



**IGF 2024**

**Policy Network on Meaningful Access**

**How to conciliate “Access” with “Meaningful”:  
practices from the community**

**PNMA Output Report  
Riyadh, Kingdom of Saudi Arabia  
December 2024**

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## Executive Summary

The concept of meaningful access has emerged in response to the growing body of evidence that even when people have connectivity, they might not have been fully benefiting from the Internet. How one gets connected to the Internet and which contents and services one can access is an equally important challenge to the experience that a person will have once they are online, even more so to the community/country in which they live.

Since 2022, the Policy Network on Meaningful Access (PNMA) has worked on incrementally building knowledge, practice, and bridging communities around three overarching thematic streams: **Connectivity (Infrastructure & Business Models)**, **Digital Inclusion through a citizen-centric approach (accessibility & multilingualism: local services and contents in local languages based on local needs and resources)**, and **Capacity Development (technical skills training)**. Since its inception, the PNMA has actively contributed within and outside IGF to identify a certain number of good practices and policy solutions towards meaningful access, and retain them as possible models to be scaled and/or applied in other regions of the world. Different stakeholders groups have joined such efforts: governments, international organisations, academia, private actors, non-profits, and local or language-based communities. In this aspect, it is important to note that the PNMA builds upon the efforts of the late Best Practices Forum on Local Content (BPFLC) and of the BPF on Gender and Access (BPFGA), which started the identification of such relevant solutions.

As the first of its series, the [PNMA 2022 Output Report](#) features a collation of selected cases for each of the above-mentioned focus areas. During 2023, the PNMA expanded its analysis of said experiences with implementation and problem-solving of the issues previously raised. By building a [PNMA Repository of Good Practices](#), the network was able to assess reasons on why practices have or have not expanded, why digital divides persist, and which structural issues repeat themselves in different scenarios. The [PNMA 2023 Output Report](#) reflects the collaborative work and the group's list of recommended actions on meaningful access.

**During 2024, the PNMA has contributed to assist and advocate for the implementation of policy solutions for the key issues previously raised, while monitoring ongoing experiences and welcoming new practices.** The continuous multistakeholder public debate on the above mentioned focus areas took into account the Global Digital Compact: a process to which the PNMA has actively contributed, and has welcomed with great satisfaction its final text and recommendations adopting the concept of meaningful access), the deliberations from NETMundial+10, and the WSIS+20 and IGF+20 processes. This year's [Process](#) was supported by a follow-up monitoring survey of previously presented cases, as well as a review of the key policy issues raised in earlier output reports; and a revamped selection of new, community-endorsed good practices. Additionally, the policy network engaged in discussions regarding this intersessional work and ways of collaboration – within the IGF – with the Leadership Panel, Dynamic Coalitions, and institutional partners such as the Internet Corporation for Assigned Names and Numbers (ICANN); World Intellectual Property Organization (WIPO); the UN (UNDESA) and its agencies such as the International Telecommunication Union (ITU), UNHCR, and UNESCO; Internet Society (ISOC), and Organisation of American States (OAS), amongst others.

The discussions in Riyadh closed the 2024 PNMA Process on a good footing: this output report reflects the goals and priorities defined by the community and pinpoints to policy and practice to solve them. During the policy network's plenary session, special guest Vint Cerf highlighted that "access that isn't useful can't be meaningful". He concentrated his statement on the importance of proper measurement of said access - considering security, utility, affordability, and accessibility - and on the good work that the PNMA has been doing on the topic. As a yearly process, the policy network can timely follow discussions and respond to quick changes in technology. As Chair of the Leadership

Panel, Vint Cerf stated that a message to the UN Secretary-General on the permanence of IGF, regarding the upcoming WSIS, is being prepared: “Our work is not done. Our work continues to be extremely important, and I believe that we should persist, beyond the WSIS+20 timeline”.

The Policy Network on Meaningful Access’ key takeaways are:

- Meaningful access is a concept and practice rapidly expanding across all regions; as recognised by the approved Global Digital Compact back in September, 2024, this is the right way to ensure connectivity through the provision of content in local languages, and establishing services that actually improve the community’s livelihoods.
- A “whole of society approach” while dealing with meaningful access is essential: connectivity, digital inclusion, and capacity development goals may only be achieved by multistakeholder cross-collaboration and multidisciplinary operating lenses.
- Reliable measurement tools are needed: after many years of discussing policy loopholes, it is now clear that reliable tools to frequently measure where the issues persist are still in demand, as well as to assess policy effectiveness. Alternative solutions for such measures, beyond direct regulation, can be explored in order to avoid unnecessary burdens.
- Access is not possible without affordability: the price of access (of services, devices, and infrastructure) persists as one of the main barriers to connectivity. This needs to be urgently addressed if we really want the other half of humanity to join the Internet.
- Good practices’ acknowledgment: the success cases raised by the PNMA during its operation years – collated both in its Repository and presented at the Annual Meetings – shall be proactively promoted by the IGF and the Leadership Panel, throughout regions and institutions, so their impact is amplified.

The Policy Network on Meaningful Access reaffirms its commitment to the multistakeholder public debate on Internet governance; offers itself as a model for the implementation of the GDC built on policies based on best practices; and welcomes new likeminded partners to build together the future that will be defined during the ongoing WSIS+20 and IGF+20 processes.

## List of Acronyms

AAU	Association of African Universities
AFN	Ads for News Initiative
AFNOG	Africa Network Operators Group
AFTLD	Africa Top Level Domains Organisation
APC	Association for Progressive Communications
AUC	African Union Commission
BTRC	Bangladesh Telecommunication Regulatory Commission
CITEL	Inter-American Telecommunication Commission
CLUA	Climate and Land Use Alliance
CN	Community Network
COW	Community Owned Wireless
DACD	Development Agenda Coordination Division
DCAD	Dynamic Coalition on Accessibility and Disability
DFG	Declaration on Future Generations
DNS	Domain Name System
DNSSEC	DNS Security Extensions
DRR	Disaster Risk Reduction
DSO	Digital Switch-Over
DTT	Digital Terrestrial Television
DTTB	Digital Terrestrial Television Broadcasting
EAI	Email Address Internationalisation
EC	European Commission
EMF	Electromagnetic Field
FCDO	Foreign, Commonwealth and Development Office
GARM	The Global Alliance for Responsible Media
GDC	Global Digital Compact
GDIP	Global Digital Inclusion Partnership
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
GoS	Grade of Service
GSMA	Global System for Mobile Communications Association
ICANN	Internet Corporation for Assigned Names and Numbers
IDNs	Internationalized Domain Names
IETF	Internet Engineering Task Force
IFAP	Information for All Program
IFLA	International Federation of Library Associations
IG	Internet Governance
IGF	Internet Governance Forum
IIG	International Internet Gateway
IMRS	ICANN Managed Root Server
IP	Intellectual Property
ISIF	Information Society Innovation Fund
ISOC	Internet Society
ISP	Internet Service Provider
ITU	International Telecommunication Union
KAUST	King Abdullah University of Science and Technology
NSRC	Network Startup Resource Center
NTTN	Nationwide Telecommunication Transmission Network
NUPEF	Núcleo de Pesquisas, Estudos e Formação
OAS	Organization of American States



PNMA	Policy Network on Meaningful Access
PRIDA	Policy and Regulation Initiative for Digital Africa
PTA	Pakistan Telecommunication Authority
RF/FSO	Radio Frequency / Free Space Optics Systems
SCN	School of Community Networks
SDG	Sustainable Development Goals
SIDA	Swedish International Development Cooperation Agency
SIG	School of Internet Governance
SME	Small and Medium Enterprises
SMS4DC	Spectrum Management System for Developing Countries
TLDs	Top-Level Domains
UA	Universal Acceptance
UASG	Universal Acceptance Steering Group
UGC	User Generated Content
UMC	Universal and Meaningful Connectivity
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHCR	United Nations High Commissioner for Refugees
WAN-IFRA	World Association of News Publishers
WBU	World Broadcasting Unions (ABU,AUB,AIR,ASBU,CBU,EBU,NABA)
WEF	World Economic Forum
WIPO	World Intellectual Property Organization
WRC	World Radiocommunication Conference
WTIS	World Telecommunication Indicators Symposium

## 1. Introduction

### 1.1. About meaningful access

The concept of **meaningful access** has emerged in response to a growing body of evidence that even when people have connectivity, they might not have fully benefited from it. How one gets connected to the Internet is an equally important challenge to the experience that a person will have once they are online, even more so to the community/country they live in. While access to infrastructure is critical, without this access being inclusive, useful, sustainable and affordable, linked to human capacity development and relevant content that can make it so, the impact connectivity could have will not achieve its positive potential for greater public good. Many of the access efforts, unfortunately, are only focusing on bringing connections to end-users (i.e., consumers), without taking into consideration the potential of the Internet to create, communicate and produce content and services locally and in local languages (i.e., citizens), and what it will take to realise this.

