



20th World Telecommunication/ICT Indicators Symposium (Geneva, 2025)

*WTIS@20: The past, present and future of
digital development statistics*

22nd September 2025 – Presentations

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Keeping Pace with Digital Transformation

National Data Agencies Perspectives

Professor Paul Cheung
Director, Asia Competitiveness Institute
National University of Singapore
former Director, UN Statistics Division

22 September 2025



WTIS: 30 Years of Collaborative Innovation

- Strong Institutional Arrangement to advance methodological improvements under ITU leadership.
 - Since 1996, a series of meetings serving as a platform for developing international standards and methodologies.
 - The Expert Group on Telecommunication/ICT Indicators (over 1100 members) and the Expert Group on ICT Household Indicators (over 800 members) are institutional pillars in standard-setting.
- Steadfast Political Support through World Summit on the Information Society, Geneva Plan of Action, Internet Governance Forum, and Global Digital Compact.

Global Efforts in ICT Methodological Development

Central Pillar since 2004:

Partnership on Measuring Information and Communication Technologies for Development:



Statistical Commission

Thirty-sixth session

1-4 March 2005

Item 7 (f) of the provisional agenda*

Activities not classified by field: information and communication technologies statistics

Report of the Partnership on Measuring Information and Communication Technologies for Development

Note by the Secretary-General

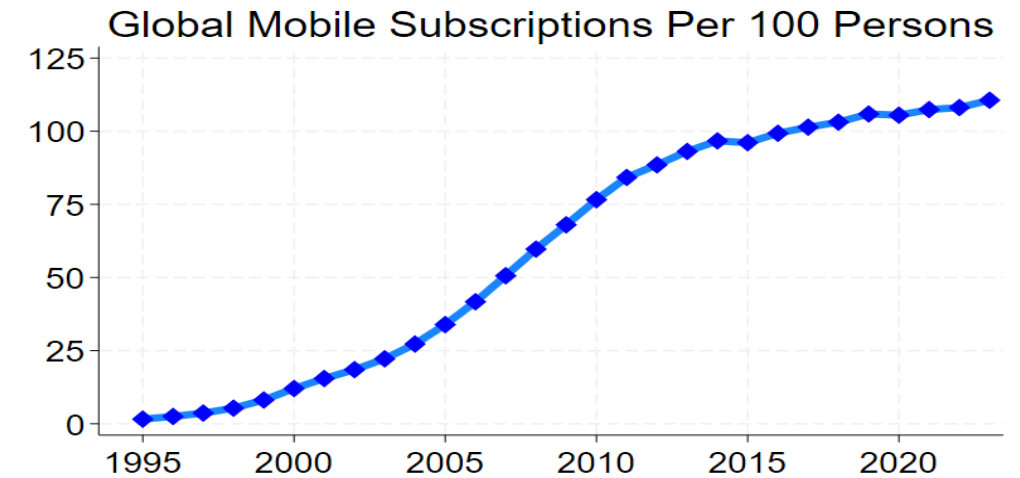
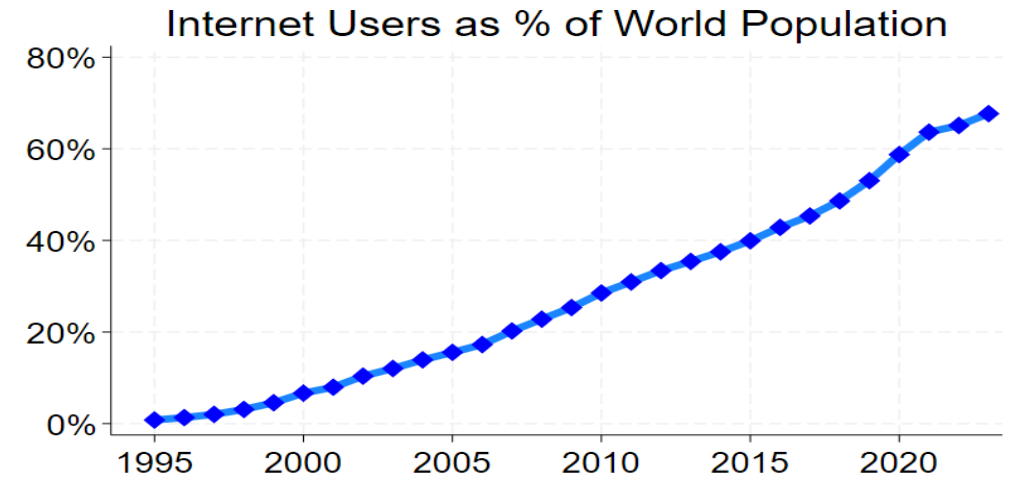
The Secretary-General has the honour to transmit to the Statistical Commission the report of the Partnership on Measuring Information and Communication Technologies for Development. The report is transmitted to the Commission in accordance with a request of the Statistical Commission at its thirty-fifth session.^a It is presented to the Commission for information.

Are We Keeping Pace with Digital Transformation?

Pace of digital transformation extremely fast. Fourth Industrial revolution has fully arrived. Major advances in digital infrastructure and associated transformations in economy and society.

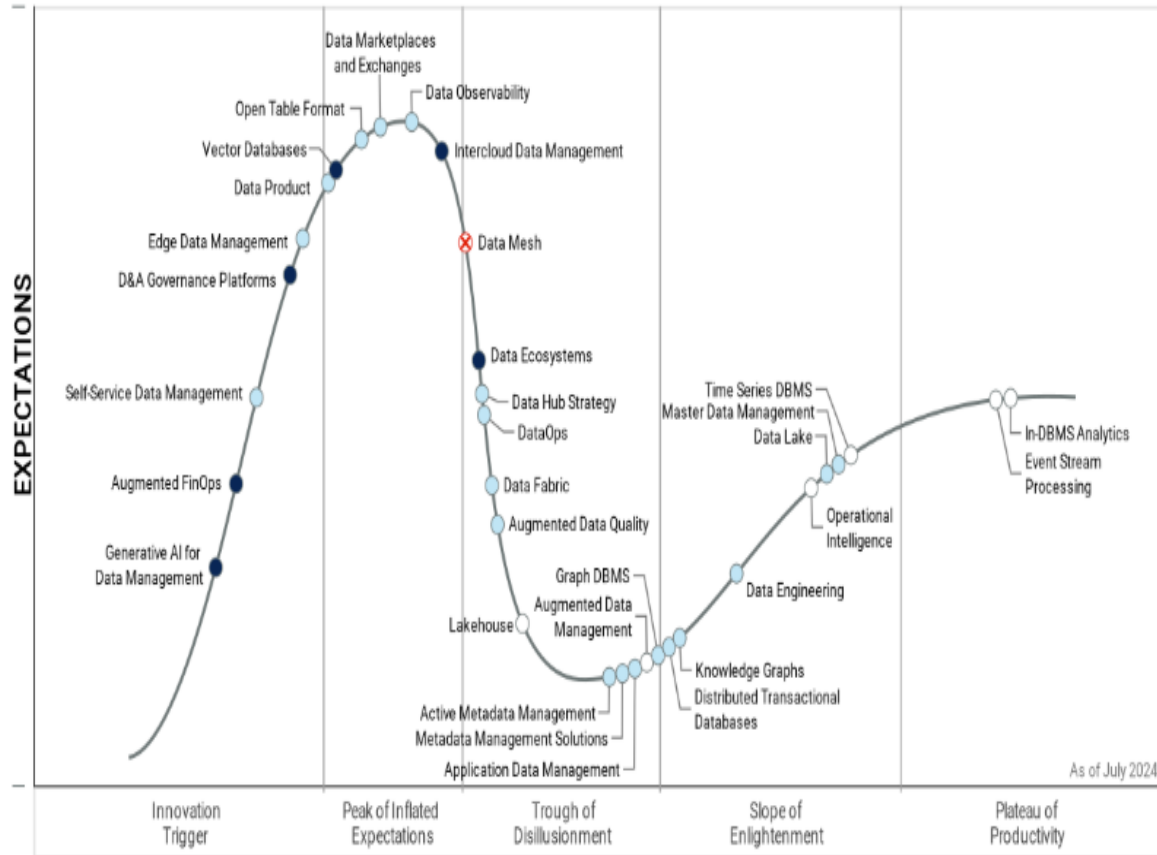
Are we, the National Data Agencies, keeping pace with the speed of the transformation?

Are 60 core indicators proposed in 2024 adequate? What else should we do? Are we tracking new indicators?



Hype Cycle and Rapid Changes in Digitalization

Hype Cycle for Data Management, 2024



Plateau will be reached: ○ <2 yrs. ● 2-5 yrs. ● 5-10 yrs. ▲ >10 yrs. ✗ Obsolete before plateau

Gartner

DATA SOURCES

Internal data sources such as data from CRM system, ERP system, sales reports, etc.

External data sources such as government statistics and media channels

DATA STORAGE

Big data storage software tools store, manage and retrieve massive amounts of data.

DATA MINING

Data mining tools allow businesses to extract usable data from a huge set of raw data to find relationships, patterns, and anomalies.

DATA ANALYTICS

Although data mining tools incorporate data analysis, there are software designed specifically with advanced analytical capabilities.

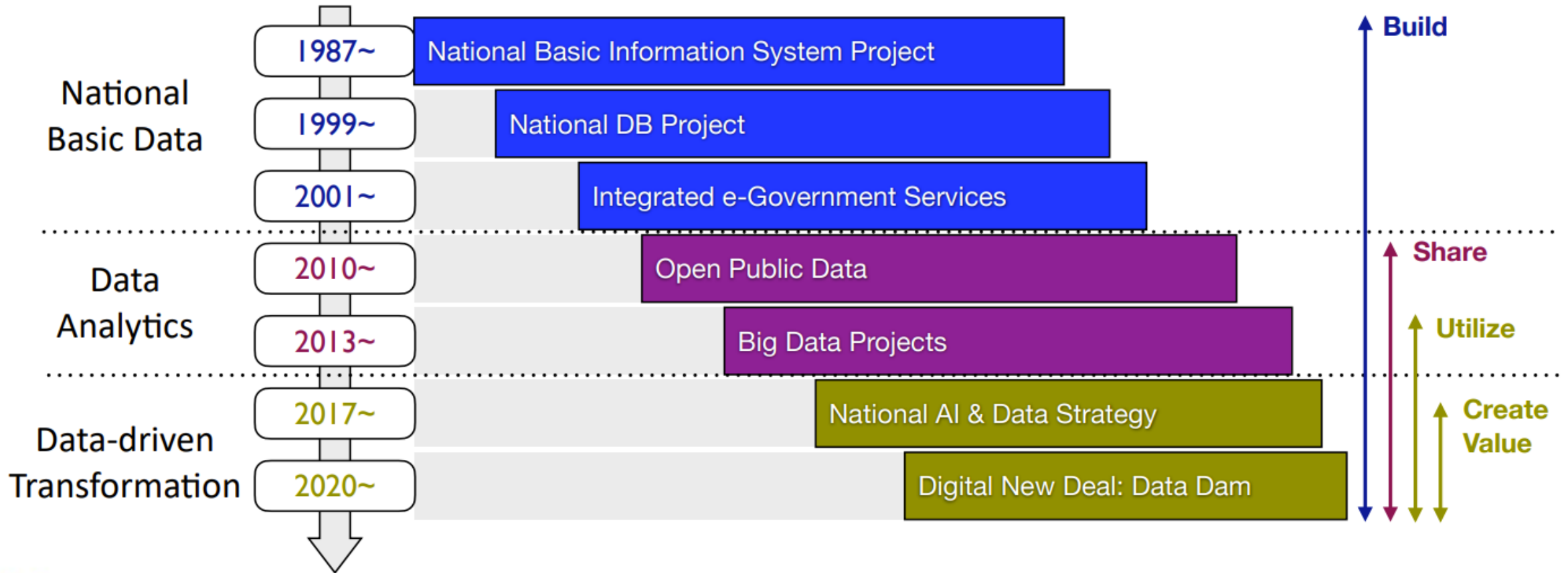
DATA VISUALIZATION

Data visualization software is also a type of data analytics tool. However, they are specifically designed to take the raw data and presenting it with beautiful and easy digestible visuals like graphs and charts.

Intellspot

Korea's Data Strategy

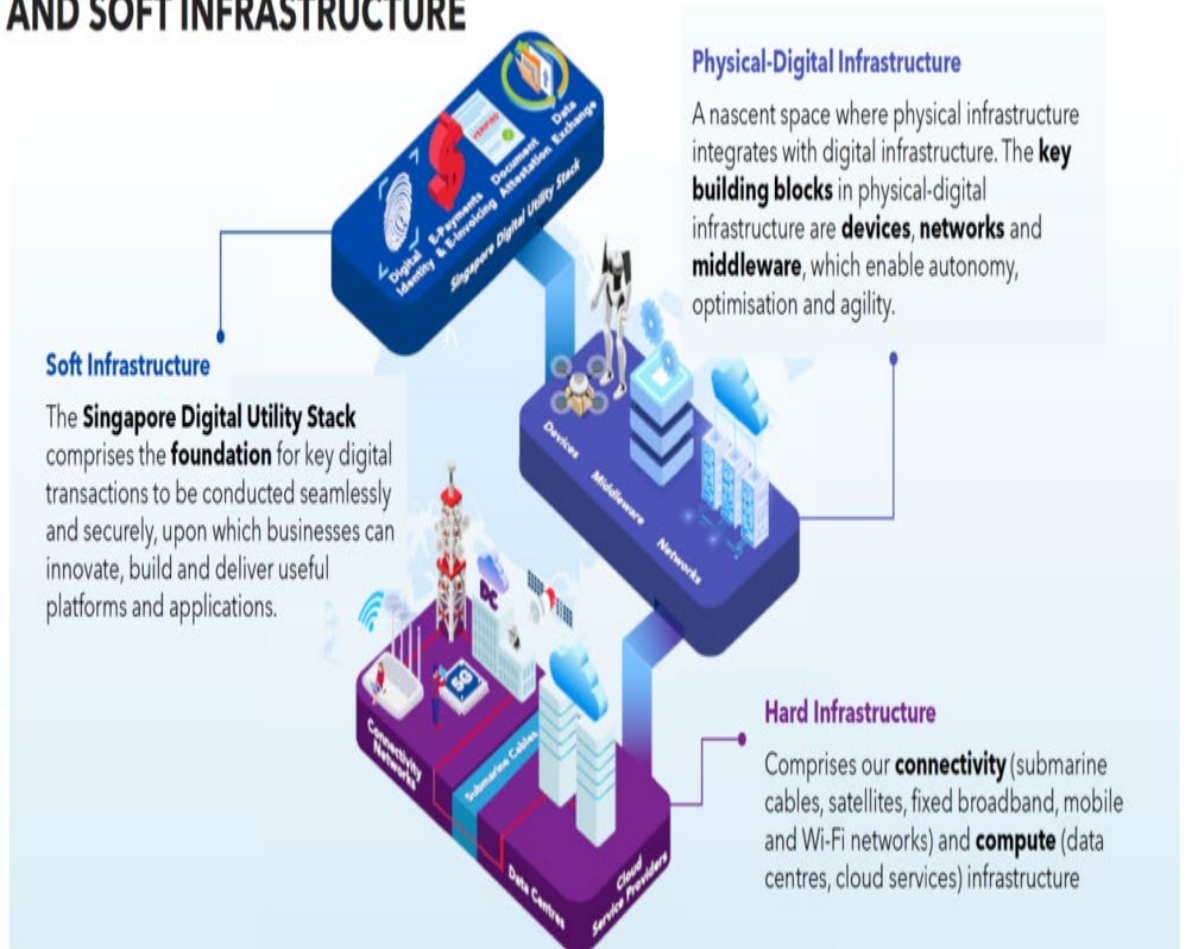
- Decades-long consistent data strategies have been implemented across all the administration since 1987



Irreversibility of Digital Transformation

- Digital Public Infrastructure becomes as important as roads and bridges; digital connectivity becomes a part of life.
- Digital economy is a new driving force in the socioeconomic development.
- Digital transformation has equal impact on social life, shaping our health and well-being.

SINGAPORE'S DIGITAL INFRASTRUCTURE STACK - HARD, PHYSICAL-DIGITAL, AND SOFT INFRASTRUCTURE



National Data Agencies Perspectives

- There is a strong mandate for national data agencies to improve their monitoring and analytics performance.
- How could we take advantage of ever-improving digital infrastructure?
- What are the emerging issues; how can we capture new ICT indicators faster?
- How could we function more effectively in the digital data ecosystem?



Improving Data Capture through Digital Networks

Case Study: Singapore

- Singapore established national broadband network for high-speed internet access in 1996.
- Digital platforms established for trade declarations and citizen information.
 - 1989: World's first national single window for trade declaration
 - 1999: eCitizen portal for integrating citizen data using digital identity
- Further enhancements over time in many aspects of national digital infrastructure

Internet-based Data Collection

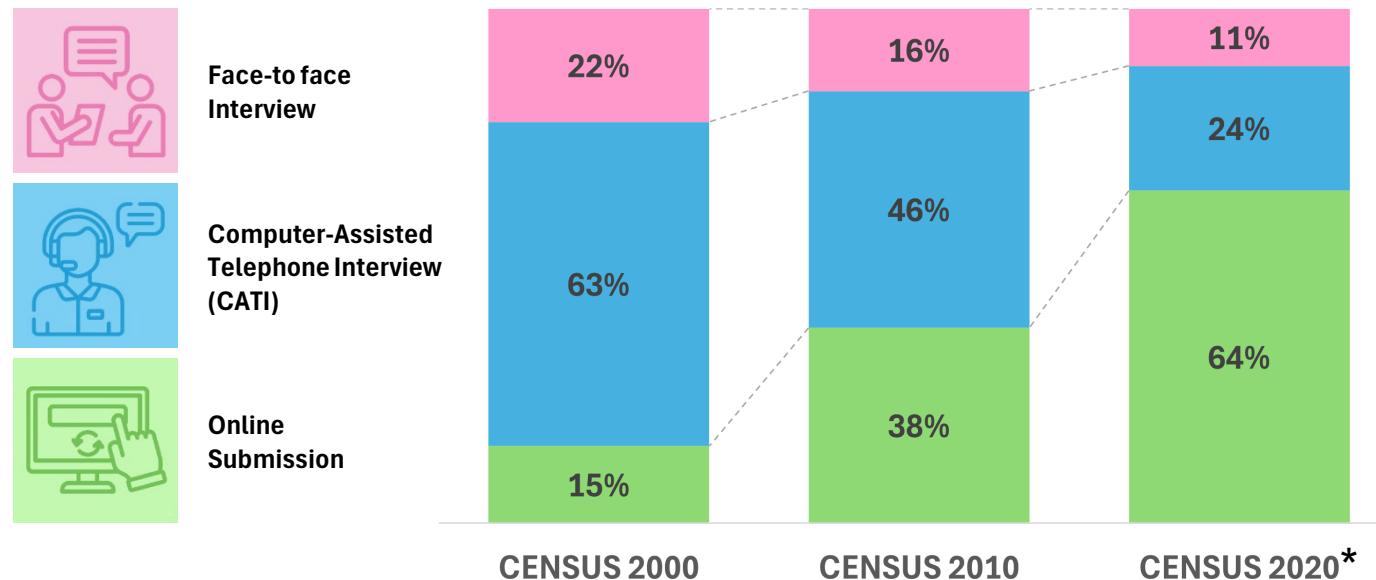
Multi-Mode Data Capture since 2000

- Cater to varied profile and needs of population while balancing resource considerations
 - Online Submission via Self-Enumeration
 - Phone Interview through hotline using Computer-Assisted Telephone Interview (CATI)
 - Face-to-face Interview with field interviewers using Tablets

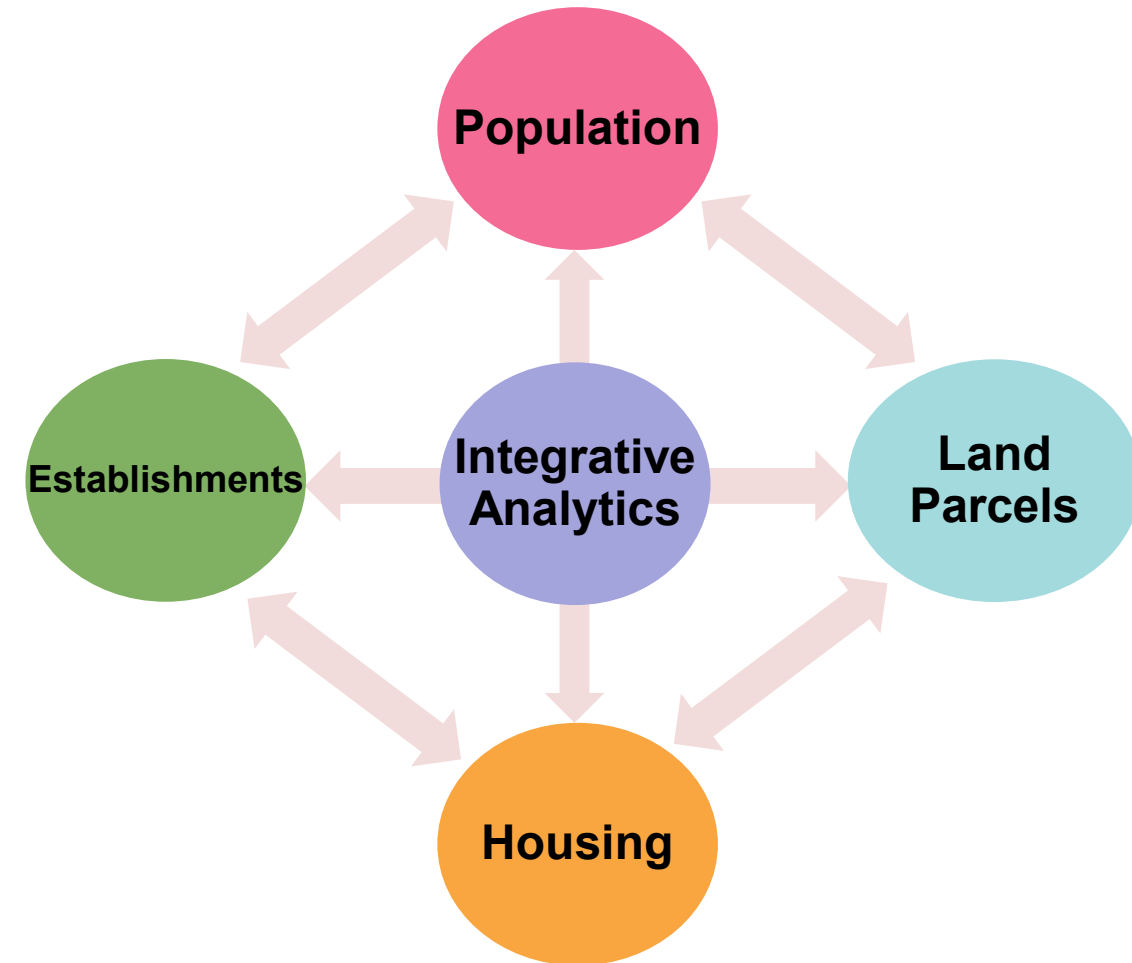
Adoption Rate by Mode of Submission

- Response via Online Submission increased steadily with higher internet penetration rate and computer literacy
- Online submission constituted more than 60% of all responses for 2020

