

Connectivity for all

Connectivity was a recurring topic at the 12th Internet Governance Forum (IGF). To underscore the importance of the issue, panelists referenced statistics that indicate roughly 50% of the world's population is connected to the internet. In keeping with the theme, "Shape Your Digital Future," the session **Policy and technology approaches for expanding broadband to rural and remote areas (WS160)**, got to the point of why access to the internet matters in the Digital Age. Connectivity is key to enabling people to participate in the digital economy, using the internet & ICTs to achieve sustainable development goals and closing the digital divide.

What is connectivity?

Simply put, connectivity is about having access to the internet. The quality of the internet connection plays a deciding role in the types of **applications** a user may access. Robert Pepper of Facebook's Global Connectivity and Technology Policy team, distinguished between being connected to the internet and having access to an inclusive internet which hosts rich applications. In developing strategies for scaling connectivity, policymakers should prioritize what Pepper calls the robust, high-speed, quality connection that is necessary to access all the benefits of the internet.

"Internet for what?"

One of the seminal moments of WS160 came when Michael Ginguld of AirJaldi Networks, a rural ISP in India, asked "Internet for what?" I believe this question encourages policymakers to go beyond normative-based justifications for scaling connectivity in rural areas and think about how the internet may be used to address local challenges. Ginguld listed three areas in which connectivity may help rural populations: (1) environmental monitoring; (2) precision agriculture; and (3) water usage.

What I appreciate about Ginguld's suggestions is that they provide concrete examples of Lorraine Porciuncula's remarks at the top of session that the UN Agenda for Sustainable Development identifies ICTs and the Internet as horizontal enablers of development. The link between connectivity and economic development was also echoed in the session **Small Island Developing States (SIDS) Roundtable: Are we running out of resources and bandwidth? (WS4)**. To answer Ginguld's question, efforts to connect the 53% of the world's population that were not using the internet at the close of 2016 should focus on how connectivity may accelerate their personal, social and economic development.

Barriers to scaling connectivity

There is no one-size-fits-all approach to scaling connectivity not least because of the web of existing barriers. Lorraine Porciuncula highlighted that a lack of internet access is a problem in developed and developing countries with challenges persisting in rural areas. In addition to the

urban-rural divide, there is a gender gap as Doreen Bogdan-Martin, Chief of Strategic Planning at the ITU made clear. Over the course of WS160, five challenges emerged as the main barriers to scaling connectivity in the rural context.

The first issue is **awareness**. Helani Galpaya, CEO of LIRNEasia, asserted, “There are still people who don’t know what the internet is.” For those who do know, Bogdan-Martin explained, “Often people are not getting online because they don’t have the awareness of the benefits of connectivity.” People want to know why connecting to the internet is worth their time and money. This lack of awareness may adversely affect the rural population’s demand for internet access.

Availability is the second barrier to scaling connectivity. Bogdan-Martin indicated that there are countries with less than 5% internet penetration. Using 2017 data from nationally representative household and ICT access and use surveys, Galpaya showed that in some countries there is a wide connectivity gap between urban and rural areas. **Affordability** is also a barrier though Galpaya was careful to point out the difference between an individual’s perception of how affordable internet access is and international standards of affordability. While availability and affordability are more supply-side barriers, Pepper thoughtfully pointed out that even with available and affordable internet access, awareness is key to fostering people’s desire to connect to the internet.

Access to an internet-enabled device is key to scaling connectivity. **Low smartphone ownership levels** are an additional challenge to connecting those living in rural and remote areas. **Relevance** is also a barrier. An audience member shared that financial and social applications drive internet usage in Kenya. I think relevance is also an opportunity to develop new value propositions for expanding internet access. Amrita Choudhury, the Director of a not-for-profit association called CCAOI, suggested bundling public services to increase iusage.

The community networks solution

In discussing how to scale connectivity in rural areas, panelists often cited **community networks as a viable solution**. Bengt Molleryd, a Senior Analyst at the Swedish Post and Telecom Authority (PTS) gave an example of how users aggregated demand to create the first wave of fiber-driven networks in Sweden. Sebastián Bellagamba, a Regional Bureau Director for Latin America and the Caribbean at the Internet Society (ISOC), listed three target areas for helping people working on community networks: (1) spectrum (2) licensing; and (3) Universal Service Obligation funds. Bellagamba’s suggestions show that while community networks may be the kind of bottom-up solution that works at the outset, government and commercial support are helpful for scaling and maintaining these networks. Other ideas such as technological innovation and public-private partnership also have a role to play in supporting the adoption of community networks as well as developing new pathways to connectivity in rural areas.

In concluding, the WS160 discussions around scaling connectivity in rural areas provide insights for improving the internet’s future availability, affordability and relevance everywhere.