### 1.2. About the Internet Governance Forum (IGF)

The Internet Governance Forum (IGF) is a global arena, convened by the United Nations<sup>1</sup>, where governments, civil society, the Internet technical community, academia, the private sector, and independent experts exchange information and share best practices around Internet governance and policy issues.<sup>2</sup> It brings together different stakeholder groups as equals, working as a facilitator of a common understanding of the Internet opportunities and threats.

In 2024, the nineteenth annual meeting of the IGF will explore the overarching theme “Building our Multistakeholder Digital Future”. This is a hybrid event hosted by the Kingdom of Saudi Arabia between 15 and 19 December in Riyadh, and online. The PNMA activities can be found under the subtheme “Advancing human rights and inclusion in the digital age”.

### 1.3. About the Policy Network on Meaningful Access (PNMA)

The Policy Network on Meaningful Access (PNMA) is a type of intersessional activity under IGF created to establish an expert-led framework network on broad Internet governance topics that create spaces for in-depth multistakeholder efforts. It aims to identify best practices and successful solutions applied somewhere in order to formulate impact-driven, concrete, and actionable policy recommendations on how to achieve meaningful and universal Internet access aligned with the Secretary-General's Roadmap for Digital Cooperation and the Sustainable Development Goals. The PNMA foundations are grounded on:

- the IGF mandate at paragraph 72 of Tunis Agenda, for the exchange of information and engagement of stakeholders - in particular from developing countries - as well as capacity development in Internet governance;
- the paragraph 93(e) from the United Nations Secretary-General's Roadmap for Digital Cooperation as it envisages a strengthened IGF with a view to making it more responsive and relevant to digital issues, and streamline priority areas (global connectivity, digital inclusion, capacity building);
- Our Common Agenda First Commitment (“Leave no one behind”) and Seventh Commitment (“Improve digital cooperation”);

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<sup>1</sup> The [resolution adopted by the UN General Assembly on 16 December 2015 \(70/125\)](#), “Outcome document of the high-level meeting of the General Assembly on the overall review of the implementation of the outcomes of the World Summit on the Information Society”, extended the mandate of the IGF as set out in paragraphs 72 to 78 of the Tunis Agenda.

<sup>2</sup> IGF website: <http://www.intgovforum.org>. The IGF is one of the key outcomes of the World Summit for the Information Society (WSIS).

- the Global Digital Compact future engagements.

Officially starting its activities in June 2021 – building on the experience of the Best Practice Forum on Local Content initiated in 2018 and rechartered in 2019, among other intersessionals –, the Policy Network has successfully built a network of partners - its Multistakeholder Working Group (MWG) - ; arranged connections with ongoing relevant discussions and actions in other fora; and built a repository of good practices. As decided during its foundation, the MWG – composed by representatives of groups and communities concerned by the Meaningful Access – “agreed to explore concrete actions the members of the PNMA could support so that [our] main outcome is not only a set of recommendations”<sup>3</sup>.

In 2022, the PNMA’s analytical focus was on the community’s agreed three overarching thematic workstreams: Connectivity (Infrastructure & Business Models), Digital Inclusion through citizen approach (accessibility & multilingualism: local services and contents in local languages based on local needs and resources) and Capacity Development (technical skills training). During that year’s intersessional activities, the policy network actively contributed within and outside IGF communities to identify a certain number of good practices and policy solutions, and retain them as models to be exported or applied to other regions of the world. Stakeholders from different groups joined this enterprise: government, international organisations, academia, private actors, non-profits. The [PNMA 2022 Output Report](#) features a collation of selected cases for each of the focus areas. Additionally, one section of the document is devoted to recommendations around meaningful access and its expansion.

During 2023, the PNMA expanded its analysis of said experiences with implementation and problem-solving of the issues previously raised. By building a [PNMA Repository of Good Practices](#), the network was able to assess reasons on why practices have or have not expanded, why digital divides persist, and which structural issues repeat themselves in different scenarios. Throughout online monthly deliberations and the outcomes of the plenary discussion held in Kyoto, the community shared examples of how we are working towards better local content and languages online, improved meaningful connectivity, and the use of non-Latin alphabets, amongst other areas. Additionally, the policy network encouraged conversations about the intersessional work and ways of collaboration and advocacy with other IGF areas (e.g., Dynamic Coalitions and National and Regional Initiatives), the Leadership Panel, and institutional partners. Amongst these, cooperation has been renewed with IGOs such as the Internet Corporation for Assigned Names and Numbers (ICANN); the International Federal of Library Associations (IFLA); the International Telecommunication Union (ITU), and the World Intellectual Property Organization (WIPO). The [PNMA 2023 Output Report](#) reflects the collaborative work and the group's list of recommended actions on meaningful access.

**In 2024, the PNMA aims to assist and advocate for the implementation of policy solutions for the key issues previously raised, while monitoring ongoing experiences and welcoming new practices.** The continuous multistakeholder public debate on the above mentioned focus areas takes into account the Global Digital Compact (which has adopted the concept of meaningful access in its final text and recommendations), the deliberations from NETMundial+10, and the WSIS+20 and IGF+20 processes.

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<sup>3</sup> [Statement of IGF 2021 PNMA Multistakeholder Working Group.](#)

## 2. The 2024 PNMA Process

### 2.1. Goals

1. Expand the policy network's advocacy regarding all the achievements and solutions identified through its activities into the future Digital Compact Initiative, and effectively contribute to the roadmap that went through the Summit of the Future on September 22 and 23rd, 2024 and the WSIS+20 and IGF+20 processes - this could be made building on the useful suggestions included in the NETMundial+10 final document;
2. Work upon the key issues and deliberations collated by the PNMA community during the 2023 PNMA Session Plenary, bringing them to the attention of the IGF Secretariat and of the Leadership Panel;
3. Actively promote the good practices that have been identified by the Policy Network across all stakeholder groups and through the Digital Cooperation initiative, with the assistance of the Leadership Panel and the IGF Secretariat;
  - a. *Sub-goal:* focus the PNMA work on project implementation lessons and policy/regulatory conditions via a multisectoral approach and under the lens of intersectionality, scalability, and localisation.
  - b. *Sub-goal:* establish a permanent call for selection of good practices to be added to the PNMA Repository, with frequent updates on implementation status.
4. Strengthen partnerships with intergovernmental organizations (IGOs) that are already part of the network (ICANN, ITU, UNESCO-IFAP, WIPO, WBU, IFLA, etc), and welcome the involvement of new stakeholders that are relevant and active in the field of Meaningful Access (e.g., UNHCR);
5. By expanding the reach of the policy network, open a permanent dialogue between the PNMA community and regional and global actors (such as the EU, the AU or the OAS and other regional bodies), in order to promote regional initiatives and encourage projects' replication and scaling;
  - a. *Sub-goal:* work as a direct link to the regional bodies that could play a key role in replication efforts (e.g., involve the African Union in practices from said continent).
  - b. *Sub-goal:* monitor implementation and promotion of collaborative efforts with local actors, with a special attention to amplifying the voices of least advantaged groups in the public debate on meaningful access (Youth, NRIs, Women, LGBTQIA+, Indigenous, People with Disabilities, Displaced Persons).
6. Propose public deliberation rounds and/or webinars on selected cases (for instance, on examples of policies promoting Meaningful Access) with participation of IGOs and regional bodies, in order to advocate for their collaboration on implementing or replicating presented solutions.