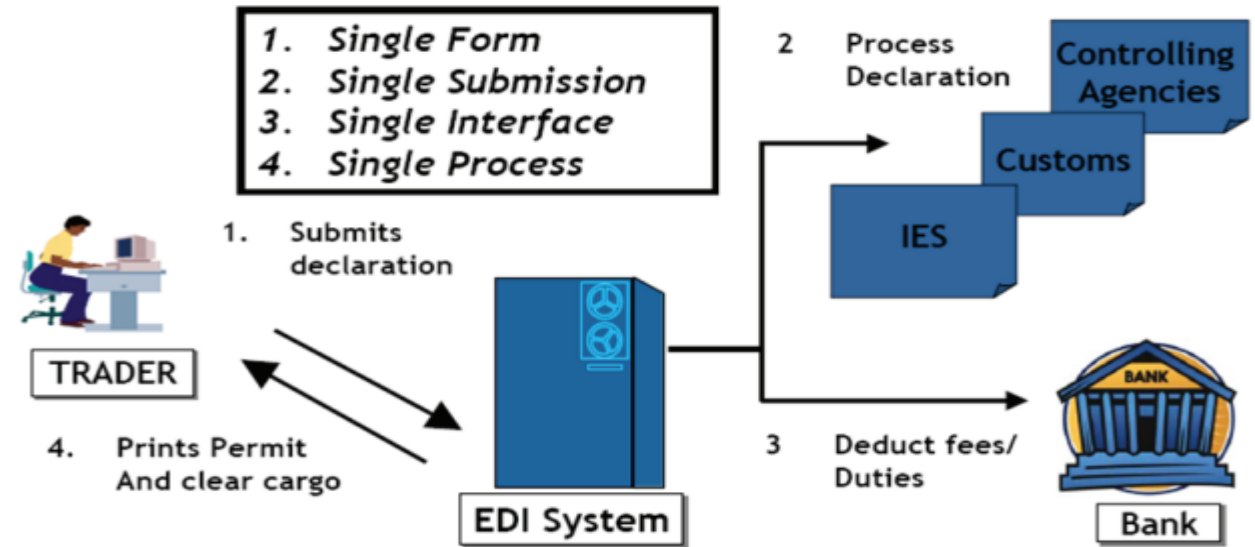
MODES OF SUBMISSION



Integrated Core Data Infrastructure



TRADENET facilitates collection of Trade Data



Subsequent Add-ons:



Data Exchange through API: APEX

- Digital data exchanges supported by legal frameworks such as The Public Sector (Governance) Act and The Electronic Transactions Act.
- APEX enables government and approved entities to share data via APIs, and allows consuming services to access approved APIs.
- Data exchange facilitated by the identification of authoritative data (single source of truth) in government databases. Further supported by uniformed data standards and formats.
- An important element of Digital Public Infrastructure.



The image is a promotional poster for a virtual launch event. It features a background image of two women, one younger and one older, looking at a smartphone together. The poster includes the logos for The World Bank and GovTech Singapore. The text on the poster reads: 'VIRTUAL LAUNCH National Digital Identity and Government Data Sharing in Singapore A Case Study of Singpass and APEX'. Below this, the date 'October 19, 2022 (Wednesday)' is listed, followed by the event times for three time zones: US Eastern Time (7:00 AM-8:30 AM), Singapore Time (7:00 PM-8:30 PM), and East Africa Time (1:00 PM-2:30 PM). At the bottom, there is an RSVP icon and the URL 'bit.ly/singpassapex'. A smartphone in the bottom right corner displays a user interface with a profile and various service icons.

THE WORLD BANK GOVTECH SINGAPORE

VIRTUAL LAUNCH

National Digital Identity and Government Data Sharing in Singapore

A Case Study of Singpass and APEX

October 19, 2022 (Wednesday)

US Eastern Time	Singapore Time	East Africa Time
7:00 AM-8:30 AM	7:00 PM-8:30 PM	1:00 PM-2:30 PM

RSVP: bit.ly/singpassapex

Abu Dhabi's Innovative 2024 Census

TAMM is the central platform for Abu Dhabi Government services. Residents access everyday vital services across Healthcare, Housing, Education, Citizenship, Residency and much more.

Every service provided for individuals is a dataset used for census.

Abu Dhabi's TAMM Platform Sets New Benchmark for Customer Service Excellence in 2024

940+ services provided

= (up from 765 in 2023)

12.7+ million transactions

= (up from 10.1 million in 2023)

90%

= customer satisfaction rate

63+ million

= sheets of paper saved annually

39 entities

= provide services through the integrated app

25+ million

= in-house customer visits saved annually

Source: مكتب أبوظبي الإعلامي
Abu Dhabi Media Office

Utilization of Admin data to solve four main challenges

challenge	Solution
<p>Coverage</p> <p>Traditional: Under coverage of total population</p> <p>Register: Over coverage of total population</p>	<div style="background-color: #00728f; color: white; padding: 5px; text-align: center;"> A Signs of Life </div> <ul style="list-style-type: none"> • The basis of the methodology is that over time, a person living in Abu Dhabi inevitably leaves certain traces or markers of administrative activity in the form of records in different databases. • This means it is possible to verify the person's residence in the emirate. <div style="text-align: center; margin-top: 10px;"> <p style="font-size: x-small;">Tracing person(s) activities across respective registers</p> </div>
<p>Linking Person to Person</p> <p>Traditional: Identifies relationship for persons who live in the same place only.</p> <p>Register: Not all relationships captured.</p>	<div style="background-color: #00728f; color: white; padding: 5px; text-align: center;"> B Signs of Relationship </div> <p style="font-size: x-small;">Linking persons and building relationship trees</p> <div style="text-align: center; margin-top: 10px;"> </div>
<p>Linking Person to Dwelling</p> <p>Traditional: Identifies place of usual residence, however, remains outdated till next census.</p> <p>Register: Can not identify place of usual residence</p>	<div style="background-color: #00728f; color: white; padding: 5px; text-align: center;"> C Signs of Place of Living </div> <p style="font-size: x-small;">Linking person to dwelling is captured</p> <div style="text-align: center; margin-top: 10px;"> </div> <div style="display: flex; justify-content: center; margin-top: 5px;"> definite potential actual </div>
<p>Linking Persons to Households</p> <p>Traditional: Constructs households only</p> <p>Register: Constructs Families only</p>	<div style="background-color: #00728f; color: white; padding: 5px; text-align: center;"> D Social Aggregation </div> <p style="font-size: x-small;">Designing families and households</p> <div style="text-align: center; margin-top: 10px;"> </div>

Deployment of AI as the next frontier

- Major efforts underway to leverage AI/ML in statistical operations as productivity tools.
- Promising results in improving coding and classification processes. Could extend to the entire data management process.
- AI/ML holds great potential in advancing knowledge generation through advanced analytics.
- Costs and sustainability a major concern in AI/ML operations.

	Highly impactful	Moderately impactful	Slightly impactful	Not impactful at all	Not sure	Average score
Data collection and processing	6	17	15	1	2	2,72
Data analysis	8	17	13	3	0	2,73
Dissemination and communication	13	16	9	2	0	3,0
Coding and IT development	21	15	4	0	1	3,43
Other administrative tasks	8	14	12	3	4	2,73

UNECE



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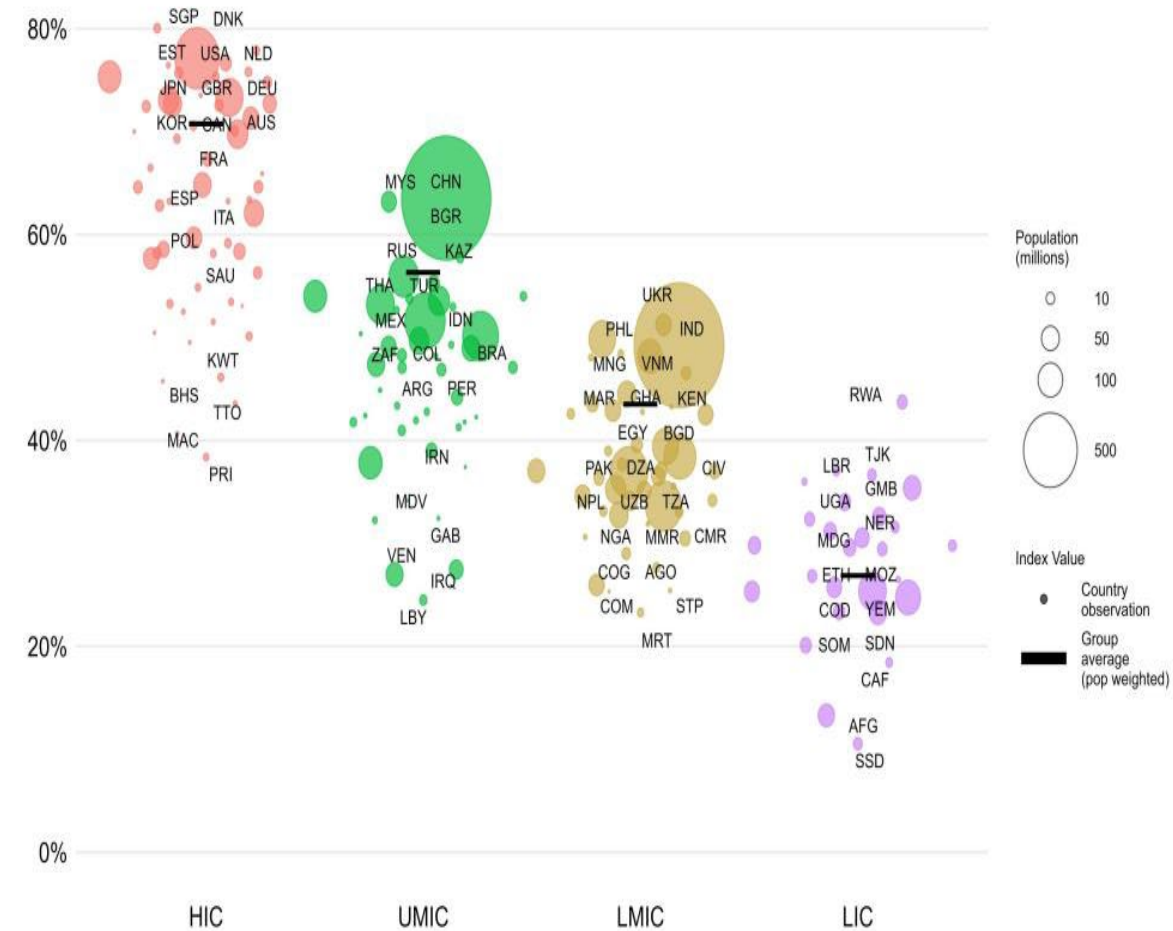
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Supercharging Statistics with AI

Rising Disparity in Digital Infrastructure

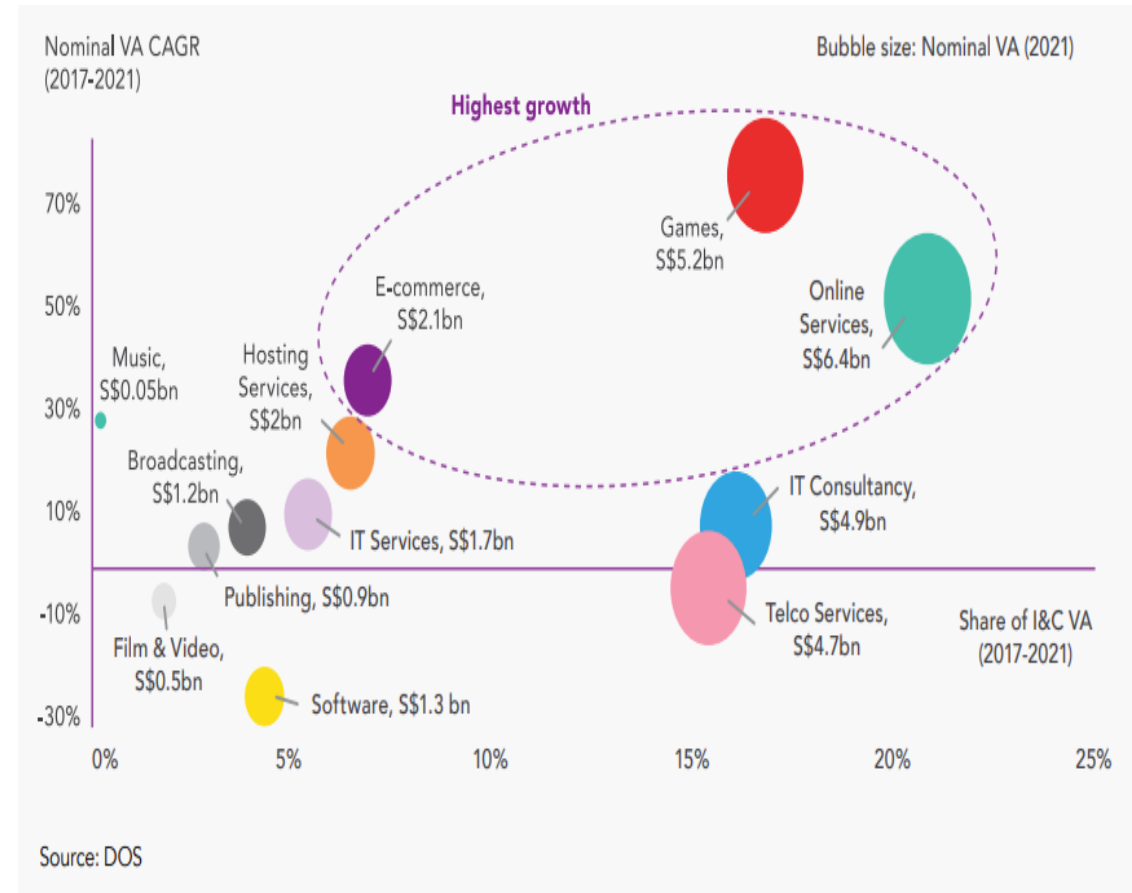
- There is great disparity in infrastructure development, with consequent impact on deployment of advanced data capture methods.
- Digital infrastructure, especially DPI, directly impacts a country's competitiveness.
- We will see greater divergence in how data agencies manage digital data resources and the sophistication of their data management systems.
- No clear solution how to address this disparity.



AI preparedness Index 2024, IMF

Emerging Issue: Measuring Digital Transformation

- Efforts are underway to better measure Digital Economy through Digital Economy Satellite Accounts.
- Aggregated estimates may not be as useful as sectoral basic statistics, as industries undergoing rapid transformation.
- Emerging issues deserve close attention.



Emerging Issue:

Monitoring Cross-Border Data Flows

- With cross-border data flows becoming more prominent, there is a need to monitor unregulated export of national data and help promote domestic value-adding data processing activities.
- Monitoring data flows facilitate the assessment of digital economy integration and inter-dependency.
- In particular, capturing the value of data flows and the digital services that enable such flows enhances understanding of the digital economy.

Emerging Issue:

The API Economy and DIPs

- APIs and DIPs are the engines of the digital economy. APIs are everywhere, powering every digital interaction. Are we tracking these new engines of growth?
- API Economy: Core drivers of new business models and economic value. APIs are building blocks that allow applications systems to communicate, share data, and work together as a cohesive whole. Numerous APIs are developed; critical interface across systems.
- Digital Intermediation Platforms, relying on APIs, are highly important in facilitating various transactions offering a variety of services. They enable businesses, particularly MSMEs, to access wider markets, enhance efficiency, and evolve new business models.
- We need to understand the number and impact of the APIs and DIPs.

Enhancing Data Governance

Integrating Horizontal and Vertical Mandates

- Multiple agencies involved in monitoring digital transformation.
- Horizontal mandates: National Infrastructure, Data privacy, AI and data regulations, DPIs, API development.
- Vertical mandates: social and economic sectors from well-being to jobs, transport and economy.
- Need strong coordination to manage and integrate various data assets and developed a uniformed data platform for sharing and analytics.

Singapore		
Data Strategy		<i>Smart Nation Initiative, 2014</i>
Legal Framework	Personal Data Protection	<i>Personal Data Protection Act, 2012</i>
	Government Data Sharing Authorization	<i>Public Sector (Governance) Act, 2018</i>
Technical Interoperability Standards Mandatory for Government Entities		<i>Open APIs for G2G/G2B/G2C services</i>
Institutions for Data Strategy, Governance and Stewardship		<i>Smart Nation Office, Government Data Office, Trusted data Centres, Ministry of Digital Economy</i>

Coordinating Data Custodians and Stewards

Data Custodians perform specific data management roles, including managing data collection processes, quality assurance mechanisms, and storage and retrieval procedures.

They serve as Single Source of Truth (SSOT).

Operating principles:

- Quality assurance at source
- Data privacy at source
- Data and knowledge as a service

Data Stewards perform a professional function over and about the data production processes. They assess and promote the usage of data, identify shortcomings in the data system, and strive to meet the need and trust of users.

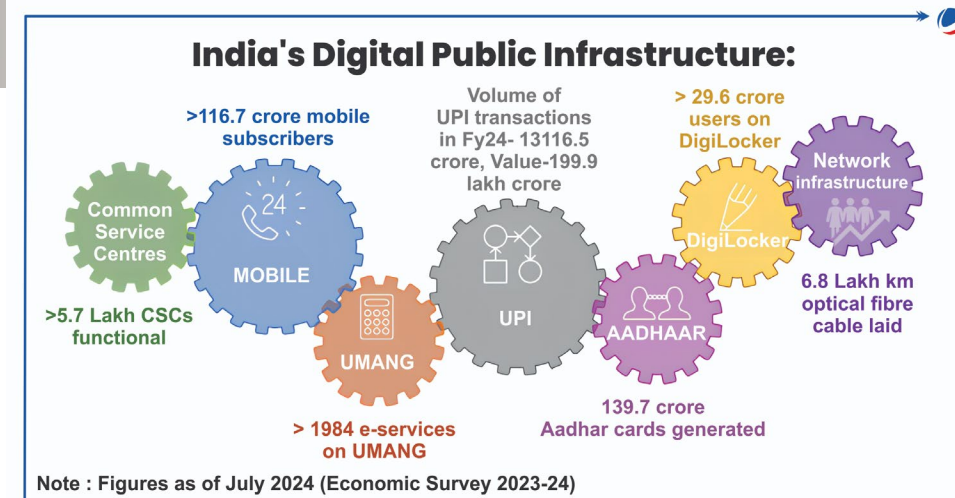
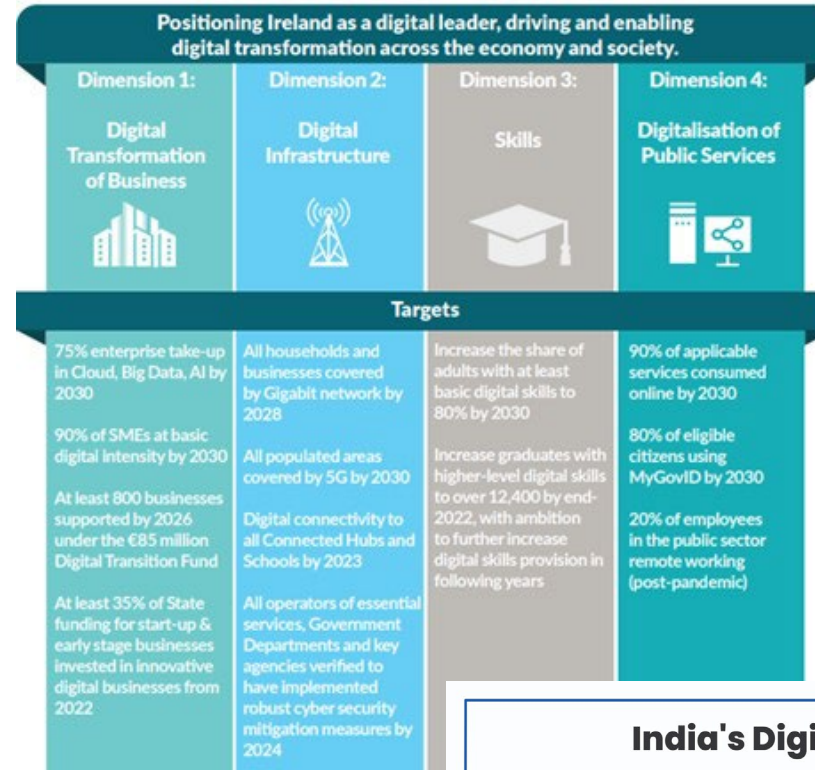


Advancing Data-as-a-Service

- Priority tasks:
 - Defining and managing the ecosystem of ICT statistics
 - Re-aligning data capture instruments and channels
 - Ensuring smooth data flow across data ecosystem
- Key enablers:
 - Data, analytics, and knowledge as a service
 - Strengthening legal and administrative mandate in data governance
 - Professional services in data stewardship
 - Strengthening human resource capabilities, from data scientists to data engineers

Conclusion

- A new world of possibilities, with new data sources, product lines and improved productivity;
- Use of technology will intensify rapidly. Incorporating Data Analytics and Complex Systems will help governments to advance knowledge generation;
- Government agencies must adopt new responsibilities and acquire new capabilities. New business models are required to implement data-as-a-service.



UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

Financing Digital Development Statistics

Global Call for Data Investment

22 September 2025

WTIS 2025 – Session on Financing Digital Development Statistics

Anu Peltola, Director of Statistics, UNCTAD

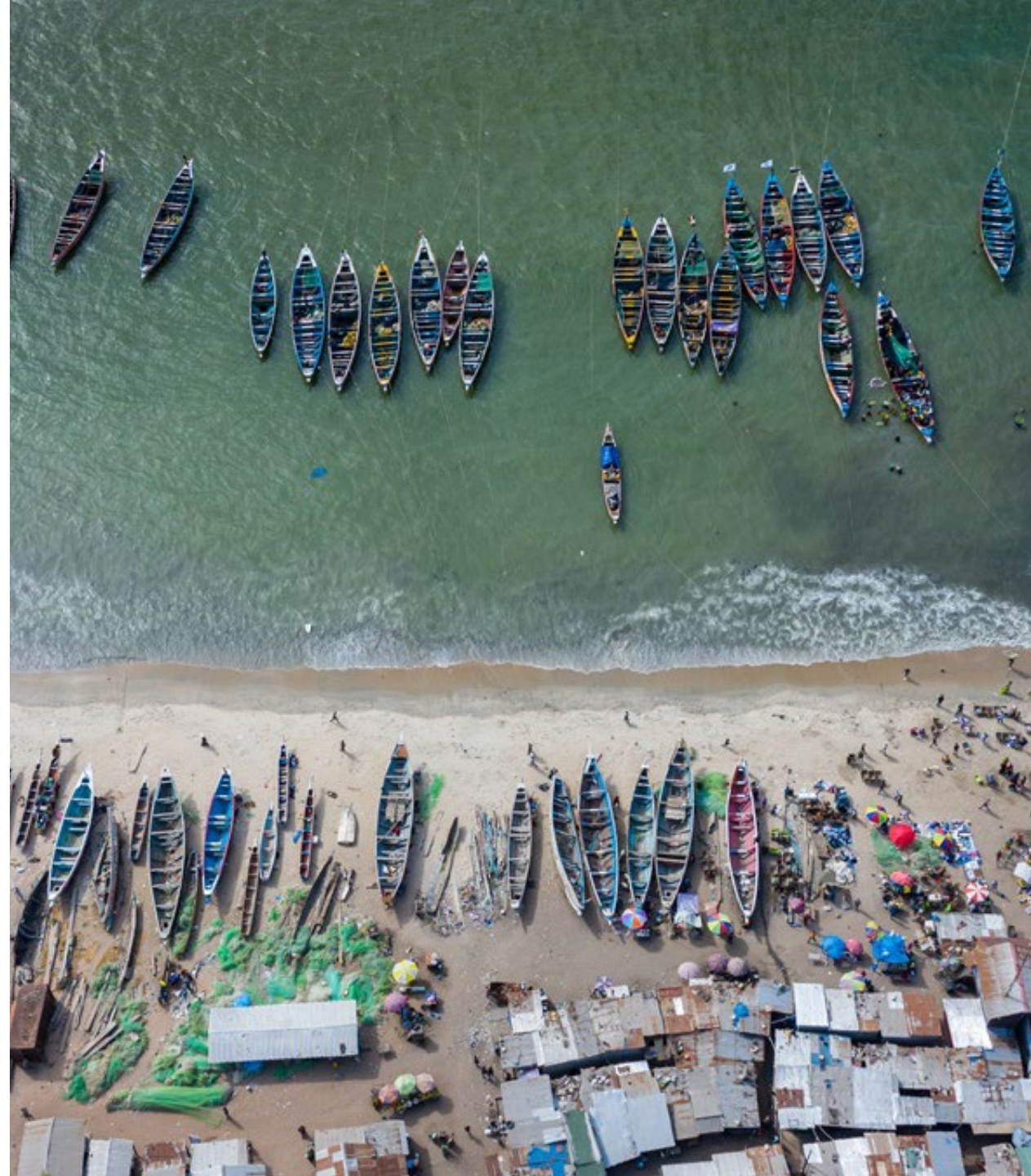


PACT FOR THE FUTURE

- The Pact for the Future and its Global Digital Compact mention data 90 times
- Launch of Working Group on Data Governance at all levels
 - ▶ Coordinated by the Committee on Science and Technology for Development (CSTD) at UNCTAD
 - ▶ Focus on inclusive, rights-based governance, interoperability, and trusted data flows
- Parallel Working Group on Data Governance by the UN Statistical Commission ensures technical rigor

➤ Fourth International Conference on Financing for Development (FfD4)

- Outcome Document: Strongest ever emphasis on data
- Recognizes data as:
 - A strategic asset for development
 - Essential for transparency, accountability, and trust
 - A foundation for digitalization, AI, and revenue modernization
- Calls for predictable financing and capacity building for national statistical systems



➤ SPA initiative - FfD4 and the Future of Data: Strengthening Systems for Sustainable Financing



- Embed **data and statistics** at the core of financing strategies to deliver on all **FfD4 ambitions**
- **Spearheaded by** Colombia, Norway, United Kingdom, Canada, Ireland, Maldives, Nigeria, Switzerland + UN agencies & civil society
- **Strategic pillars:**
 - ▶ **Efficient Financing** : Align support with national priorities and improve coordination
 - ▶ **Future - Proofing** : Invest in tech-ready, AI-compatible, and innovative data systems
 - ▶ **Political Commitment** : Strengthen cross-sector collaboration and long-term investment in national data systems

➤ Bridging the Digital Divide with Data



FfD4 highlights persistent digital divides:

- ▶ **Connectivity, access, and use**
- ▶ **Infrastructure, innovation, and data gaps**
- ▶ Data can enhance **domestic resources** , innovation, **digital investment** , and **impactful development cooperation**
- ▶ Strong data systems can be effective in building **resilience** , **transparency** , and **stability** .

Yet, ICT statistics are underdeveloped, especially in developing countries

➤ Two sides of Digital Development Stats

Close collaboration of ITU and UNCTAD

- ITU: Household surveys
- UNCTAD: Business surveys

Together, they provide both sides of digital transformation

- Data gaps are large due to the lack of financial and human resources in countries
 - ▶ ICT-use by businesses: 67 countries
 - ▶ e-commerce statistics: 48 countries

Informal digital activity often missed

- In many developing countries households do “business” activities without registering



➤ Capacity development efforts

Key activities:

- Methodological development
- Capacity building
- Digital tools for statisticians
- Task Group on Measuring E-commerce Value
 - ▶ 80+ experts from ~30 countries & organizations (incl. ITU)
 - ▶ Developing guidelines & recommendations
 - ▶ Focus on business surveys as primary data source
 - ▶ Exploring methods to capture informal digital activity



Call to Action

- FfD4 and SPA call for:
 - ▶ Scaling up investment in data systems
 - ▶ Strengthening interoperability and innovation
 - ▶ Supporting national efforts to collect disaggregated, high-quality data
- Business statistics to be part of this agenda
- Can we scale up support together?
- How to enhance funding for data capacities?



Thank you





**WHO
Foundation**

A New Model for Financing Global Public Goods: Lessons from the WHO Foundation

WTIS 2025, Panel on Financing digital development statistics
22 September 2025

Geoffrey So, Head of Strategic Engagement, WHO Foundation



Introduction & Agenda



The Challenge

The persistent funding gap for global public goods

A Solution

The WHO Foundation model for diversifying resources and engaging the private sector and other funders

An Application

Applying these lessons to financing ICT household surveys and bridging the digital data gap



For over 75 years, WHO has been the world's health leader, promoting health, keeping the world safe, and serving the vulnerable.

WHO's Mission & The Funding Imperative

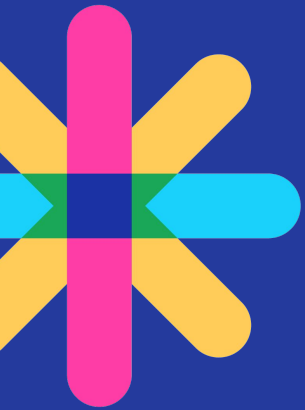
For every \$1 invested in health, WHO calculates a return of \$35. In the last five years alone, WHO's work has helped:

1.25 billion people live healthier lives.

429 million more people get essential health services without financial hardship.

599 million people become better protected from health emergencies.

This vital work requires predictable, sustainable, and diversified funding to succeed.



The Birth of a New Model: The WHO Foundation

The WHO Foundation was established in 2020 as an independent Swiss philanthropy to support the WHO.

Mandate: Created by WHO Director-General Dr. Tedros Adhanom Ghebreyesus to **diversify WHO's funding sources** and mobilize new resources, particularly from the private sector, philanthropists, and the public.

Core Characteristics: We are agile, dynamic, and flexible. We co-create collaboratively with partners and are open to experimentation and innovation.



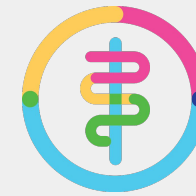
Two organizations, One mission:

Global health equity for all



World Health
Organization

EST. 1948



WHO
Foundation

EST. 2020

From eliminating diseases to promoting health-system resilience worldwide, WHO is **health leadership for the world**.

The WHO Foundation acts as a **catalyst to marshal new resources** from businesses, philanthropists, and individuals.

WHO **provides technical expertise and responds to crises** but often a last-resort healthcare when emergencies arise.

WHO Foundation finds, highlights, and **co-creates solutions** with partners and WHO technical teams that address health inequity.

WHO **develops global standards and norms** that keep the world safe

WHO Foundation acts as a convener of private-, public- and philanthropic parties to make **unique, meaningful, positive impact**



Advantages of the Foundation Model

Building Resilience and Unlocking New Opportunities

- **Diversifies Funding:** Reduces reliance on a few traditional donors and mitigates risks, particularly when anticipated funding is suddenly withdrawn.
- **Manages Conflicts of Interest:** The independent structure provides a clear mechanism for due diligence and risk management when engaging with the private sector.
- **Unlocks Private Sector Potential:** Provides a dedicated channel for corporate partners, who are increasingly expected by consumers, employees, and investors to address societal issues.
- **Agility and Innovation:** Our flexibility allows us to move nimbly, experiment with new financing mechanisms, and capture uncommon approaches that might otherwise be overlooked.



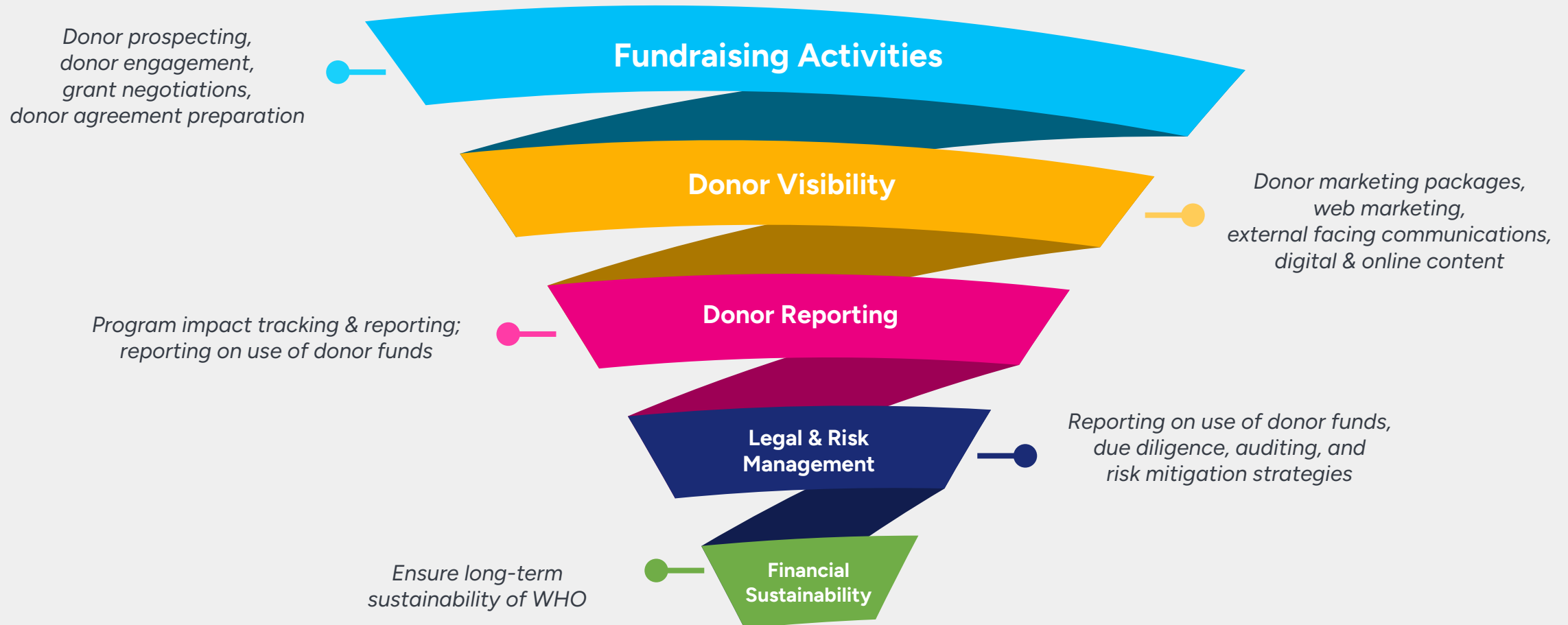
Our Approach: From Donor Prospecting to Impact Reporting

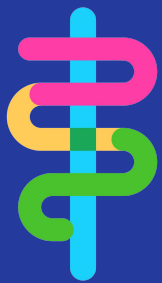
How We Build High-Impact Collaborations

- **Understand Donor Needs:** We work to align partner priorities with WHO's strategic goals, such as in the first WHO Investment Round (Replenishment) supporting its 4 year strategy, the 14th Global Programme of Work for 2025-2028.
- **Co-Create Solutions:** We collaborate with partners and WHO technical teams to design investable programs, that meet the needs of WHO's programs and meaningfully engages partners.
- **Provide Full-Service Support:** We manage the entire donor lifecycle

For every \$1 invested in health,
WHO calculates a return of \$15

The Key Considerations of the Donor Lifecycle





Partnership in Action (1): Pooled & Thematic Funding

Creating Scalable, Sustainable Funding Mechanisms



Health Emergencies Alliance (HEA):

A membership community of businesses and foundations providing **reliable, pooled funding** for WHO to respond rapidly to health emergencies and prepare for future crises. Members get access to expert information to make better business decisions.

WHO Investment Round:

The Foundation played a key role by engaging private sector partners and philanthropists, securing

USD \$50 million towards WHO's core priorities in 2024. This allowed companies to support thematic areas aligned with their values.





Partnership in Action (2): Digital Engagement

Leveraging Partner Platforms for Global Reach

The Health Online Collective: A collaboration with tech companies to strengthen the digital health ecosystem.

TikTok, Meta (Facebook/WhatsApp), Google (YouTube): We work with these platforms to translate science-based WHO information into accessible content, combat misinformation, and direct billions of users to reliable health resources.

This is not just about funding; it's about leveraging partners' valuable insights and platforms to achieve shared health goals.





The Value Proposition to Partners

What's in it for them? Benefits for Partners

Brand & Reputation

Positive positioning, enhanced brand affinity, and customer loyalty.

Stakeholder Engagement

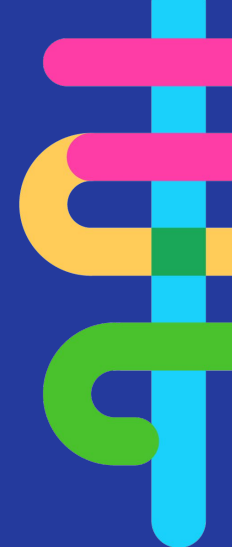
Deeper employee engagement and healthier workforces.

Strategic Alignment

Synergy with key markets and a "seat at the table" on global issues.

Measurable Impact

The ability to contribute to tangible outcomes, like more people reached, improved health systems, and scaled innovations.



From Global Health to ICT Statistics

A Shared Challenge: The Data Financing Gap

The Parallel Challenge: Just as global health needs funding, achieving universal and meaningful connectivity demands robust, timely data.

The Data Gap: The main bottleneck in ICT statistics is financing surveys.

- 60 countries lack baseline ICT household surveys
- Each survey costs an estimated €1.5 to €2M
- A facility to cover just 30 countries would require €60-70M

This is a classic "global public good" problem that requires innovative, collaborative funding mechanisms.



**A Shared
Challenge:
The Data
Financing Gap**

Applying the Lessons

Could an Independent Foundation support the ITU's Mission?

Imagine an independent foundation affiliated with the ITU, dedicated to financing ICT statistics and its other core functions.

Potential Mandate:

- **Mobilize resources** from the private sector, foundations and high-net worth individuals.
- **Convene stakeholders** for an inclusive, multisectoral and multistakeholder approach.
- **Create pooled funding mechanisms** to finance ICT household surveys in countries with the greatest need, among other priorities.

This would complement, not replace, existing funding from governments and development banks.



**A Foundation
Model to
Finance
ICT Data?**

Potential Benefits

How could this model bridge the data gap?

Sustainable & Pooled Funding: A foundation could establish a dedicated financial facility, like our Health Emergencies Alliance, to provide predictable funding for surveys.

Targeted Private Sector Engagement: The private sector relies on connectivity data for market analysis and investment decisions. A foundation provides a vehicle to invest in this data as a shared asset.

Integrated Capacity Building: Funding could extend beyond survey costs to also include technical assistance and capacity building for NSOs, so it moves from philanthropy to sustainability.

Neutral Convener: An independent foundation can serve as a neutral broker between public and private interests, building trust and facilitating collaboration.



**A Foundation
Model to
Finance
ICT Data?**

Key Considerations

What is needed in making this a reality?

Governance is Key: A new entity would need a strong governance structure that ensures its independence while maintaining close alignment with the ITU's technical mandate and international statistical standards.

Define the Value Proposition: Clearly articulate the benefits for private sector partners—beyond CSR but investment into sustainability and playing a role in shaping digital inclusion.

Start with a Participatory Process: Designing such a financial vehicle requires collaboration from the start, involving multisectoral, multistakeholder discussions to ensure fit for purpose mechanisms.



**A Foundation
Model to
Finance
ICT Data?**

THANK YOU!

Geoffrey So
Head of Strategic Engagement
WHO Foundation
g.so@who.foundation

<https://who.foundation>



ITU WTIS

GENEVA 2025

22–23 September 2025
Geneva, Switzerland

المملكة المغربية



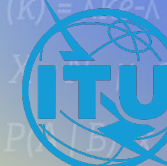
المنذوبية السامية للتخطيط

ⵜⴰⵎⴳⴷⴰⵢⵜ ⵜⴰⵎⴳⴷⴰⵢⵜ ⵜⴰⵏⵓⵔⵉⵜ

HAUT-COMMISSARIAT AU PLAN

“ Financing digital development statistics

– From NSO perspective
High Commission for planning
Morocco”



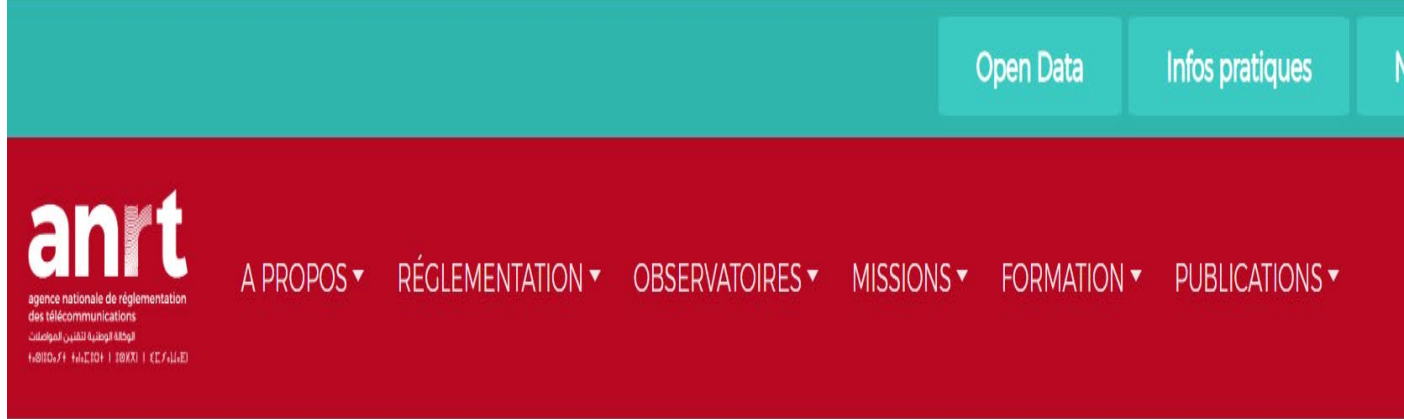
About HCP Morocco

- The NSO-Morocco
- Decentralized National Statistical system
- Statistics Production mainly based on:
 - Censuses
 - Household surveys
 - Business surveys
 - Admin data
 - Ongoing developement of the use of Big data
- Financing of statistical operations is secured through the State budget allocations, complemented when needed by development partners (e.g. World Bank, EU, UN agencies)



Morocco ICT statistics

- Different sources of ICT Statistics
 - **HCP sources:**
 - ICT module on BS surveys
 - Census ICT module
 - LFS Module
 - **ANRT (Regulatory authority) sources**
 - Yearly survey on individual & households ICT acces & Use
 - Qualitative surveys



Challenges

NSS are facing major challenges for answering users needs:

- Data with High quality
- Reliable and up-to-date data
- Disaggregated data
- More frequent data
- Data for SDG monitoring
- Strengthening NSOs' position in the national data ecosystem



Strong financing needs for both domestic & external financing



African, Arab & National
Commitments/Frameworks

Official Commitments on financing Statistics



African countries

AU executive Council/
ShaSA II 2017 -2026
financing plan

Road map on
transformation &
modernization
of official statistics in
Africa 2023-2030

African countries
ambition to dedicate
**0,15 % GDP to
financing OS)**

**African Statistical
Charter**



ESCWA Countries

ESCA Statistical
Committee helps member
states commit to
improving and financing
statistical systems..



Morocco/NMD

the New
Development Model
(2021 - 2035)
explicitly recognize
data and statistics as
strategic assets for
governance and
policy-making,
thereby requiring the
allocation of
adequate financial
resources.



