

Session Outcome Document

Challenges and solutions for broadband infrastructure deployment in developing countries, rural and remote areas

ITU-D FNS and ITU-T SG15

30th May 2024 - 14:00 – 14:45 (UTC+02:00)

<https://www.itu.int/net4/wsis/forum/2024/Agenda/Session/156>

Key Issues discussed (5- 8 bullet points)

- 1/3 of the world's population is still offline.
- Digital divide between high-income and low-income countries as well as between urban and rural areas.
- ITU Strategic Plan 2024-2027 - Goal: Universal Connectivity by 2030: Connecting the unconnected 2.6 billion people still living without the Internet is a truly challenging task.
- Challenges to deploy broadband connectivity in developing countries, rural and remote areas: Lack of infrastructure, Lack of skilled labour force, Technological and economic considerations (costs of deployment and return of investment), Affordability.

Towards WSIS+20 and WSIS beyond 2025, please share your views on the emerging trends, challenges, achievements, and opportunities in the implementation of the WSIS Action Lines to date (5-8 bullets)

- Affordability of rural broadband infrastructure: There has been tremendous progress in the development of information and communication technologies over the past two decades, especially to facilitate, accelerate and reduce costs of deployment of fixed and mobile broadband networks infrastructures, including those to deliver internet connections to populations in developing countries, rural and remote areas.
- Wireless access technologies such as FWA and satellite access are often more cost-effective and enable faster deployment of broadband infrastructure in rural and remote communities.
- Fibre access technologies are regarded as superior broadband solutions to connect homes, business premises and mobile cell sites; however, setup costs for planning, optical

cable installation and the longer deployment time often makes FTTx less affordable, especially in remote areas with no existing infrastructure.

- Emerging trend: Both technologies are complementary and are often deployed in a hybrid access infrastructure.

Tangible outcomes (such as key achievements, announcements, launches, agreements, commitments, figures, and success stories (3-5 bullet points))

- ITU-D FNS offers a range of products & services tools such as assessment studies, publications, workshops, guidelines, training and best practices on telecommunication/ICT infrastructure including wireless and fixed broadband, connecting rural and remote areas, conformance and interoperability, spectrum management, the effective and efficient management and proper use of telecommunications resources to assist ITU Member States and ITU-D Sector Members and Associates in maximizing the use of new technologies of their ITC infrastructure.
- ITU-T SG15 develops a broad range of international standards for broadband fibre access technologies including active equipment such as the PON and PtP systems, topologies for optical access networks, passive infrastructure components such as optical fibre and cables, WDM/splitters, closures, etc., as well as a range of innovative solutions to reduce time and cost of deployment, meet the challenges of the lack of skilled labour force and limited space across all infrastructure.
- Consideration of alternatives business models such as sharing costs to build and/or to operate the network were presented such as passive infrastructure sharing, active sharing and open access networks.

Actionable plan and key recommendations (2-5 points)

- Raise awareness of the products & services tools offered by ITU-D FNS to assist the wireless and fixed broadband deployment in developing countries, rural and remote areas, as well as of the international standards developed by ITU-T SG15 for optical access networks and innovative solutions to reduce time and cost of deployment.

Suggestions for thematic aspects that might be included in the WSIS Forum 2025 (one paragraph)

- There is no way to connect the unconnected without reliable network infrastructure: “Broadband Connectivity” should be considered as an essential topic in WSIS Forum agenda.