### 2.2. Priorities

The above referred goals demonstrate there is much to push forward in the realm of meaningful access. As an incremental work, the PNMA's current efforts will add up to the activities developed during 2023 and 2022 and will provide the foundation for follow-ups and reviews in the following

year.

- **Priority 1:** in close communication with the **Leadership Panel**, bring all the achievements and solutions identified through the PNMA activities into the future **Digital Compact Initiative**, and effectively contribute to the roadmap leading to the Summit of the Future 2024 and the WSIS+20 and IGF+20 processes. The contribution will **actively promote good practices**, to be presented on a multisectoral approach following the three focus areas for PNMA analysis and under the lens of intersectionality, scalability, and localisation - with attention to lessons drawn from **project implementation lessons and policy/regulatory conditions** that enabled said achievements. Additionally, the benchmarks and good practices will **continue to be monitored for implementation and scaling**, in their region of origin and, eventually, in other regions inspired by the same process. The first step –at the beginning of the 2024 work plan – could consist in making a critical analysis of what exists about Meaningful Access in the current draft documents of all above-mentioned processes. A following step could be, e.g., to analyse the need to improve the current wordings of these drafts in view of the future debates that shall take place at the UNGA in 2025 about WSIS and IGF +20.
- **Priority 2: Amplify the voices of those groups that are less heard** in the public debate on meaningful access (e.g., Women, Youth, NRIs, LGBTQIA+, Indigenous, People with Disabilities, Minority Languages Communities) by actively listening to them and having these groups lead on what are their challenges and viable solutions to be developed. Encourage their involvement in the current PNMA Process, starting from the considerations emerged during 2023, about the relevance of gender gap for Meaningful Access. For 2024, particular attention needs to be paid to the emerging applications of A.I. that could improve the access experience for groups traditionally marginalized.
- **Priority 3:** Under the guidance and assistance of the IGF Secretariat, open a **permanent dialogue between the PNMA community and institutional regional and global partners** (such as the EU, the AU, and the OAS), in order to involve them directly in the PNMA activities and to encourage regional projects’ replication and adaptation in other countries, with active participation of local actors.

### 2.3. Focus areas

Building upon the last processes, the 2024 PNMA will keep focusing on the following themes:

- Connectivity (infrastructure and business models, analysed within the framework of the Roadmap for Digital Cooperation)
- Digital Inclusion (accessibility and multilingualism), with special attention to local contents in local languages, helping the digital transition of existing experiences
- Capacity Development (technical skills training)

## 2.4. Methodology

As stated in the IGF 2021 messages, the PNMA efforts are not directed at “producing a unique definition, but [aim] to identify, map and understand the properties that those in the field identified as key”<sup>4</sup> to meaningful access. Starting from the previous database of stories and case studies collected throughout the last year, the PNMA MWG can shed light on the reasons why known, effective policy solutions currently lack scaling and/or localisation in their implementation. The policy network aims to analyse the above mentioned focus areas by asking the following questions, which will lead the achievement of 2024 goals and priorities:

- What has been done so far? Analyse gaps in policy
- What are the main challenges for project scaling? Document loopholes via public debate/consultation
- What are the common features which allow a project to be localised?
- What are the social elements that support meaningful access?
- Is there any tested, multistakeholder business model that can be replicated into one or all of the analysed focus areas?
- How to promote and improve good access and connectivity, so Internet use could produce positive social and economic impact?
- How to promote and improve the quality of connectivity to support civic engagement and e-government experiences and services ?
- How could multistakeholder partnerships be strengthened?
- Is there a gap in networking, implementation, or continuity?
- Is there any relevant case of A.I. application that has contributed to increase the meaningful access experience in some areas or for certain categories? Are these experiences replicable elsewhere and scalable?

The PNMA community plays a significant role in highlighting these initiatives and bringing attention to creative solutions derived from marginalised groups – hence the remarks compiled during the 2023 PNMA Plenary Session are so important. Moreover, a close relationship within and outside the IGF is crucial to ensure that the policy network’s activities amplify the reach of successful experiences.

## 2.5. Planned outputs

Based on the methodology, a few outputs are expected at the end of the 2024 process; these are listed below as end results from the selected priorities.

- **[All priorities and discussions, including the 2024 IGF PNMA Plenary Session in Riyadh]**  
An informative output report that explores the Policy Network’s activities in depth and connects it with IGF 2024’s efforts on “**Building our Multistakeholder Digital Future**”. The production of a collaborative manuscript includes the following activities, not exclusively:
  - A follow-up survey with the selected 2023 cases, monitoring their implementation/scaling along the year
  - Follow-up and review of the key policy issues raised in the 2023 output report
  - A report section on intersessional work with Youth IGF, DCs, and/or NRIs

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<sup>4</sup> [IGF 2021 Report](#), p 45.



- Engage with the activities connected to the 19<sup>th</sup> IGF Theme “Advancing human rights and inclusion in the digital age”; out of the [four main themes](#) selected for this edition, meaningful access is one of the main tools to develop this advancement.
- ***[Priority 1, supported by output report and input provided during the year]*** Input to the Global Digital Compact: contributed to the preparation of the Summit of the Future during 2024/1 (please refer to item 3.2. for more). Later in the PNMA process, follow-ups of the Summit of the Future and the preparation of WSIS and IGF +20 debates will be put forward.
- ***[All priorities]*** Update and expand the online and public repository for good practices, by opening a permanent round of applications for consideration
- ***[All priorities]*** Outreach and engagement activities for promotion of the PNMA agenda
- ***[Priorities 1 and 2]*** Monitor updates regarding the key issues and considerations raised by the PNMA community during the 2023 Process
- ***[Priorities 2 and 3]*** Promote public debates/webinars on shared experiences and challenges to access, featuring implementation actors and regional institutions that play a leading role in enabling successful experiences and policies for meaningful access.
- ***[Priority 3]*** Strengthen the networks and encourage new connections for advancing meaningful connectivity

### 3. The Public Debate on Meaningful Access

The concept of meaningful access or connectivity has emerged over the last five years in response to the growing body of evidence that even when people have connectivity, they often do not make use of the Internet. The framework considers factors such as 4G/5G speeds, smartphone ownership, daily use of digital tools, and unlimited Internet access at regular locations like home or work. Hence, the public debate around it has also evolved to emphasize quality, cost, literacy, and inclusivity of access, which then enables full participation in the digital economy and society. Additionally, there is a heightened awareness of the persistent digital divide, with only 35% of people in developing nations having internet access compared to over 80% in developed countries, underscoring the need for targeted efforts to bridge these gaps<sup>5</sup>.

Before delving into the 2024 journey, this section explores some of the compiled knowledge on the incremental discussions held by the PNMA. To start, there is a reference list of the most relevant literature on meaningful access, collated between 2024 and the current year. We also investigate references on meaningful access on the adopted text for the Global Digital Compact. Finally, we present the key issues and considerations around meaningful access raised at the PNMA Plenary Session in 2023, and how has the policy network responded to them throughout the 2024 Process.

#### 3.1. Literature on Meaningful Access: a 2021-2024 list endorsed by the PNMA

Since its inception, the PNMA has been a platform for exchange of knowledge and practice. Given the success of its repository, the policy network has now published a list of referenced publications on meaningful access, collated and endorsed by its members since 2021. The material is available in [Annex II](#).

#### 3.2. The Global Digital Compact: Mentions to Meaningful Access

On 22 September 2024 at the United Nations Summit of the Future, a Pact for the Future was approved, including a Global Digital Compact (GDC) and a Declaration on Future Generations (DFG). The GDC has embraced the concept and importance of meaningful access in its document, granting it proper recognition and support for new and current access policies. One may find the following mentions in the text:

*“III. Science, technology and innovation and digital cooperation  
49. Science, technology and innovation have the potential to accelerate the realization of the aspirations of the United Nations across all three pillars of its work. We will only realize this potential through international cooperation to harness the benefits and take bold, ambitious and decisive steps to bridge the growing divide within and between developed and developing countries and accelerate progress on the 2030 Agenda. Billions of people, especially in developing countries, do not have meaningful access to critical life-changing technologies. If we are to make good on our promise to leave no one behind, sharing science, technology and innovation is essential. Innovations and scientific breakthrough that can make our planet more sustainable and our countries more prosperous and resilient should be affordable and accessible to all.*

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<sup>5</sup> [World Economic Forum](#), 2023.