Digital Morocco 2030

strategy, launched in
September 2024

Africa Hub /Improve
Digital public
services/Boost digital
economy/Tech
infrastructure

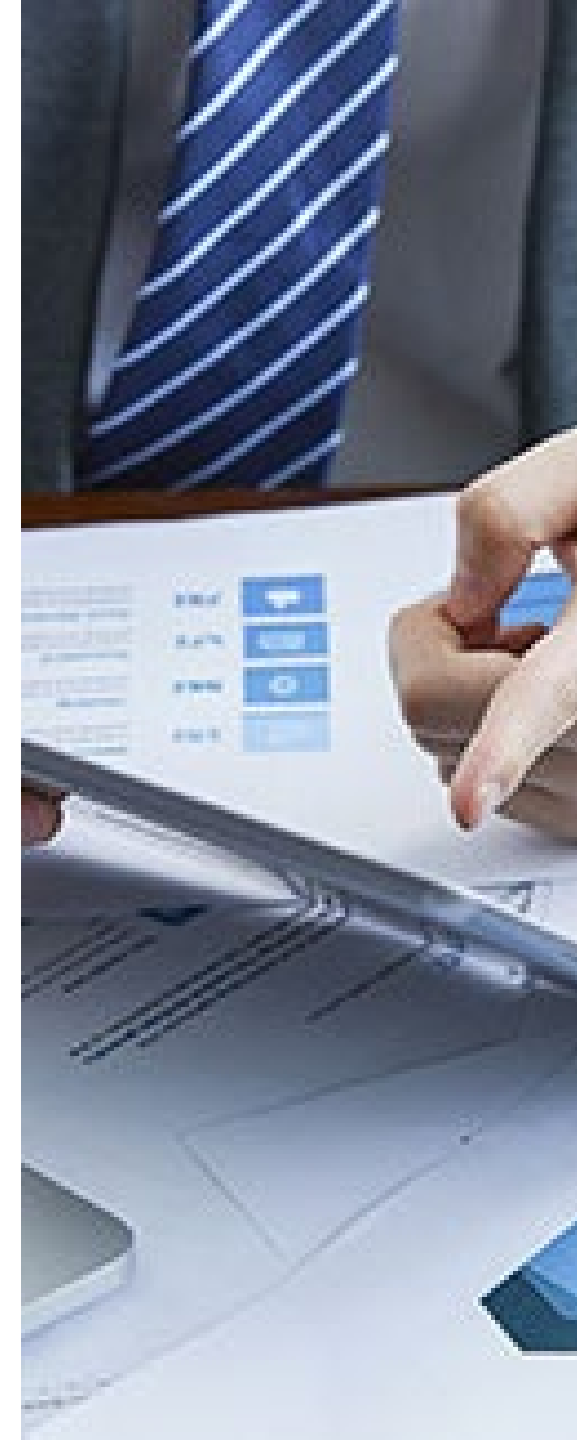
Backed by substantial
public and private
financing

HCP- Public financing statistics

- Three year financing plan (23 M \$)
- Negotiation on the basis of PDP (Performance Program)
- Commitment on the basis of performance indicators

Negotiations with Ministry of Economy and Finance based on:

- Usefulness of indicators for policy design & national priorities
- Compliance with international standards (SDDS, SNA 2025)
- Capturing emerging issues (digital economy, new topics)
- Fostering innovation (digitalization of surveys)
- Country commitment on SDGs indicators





External financing of statistics through cooperation & partnership

- **Rationale**

- New topic coverage
- New approach testing
- Redesign a survey
- Pilot surveys
- Introduction of innovation
- Unexpected data needs

- **Different mechanisms:**

- Through bilateral cooperation projects
- multilateral donors,
- co-financing arrangements,

Example 1 : MEDHIMS

‘Regional cooperation as a driver of financing surveys at national level’

- Regional initiative (MEDSTAT.EU/MED statistics program)
- Covers 18,000 households
- Implemented in 7 countries
- Regional level: Design of the survey (Questionnaires, Manuals,..)
- National level: Adaptation & implementation and data analysis
- Ensures harmonized data on international migration
- Morocco’s first round financed by EU Delegation (2018/2019)
- EU committed to financing the second round (2027-2028)

“Sustainability : integration of MEDHIMS in the national action plan.”



The programme of
regionally coordinated
*Household International
Migration Surveys
in the Mediterranean
Countries*
(MED-HIMS)

**Programme Steering
Committee:**

European Commission
The World Bank
UNFPA
UNHCR
ILO
IOM
League of Arab States
CAS-Lebanon (as
EMWGMS Coordinator)

**Implementing and
partner agencies:**

ONS Algeria
CAPMAS Egypt
DoS Jordan
CAS Lebanon
HCP Morocco
PCBS Palestine
INS Tunisia



Example 2: Household survey on COVID-19 Impact

“Building resilience through external financing”

- Urgent need to measure socio-economic impact of the pandemic
- Multiple financing: supported by UN agencies consortium
- Integrated in an existing multipartners document project ASRODD
- Quick answer to data needs in the crisis period
- Data served to adjust government interventions & UN agencies support as for children vaccination, education, ..



External financing of statistics

Example 3: Income survey -2019

“How external financing could stimulate the to introduce new approaches”

- WB financing (TA & data collection)
- Sample: 3000 households
- The objective is to test WB approach in measuring income
- The results were published
- The approach was integrated in the national survey on living conditions (18 000 households)

“Sustainability :The use of the approach in the national survey financed by public budget”



Example 4: LFS-2025

“How external financing could help in the redesign of the existing national surveys”

- Co-financing financing (HCP & ILO)
- Sample: 3000 households
- The objective is to test the new LFS complying with CIST resolutions / Consider the new behavior of the Labor market / Introduce new modular topics..Migration, Green jobs, etc.
- The Pilot survey is being conducted in parallel with the classic one.

“Sustainability :The use of the revised questionnaire in 2026 survey that will be financed by public budget ”



Example 6: qualitative survey

“How external financing could helping going through qualitative survey”

- UE financing & Canadian financing
- Focus groups on women participation to Labour Market
- Perception survey on unemployment in a regional area
- The objective is to deepen the understanding of observations issued from quantitative surveys
- The experiences helped in strengthening regional capacities in designing surveys

“Sustainability :considering the key role of quantitative strategies to deepen analysis of data produced through quantitative surveys ”

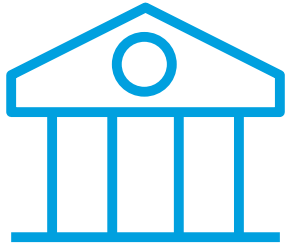


Example 7: Other examples

“How external financing could helping in introducing new topics

- Survey on the recruitment cost of international migrant & return back migrants
- financing ILO/THAMM+ Program
- Sample: 800
- The survey helped in calculating the related SDG 17.10.4

“Sustainability : Considering this costing in the upcoming surveys on migration.



Enhancing financing of statistics is one of the strategic components

HCP New ongoing Strategy

New admin. status

New administrative status is being set up to attract good profiles (Researchers, data scientists, multi-disciplinary profiles)

& to value the employees' expertise

Diversifying financing mechanisms

Promoting co-financing/

Make use the existing UE instruments that are still underused (TA, Twinning, etc.)

Ensuring complementarity between the financing supports coming from many international partners.

Promoting paid statistics services

Specific requests for data collection, data assessing

Strengthen users financing/co financing/co

Public institutions

Territorial authorities

Private sectors

NGOs & Universities

Promoting alternative sources to surveys

Administrative sources

Admin Registers

Big data sources

Combining sources

Cost-effectiveness compared to surveys.

Key lessons for stimulating both domestic & external financing for statistics



Advocacy tools /Rationale

Well document the rationale

Focus on Users needs & public policies priorities

NSSD or NSO

strategy/Programme

Innovation & Modernisation

Redesign/Pilots

Complying with

International standards

SNA 25-SEEA

Regional comparability &



New international standards

Emphasizing the imperative of complying with the new international standards as SNA 2025, SEEA, Digital Economy



Considering statistics in sector coop projects /Progr

Statistics as a cross-cutting component in donor-funded sector programs.

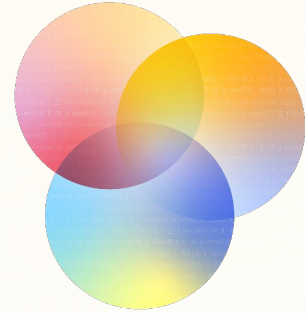
*Digital transition
Environment & CC
Gender*



Partnership with users & Diversifying financing mechanisms

*Public users
Territorial authorities
Private sector.*

*Cofinancing
Multidonors
Bilateral*



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Thank you

20TH WORLD TELECOMMUNICATION/ICT
INDICATORS SYMPOSIUM

ITUWTIS
GENEVA2025

22–23 September 2025
Geneva, Switzerland

Insights from the Expert Group on Telecommunications/ ICT Indicators (EGTI)



Agenda

- Mission of EGTI
- The EGTI working method
- Meeting Summary for the 15th Meeting of the ITU Expert Group on Telecommunication/ICT Indicators
- Current Work of EGTI

Mission of EGTI



To **review existing and develop new** telecommunication/ICT **supply-side indicators** on a continuous basis, including reviewing and developing **harmonized definitions and data collection** methodologies to keep up to date with the fast changing nature of ICT technologies and services.



To decide on ICT indicators from the supply side to be **collected through the ITU statistical questionnaires** on telecommunications/ICT.



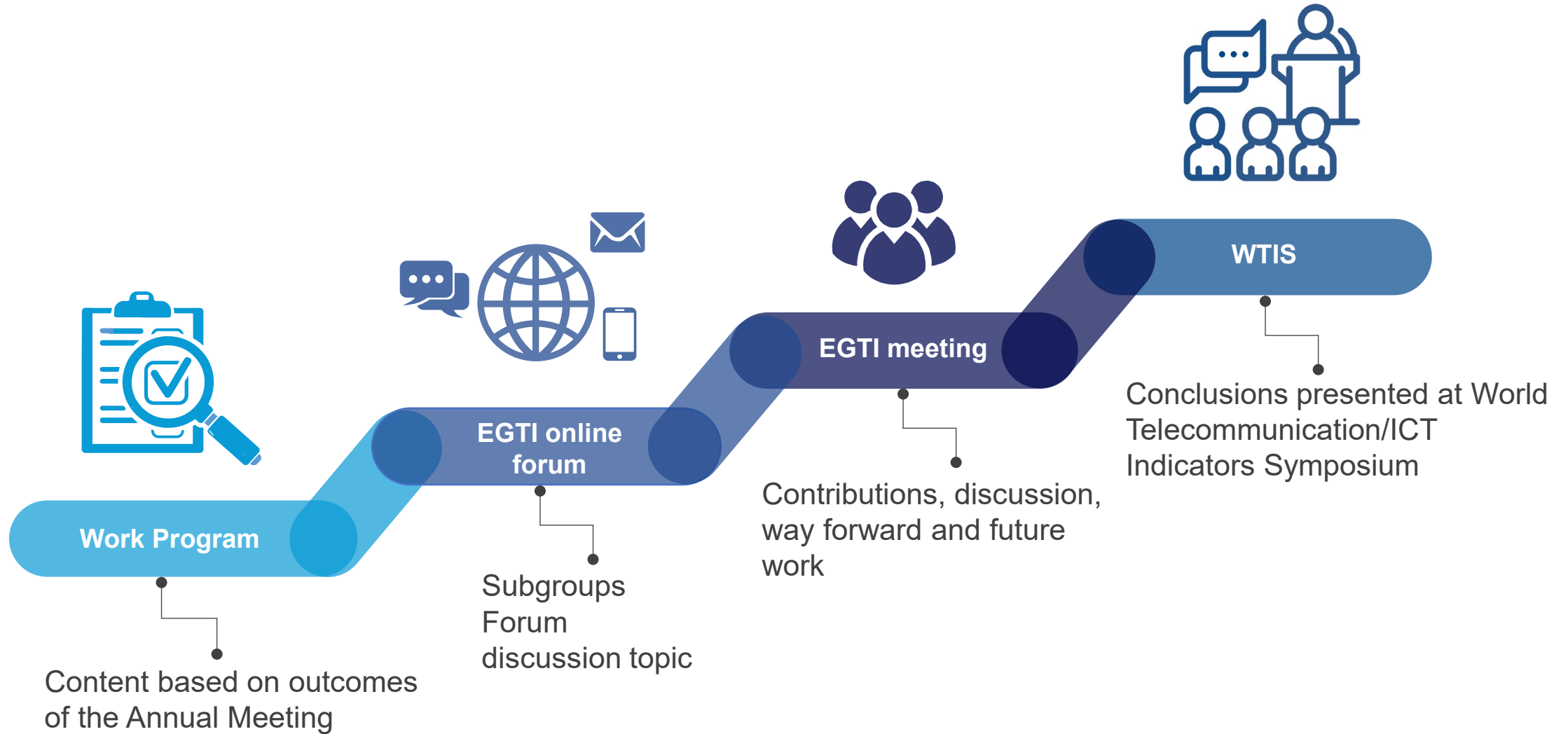
To **periodically review the *ITU Handbook for the Collection of Administrative Data on Telecommunications/ICT***. The Handbook is updated to reflect the updated definitions and methodologies.



To work with the Expert Group on ICT Household Indicators (**EGH**) on issues related to indicators and topics that are common to both groups.

Online forum: <https://www.itu.int/net4/ITU-D/ExpertGroup/default.asp>

The EGTI working method



EGTI 2024 Conclusions






1. The development of the ICT Development Index (IDI) – jointly with the EGH

- Agreed to use the universal and meaningful connectivity (UMC) as the conceptual framework of the IDI
- Adopted a framework for comprehensively assessing candidate indicators
- Agreed to extend the mandate of the joint subgroup to work toward possible recommendations of indicators for the next update of the IDI

2. New Price Basket data collection methodology

- Agreed to revise the rule on contract modality (prepaid/postpaid) – selecting the cheapest plan, irrespective of contract modality from the leading service provider, without consideration of breakout or early termination fees;
- Agreed to update the baskets [next slide]
- Agreed to implement the new methodology in the 2025 data collection
- Subgroup was closed, ITU to report on data collection experience to EGTI 2025

Update of the ITU ICT Price Baskets

ICT Price Basket	Old Definition (2021-2024)	New Definition (from 2025)
Mobile-cellular low-usage basket 	70 minutes + 20 SMS	Removed
Data-only mobile-broadband basket 	Minimum 2 GB	Minimum 5 GB
Mobile Data and Voice Low-consumption Basket 	70 minutes + 20 SMS + 500 MB	70 minutes + 50 SMS + 1 GB
Mobile Data and Voice High-consumption Basket 	140 minutes + 70 SMS + 2 GB	140 minutes + 70 SMS + 2 GB (On a temporary basis) 140 minutes + 20 SMS + 5 GB
Fixed-broadband basket 	Minimum 5 GB	No Change Minimum 5 GB

EGTI 2024 Conclusions / 2

3. Revisiting Quality of Services indicators

- Active discussion emerged on the variety of country practices
- Agreed on the aim to refine QoS indicators and continue to exchange best practices

4. Environmental indicators

- Discussed ongoing work at the ITU, the World Bank and across countries on measuring “green digital”
- Launched a subgroup on measuring the environmental impact of ICTs

5. Exchanging best practices

- Discussed country experience on collecting, managing and disseminating supply-side ICT statistics

On the EGTI agenda 2025

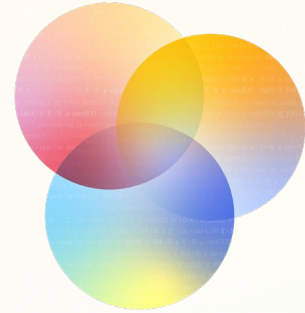


- EGTI agreed future work:
 - Joint EGTI-EGH subgroup on reviewing the IDI;
 - Subgroup on greenhouse gas emissions of the ICT sector
- Forum discussions topics on:
 - Submarine cables (raised in the forum);
 - Refinement of QoS / speed indicators;
 - Satellite-based broadband Internet indicators
 - Middle-mile connectivity indicators; (data centers, cloud computing, secure Internet servers, IXPs)
 - OTT use indicators
 - Emerging technologies



Expert Group on Telecom/ICT Indicators Forum

https://www.itu.int/net4/ITU-D/ExpertGroup/topic.asp?TOPIC_ID=8459



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Thank you



“Expanding Horizons in Digital Development Statistics”

September 2025

Natalia Vicente
VP Public Affairs, GSOA





Global Association
representing the
entire industry

GSOA provides a platform for
collaboration among member
companies involved in the global
satellite ecosystem and a unified
voice for the industry.

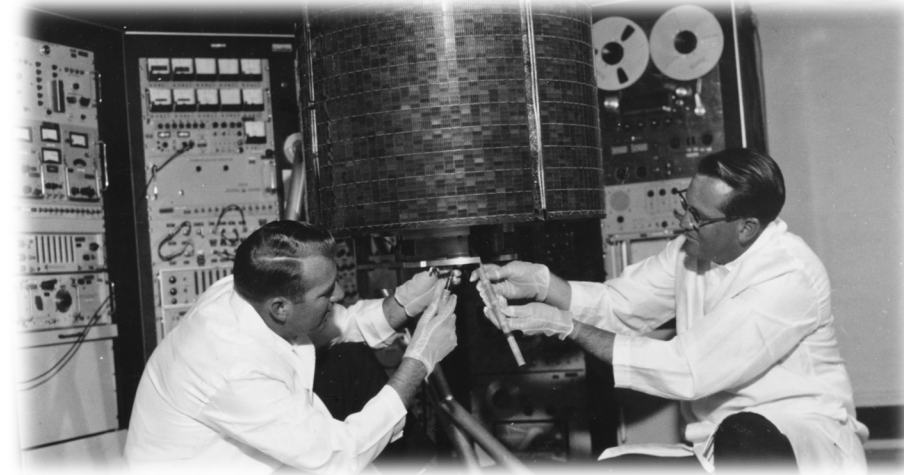
Fundamentals of Satellite



Sputnik 1 (1957)



Telstar 1 (1962)



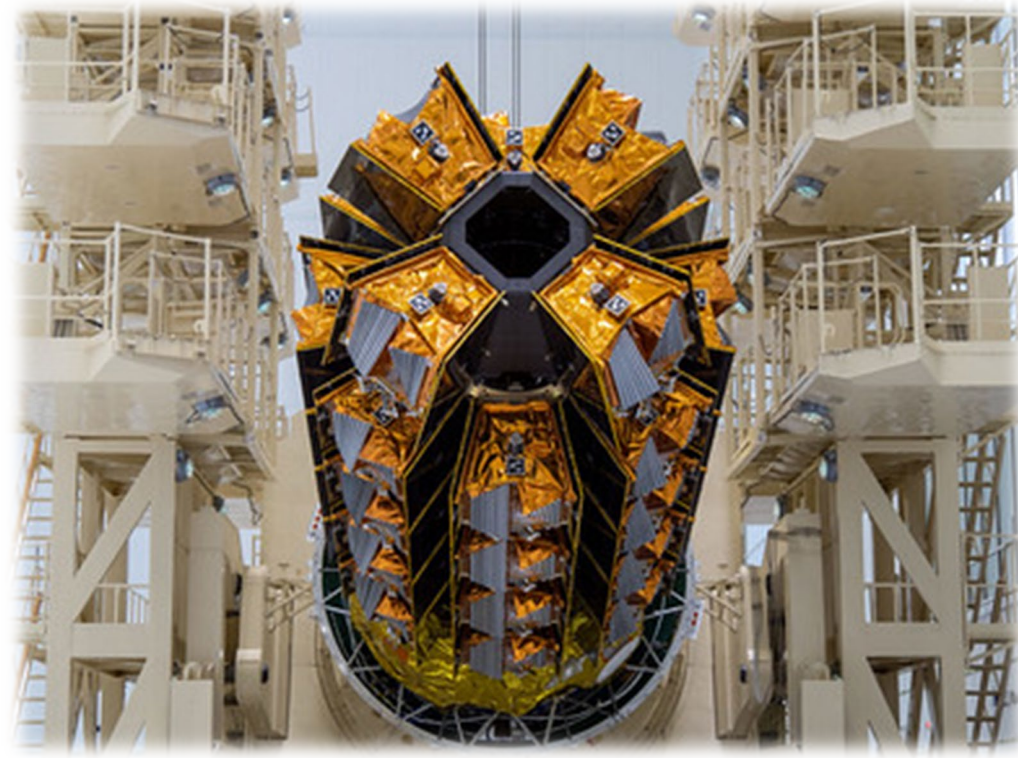
Early Bird 1 (1965)



Intelsat 33e (2016)



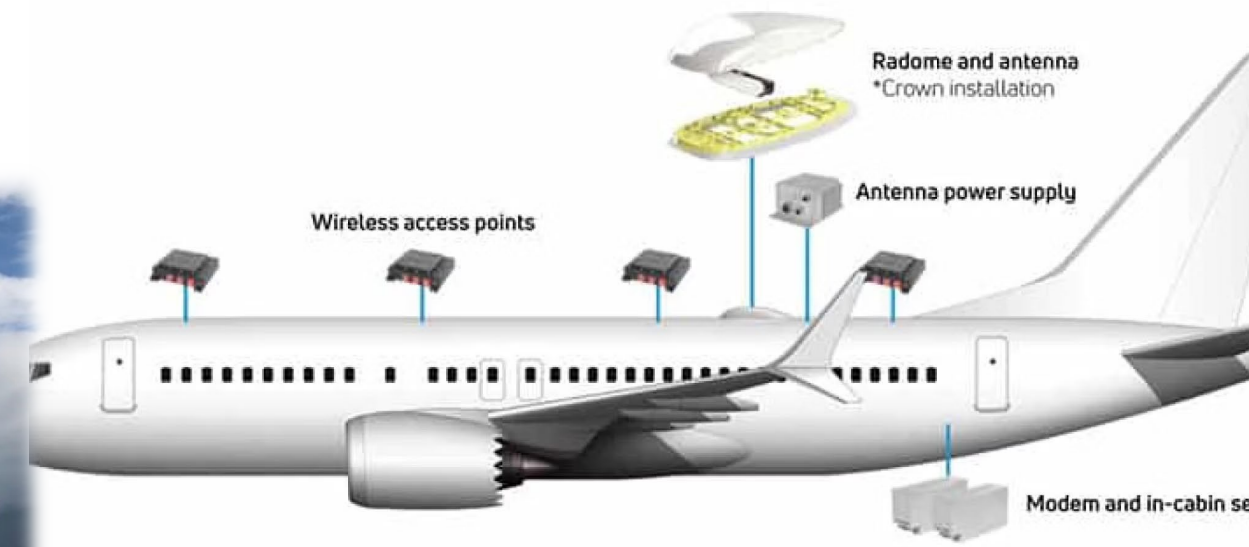
ViaSat-3 (2025)



