



# DIGITAL INFRASTRUCTURE INVESTMENT: COLLABORATIVE APPROACHES AND MECHANISMS TO FINANCE UNIVERSAL CONNECTIVITY

## Key messages

- Digital infrastructure stands as a cornerstone for the digital economy and is linked with 70% of the Sustainable Development Goal (SDG) targets<sup>1</sup>. The UN Pact for the Future recently adopted, underscores a commitment to invest in resilient infrastructure, aiming to connect the 2.6 billion people still offline<sup>2</sup>.
- The absence of essential digital infrastructure presents a significant obstacle, especially in low and lower-middle-income countries<sup>3</sup>, restricting access to learning and economic opportunities. Building the necessary infrastructure to achieve universal connectivity requires substantial investment, but challenges such as demand fragmentation<sup>4</sup>, missing core infrastructure, and execution risks continue to deter it.
- Addressing these challenges requires maximizing the impact of traditional investments while also applying appropriate financing mechanisms and instruments. A collaborative approach that brings together the public sector, Development Finance Institutions (DFIs)<sup>5</sup>, the private sector, and investors is crucial for fostering innovation, improving coordination, and ensuring transparency.
- Initiatives such as the Digital Infrastructure Investment Initiative (DIII)<sup>6</sup>, and Giga<sup>7</sup> exemplify efforts moving in this direction.

1. According to the SDG Digital Acceleration Agenda (ITU, UNDP, 2023).

2. ITU, 2023.

3. Only 46% of the population in low and lower mid-income countries accesses the internet at adequate speeds, compared to 92% and 77% in high-income and upper-middle-income countries, respectively (DIII, 2024)

4. In rural, remote, and underserved areas - which account for 70% of the existing connectivity gap - operating cost for digital infrastructure tends to be higher than direct revenues. Consequently, roll-out is not perceived as economical rendering traditional private sector-led financing models likely untenable.

5. For the purposes of this policy briefing, the term 'Development Finance Institutions' includes international, regional, and bilateral institutions.

6. In April 2024, the International Telecommunication Union (ITU) launched the Digital Infrastructure Investment Initiative. This initiative aims to spark investments in digital infrastructure and is jointly led by six DFIs: The Asian Infrastructure Investment Bank (AIIB), African Development Bank (AfDB), European Bank of Reconstruction and Development (EBRD), Interamerican Development Bank (IADB), International Finance Corporation (IFC), and Islamic Development Bank (IsDB). It also enjoys the backing of the Brazil G20 Presidency. A key part of this initiative is the formation of a working group, which includes over 40 stakeholders from the private sector, the public sector, DFIs, and academia. This group's goal is to explore innovative financial mechanisms and instruments that can accelerate investment in this area. The G20 Digital Economy Working Group (DEWG) has recognized this initiative in its [G20 DEWG Maceió Ministerial Declaration on Digital Inclusion for All](#).

7. [Giga](#) is the ITU-UNICEF initiative to connect every school in the World to the internet.

## RELEVANT ACTION AREAS



## ABOUT THIS SERIES

The Financing Policy Brief Series has been prepared by the Inter-agency Task Force on Financing for Development to inform the substantive preparations for the Fourth International Conference on Financing for Development (FfD4), to be held in Sevilla, Spain, from 30 June to 3 July 2025.

The Inter-agency Task Force on Financing for Development is comprised of more than 60 United Nations Agencies and international organizations. The policy briefs in this series were not subject to review by Task Force Members, and represent the views of the authoring organizations.