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54.

*(c) Ensure that those in vulnerable situations benefit from and fully and meaningfully participate in the development and application of science, technology and innovation;*

55.

*(a) Address barriers to full, equal and meaningful access to and participation and leadership in science, technology and innovation for all women and girls, including through improving education, employment and research opportunities for women and girls in areas such as science, technology, innovation, mathematics and engineering;*

*From the Global Digital Compact  
Approved on September 22, 2024*

*Commitments and actions*

*9. We commit to pursue meaningful and measurable actions to achieve our objectives. Objective 1. Close all digital divides and accelerate progress across the Sustainable Development Goals*

*Connectivity*

*10. We acknowledge the pivotal role of universal and meaningful connectivity and affordable access in unlocking the full potential of digital and emerging technologies. We commit to connect all persons to the Internet. We recognize that this will require strong partnerships and increased financial investments in developing countries from Governments and other stakeholders, in particular the private sector. We affirm the important role of the International Telecommunication Union in advancing universal and meaningful connectivity and invite it to further continue its efforts. We recognize that innovative solutions can help deliver high -speed connectivity to, inter alia, underserved, remote and rural areas.*

.....

*11. We commit, by 2030, to:*

*(a) Develop and strengthen targets, indicators and metrics for universal meaningful and affordable connectivity, building on existing work, and integrate these into international, regional and national development strategies (SDG 9);*

*(b) ... We will aim for entry -level broadband subscription costs that are accessible to the widest section of the population (SDGs 1 and 9);*

*(c) Invest in and deploy resilient digital infrastructure, including satellites and local network initiatives, that provide safe and secure network coverage to all areas, including rural, remote and “hard -to-reach” areas, and promote equitable access to satellite orbits, taking into account the needs of developing countries. We will aim for universal access at affordable rates and at sufficient speeds as well as reliability to enable meaningful use of the Internet (SDGs 9 and 11);*

....

*Digital literacy, skills and capacities*

*12. To fully harness the benefits of digital connectivity, we must ensure that people can meaningfully and securely use the Internet and safely navigate the digital space. We recognize the importance of digital skills and lifelong access to digital learning opportunities, taking into account the specific social, cultural and linguistic needs of each society and persons of all ages and backgrounds. We recognize the need to scale*

*up international cooperation and financing for digital capacity development in developing countries and to support the development of local content and content relevant to local realities online and retain talent.*

....

*Objective 2. Expand inclusion in and benefits from the digital economy for all*  
*18. We recognize that equitable and affordable access to digital technologies can unlock the potential of the digital economy for every society. We recognize digital access to encompass opportunities for the acquisition and development of knowledge, research and capacity as well as technology transfers on mutually agreed terms.*

.....

*21. We commit by, 2030, to:*

....

*(g) Encourage North-South, South-South and triangular cooperation, including among universities, research institutes and the private sector to accelerate digital knowledge development and access to research capacity (SDG 17);”<sup>6</sup>*

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<sup>6</sup> [Pact for the Future, Global Digital Compact and Declaration on Future Generations](#). Summit of the Future, Outcome Documents, September 2024.

## 4. 2024 PNMA Focus Areas: An Incremental Work

The 2024 PNMA process cannot be understood without references to its earlier years of operation, as showcased in the previous section of this report. Alongside monthly discussions, the policy network duly operated in the search of new practices that can be replicated or scaled elsewhere from their original application. Efforts were equally concerned with understanding the development of previously known activities, verifying which successes and challenges they faced along the way.

### 4.1. Exploring Connectivity

The PNMA's goal around connectivity is to ensure that all people in the world have access to reliable, affordable, and secure internet. The PNMA works to promote the development of infrastructure and services, and to advocate for policies that help people connect to an internet that is useful, empowering, and reflects their local realities. The PNMA also works to ensure that all people in the world have access to affordable digital tools and resources they need to participate in the digital economy. Here is the list of newly-selected success cases in this focus area, collated and evaluated by the policy network.

Case C01	Terragraph Connectivity Project
<b>Location:</b>	Kingdom of Saudi Arabia
<b>Timeframe:</b>	2021-2022
<b>Funding:</b>	The project was co-funded by Meta and KAUST
<b>Responsible institutions / partners / people:</b>	<ul style="list-style-type: none"> <li>● King Abdullah University of Science and Technology (<a href="#">KAUST</a>)</li> <li>● Communications, Space and Technology Commission (<a href="#">CST</a>), Kingdom of Saudi Arabia</li> <li>● META</li> </ul>
<b>What is the problem?</b>	<ul style="list-style-type: none"> <li>● The Modern Architectural Contracting Company (MACC) camp, located about 1.5 km from the KAUST campus, previously offered no internet connectivity due to the lack of high-speed backhaul and distribution capacity to the Wi-Fi nodes.</li> <li>● Specifics (if any) <ul style="list-style-type: none"> <li>○ Fiber would have been way too expensive to deploy, not only as a backhaul between KAUST and the camp, but also as a distribution technology within the camp, notwithstanding the lack of flexibility as housing configurations tend to change.</li> </ul> </li> </ul>
<b>Which were the actions taken to address the problem(s)?</b>	<ul style="list-style-type: none"> <li>● KAUST, META and CST have been cooperating to deploy hybrid radio frequency and free space optics developed by the Communication Theory Lab for reliable internet connection to the camp.</li> </ul>
<b>Results / Impact / Lessons learned (what worked / remaining challenges)</b>	<ul style="list-style-type: none"> <li>● Results: <ul style="list-style-type: none"> <li>○ Hybrid radio frequency and free space optics (RF/FSO) systems have emerged as a promising solution for reliable high-data-rate wireless connection between KAUST and the MACC camp;</li> <li>○ The deployment of Terragraph, a gigabit wireless technology developed by Meta, is allowing the validation of KAUST research in extreme bandwidth communication (i.e., mm-wave RF and FSO), with the potential to develop new practical switching algorithms for hybrid mm-wave RF/FSO links;</li> <li>○ In this context, weather stations installed in KAUST and the camp will be used to monitor climate variables that could affect the operation of FSO systems and the switching between FSO and mm-wave RF backhaul links.</li> </ul> </li> <li>● Impact: <ul style="list-style-type: none"> <li>○ The project provided a testing ground for bringing high-speed Wi-Fi service to communities with no or limited affordable access;</li> <li>○ The success is a framework to bring other remote and unconnected communities – where the deployment of fibers is difficult and costly.</li> </ul> </li> <li>● Lessons learned: <ul style="list-style-type: none"> <li>○ We needed a low-cost, high-speed alternative to fiber that can be redeployed at little to no cost. Terragraph was the perfect choice.</li> </ul> </li> </ul>

Case C02	CNSP License
Location	Kenya
Time Frame	2020 -2021
Funding:	The program was developed with support from the United Kingdom's Digital Access Programme (DAP)
Responsible institutions/ partners / people:	The Communications Authority of Kenya, Association for Progressive Communications and Kenya ICT Action Network, The State Department of ICT and Digital Economy.
What is the problem?	<ul style="list-style-type: none"> <li>● Many rural and underserved urban areas in Kenya have historically faced a lack of reliable internet access. These regions are perceived as commercially unviable for major telecommunications companies, leaving communities limited to no connectivity solutions.</li> <li>● Prior to the introduction of the CNSP license, there were no exemptions for non-profit organizations under the existing licensing framework, which imposed high fees and stringent requirements that made it difficult for community-based initiatives to operate legally.</li> <li>● The need for local community ownership and governance in the design and operation of networks is crucial for ensuring that services are tailored to meet the community's specific needs, fostering a sense of ownership and responsibility among users.</li> </ul>
Which were the actions taken to address the problem(s)?	<ul style="list-style-type: none"> <li>● The Communications Authority of Kenya (CA) created a Licensing and Shared Spectrum Framework for Community Networks in collaboration with the Association for Progressive Communications (APC) and the Kenya ICT Action Network with input from various stakeholders</li> <li>● The framework emphasized community involvement, requiring that community networks be fully controlled by non-profit entities. This was designed to ensure local governance and operationalization of the networks</li> <li>● The CNSP license includes a low application fee of Ksh 1,000 and an annual operating fee of Ksh 5,000, making it financially accessible compared to other licensing options. Additionally, CNSPs are exempt from contributions to the Universal Service Fund (USF), further reducing costs</li> <li>● The framework allows for fee waivers on non-protected access to lightly-licensed and license-exempt frequency bands, facilitating easier access to necessary spectrum for community networks</li> <li>● The CNSP license integrates community networks into the national regulatory framework, allowing existing networks operating outside this ambit to formalize their operations</li> </ul>