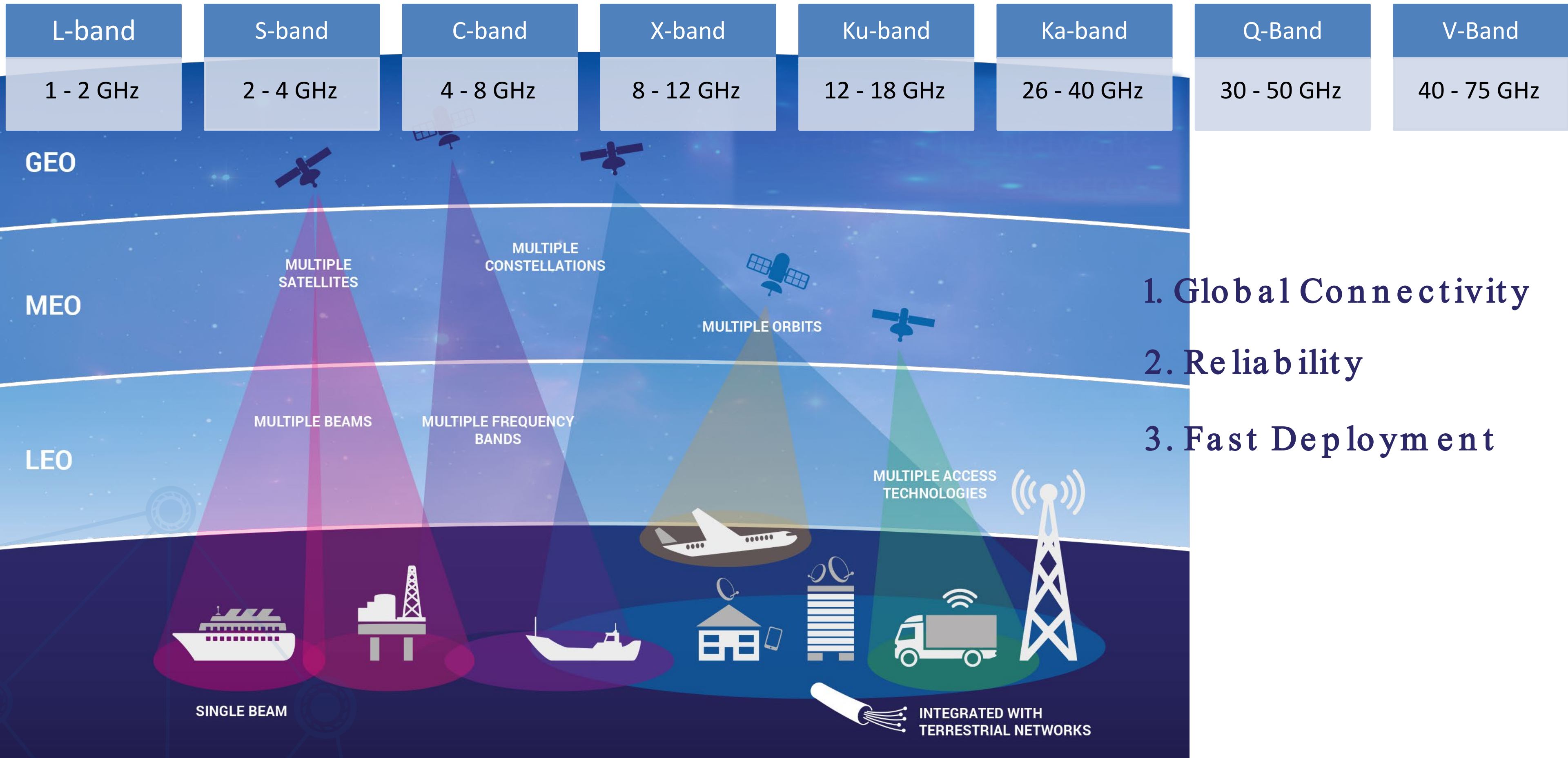
Eutelsat One Web (2024)



Fundamentals of Ground Segment



Overview of satellite communications



1. Global Connectivity
2. Reliability
3. Fast Deployment

BBS – Broadcasting Services



**Contribution
links**



Special Events



**Satellite News
Gathering**



**DTH TV
Services**



Cable Distribution

FSS - Fixed Satellite Service

Broadband connectivity



Cellular Backhaul



Fixed Broadband residential/enterprise



Trunking

Earth Stations in Motion



Direct to Home Internet

MSS – Mobile Satellite Service



Safety Services
(GMDSS &
GADSS)

D2D



Connected
Cars



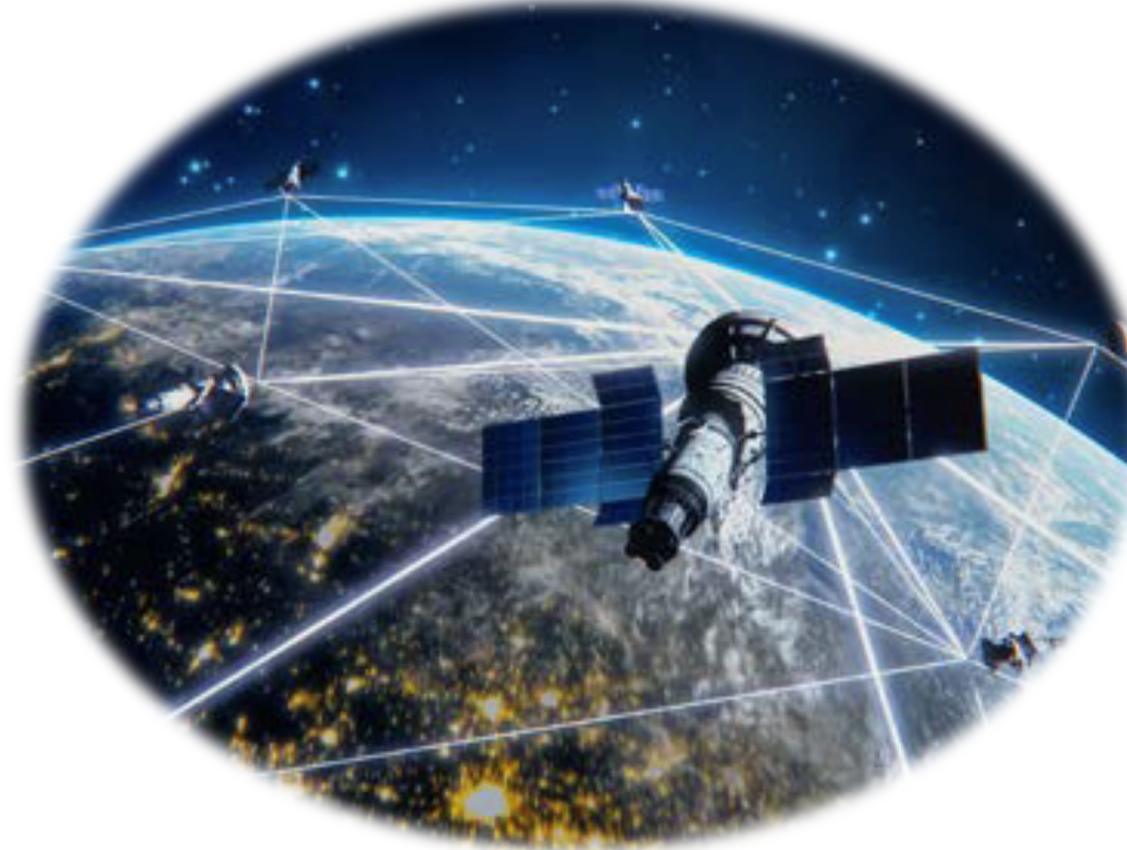
IoT

Software-Defined Satellites

Multi-Orbit
Systems



Inter-Satellite Links



Life Extension
In-orbit Servicing



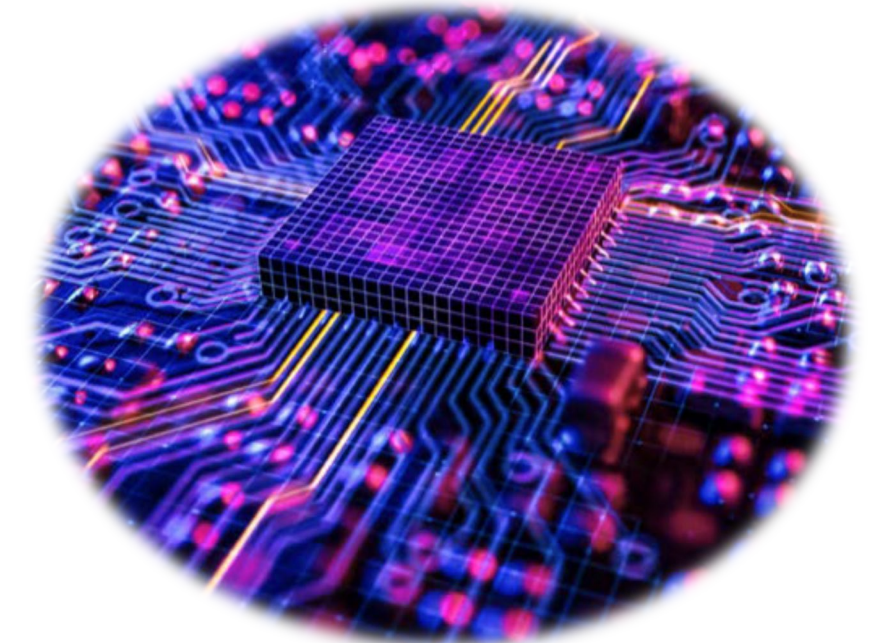
Ground Segment



Artificial Intelligence
Machine Learning

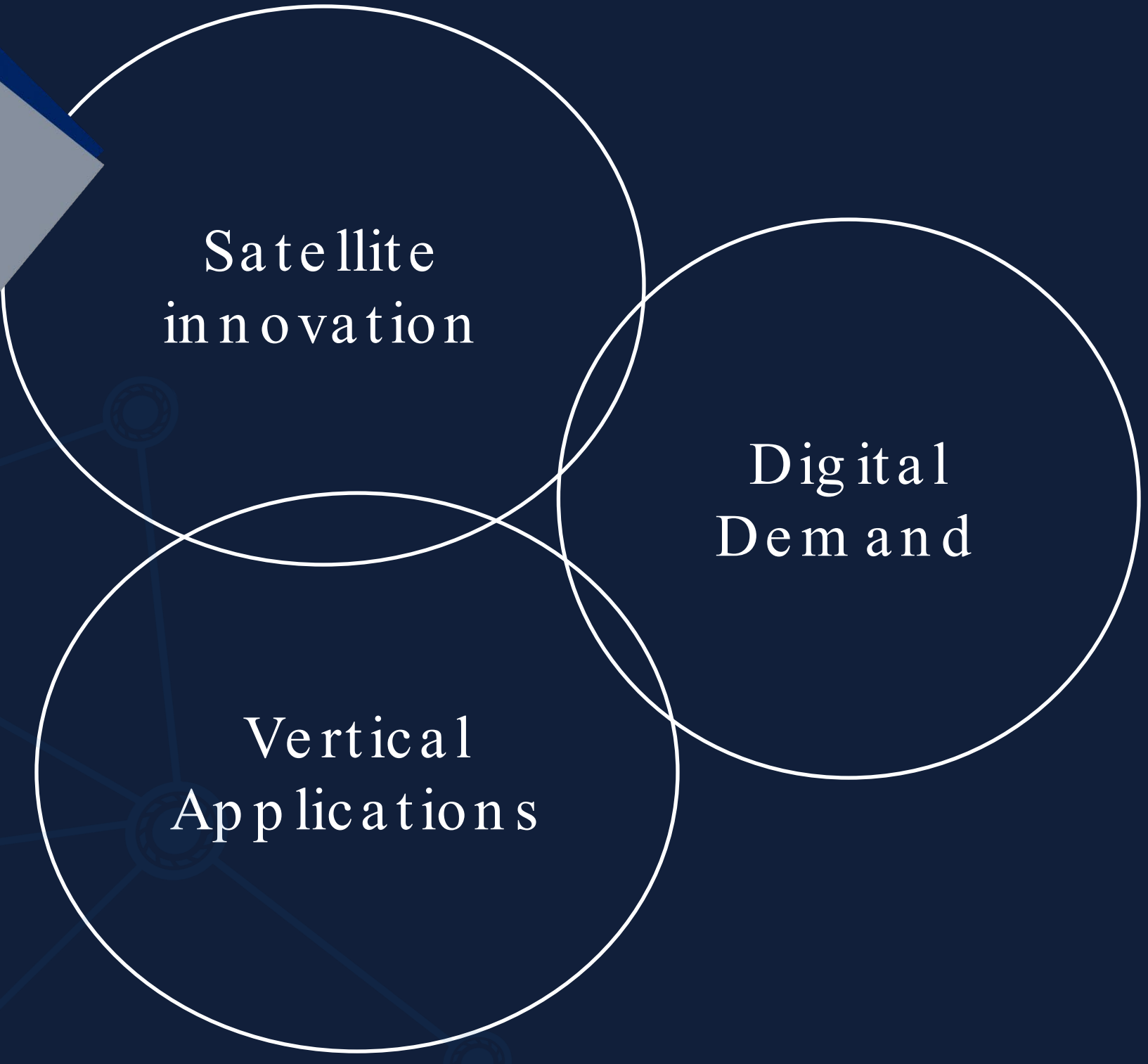
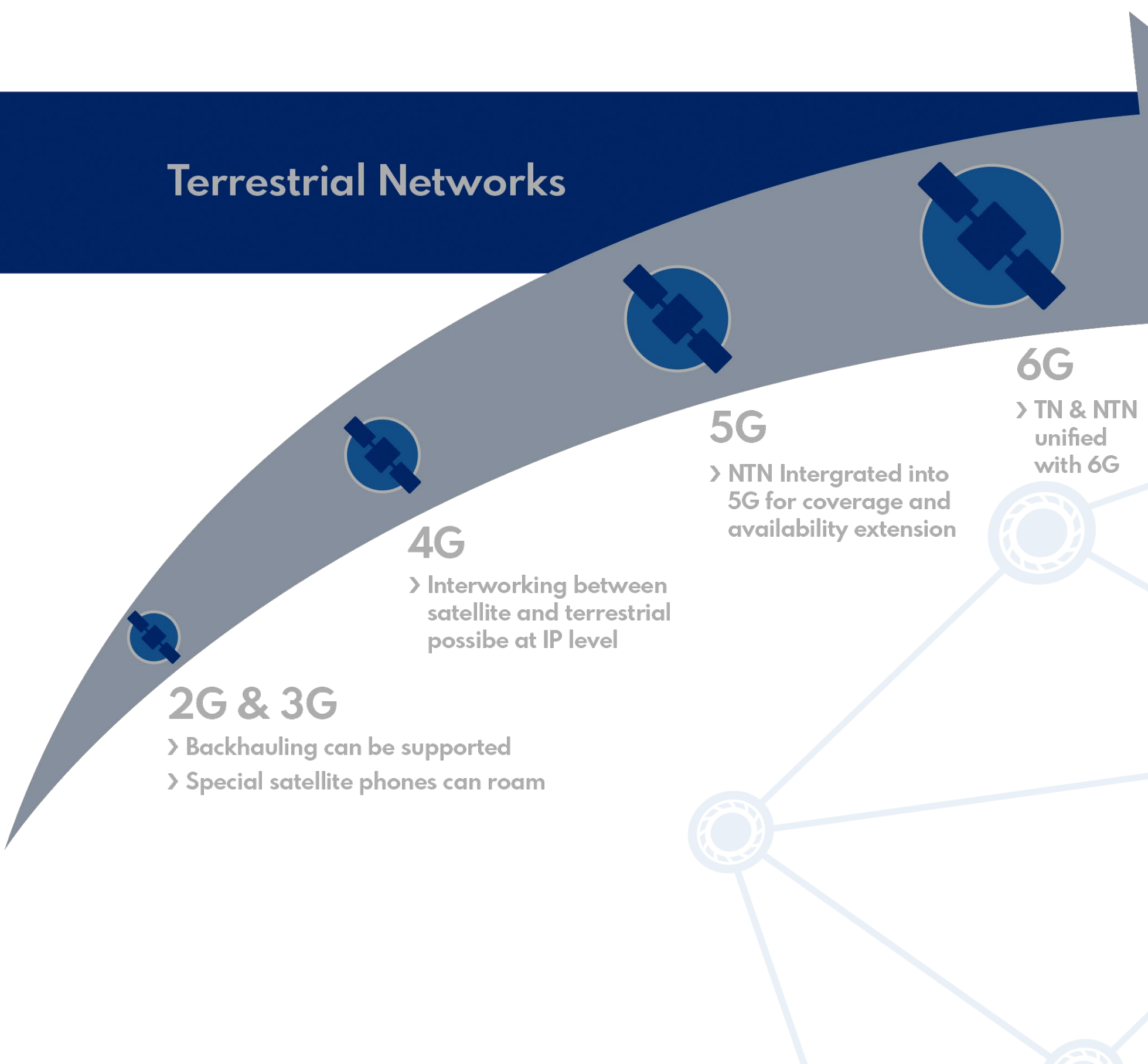


Quantum Technologies



Towards a fully integrated ecosystem

Terrestrial Networks





Non Terrestrial Networks (NTN)



Aero & Maritime



Satellite IoT



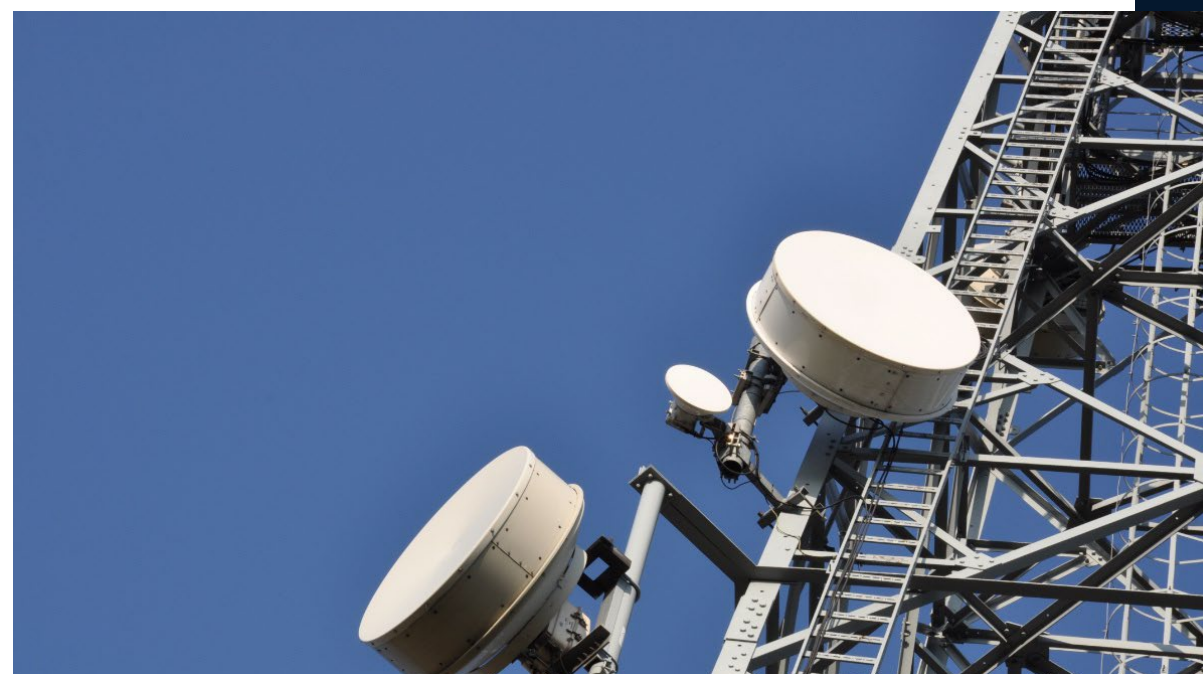
Satellite
Direct - to - Device



Cellular
Backhaul

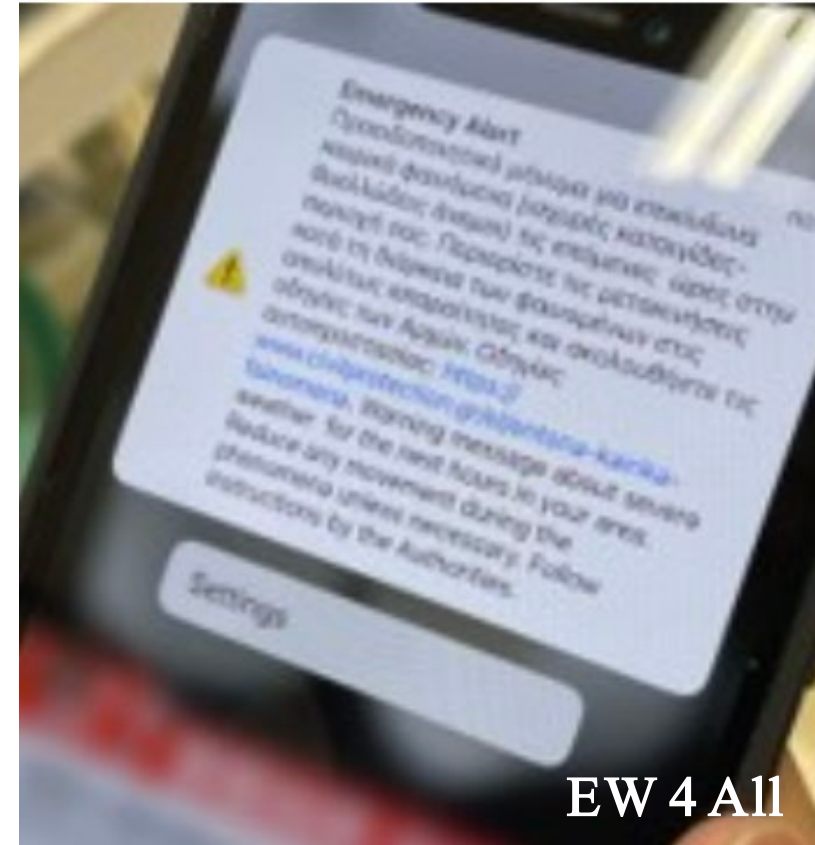


Connected Cars



IoT Satellite

Early Warning & Monitoring



Two variants of D2D

D2D in MSS bands

- Uses spectrum allocated to Mobile Satellite Service
- Leverages 3GPP Release 17 and later NTN specifications
- Requires no additional regulatory action if MSS authorized
- Support L- and S-Band, and Ka- Ku in future release
- Additional MSS spectrum allocations studies in WRC-27 Agenda Items 1.12 and 1.14

Challenges:

Needs mobile chipset vendors to include those 3GPP bands

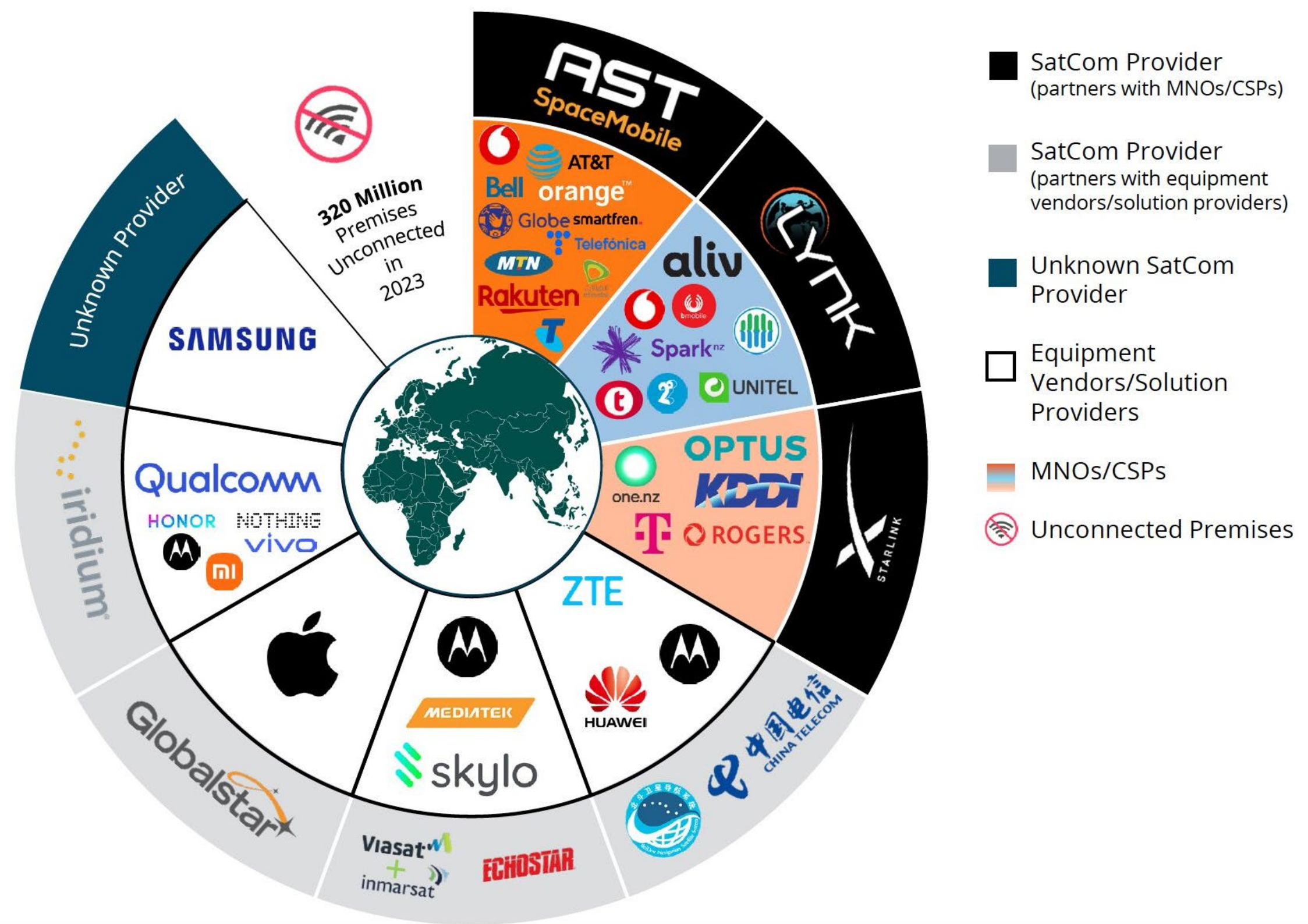
D2D in Terrestrial bands

- Uses terrestrial spectrum
- Can use off-the-shelf mobile handsets
- Requires partnerships with MNOs
- Complements existing mobile coverage
- Using IMT bands < 3GHz
- Coexistence being studied under WRC-27 Agenda Item 1.13

Challenges:

- Interference management between MNOs and satellite operators
International regulatory hurdles (ITU RR4.4)

Existing collaborations between satellites & mobiles



By the end of 2024, up to 3% of the approximately 7 billion active smartphones will support D2D.