The full series is available at:  
<https://financing.desa.un.org/iatf/report/financing-policy-brief-series>



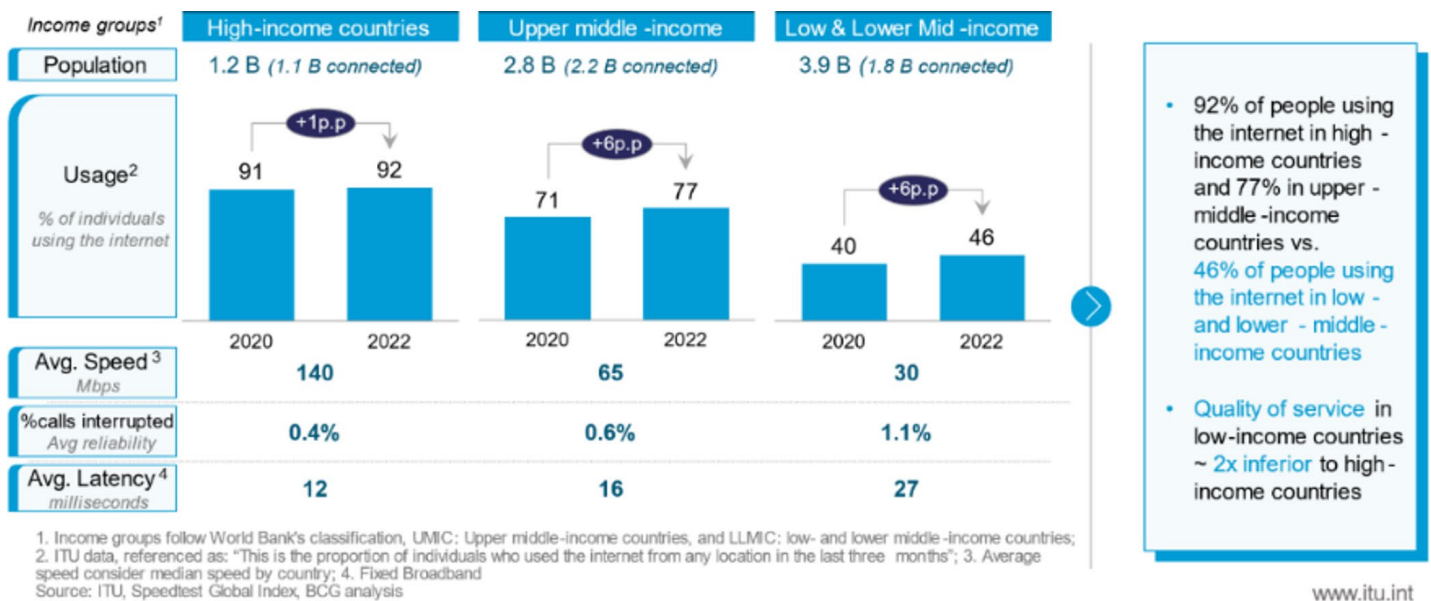
- The Fourth International Conference on Financing for Development (FFD4) can be a pivotal platform for advocating enhanced collaboration between the public sector, DFIs, the private sector, and other key stakeholders to catalyze investments in digital infrastructure. It also presents a prime opportunity to spearhead the development of green digital infrastructure and ensure investment accountability. The International Telecommunication Union (ITU) is proposing a set of specific initiatives aimed at advancing these efforts. These initiatives are envisioned to serve as potential outcomes of the conference, paving the way for investing in a more inclusive and sustainable digital future.

## Problem statement

Digital infrastructure is a key enabler of the digital economy and a critical factor in achieving the SDGs, with 70% of the SDG targets having a digital component. As of 2024, however, 2.6 billion people – approximately one third of the world population – remain offline. This digital divide is most acute in low and lower-middle-income countries, where only 46% of the population accesses the Internet at sufficient speeds, starkly contrasting with 92% in high-income and 77% in upper-middle-income countries.