<p><b>Results / Impact / Lessons learned (what worked / remaining challenges)</b></p>	<p>Impact:</p> <ul style="list-style-type: none"> <li>● 15 registered Community Network Service Providers (CNSPs) in Kenya, reflecting the growing interest and engagement in community-driven internet solutions.</li> <li>● The formation of an association for community networks which aims to provide a platform for collaboration, knowledge sharing, and advocacy for community network operators.</li> <li>● The draft Universal Service Fund (USF) strategy from the Communications Authority of Kenya (CA) indicates a commitment to funding community networks as part of its broader goals. The draft USF strategy proposes the establishment of 100 community networks in unserved and underserved areas over the next five years. This initiative aims to enhance connectivity and ensure that local communities have access to essential telecommunications services.</li> </ul> <p>Lessons Learnt:</p> <ul style="list-style-type: none"> <li>● Setting low application and operational fees for the CNSP license has made it financially viable for community-based organizations to participate. This approach has demonstrated that reducing regulatory barriers can significantly enhance participation from underserved areas</li> <li>● The creation of a specific licensing category for community networks within the Unified Licensing Framework has shown the importance of tailoring regulatory frameworks to accommodate unique operational models, such as those of non-profit entities</li> <li>● Aligning the CNSP initiative with broader national strategies, such as the Universal Service Fund (USF), enhances the potential for funding and support.</li> <li>● Governments can benefit from the on-the-ground insights that CSOs provide, allowing for more effective policy-making that addresses the specific needs of communities.</li> </ul>
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Case C03	Digital Transformation in Rural or Underserved Areas of Latin America and the Caribbean
<b>Location:</b>	Guidelines for the 34 Member States of the Organization of American States - OAS. We have supported 6 member countries until 2024, including: Ecuador, Dominican Republic, Paraguay, Panama, Colombia and Bolivia (initial stage).
<b>Timeframe:</b>	<b>Past project</b> in Ecuador <b>Ongoing:</b> Dominican Republic, Panama, Paraguay, Colombia, and Bolivia.
<b>Funding:</b>	Regular budget fund of the OAS with support from grants from several international foundations.
<b>Responsible institutions / partners / people:</b>	<ul style="list-style-type: none"> <li>● <b>Responsible institution: Executive Secretary of the Inter-American Telecommunication Commission – CITEC/OAS.</b></li> <li>● Counterpart institutions: ICTs Ministries and ICT regulatory agencies.</li> <li>● Partners: ISOC, European Union.</li> </ul>
<b>What is the problem?</b>	Digital inequality in Latin America and the Caribbean, exacerbated by outdated and inefficient regulatory policies, limits the economic, social, and educational development of the region, perpetuating inequities in key areas such as education, employment, and health. This is compounded by collateral issues such as high internet costs, lack of political interest, digital skills, and deficient infrastructure, which hinder the implementation of new technologies, the entry of new players, and aid in disconnected areas, limiting digital transformation.
<b>Which were the actions taken to address the problem(s)?</b>	CITEC has led a comprehensive process to reduce the digital divide in Latin America and the Caribbean through the implementation of the OAS General Assembly resolution AG/RES. 2966 (LI-O/21) with 21 guidelines for reducing the digital divide. This includes diagnosing specific needs by country, designing roadmaps with short, medium, and long-term actions, and establishing an observatory to verify implementation. These 21 guidelines include the efficient use of universal service funds, promotion of public-private partnerships, elimination of regulatory barriers, and adoption of innovative technologies that would directly impact the quality of life of people living in rural areas, maximizing their social, economic, and cultural well-being, and transforming their lives. Additionally, a management observatory supervises and adjusts the implementation of projects, strategies, policies, and/or regulations, ensuring that equitable opportunities for access to the internet, education, and essential services are created in the most vulnerable communities.

**Results / Impact /  
Lessons learned (what  
worked / remaining  
challenges)**

- **Results:**  
The technical support provided by the CITEL Secretariat in Ecuador, the Dominican Republic, Panama, Colombia, Paraguay, and Bolivia has generated significant progress, including the reform of laws and regulations to measure the impact of solutions and facilitate rural digital transformation projects, as well as the promotion of inclusive public policies that prioritize gender equity and essential services in rural or underserved areas. Additionally, the sharing of technological infrastructure has been encouraged to expand coverage and improve affordability, and community telecommunications networks have been promoted to reduce the digital divide. Furthermore, legal and regulatory frameworks have been updated to maximize social well-being, improve the quality of telecommunications services, and stimulate investment in remote areas.
- **Impact:**  
The actions taken have achieved greater social inclusion in rural or hard-to-reach areas, connecting communities through self-sustaining systems, which reduces the digital divide in the Americas. This has decreased forced migration by enabling local job creation, facilitated access to funds for new community networks, and promoted technological adoption with access to basic services. Additionally, public-private investment in telecommunications has been encouraged, improving quality of life, economic, social, and cultural development, as well as access to essential services such as health and education.
- **Lessons learned:**  
Reducing the digital divide and connecting disconnected rural areas has required neutral technical support focused on the implementation of effective public policies and regulatory reforms in the short, medium, and long term. It has been essential to foster multisectoral collaboration among governments, private companies, NGOs, and local communities, developing sustainable business models and integrating flexible public policies that attract investment in telecommunications. Additionally, it has required a governmental commitment to modernize legal frameworks and make significant investments in infrastructure to drive inclusive and sustainable digital transformation.



Case C04	<b>Meaningful Connectivity in Brazil: The portrait of the population (study)</b>
Location:	São Paulo, Brazil
Timeframe:	Launched in April, 2024
Funding:	Self-funded by NIC.br - Brazilian Network Information Center
Responsible institutions / partners / people:	<ul style="list-style-type: none"> <li>• Cetic.br – Regional Center for Studies on the Development of the Information Society, department of the NIC.br – Brazilian Network Information Center</li> <li>• Author: Graziela Castello. Social Scientist and Coordinator of Sectoral Studies and Qualitative Methods at Cetic.br   NIC.br</li> </ul>
What is the problem?	<ul style="list-style-type: none"> <li>• In recent years, the debate on the impact of digital technologies on society has intensified. Internet and digital device usage have grown exponentially, driven by new applications and services, transforming lifestyles. However, many remain excluded from the digital world due to limited infrastructure access, inadequate devices, insufficient digital skills, and socioeconomic barriers.</li> <li>• Amid rapid changes, technologies like AI, IoT, and the digital economy demand increasing connectivity, which is essential for people to seize opportunities and address potential risks. Human-centered development depends on equitable access to these possibilities.</li> <li>• A multidimensional approach is crucial to understand connectivity, considering not just Internet access but also device quality, connection reliability, affordability, and opportunities for meaningful usage in different contexts.</li> </ul>
Which were the actions taken to address the problem(s)?	<p>In April 2024, Cetic.br published "<a href="#"><i>Meaningful Connectivity: Measurement Proposals and the Portrait of the Population in Brazil</i></a>", providing new perspectives on measuring connectivity. Chapter 3 offers an overview of the Brazilian population's levels of meaningful connectivity.</p> <ul style="list-style-type: none"> <li>• This study proposes a method for measuring the population's level of meaningful connectivity, by constructing a scale derived from data processing from the ICT Households survey, a longitudinal probabilistic household survey on access and use of ICT in Brazil.</li> <li>• The proposed levels of analysis appear as a first exercise in gauging the population's connectivity conditions from a comprehensive analytical lens. This is an attempt to deepen the effective meaning of digital inclusion beyond, for example, mere usage or non-usage of the Internet, or access or non-access to the web.</li> <li>• Based on the concept of meaningful connectivity, which presupposes that Internet access should enable satisfactory, secure usage and the possibility of capitalize on network, the levels of meaningful connectivity presented are the result of combining nine indicators across four dimensions: (a) affordability, which deals with connectivity costs; (b) access to equipment, encompassing the possession of suitable devices for intended uses; (c) quality of the connections available; and (d) connectivity environment, considering Internet usage frequency and locations.</li> </ul>
Results / Impact / Lessons learned (what worked / remaining challenges)	<ul style="list-style-type: none"> <li>• Results: <ul style="list-style-type: none"> <li>○ <b>Challenging Connectivity Scenario:</b> Only 22% of Brazilians aged 10+ achieved the highest meaningful connectivity scores (7-9 points), while 33% scored in the lowest range (0-2 points), indicating significant challenges in digital inclusion.</li> <li>○ <b>Persistent Inequalities:</b> Residents of rural areas, small municipalities, women, self-identified black or brown people, from lower income socioeconomic class, with low levels of education and outside the labor market are those with the lowest scores for meaningful connectivity.</li> </ul> </li> </ul>