Thank you!

 gsoasatellite.com

 info@gsoasatellite.com

 [@GSOA](https://www.linkedin.com/company/gsoa)

 [@GSOA_SAT](https://twitter.com/GSOA_SAT)

 [@gsoa4satellite](https://www.youtube.com/channel/UCGSOA4satellite)



The Future of Satellite Connectivity: Various Approaches to Direct-to-Device Services

Exploring the transformative impact of satellite direct-to-device connectivity, shaping the future of ubiquitous mobile communication.

Global Challenges | Satellite Answers

www.gsoasatellite.com



Satellite Solutions for Universal Service: Bridging the Digital Divide

Extending connectivity to the remaining 4% unconnected populations is challenging. Fostering the use of space-based solutions is key to improving access, reliability, and broadband expansion in underserved areas.

Global Challenges | Satellite Answers

www.gsoasatellite.com



gsoasatellite.com

#satellite4life

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GENEVA2025

Past

Present

Future

PERU'S SUBNATIONAL CONNECTIVITY STATE

Alan Ramírez-García

09/22/2025

Content

- Context
 - Global
 - Latam
- Peru's national and subnational scope
 - Divides: connectivity and affordability
 - Evidence-based policies addressing the gaps
- Final perspectives

Content

- **Context**
 - **Global**
 - LAC
- Peru's national and subnational scope
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- Final perspectives

WORLD: CONNECTED AND UNCONNECTED



ITU. Facts and figures (2024)

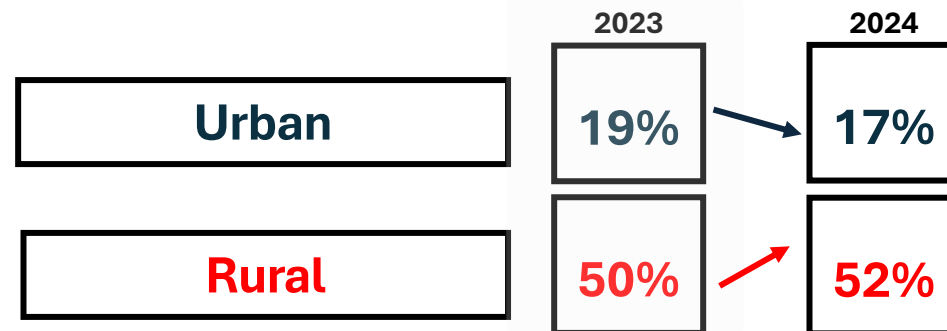
People online



People offline



People not using the Internet



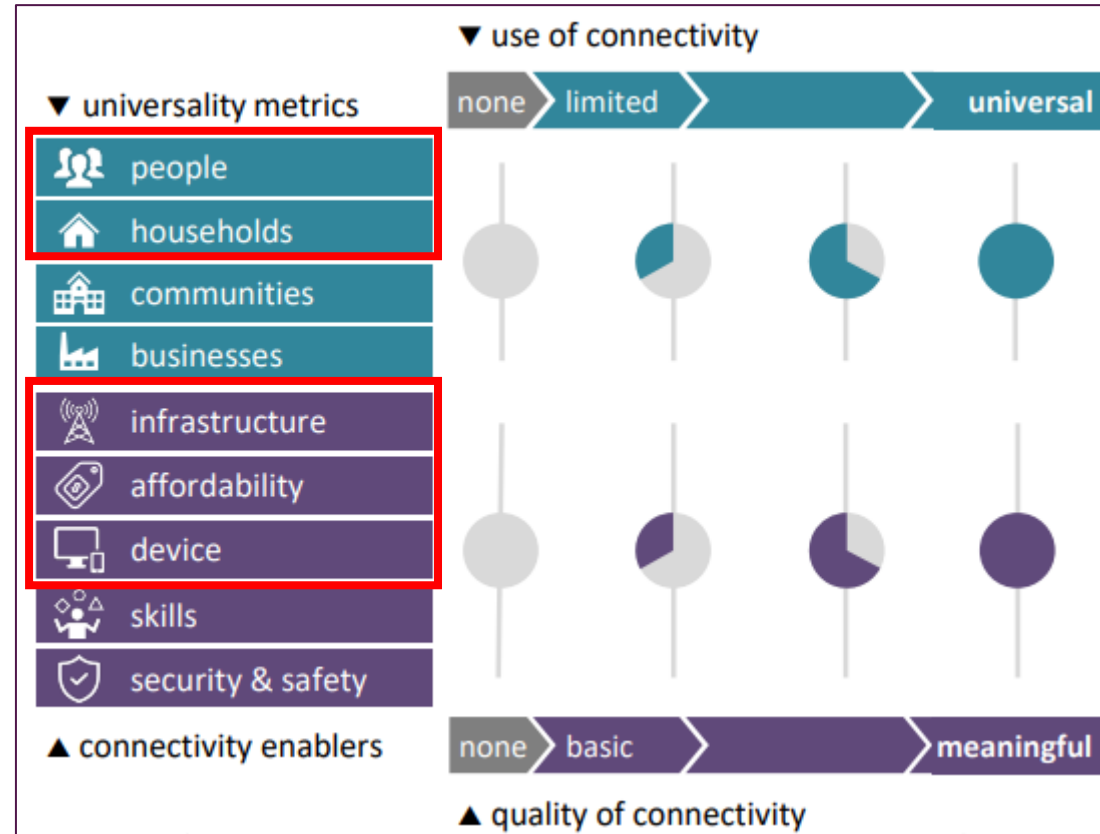
The rural and urban segmentations is vital,
but not enough

UNIVERSAL AND MEANINGFUL CONNECTIVITY PERSPECTIVE

ITU's UMC concept

The possibility for everyone to enjoy a safe, satisfying, enriching, productive, and affordable online experience.

UMC framework



ITU. Achieving universal and meaningful digital connectivity Setting a baseline and targets for 2030

Content

- **Context**

- Global

- **LAC**

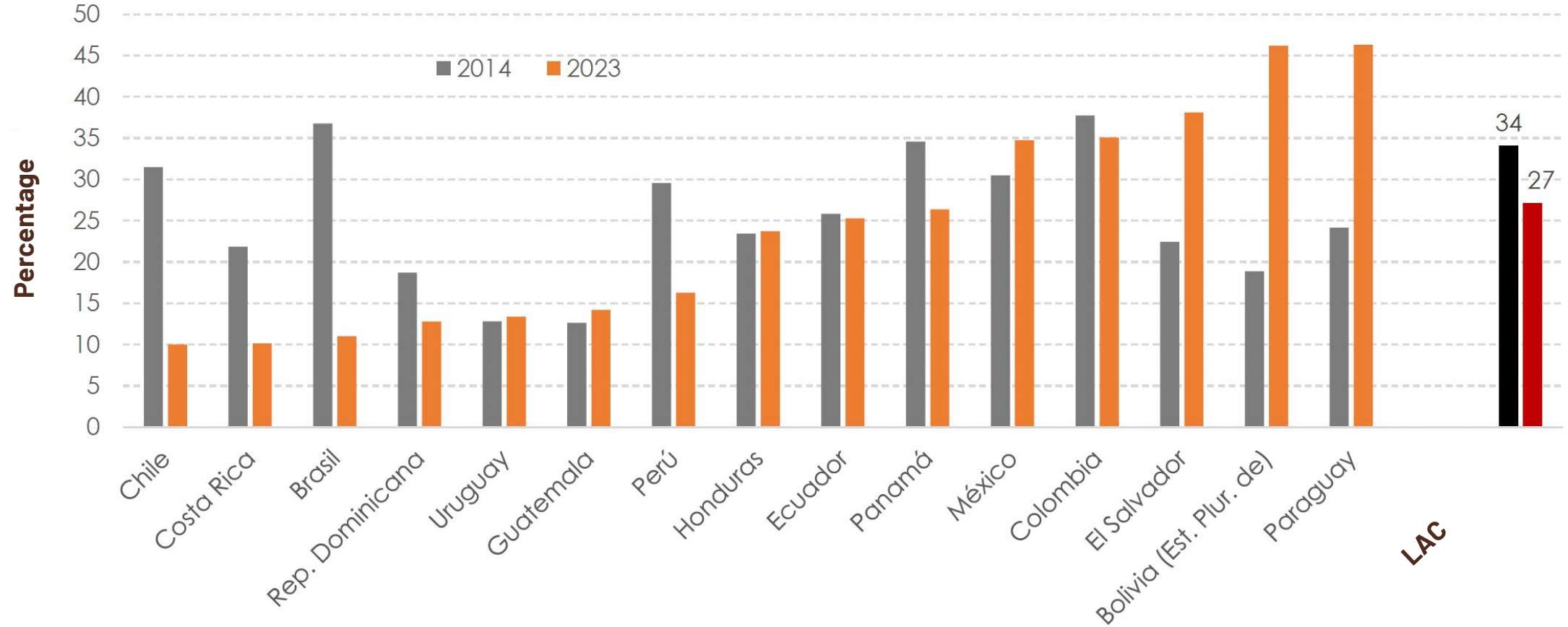
- Peru's national and subnational scope

- Divides: connectivity and affordability

- Evidence-based policies addressing the gaps

- Final perspectives

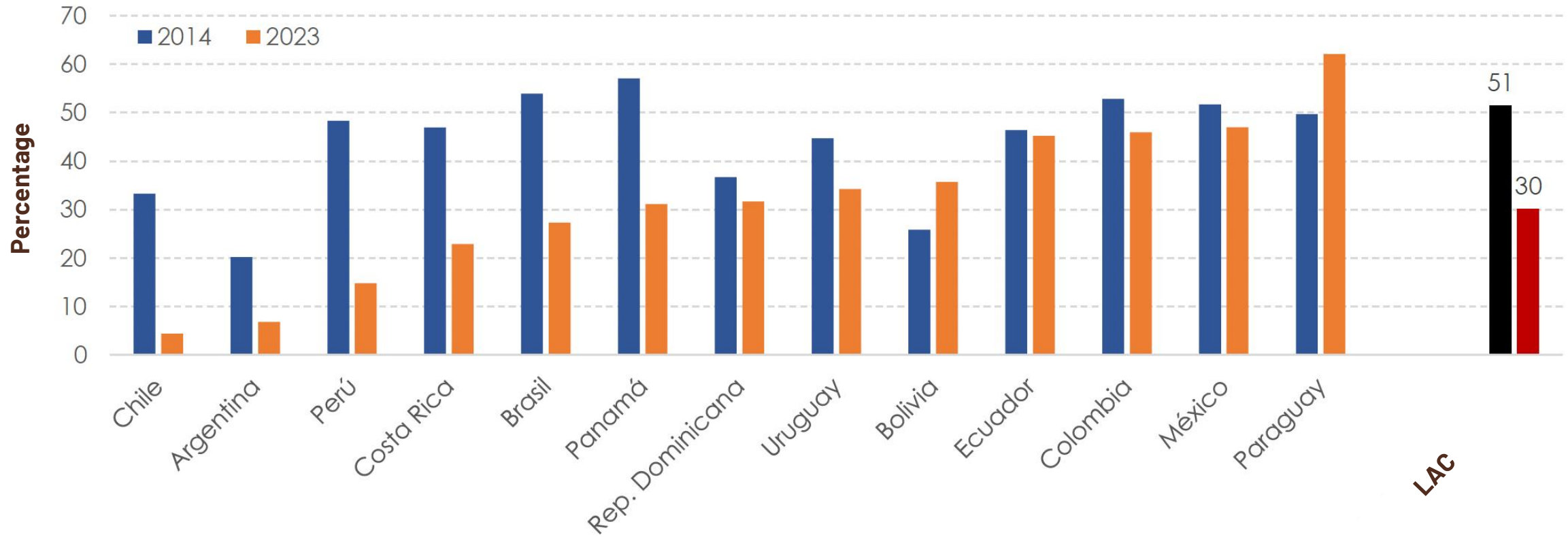
LATAM: CONNECTIVITY GAP BY TYPE OF RESIDENCE



CELAC (2025), BADEHOG

The difference between urban connected households and rural connected households is significant (27 p.p)

LATAM: CONNECTIVITY GAP BY INCOME



CELAC (2025), BADEHOG

The difference between Q5 quintil connected households and Q1 quintil connected households is more significant (30 p.p)

Content

- Context
 - Global
 - LAC
- **Peru's national and subnational scope**
 - **Divides: connectivity and affordability**
 - Evidence-based policies addressing the gaps
- Final perspectives

PERU: TERRITORIAL ORGANIZATION

Geopolitical structure	#
Regions (or deparments)	25
Provincies	196
Distrits	1,891
<u>Populated centers (or localities)</u>	108,115



Internet statistics are determined at different levels within the geopolitical structure.

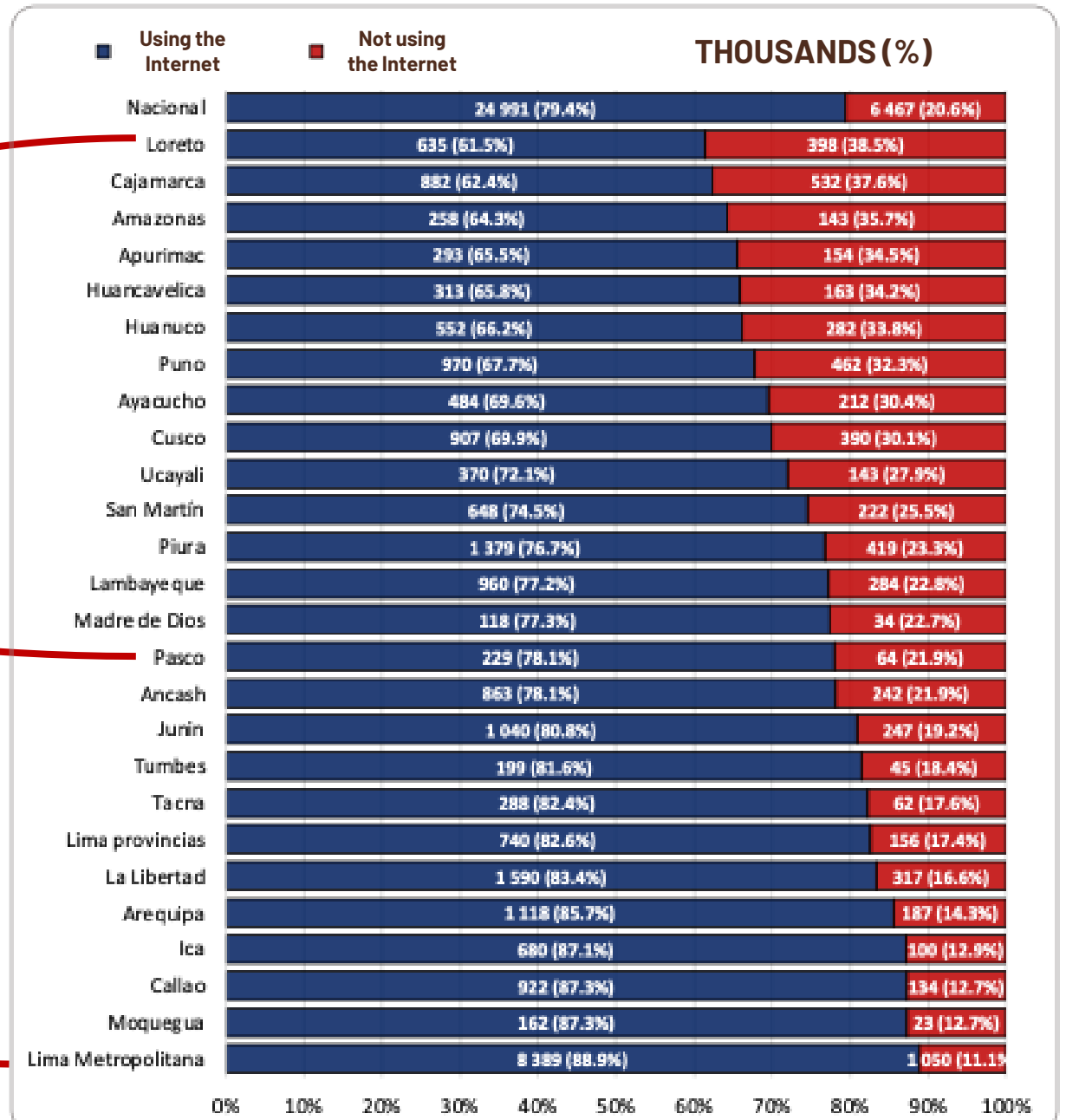
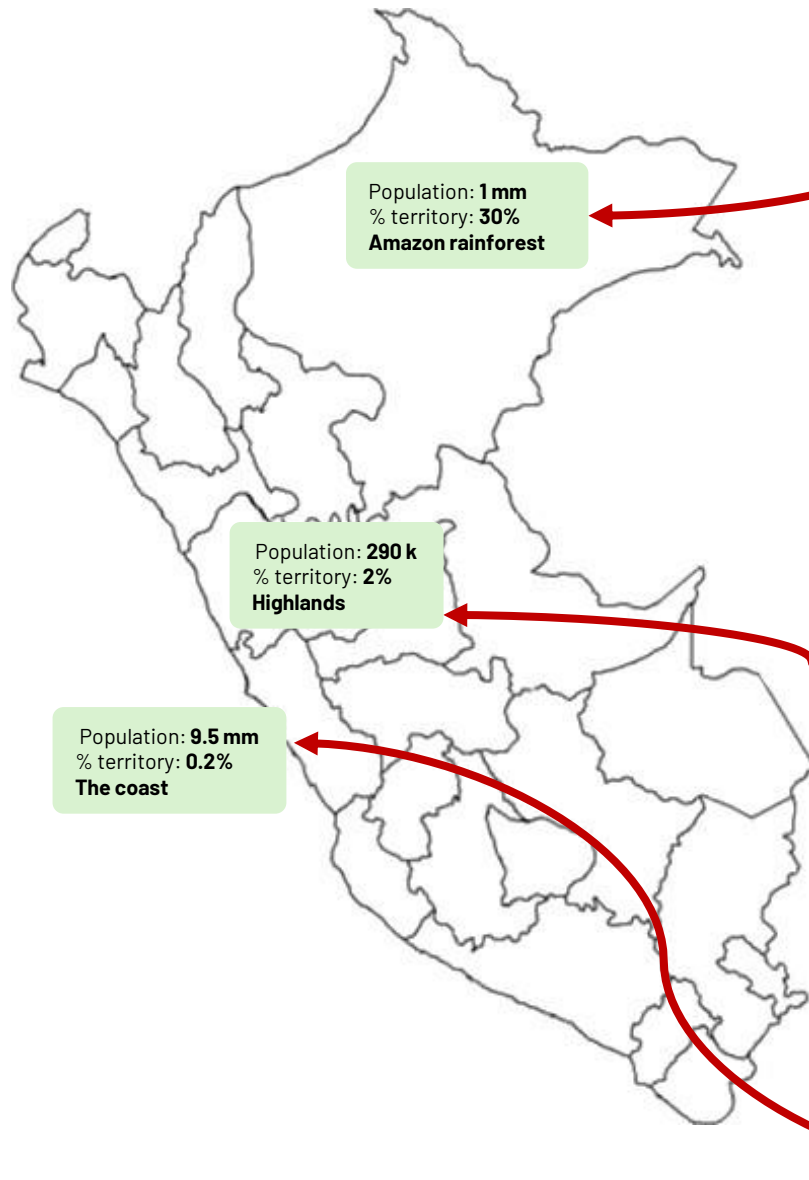
PERU: PEOPLE NOT USING THE INTERNET

