving efficiency in State operations.
- AIG - **Strengthen the Virtual Training Center** for government institutions. Services include: virtual content, hosting management for online learning, virtual educational platform consulting, program management, courses and online training services. Video conferencing services are included.
- AIG - Establishment of the **Regional Data Center** of the **Copernicus** programme of the European Union in Panama - Work is underway on a **feasibility study** to define governance, installed capacities and products to carry out the consultancy.

E-Government

Initiatives related to Sustainable Panama

- AIG - **Cooperation agreement with ESRI** (Environmental Systems Research Institute) to collaborate in developing an **experimental laboratory** to help understand **maps, topography, watersheds, natural hazards, aeronautics**, among others in a safe environment under conditions of the real world.
- AIG - Launch project for a **new electronic invoice format**, and the preparation of a proposal to modernize the corresponding regulation in order to allow simple signatures, private signatures for contractual validity and digital identity signatures for public officials, improving tax collection.
- MIRE - **Issuance of the Apostille Certificate in electronic form** with an electronic signature, which can be consulted online and where the verification of the apostille is carried out electronically, together with the payment.
- RP (Public Register) - **Open electronic signature ecosystem** to non-state certifying companies. By 2022, the main goal is to launch the electronic signature service in the cloud and establish the regulations that allow other organizations, private or public, apart from the national electronic signature address, to establish themselves as electronic signature issuing entities.

E-Government

- MINGOB - Implementation of the **ARGIS software** as a management tool and control of operations within **SINAPROC**. Early prevention mechanisms, alerts to natural events, greater coordination in operations, control center with early information for decision making.
- MIDA – Next phases of the **Integrated Agricultural Management System (SIGAP)**, with the Registry of producers in the agricultural sector, as well as a **Geospatial Information System (GIS)** together with the implementation of a **traceability platform**.
- MiAmbiente (Ministry of Environment)- **Digitization of online environmental impact studies**.
- MiAmbiente (Ministry of Environment) – **Hydrographic Basin System. Online procedures for water and land use concessions**.
- **Urban and Home Cleaning Authority (IDAAN)** – Simplification and Automation of the digital “no outstanding balance” indication of the waste fee.

E-Government

Initiatives related to the Justice area

- Ministry of Government (MINGOB) – **House of Peace Project** to relieve the Houses of Peace of operational procedures (Certifications), in order to digitize these processes.
- OJ - **Electronic Notification System (SEN)** to provide comprehensive services to users of the Administration of Justice, such as the **Single Entry Registry (RUE)** distribution module.
- MINGOB - Development of the **Penitentiary Information System** and its implementation, electronic micro-payment system in prisons based on biometrics, biometric engine according to the technological standard of Interpol, CS and DHS.
- CGR - **Evaluation of Public Works Projects (EPOP)**. This project seeks to have a **technological tool to support the management of audits** carried out by the National Directorate of Investigations and Forensic Audit, where information on public acts by entity, proponents, amounts, addenda to the contract and deadlines will be recorded.
- OJ - **Electronic court file of the Judicial Branch.**

E-Government

- OJ - **Automation of judicial services** through a mobile application.
- OJ - Adjustments to the **electronic agenda of Hearings and Proceedings**, integrated into the SAGJ. Process of digital audiences integrated into the Automated Judicial Management System.
- OJ – **Development of the Digital Agenda for Justice**, within the framework of the new Strategic Plan of the Judicial authority.
- OJ - Creation of a **centralized Judicial Information Model - Judicial Big Data** (SPA, SAGJ, other applications).
- OJ - **Development of emerging technological solutions and applications for the judicial system** – digital recording, video hearings, biometric registration for application and monitoring of precautionary measures, among others.