- **Connectivity and Digital Skills:** Higher meaningful connectivity scores are linked to better technical and safety skills, including privacy protection and information verification. Those with poor access conditions also lack essential skills to navigate risks online.
- **Impact:** There are two major outcomes of this study, in addition to its role as a reference for guiding public policies in Brazil:
  - It formed the basis for the [Guidelines on Indicators and Metrics for Universal and Meaningful Connectivity](#), developed in partnership with the ITU and Brazil's Ministry of Communications, and featured in the G20 under Brazil's presidency. It was included in the [G20 DEWG declaration](#) and endorsed by all member countries.
  - The study became a reference for measuring Meaningful Connectivity across Latin America, in partnership with UN-ECLAC, where we provide methodological support to countries. To date, two countries — [Dominican Republic](#) and Chile — have completed their measurements, and four others — Ecuador, Uruguay, Costa Rica and Peru — are in progress or planning stages.
- **Lessons learned:**
  - Based on this study on the meaningful connectivity of the Brazilian population, it became clear that there is a need to revise public policy strategies for digital inclusion, also taking into account the identified and quantified dimensions, since, from the perspective of Internet users alone, almost 90% of Brazilians are already online.
  - Public policies focused on reducing inequalities in access must be accompanied by investments in digital infrastructure strategies to reduce the costs of individual devices and democratization of Internet access locations. More than that, inclusion initiatives should target vulnerable groups, promoting digital literacy.
  - At the same time, it is imperative to continue monitoring the progress of meaningful connectivity over time in order to adapt policies and interventions as necessary to ensure that all the population has the opportunity to enjoy the benefits of the digital age.

## 4.2. Exploring Digital inclusion

Digital inclusion ensures everyone, regardless of socioeconomic status, age, ability, or geographic location, has access to the opportunities and resources the digital world offers. It promotes equitable access to education, healthcare, employment, and social connection, while reducing disparities and fostering economic growth. By bridging the digital divide, societies can empower individuals, strengthen communities, and drive innovation and inclusivity in a rapidly evolving digital landscape. Over the years, the PNMA has noted the growth of best digital inclusion practices focusing on marginalised groups: women and girls, persons with disabilities, indigenous/traditional communities, and displaced persons/refugees.

<b>Case DI01</b>	<b><u>Pakistan Digital Gender Inclusion in ICTs Strategy</u></b>
<b>Location:</b>	Islamabad, Pakistan
<b>Timeframe:</b>	3-year strategy (launched in 2024)
<b>Funding:</b>	The strategy was developed by the Pakistan Telecommunication Authority (PTA) with support from the UNESCO and GDIP team.
<b>Responsible institutions / partners / people:</b>	PTA leads the strategy implementation, under the guidance and supervision by the Ministry of IT. However, the strategy, by design, necessitates cooperation among all stakeholders of the digital ecosystem to reduce the gender digital divide in Pakistan.
<b>What is the problem?</b>	Pakistan is among the countries with the widest gender gap in the world. According to <a href="#">GSMA Mobile Gender Gap Report 2024</a> , Pakistan has a 38% gender gap in mobile ownership and mobile internet adoption. This gap of 38% is more than twice as wide as the overall Low-Middle Income Countries (LMICs) gender gap (15%). <a href="#">The World Bank</a> states that women in Pakistan are 43% less likely to use the Internet whereas the <a href="#">Inclusive Internet Index</a> reports a 67.5% gender gap in Internet access and 44.7% mobile phone access gap. Naturally, Pakistan ranks 135 out of 166 countries in the <a href="#">UNDP Gender Inequality Index</a> and 145 out of 146 countries in the <a href="#">WEF's Global Gender Gap Report</a> . While the statistics and rankings present a challenging state of affairs, it is more concerning to note that the gender gap shows no signs of improvement over the recent past.
<b>Which were the actions taken to address the problem(s)?</b>	PTA's all-female team developed the 'Digital Gender Inclusion in ICTs Strategy' based on a nation-wide, community-centered consultation process with the relevant stakeholders. A gender expert was hired to prepare the strategy with consultation sessions held across the country, followed by a validation workshop in Islamabad. Moreover, extensive situational analysis was carried out through policy analysis, literature review, stakeholder mapping, physical and IVR surveys and expert interviews. Resultantly, top barriers to women's digital inclusion were identified such as digital skills & literacy, affordability, family disapproval, safety & security and structural social inequalities.  In view of the above mentioned barriers, a three-year digital gender inclusion strategy was developed. The implementation is to be ensured by a high-level Steering Committee, led by the IT Minister and coordinated by PTA, with heads of public and private sector organizations as the members. Six working groups on access, affordability, safety & security, digital literacy, inclusion, research & data. Both the steering committee and the working groups will be assisted by a Technical Advisory Group of international organizations that includes GDIP, ISOC, APC, Tiktok, UNESCO and GSMA.

<p><b>Results / Impact / Lessons learned (what worked / remaining challenges)</b></p>	<p><b>Results:</b> The first meeting of the steering committee and technical advisory group was held on 07th August 2024 where the implementation plan was discussed. All (six) working groups have started to convene and develop their own TORs that will be reviewed by the steering committee and tangible initiatives will be taken to bridge the gender digital divide.</p> <p><b>Impact:</b> The strategy has unified the public and private sector entities to work together for the digital gender empowerment in Pakistan. It has created a strong network of stakeholders committed to achieve the working group objectives, backed by their leadership. Moreover, the country is open to international cooperation, making use of the insights, experience and technical resources of the global organizations. This would lead to more collaborations and direct assistance programs for the internet community in Pakistan.</p> <p><b>Lessons learned:</b> Policies and implementation plans on gender digital empowerment should be led by women – nothing about us without us. Inclusive policy development process should be adopted at all levels of the Government to ensure a whole-of-the-society approach to address internet public policy issues like gender digital divide. The unequivocal support by the government and private sector leadership is the key to drive the digital policy changes in the country. Digital gender inclusion is not just a sociocultural issue but has significant economic loss associated with it, that requires perspective shift in the society.</p>
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<b>Case DI02</b>	<b>Transforming Financial Inclusion for Persons with Disabilities in Pakistan</b>
<b>Location:</b>	Pakistan
<b>Timeframe:</b>	2013–2021 (ongoing advocacy)
<b>Funding:</b>	n/a
<b>Responsible institutions / partners / people:</b>	<ul style="list-style-type: none"> <li>• State Bank of Pakistan (SBP)</li> <li>• Dr. Muhammad Shabbir</li> </ul>
<b>What is the problem?</b>	<p>Before December 2014, the financial system in Pakistan posed significant barriers for blind and visually impaired individuals. They were systematically excluded from modern banking services such as ATMs, credit cards, mobile banking, and internet banking. Instead, they were forced to physically visit their respective bank branches to withdraw money—and even then, only in the presence of a designated witness. This practice not only eroded their financial independence but also left them insecure and vulnerable. The very technologies designed to ensure security and convenience were denied to an entire community, exacerbating their marginalization. This systemic exclusion not only undermined their independence but also highlighted the pressing need for policy reform to address the barriers they faced.</p> <p>Moreover, the existing banking framework failed to recognize the rights and dignity of blind individuals. These restrictions reflected broader societal misconceptions about disability and a lack of awareness among policymakers. It became evident that a systemic change was required—one that would protect the financial autonomy and security of persons with disabilities, while fostering an inclusive banking environment.</p>
<b>Which were the actions taken to address the problem(s)?</b>	<p>In 2013-2014, Dr. Muhamad Shabbir, along with other organizations in the community, worked closely with the State Bank of Pakistan (SBP) to address these challenges. Recognizing the critical need for reform, Dr. Shabbir collaborated with SBP to draft the Guidelines for Banking Services to Visually Impaired/Blind Persons. These guidelines marked a significant step forward, compelling banks to:</p> <ul style="list-style-type: none"> <li>• Provide literate blind individuals access to all banking services if they meet the other criteria for the required services.</li> <li>• Ensure reasonable accommodations for visually impaired customers.</li> <li>• Introduce secure yet inclusive measures for transactions.</li> </ul> <p>The issuance of these guidelines in 2014 by SBP catalyzed a shift in the banking sector, enabling blind individuals to access financial services that had long been denied to them.</p>