Area	2024
Metropolitan Lima	11,3 %
Urban	18,9 %
Rural	41,6 %
Total	20,6 %

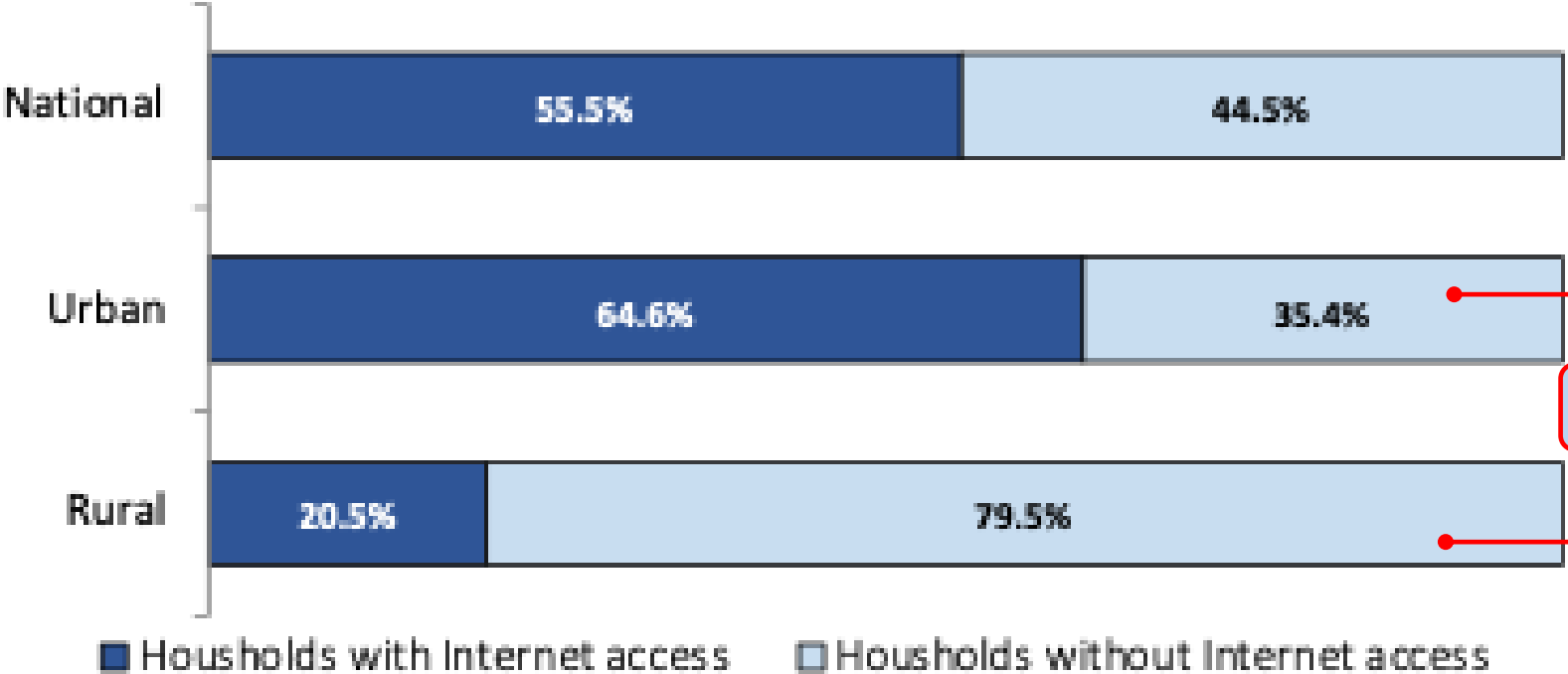
- Nearly 2 out of 10 citizens don't use the Internet.
- Significant disparity in rural areas: 30 percentage points, compared to Lima.
- Lima is not like the other urban cities.

National Institute of Statistics and Informatics - National Household Survey.

PERU: SUBNATIONAL USE OF THE INTERNET



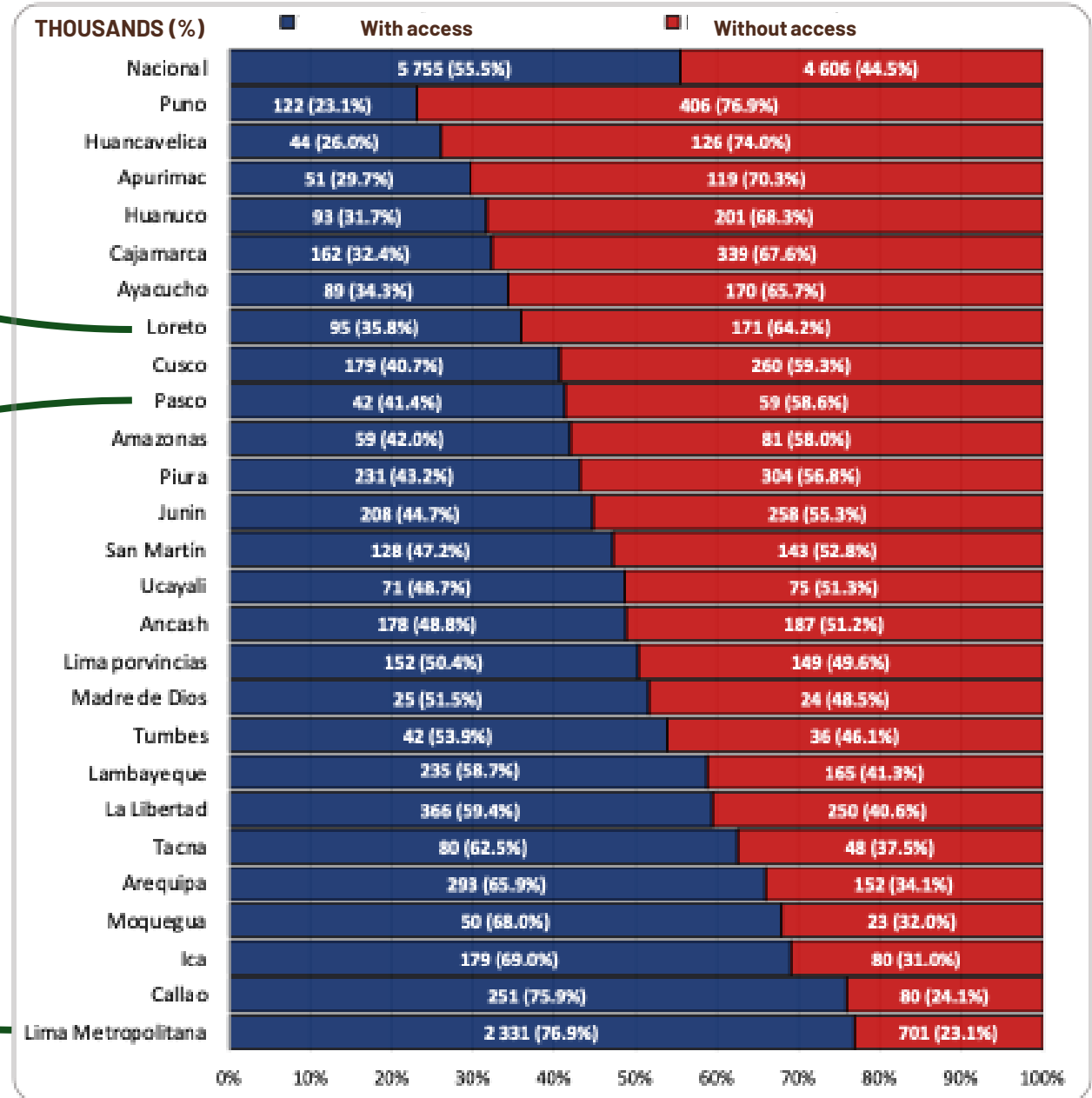
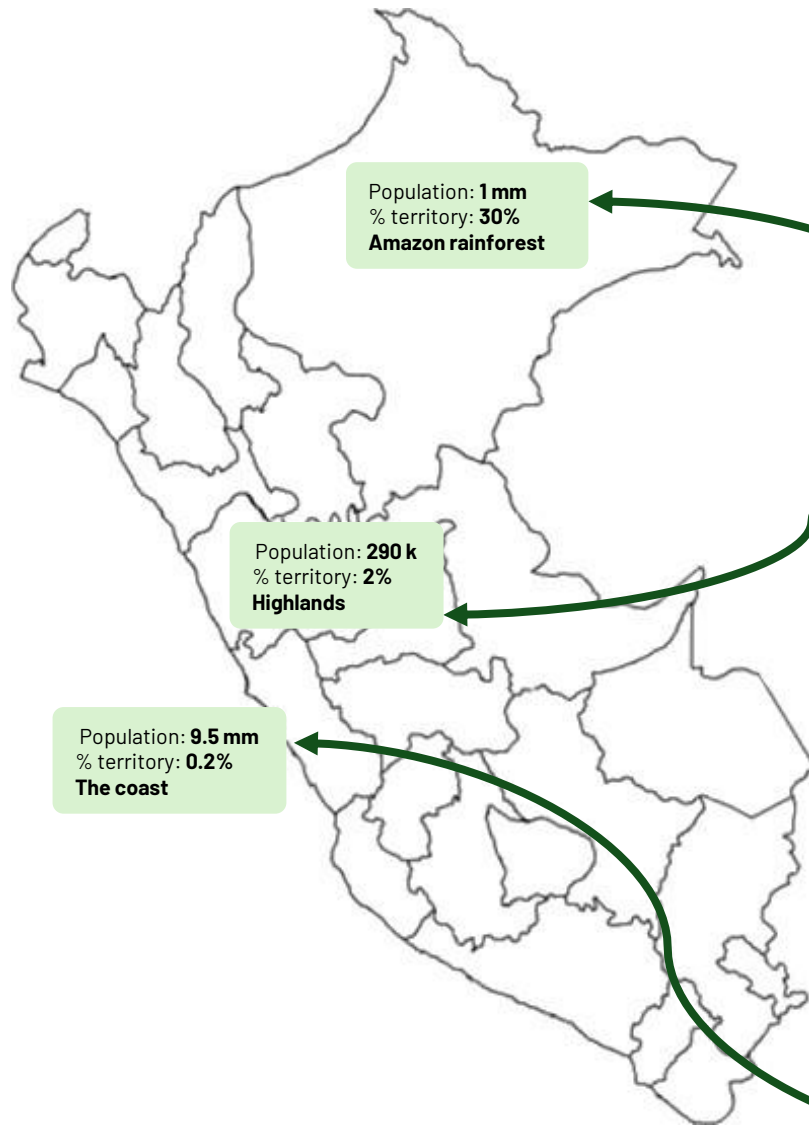
PERU: HOUSEHOLDS WITH INTERNET



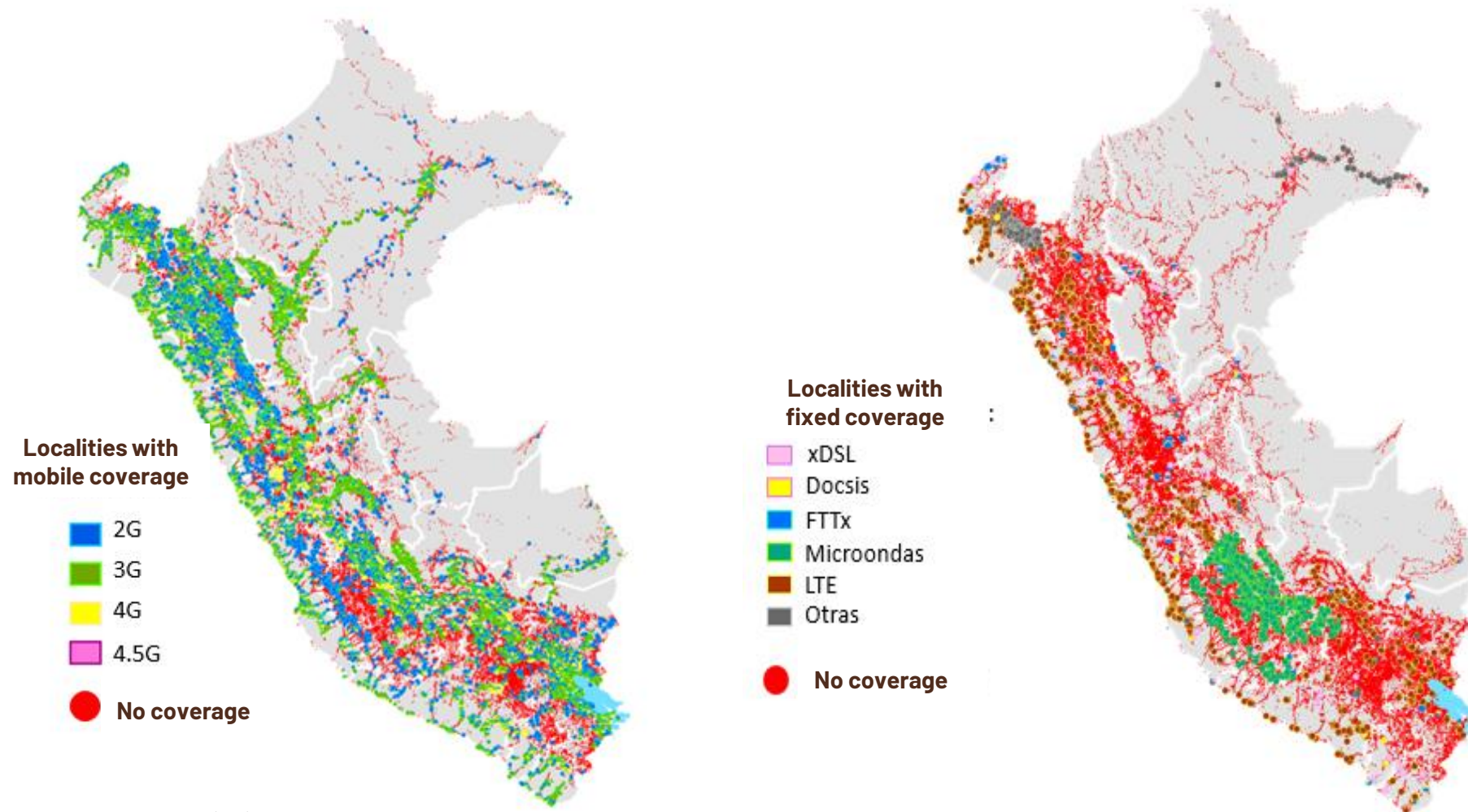
• **Great disparity in rural vs urban areas: 44 percentage points.**

National Institute of Statistics and Informatics - National Household Survey.

PERU: SUBNATIONAL HOUSEHOLDS INTERNET ACCESS



PERU: INFRASTRUCTURE AND COVERAGE



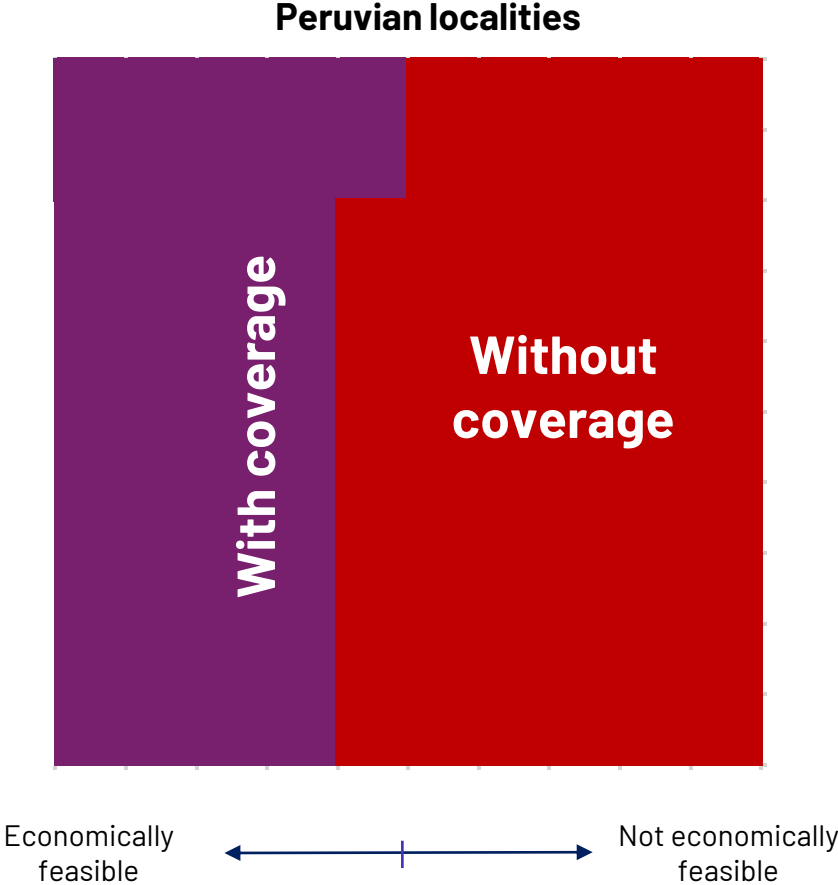
Peru's Ministry of Transport and Communications

Significant disparities are evident between the Internet coverage by technologies in regions, mainly in the Fixed Internet (terrestrial) supply .

PERU: LOCALITIES WITH AND WITHOUT BROADBAND (UMC)

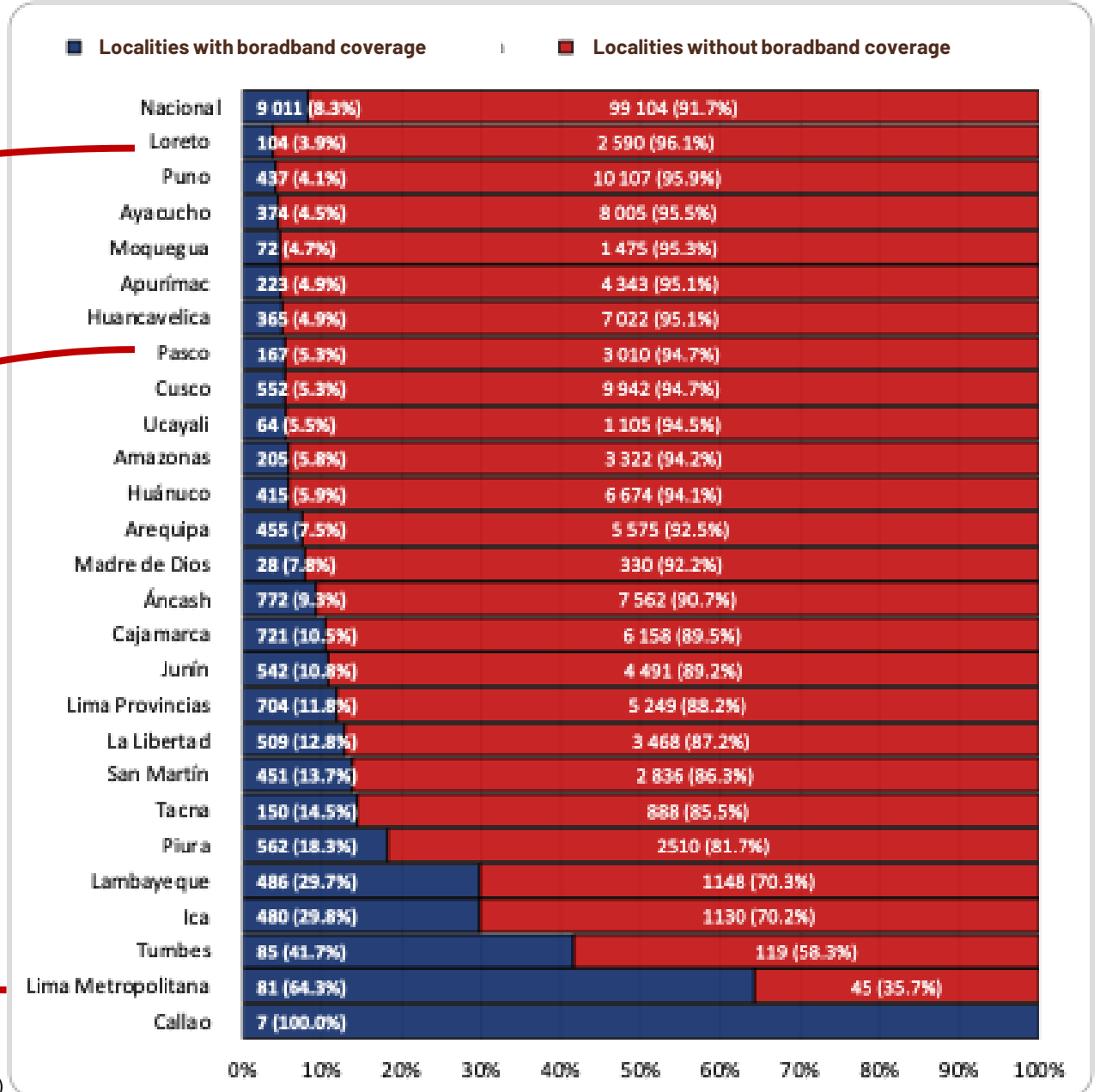
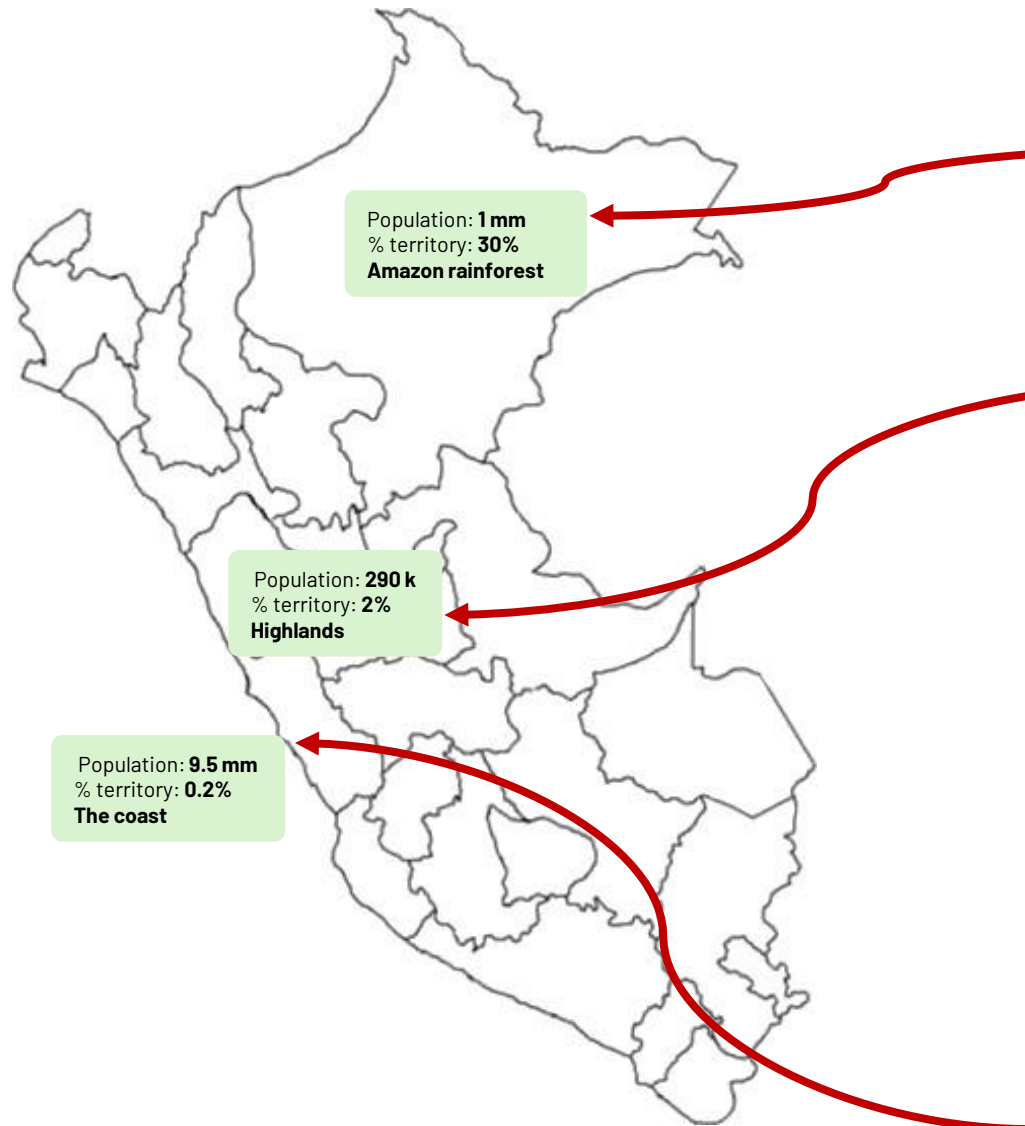
99,104
out of 108,000
locations have no
reported coverage
for 4G, 5G or FTTH
telecommunications
service.
(91,7%)

(MTC, 2025).