### Exhibit 1.

**Internet usage increased since 2020; however, there is still a major gap, especially in UMICs and LLMICs<sup>1</sup>**

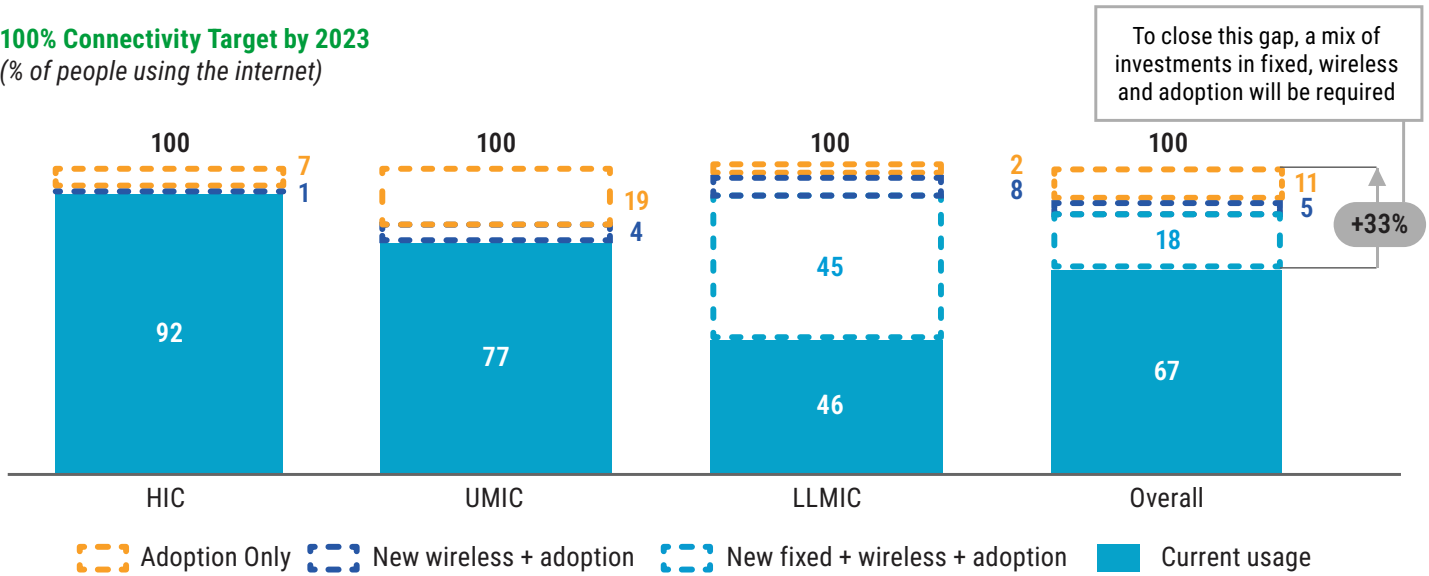


**Source:** Digital Infrastructure Investment Initiative 2024. Based on ITU data, Speedtest Global Index, and BCG analysis.



Figure 2.  
**33% of the global population is offline, with highest gap in LLMIC**

**100% Connectivity Target by 2023**  
(% of people using the internet)



Source: ITU Facts & Figures 2023; World Bank; BCG analysis

Note: Offline refers to individuals not having used the internet in the last three months. Current usage figures based on ITU Facts & Figures 2023; other estimates are BCG analysis. Individual segments might not add up to 100 due to rounding. Income classification based on World Bank.

Deficiencies – coverage, bandwidth capacity and transmission speeds – in digital infrastructure are among the principal cause for this gap. Building the necessary fixed and wireless infrastructure to achieve universal meaningful connectivity by 2030 requires significant investment. Closing the financial gap requires optimizing traditional investments – from both the private and public sectors, DFIs, investors, and philanthropists – as well as catalyzing novel forms of financing and enhancing the attractiveness of digital infrastructure projects to bring in additional investors.

Several challenges hinder investments in digital infrastructure<sup>8</sup>. These include demand fragmentation, which creates the perception that projects aimed at closing the digital gap are not economically viable for the private sector; significant gaps in core infrastructure, such as backbone networks; unclear or outdated digital agendas that are not always embedded in broader social development plans; and widespread execution or country risks.