**Results / Impact / Lessons learned (what worked / remaining challenges)**

**Results**

Building on this success, the SBP developed the Policy for Financial Inclusion of Persons with Disabilities. This policy broadened the scope of inclusion to address the needs of all persons with disabilities. It emphasized creating equitable access to financial products and services while promoting the use of assistive technologies. However, challenges remain, particularly in ensuring the accessibility of online banking platforms. As digital banking becomes the cornerstone of financial services, it is imperative that these platforms are accessible to everyone. There is an ongoing advocacy for SBP to adopt the Web Content Accessibility Guidelines (WCAG) 2.1 as part of their policy framework. These standards will ensure that online banking platforms are user-friendly for individuals with disabilities, including those who rely on screen readers or other assistive technologies.

The misconceptions and low expectations about persons with disabilities still haunt their financial independence in a number of developing countries. The journey toward financial inclusion in Pakistan offers a model for other developing countries, as the responsible persons hope to inspire similar reforms across the region.

The path to financial inclusion is not without challenges, but the progress made in Pakistan demonstrates what is possible through advocacy, collaboration, and policy reform. The ultimate goal is to create a financial system where no individual is excluded due to their disability. By ensuring that accessibility standards like WCAG 2.1 are embedded in digital banking platforms, we can move closer to a world where financial independence is a right enjoyed by all.

This journey is a testament to the power of inclusive policymaking and the resilience of those advocating for change. It reaffirms the belief that accessibility is not a privilege but a fundamental right, and it underscores the importance of continuing this work until every barrier is dismantled.

**Lessons Learned**

This case story outlines the transformative journey toward financial inclusion for persons with disabilities in Pakistan. It sheds light on the collaborative efforts to create equitable access to banking services, from the development of the Guidelines for Banking Services to Visually Impaired/Blind Persons in 2014 to the more comprehensive Policy for Financial Inclusion of Persons with Disabilities in 2021. By examining these milestones, this story also serves as a call to action for further advancements, including the adoption of international accessibility standards to ensure inclusive digital banking.

Case DI03	No One Left Behind
<b>Location:</b>	Lithuania
<b>Timeframe:</b>	2023 (ongoing)
<b>Funding:</b>	n/a
<b>Responsible institutions / partners / people:</b>	<p>Lithuania’s Communications Regulatory Authority – main responsible institution</p> <p>Partners:</p> <ul style="list-style-type: none"> <li>● State Register</li> <li>● State Data Solutions Agency</li> <li>● State Consumer Rights Protection Authority</li> <li>● State Data Protection Inspectorate</li> <li>● National TV and radio broadcaster LRT</li> <li>● Association of Municipal Public Libraries</li> <li>● Various regional media outlets</li> <li>● Universities of the Third Age</li> <li>● Municipalities across Lithuania</li> <li>● Banks, state agencies, major railway and bus companies, mobile operators</li> </ul>
<b>What is the problem?</b>	<p>Lithuania, like many European countries, faces a rapidly aging society. Statistics indicate that older individuals often possess lower digital skills, limiting their ability to fully benefit from the digital society. Many services are being digitized and often the elderly are not able to access the services due to the lack of skills. This digital exclusion can lead to increased social isolation among the elderly.</p>
<b>Which were the actions taken to address the problem(s)?</b>	<p>The main approach was training of senior citizens in various formats:</p> <ul style="list-style-type: none"> <li>● Seminars and workshops: seminars on digital skills at 18 Universities of the Third Age, reaching 796 participants.</li> <li>● Remote seminars were launched in July 2024 via the digital platform "Senior’s World” with sessions on Zoom.</li> <li>● Municipal collaboration: engaged 33 municipalities to support training by sharing information and providing technical facilities.</li> <li>● Inclusion of partner lecturers: included experts from banks, state agencies, transport companies, and mobile operators.</li> <li>● Library network collaboration: partnered with the Association of Municipal Public Libraries, with 40 libraries appointing focal points for public communication about the project.</li> <li>● Media outreach: collaborated with regional and national media to disseminate information about the project.</li> <li>● Promotional video: released a video encouraging the elderly to embrace digital technologies with confidence.</li> </ul>
<b>Results / Impact / Lessons learned (what worked / remaining challenges)</b>	<ul style="list-style-type: none"> <li>● Results: <ul style="list-style-type: none"> <li>○ By December 2024, approximately 3,500 elderly individuals participated in digital skills training.</li> <li>○ Reached 26 smaller towns in Lithuania, offering 20 different courses.</li> </ul> </li> <li>● Impact: <ul style="list-style-type: none"> <li>○ Enhanced digital literacy among the elderly, reducing digital exclusion and potential social isolation.</li> <li>○ Strengthened collaboration between public and private sectors, creating a robust platform for digital education.</li> <li>○ Exact impact is yet to be measured, ideally after more years of such training.</li> </ul> </li> <li>● Lessons learned:</li> </ul>

- Effective partnerships: collaboration with a diverse range of partners, including government agencies, media, and private sector entities, is crucial for the widespread dissemination of digital literacy.
- Flexible learning formats: offering various formats of courses (remote, live, recorded) caters to different learning preferences and increases accessibility.
- Community engagement: involving local municipalities and libraries enhances outreach and provides essential support infrastructure for training sessions.
- Continuous feedback: regular surveys and feedback mechanisms help in tailoring the program to better meet the needs and expectations of participants.
- Remaining challenges:
  - Digital inclusion of the elderly remains a moving target due to the rapid change of technology, limited resources for training and varied level of skills improvement.
  - Digital inclusion projects like this should become long term with appropriate funding allocated.