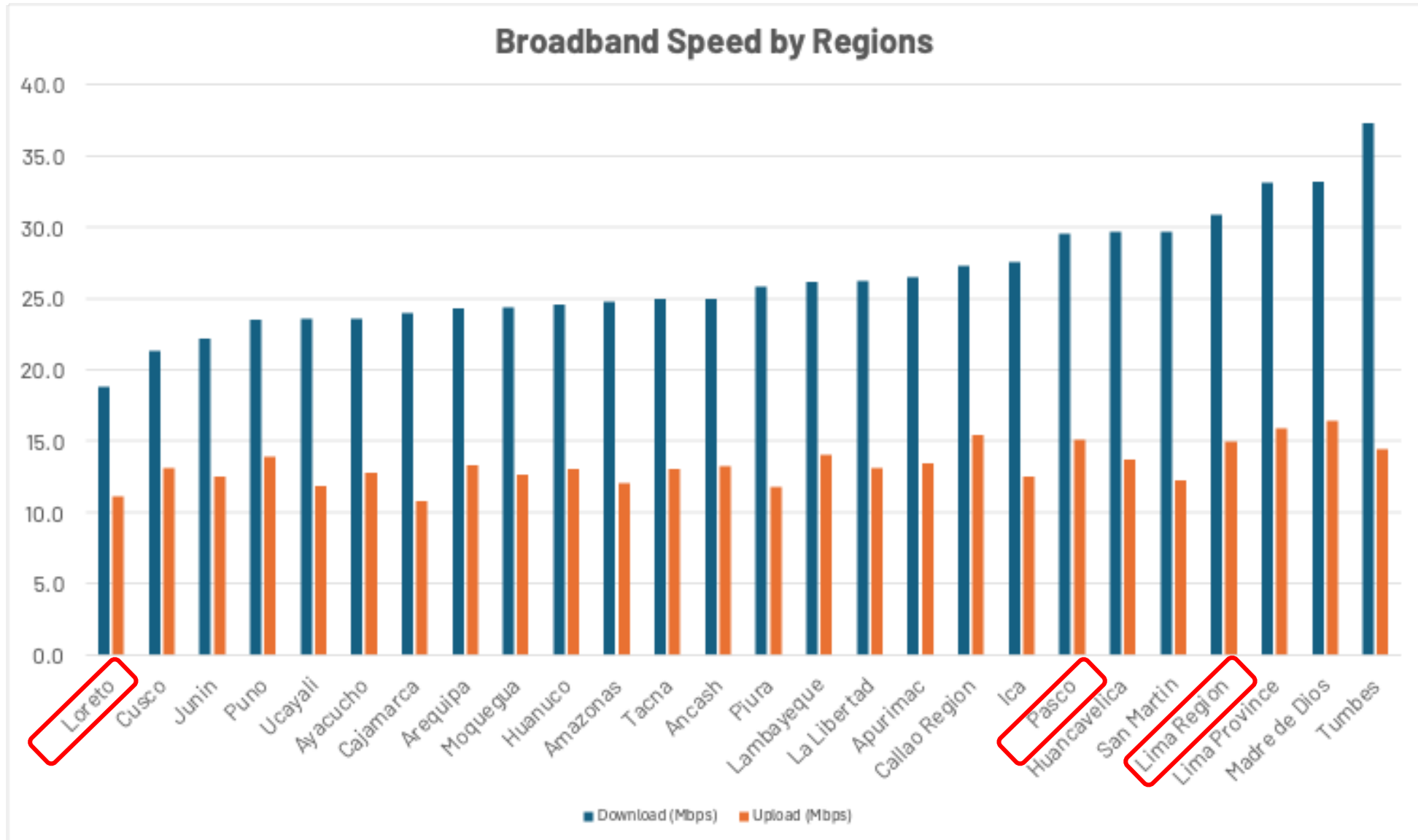


99.7%
of localities without
coverage belongs to
the rural area
(MTC, 2023).

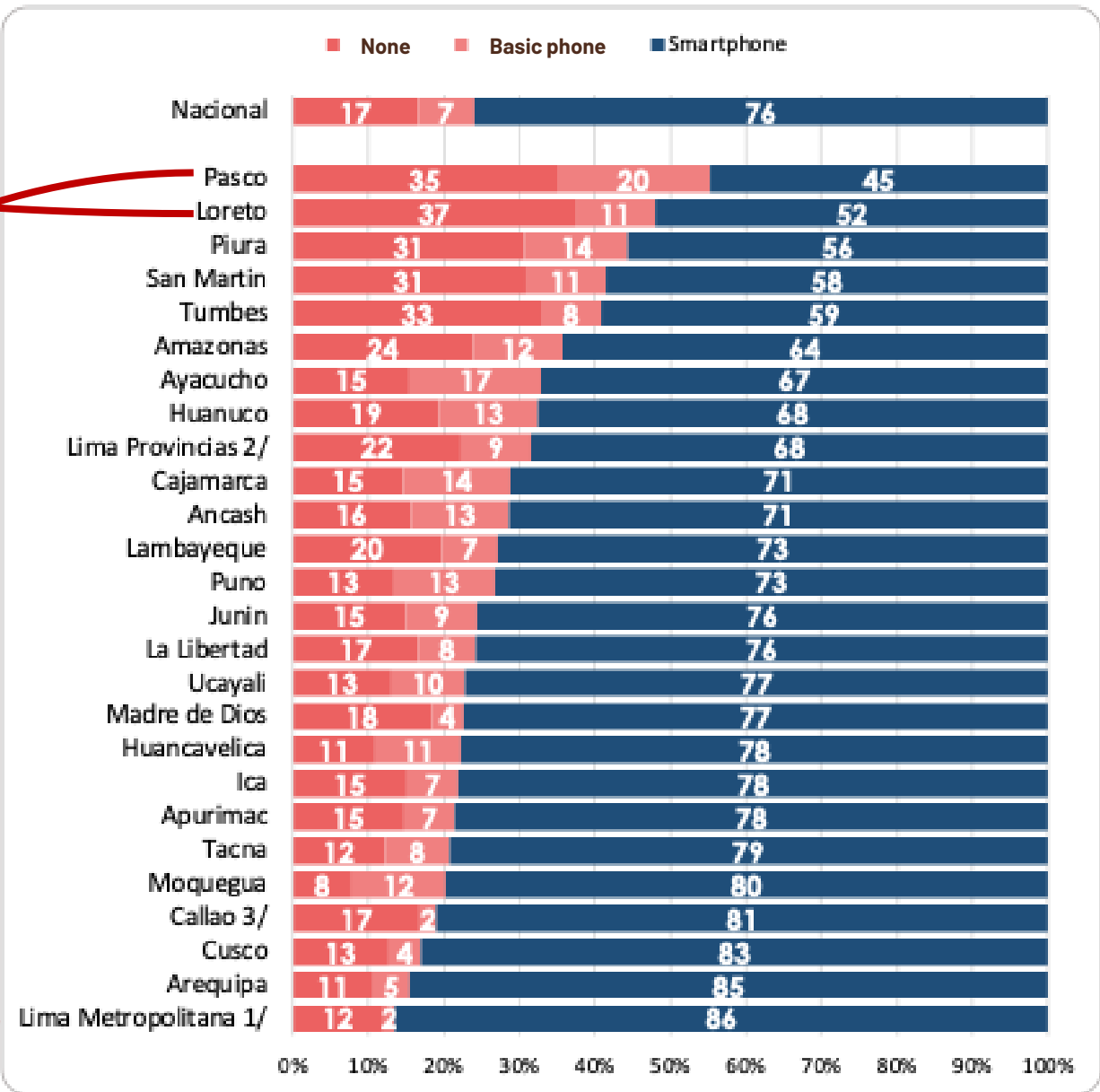
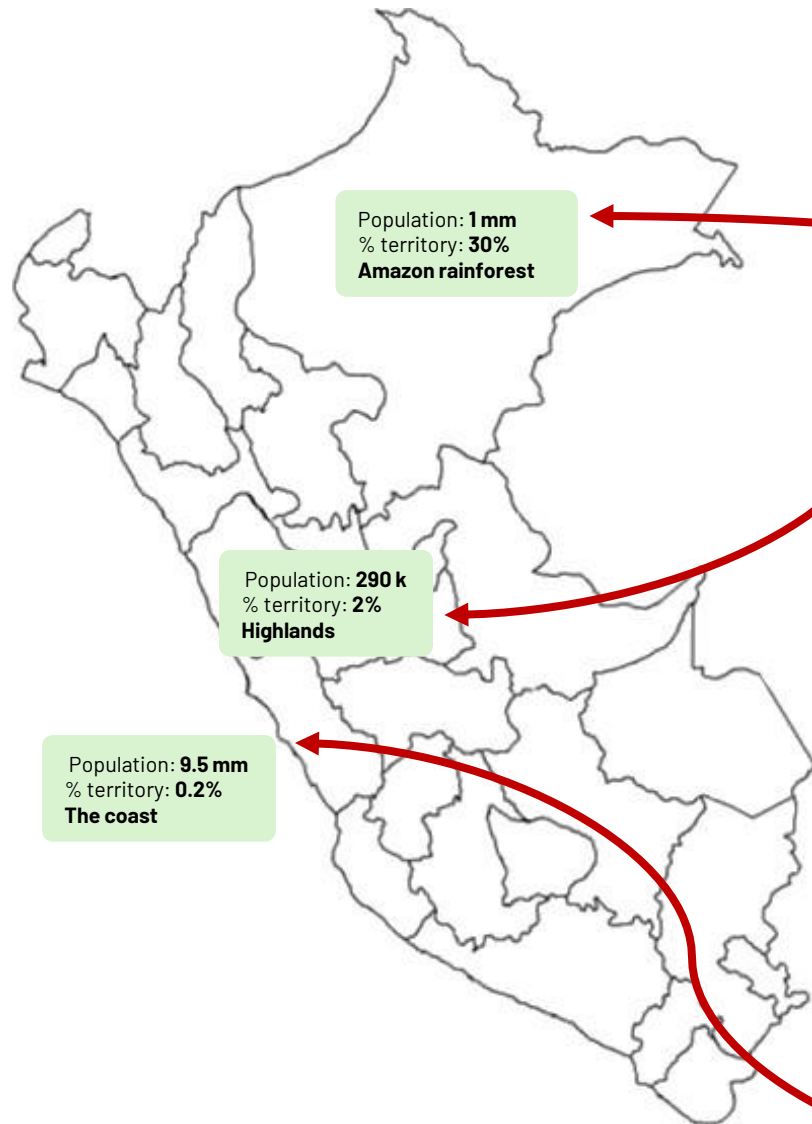
PERU: SUBNATIONAL BROADBAND COVERAGE



PERU: SUBNATIONAL BROADBAND SPEED

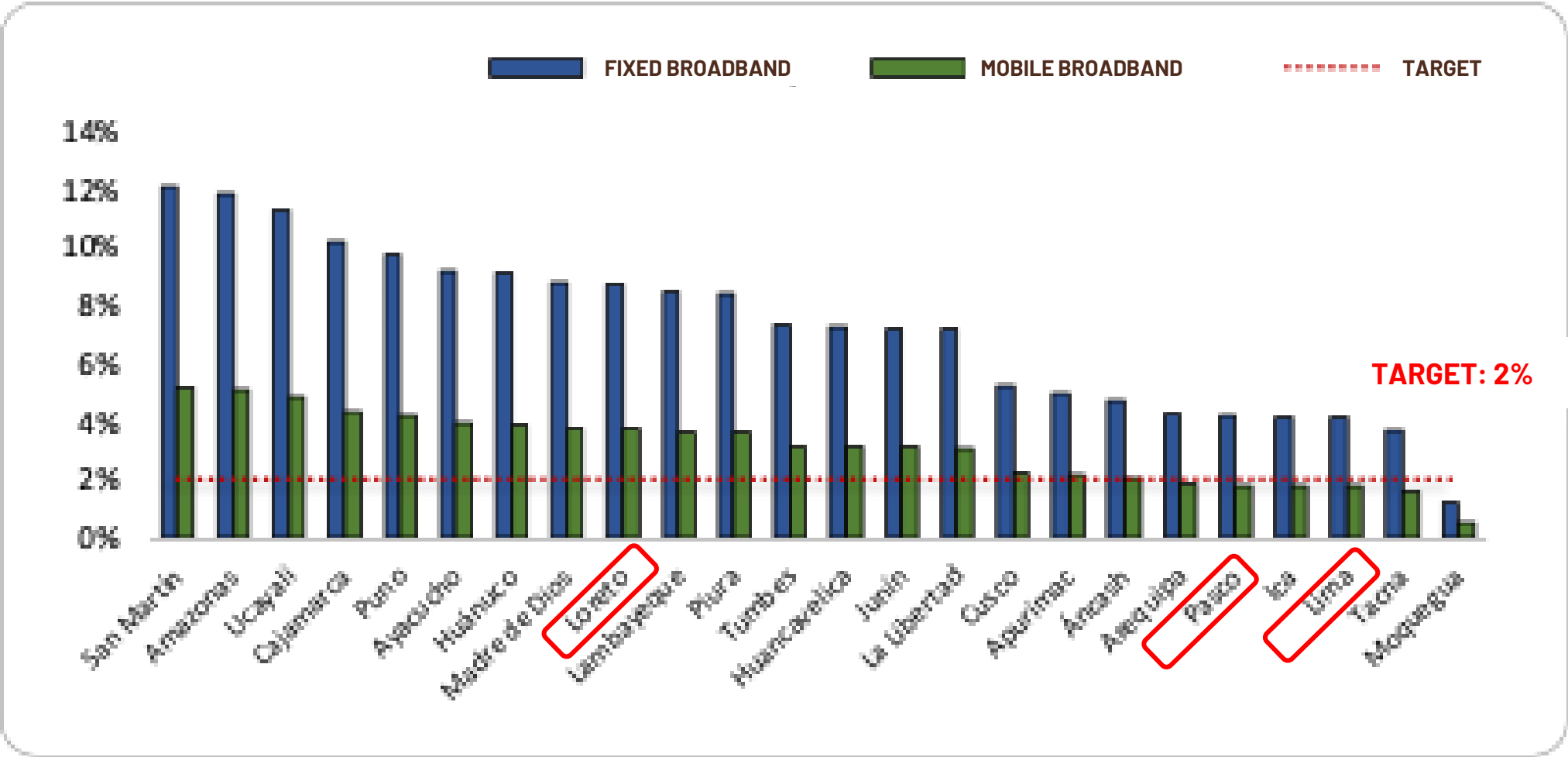


PERU: SUBNATIONAL DEVICES OWNERSHIP



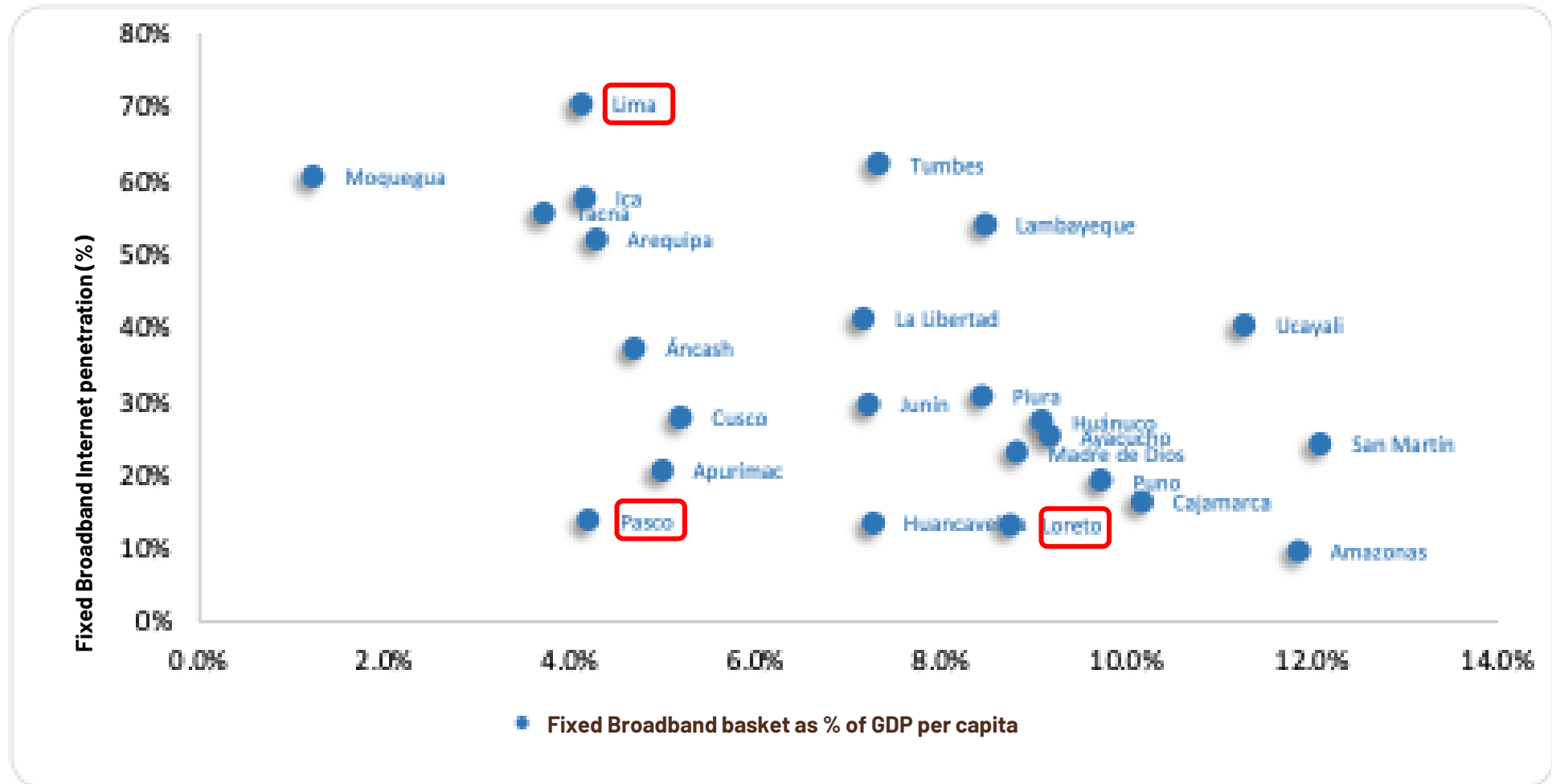
PERU: SUBNATIONAL AFFORDABILITY OF BROADBAND BASKET

Broadband basket prices as a percentage of GDP per capita, Peru, 2024 (% of GDP per capita)



PERU: SUBNATIONAL AFFORDABILITY VS PENETRATION

Correlation between Fixed Broadband penetration and the Fixed broadband basket as % of GDP: the less affordable the basket in a region, the less penetration it has.



Content

- **Context**

- Global

- **LAC**

- **Peru's national and subnational scope**

- Divides: connectivity and affordability

- **Evidence-based policies addressing the gaps**

- Final perspectives

PERU: FINANCIAL MODELS

Addressing the subnational gaps in Peru from a public sector perspective has two top-down channels:

Direct



The direct channel uses public funding for projects in the regions.

Indirect

The **indirect** channel promotes mandatory and incentive policies for private investment with focus in rural areas.

The National Telecommunication Program (PRONATEL) develops and executes projects to expand connectivity.

- 29 regional projects in its portfolio with investments exceeding USD 2.5 billion, benefiting nearly 11,000 localities.
- Digital Access Centers (CAD) and public Wi-Fi spaces (EPAD) programs.

PERU: FINANCIAL MODELS

Addressing the subnational gaps in Peru from a public sector perspective has two top-down channels:

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- Recent spectrum auctions connectivity obligations (5G in 2025, 4G in 2023).
- Fee (canon) per coverage mechanism.
- Infrastructure sharing regulation.
- Rural Infrastructure Mobile Operator (wholesale).
- Regulatory Sandbox underway

Content

- **Context**
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FINAL PERSPECTIVES

- Peru has a vast territory. Its regions are very different from each other in general terms (population, area, etc.) and in Internet use or access as well.
- To apply the UMC perspective in Peru, a major effort to align data collection with ITU tools and a focus on subnational data availability are needed.
- Digital divides lead to data divides.

ITUWTIS
GENEVA2025

Past

Present

Future

PERU'S SUBNATIONAL CONNECTIVITY STATE

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