06

MARKET REGULATIONS & REQUIREMENTS

Important Treaties & Laws

Association Agreement EU - Central-America



Main features

- Costa Rica, Guatemala, Honduras, Nicaragua, Panama, and El Salvador
- Implemented since 2013
- Political dialogue, cooperation & trade
- Elimination of most import tariffs
- Improved access to government procurement, services and investment markets
- Protection of IP rights and banning of anticompetitive practices
- Mediation mechanism for non-tariff barriers and a bilateral dispute settlement mechanism

[Highlights of the agreement](#)

[Text of the association agreement](#)

Bilateral Investment Protection Treaty NL - Panama

Main features

- Mutual protection of investments
- Non-obstruction & non-discrimination (treatment, fiscal, compensation for losses)
- Free transfer of payments (without limitation or delay)
- Non-expropriation and compensation
- Recognition of subrogation of insurer



[Text of the treaty](#)

Important laws

Selection of important laws

Public Procurement

Law 22 on Public Procurement (27 Juny 2006) ordered by Law 153 (8 May 2020) regulated by Executive Decree 439 (10 September 2020), modified by Executive Decree 34 (24 August 2022)

Protection of Personal Data

Law 81 on Protection of Personal Data (26 March 2019) regulated by Executive Decree 285 (28 May 2021)

Electronic Invoicing

Ley 256 Electronic invoicing (26 November 2021) regulated by Executive Decree 367 (31 July 2020) and Executive Decree 25 (27 June 2022)

eSignatures

Law No. 51 on eSignatures (22 July 2008) regulated by Executive Decree No. 684 (18 October 2013)

Multinationals & Logistics

SEM (Multinational HQs regime) & EMMA (Multinationals Logistics Centers regime)



07

**MOVING
FORWARD:
SEIZING
BUSINESS
OPPORTUNITIES**

Tenders, Tips & Market Entry

Moving Forward: Seizing Business Opportunities

Public Procurement

For public tenders you can search & make bids via the following sites:

- [Panama Compra](#)

PanamaCompra is the Electronic System for Public Procurement of the Republic of Panama. All public entities are obliged to publish in the PanamaCompra Electronic System. You can search the system on different criteria (e.g. type of purchase, entity). To register as a supplier, you need a business license (or equivalent in your home country), a business register extract and a passport copy of the legal representative. Bids need to be made in Spanish.

- [Sistema de Licitaciones por Internet \(SLI\)](#)

The Panama Canal has its own procurement system (SLI). The SLI allows you to search ACP tenders, participate in the ACP bidding processes and to consult the final results. To bid you must register. Bids can be made in English.

Moving Forward: Seizing Business Opportunities

Development Banks

IDB and CAF provide funding (loans & guarantees) to its borrowing member countries in Latin America and the Caribbean (such as Panama) for a broad range programmes. These programmes involve procurement processes for contracts for eligible firms and individuals that supply goods, works and consulting services.



- Development of digital enabling environment: talent, infrastructure, regulatory framework, governance
- Sectoral Digital Transformation (e.g. e-government)
- New business models & digitalization of SMEs

[Procurement plans](#)

[Procurement notices](#)

[Corporate Procurement](#)



- Digital Transformation of the State through digital inclusion and the development of high-quality digital infrastructure
- GovTech support ([Govtechlab platform](#))

[Calls for bids](#)

Moving Forward: Seizing Business Opportunities

Seizing market opportunities in the private sector in Panama

Market research or market scans

You can request specific market research to map a subsector of interest

Finding business partners

- Partner search & individual matchmaking via Holland House Panama or a local consultant
- Participate in a trade mission
- Participate in local trade fairs & events

Market entry

Options:

- Find a local representative / agent
- Cooperation/alliance with a local partner
- Establish a virtual office
- Establish your own office



Virtual Visit of Panama

Moving Forward: Seizing Business Opportunities

Business culture & Tips for Doing Business

- Build a local network of personal relations
- Take into account that making actual sales takes time & perseverance (consequent follow-up of contacts)
- Make yourself visible in the local market (expertise, clients, successful projects) e.g. by organizing an online event, participate as a speaker, mouth-to-mouth and social media
- Be aware of cultural differences (business culture is indirect, hierarchical)
- Team up with a good local partner that knows the market
- Local presence: to built trust a local presence is recommended
- Stand out with excellent customer service and support
- Investigate the opportunities of special economic zone's fiscal, labor & migration benefits (e.g. hiring foreign talent, training locals)



Moving Forward: Seizing Business Opportunities

Trade Fairs & Conferences

Participation in a trade fair or conference ([see calendar](#)) is usually a good way to gather information and meet potential partners or clients. The following tech-related or promising sector trade fairs take place in Panama, most on an annual basis:



Next edition: March 28-30, 2023



Next edition: May 17-18, 2023



Next edition: October 3, 2023



Next edition: 17-19 October, 2023



Thank You!