To address these challenges, innovative approaches that adapts existing financial solutions to the diverse needs of different communities and regions while also exploring alternatives beyond conventional profit-driven models is needed. Enhanced collaboration among the public sector, DFIs, and the private sector is crucial for fostering innovation in digital infrastructure financing and reducing risks. By sharing best practices and identifying synergies, stakeholders can jointly design effective financing and operational models. Continuous dialogue also enhances alignment and transparency regarding national interests, contributing to establishing economically stable, investor-friendly environments.

While multistakeholder platforms exist, there is considerable room to improve communication and coordination among organizations, streamline operational processes, and increase agility in responding to rapidly changing digital needs.

8. Challenges identified through discussions with DFIs, public and private sector representatives, and other key stakeholders in digital infrastructure.



Furthermore, developing a compelling business case is crucial for attracting new investment actors and addressing demand fragmentation, which remains a major roadblock to investment. Improvements in impact measurement and accountability will support these efforts and are essential to ensuring that investments translate into tangible outcomes contributing to digital inclusion and sustainability.

As a result, three pivotal questions arise:

1. How can we enhance multistakeholder collaboration to not only improve current investment flows, but also attract new financing?
2. How can we improve digital infrastructure investment's impact measurement and accountability?
3. What specific measures can be implemented to overcome digital infrastructure investment challenges?

These questions are at the heart of guaranteeing a digital future that benefits all segments of society.

## Policy solutions

Discussions with the public sector, DFIs, the private sector, and other key stakeholders in digital infrastructure<sup>9</sup> have underscored the need to strengthen multistakeholder collaboration to address the mentioned challenges. While initiatives like the Digital Infrastructure Investment Initiative and Giga are positive steps toward engaging diverse organizations in bridging the digital gap, there remains significant potential for more coordinated and systemic engagement to boost digital infrastructure financing.

Key actions and approaches to address this include:

**Foster Multisector Collaboration:** It is imperative to establish more regular and structured collaboration among the public sector, private sector, and DFIs. This collaboration

should build on existing initiatives like the DIII and Giga, and can be facilitated in the form of forums, online platforms, or working groups focused on specific areas such as policy development or innovative financing models, thereby facilitating knowledge sharing and joint problem-solving.

**Enhance DFI Coordination:** The challenge of competition among DFIs persists. An increase in collaboration is essential for DFIs to share best practices and to collaboratively identify policies, regulations, and technological innovations that are conducive to progress. While initiatives like the Digital Infrastructure Risk (DIR)<sup>10</sup> are making strides in this direction, there is need for more ambitious collaboration. Such collaboration could include the joint development of new financing initiatives and instruments, further propelling the advancement of digital infrastructure.

**Highlight the role of the Public Sector:** The public sector can play a pivotal role in supporting digital infrastructure investments. By clearly articulating digital agendas and engaging with DFIs and the private sector, governments can collaboratively address challenges, co-design solutions, and create an investor-friendly environment. Platforms such as the G20 are instrumental in driving these efforts forward. Actively involving these platforms in the FFD4 conference and its subsequent actions is crucial to leverage potential synergies and significantly enhance the impact of these initiatives.

**Advocate for Impact Measurement:** The development and adoption of standardized metrics to assess the socio-economic impacts of connectivity initiatives is key to measure the impact of connectivity investments. This will not only enhance stakeholder accountability, but also encourage investment by highlighting the business case for digital infrastructure.