For more information



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List of interviewees & panelists

Panama

AIG - National Authority for Government Innovation

Carlos Kan, National Innovation Director & Naiemeh Hjouj,
General Secretary

City of Knowledge / CAPATEC

Alessandro Francolini, Business Manager / Vicepresident

Development Bank of Latin America (CAF)

Mauricio Agudelo, Technology, Media and Telecom Specialist

Digital & Blockchain Chamber

Rodrigo Icaza, Executive Director

Georgia Tech Logistics Innovation & Research Center

Jorge Barnett, Managing Director

Inter-American Development Bank (IDB)

Galileo Solis, Science & Tech Lead Specialist

IPANDETEC

Lia Hernandez, Director IPANDETEC / Legal IT Abogados

Panama Canal Authority

Antonio Córdoba, Vice President Digital Transformation

PROPANAMA

Stephanie Pragnell, Business Intelligence Executive

SENACYT

Milva Samudio Ríos, Head of Planning

List of interviewees & panelists

Tech roundtable webinars

Cybersecurity

Eli Faskha, CEO, Soluciones Seguras

Francisco Guinard, Cybersecurity Manager, Banco General

Juan Ramon Anria, Cybersecurity Director, AIG – National Authority for Government Innovation

Juan Carlos Vega Ricoy, CEO Nuvol Cybersecurity

Fintech

Felipe Echandi, CEO, Cuanto

Eduardo Florez, General Manager Paguelofacil

Raymond Katz, CEO Adelantos

Janice Beccera, Founding member, Digital & Blockchain Chamber

Digital Health

Rafael Cohen, CEO Pacifica Salud

Juan Guerrero, Innovation Director, Caja de Seguro Social

Harry Loba, Head of Healthcare LATAM, Amazon Web Services (AWS)

Jhonatan Bringas Dimitriadis – CEO / LATAM Digital Health expert

List of interviewees & panelists

Netherlands

Dutch Digital Delta (Topsector ICT)

Fred Boekhorst, Directeur

Dutch Digital Delta (Topsector ICT)

Tijs Koops, Projectmanager & lead International Strategy

FME

Marcel van Haren, Cluster Manager Agri-Food

NIO Network

Ronald Verbeek, CEO

NL AI Coalition

Sander Ruiten, Coalition Secretary

NL AI Coalition

Stefan Leijnen, Advisor for Research, Innovation & Int. Affairs

Security Delta (HSD)

Bert Feskens, Sr. Programme Manager - Innovation Liaison

Task Force Health Care (TFHC)

Micha van Lin, Managing Director

Glossary of Terms

AAUD	Autoridad de Aseo Urbano y Domiciliario
AIG	Autoridad Nacional Para La Innovación Gubernamental
AMP	Autoridad Maritima De Panama
ANTAI	Autoridad Nacional de Transparencia y Acceso a la Información
AMPYME	Autoridad De La Micro Pequeña Y Mediana Empresa
ANA	Autoridad Nacional de Aduanas
CGR	La Contraloría General de la República
JAS	Junta Asesora de Servicio y Acceso Universal
MEF	Ministerio de Economía y Finanzas
MICI	Ministerio Comercio e Industrias
MIDA	Ministerio de Desarrollo Agropecuario
MINSA	Ministerio de Salud
MIRE	INADEH
MITRADEL	Autoridades del Ministerio de Trabajo y Desarrollo Laboral
MIVIOT	Ministerio de Vivienda y Ordenamiento Territorial
MOP	Ministerio de Obras Públicas
MUPA	Municipio de Panamá



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