**Promote Sustainable Infrastructure Development:** The development of sustainable and environmentally friendly infrastructure is crucial for achieving a sustainable digital

9. Within the framework of the DIII initiative, the ITU engaged with a working group comprising more than 40 organizations involved in digital infrastructure investment to identify innovative financing mechanisms and instruments. These organizations include: AIIB, AfDB, EBRD, IADB, IFC, IsDB, Amazon, Axiata, BCG, Connect Humanity, Connectivity Capital, Convergence Partners, DBSA, DLA Piper, Echostar/Hughes Network System, Ericsson, EIB, E&, FTTH Global Alliance, Global Digital Inclusion Partnership, Google, Government of Brazil, Government of Lithuania, GSMA, Huawei, IEC Impact Fund, Internet Society, Kacific Broadband Satellites Group, Liquid Intelligent Technologies Group, Macquarie Group, Mawingu, Meta, Microsoft, Millicom International Cellular, MTN Group, Mozilla, Nokia Corporation, OECD, Orange, Ooredoo, Private Infrastructure Development Group, Samena Telecommunications Council, SBA Communications, State Secretariat for Economic Affairs (Swiss Government), Smart Africa, Telefónica, UNICEF, University of Pennsylvania, USAID, Viasat, Vodafone, World Mobile Group, and ZTE Corporation.

10. Established in 2020 and led by AIIB, the forum serves as an informal platform for DFIs to exchange knowledge about the digital infrastructure sector and its associated risks.



future. Integrating environmental standards to reduce ecological footprints, alongside investments in renewable energy sources and energy-efficient technologies will support the sustainable development of digital infrastructure.

By advocating for the implementation of the outlined solutions, FF4D can contribute to catalyze investments towards a more resilient and inclusive digital landscape that yield long-term benefits for communities, economies, and the environment.

The FFD4 presents a crucial opportunity to prioritize digital infrastructure investments within the action area of “Science, Technology, Innovation, and Capacity Building”.

## Specific recommendations for FFD4

Digital infrastructure is fundamental for developing digital economies and achieving the SDGs.

The outcome document should utilize ambitious language and specify actions aimed at catalyzing investments in digital infrastructure. Supporting this ambition, the ITU has outlined a series of targeted initiatives designed to accelerate investment in this sector, that could be featured as part of the conference’s outcomes, showcasing a concerted effort to leverage digital technology in achieving the SDGs and providing a clear roadmap for actionable steps forward.

By introducing these initiatives, the ITU reaffirms its commitment to leveraging technology as a cornerstone for sustainable development and demonstrates its ambition to integrate ambitious language and actions into the FFD4 agenda:

**1. Establishment of a Technical Forum with DFIs:** The ITU plans to spearhead the formation of a technical forum to foster exchanges among DFIs, with a focus on digital infrastructure. Building on existing initiatives such as the DIR Forum, this body will stimulate dialogue concerning digital infrastructure, enhance comprehension of the sector, and highlight the specific risks and opportunities associated with these investments. By acting as an impartial facilitator, the

ITU is in a privileged position to foster discussions, as well as to encourage networking and bolster collaboration between DFIs and UN-led initiatives.

- 2. Launch of a Digital Infrastructure Fund:** In a collaborative effort with one or more DFIs and Member States, the ITU will explore facilitating the development a dedicated fund aimed at financing connectivity initiatives within the world’s most difficult to reach regions, with a focus on, but not limited to, Least Developed Countries (LDCs), Landlocked Developing Countries (LLDCs) and Small Island Developing States (SIDS). DFIs would contribute financially to this fund, with the ITU taking on a coordinating role together with the relevant UN agencies including leveraging the Joint SDG Fund platform where appropriate. The Fund could take on the additional role to serve as a neutral platform that brings business and governments together to facilitate digital infrastructure investment transactions with DFIs.
- 3. Development of a Knowledge Hub on Financing for Connectivity, within Giga’s Global Connectivity Center in Geneva:** Aligning with one of the Giga initiative’s core objectives to act as a financial catalyst and convener aimed at connecting every school to the internet, within the Giga Learning Hub and as part of Giga’s Global Connectivity Center, ITU will create a specific knowledge hub that will serve as a global repository of innovative financing solutions and best practices, in alignment with climate finance strategies, and as a center for capacity building with a specific focus on governments. Furthermore, it will enhance cooperation among diverse stakeholders and foster synergies with related innovative financing approaches initiatives spearheaded by Giga, such as the Giga connectivity credits marketplace.