<b>Case DI04</b>	<b>From Mountains to Data: Low-Cost Weather Stations in Kyrgyzstan’s Challenging Terrain</b>
<b>Location:</b>	Kyrgyz Republic
<b>Timeframe:</b>	2023-2024
<b>Funding:</b>	Internet Society Foundation
<b>Responsible institutions / partners / people:</b>	<ul style="list-style-type: none"> <li>● Internet Society Kyrgyz Chapter</li> <li>● Abdus Salam International Centre for Theoretical Physics, Italy (ICTP)</li> <li>● Central Asia Institute for Applied 11 Geosciences (CAIAG)</li> </ul>
<b>What is the problem?</b>	<ul style="list-style-type: none"> <li>● Kyrgyzstan, a landlocked nation in Central Asia, is characterized by its rugged mountainous terrain covering approximately 90% of its land area.</li> <li>● This unique geography poses specific challenges related to climate vulnerability.</li> <li>● The climate crisis has drastically increased the number of natural disasters, such as floods, mudflows, avalanches, etc., over the past years.</li> <li>● There is a limited number of weather stations to monitor climate conditions in the Kyrgyz Republic due to the high cost and the need for electricity and communications, which leads to a deficit of weather-related information, particularly in rural areas.</li> </ul>
<b>Which were the actions taken to address the problem(s)?</b>	<ul style="list-style-type: none"> <li>● To address these challenges, we propose a comprehensive approach that involves gathering meteorological data and making it accessible to decision-makers. By leveraging LoRaWAN communication technology, which efficiently transmits sparse and low-speed data over long distances while minimizing power consumption, we can enhance climate resilience. We initiated the installation of meteorological sensors and disaster mitigation devices, including river water level sensors, terrain moisture sensors, and tilt detectors. These sensors collect critical data, which is stored within the country on an ad hoc server.</li> <li>● Low-cost, low-power, and long-range weather stations have seen advancements in recent research. These stations offer a cost-effective solution for monitoring weather conditions both in developed and developing countries. The use of technologies such as LoRa wireless networking for the Internet of Things (IoT) has enabled the development of weather stations that can cover large areas while consuming minimal power. These stations are equipped with various sensors to monitor parameters such as temperature, humidity, air pressure, wind, and rain amount. The collected data can be stored in cloud servers and accessed remotely. The implementation of these weather stations aims to adhere to the standards set by organizations like the World Meteorological Organization (WMO). The relevance of these advancements lies in their ability to provide accurate weather predictions, which can have significant impacts on sectors such as disasters mitigation, agriculture, hydroelectric powering and tourism. Additionally, the low-cost nature of these stations makes them more accessible and affordable for deployment in developing countries where resources for such technologies are limited.</li> </ul>
<b>Results / Impact / Lessons learned (what worked / remaining challenges)</b>	<ul style="list-style-type: none"> <li>● We have presented the planning and deployment of a wide range of wireless environmental sensors in the challenging scenario of a mountainous country.</li> <li>● The sensors have been running for over a year and we can start gathering some insights from their behavior.</li> <li>● The limited Cellular coverage was addressed by deploying LoRaWAN gateways, which proved well suited to satisfy the requirements of the current application, while their agnostic nature can be leveraged to provide additional services, like messaging in places devoid of cellular coverage or for people who</li> </ul>

	<p>cannot afford the associated recurring costs.</p> <ul style="list-style-type: none"><li>● The meteorological sensors installed are less expensive than traditional automatic weather stations (AWS) without significant compromises in accuracy. The deployment of river water level, soil moisture and tilt sensors also help in mitigating environmental disasters effects.</li><li>● Data is stored inside the country, thus preserving privacy, but made available to international stakeholders with legitimate interest. Several international organizations have shown interest in deploying additional sensors of this type.</li></ul>
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### 4.3. Exploring Capacity Development

Capacity development to use and understand the Internet equips individuals with the skills and knowledge needed to effectively navigate, utilize, and benefit from digital technologies. It enables people to access information, participate in the digital economy, and engage in social and civic activities, fostering empowerment and self-reliance. As technology increasingly shapes every aspect of life, building digital literacy ensures inclusion, reduces inequalities, and prepares communities to adapt to rapid technological advancements and global challenges.

Case CD01	School of Community Networks (SCN) – Indonesia Common Room Networks Foundation
<b>Location:</b>	Nationwide project in rural and remote places in Indonesia with these piloting locations: Ciptagelar indigenous village, Sukabumi Regency, West Java Province (Ongoing, 2019 - present); Ciracap Sub-district, Sukabumi Regency, West Java Province (Ongoing, 2020 - present); Pulo Aceh, Aceh Besar Regency, Aceh Province (Ongoing, 2021 - present); Ketemenggungan Tae, Sanggau Regency, West Kalimantan Province (Ongoing, 2021 - present); Mata Redi village, Central Sumba Regency, East Nusa Tenggara Province (Ongoing, 2021 - present); Tembok Village, Buleleng Regency, Bali Province (Ongoing, 2021 - present); Sukadana Village, North Lombok Regency, West Nusa Tenggara Province (Ongoing, 2021 - present); Hitu Messing village, Central Maluku Regency, Maluku Province (Discontinued, 2021 - 2022); Lapeo Village, Polewali Mandar, West Sulawesi Province (Discontinued, 2021 - 2023); Nimboran District, Jayapura Regency, Papua Province (Discontinued, 2021 - 2023); Bobong Village, Taliabu Island Regency, North Maluku Province (Ongoing, 2022 - present); Don Bosco Training Center, Southwest Sumba Regency, East Nusa Tenggara Province (Ongoing, 2023 - present); Ngata Toro indigenous village, Sigi Regency, Central Sulawesi Province (Ongoing, 2023 - present).
<b>Time Frame:</b>	First Phase (2019 - 2024): The School of Community Networks (SCN) training and capacity building program in Indonesia was officially launched in 2021 along with the development of community-centered internet infrastructure prototype in Ciptagelar indigenous village in 2019 and SCN training program preparation in 2020. Currently the SCN training and capacity building program in Indonesia is still ongoing and expanded to other rural areas and remote places in Indonesia.
<b>Funding:</b>	Association for Progressive Communications (APC), The Swedish International Development Cooperation Agency (SIDA), MEDCO Foundation, ASEAN Foundation, The Foreign, Commonwealth and Development Office (FCDO), the Information Society Innovation Fund (ISIF Asia), and Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ).
<b>Responsible institutions / partners / people:</b>	APC was in partnership with Rhizomatica to collaborate with Common Room and initiate Connecting The Unconnected: Supporting Community-led Approaches to Addressing the Digital Divide Indonesia (LocNet Project) in 2019. Subsequently, the initiative became integrated into the Digital Access Programme (DAP), led by FCDO in 2020. Later on, SCN training and capacity-building programs were also developed in collaboration with ISIF Asia by the end of 2021.
<b>What is the problem?</b>	Digital divide challenges in Indonesia are mainly faced with a number of issues, ranging from vast and diverse geographical conditions, insufficient supply of electricity sources, inadequate basic infrastructure, as well as significant disparities in bandwidth costs (both within and outside Java Island). This also includes unavailability of suitable and affordable devices, the inability to generate local content and knowledge, including the gender gaps and limited funding resources available to expand the internet outreach. In 2024, one in five Indonesians are still not connected to the internet. Data from the Indonesian Internet Service Providers Association (APJII) shows that the number of Indonesians connected to the internet in 2024 reached 221,563,479 out of a total population of 278,696,200 (79.50%). As the follow-up to this survey, it is estimated that 82.6% of the population in underdeveloped areas with total numbers around 8,114,273 users out of a total of 9,823,575 people already have internet access in 2024. Digital divide challenges in rural and remote places, as well as among underserved communities still persist, with the following gaps and disparities: Infrastructure and digital connectivity gaps; Skills and digital literacy gaps; Internet security and personal data protection issues; Adaptive digital access policies and regulations; Inclusive digital connectivity (Gender Inclusion, Disability and Social Inclusion - GEDSI).

<p><b>Which were the actions taken to address the problem(s)?</b></p>	<p>Training and capacity building program through the School of Community Networks (SCN) in some rural and remote places in Indonesia. The training and capacity building program was developed with a user centered approach, started with participatory rural appraisal (PRA) method to conduct needs assessment and define the targeted beneficiary group. Apart from training and capacity building programs, the initiative was also enhanced with research and policy advocacy from rural, regional to national level that involves multistakeholder approach, ranging from local communities, civil society organizations (CSOs), government, academics, business sector, and technical community. SCN training and capacity building programs also consider 4 core elements, which include: (1) policy and regulatory frameworks, (2) internet safety and security protocols, (3) affordability, and (4) meaningful connectivity. At the technical level, the training and capacity building program was developed with 5L frameworks:</p> <ul style="list-style-type: none"> <li>● Low Tech: technology chosen to build the community-centered internet infrastructure should be affordable and accessible at the local level.</li> <li>● Low Energy: for those on limited power sources, community-centered internet infrastructure development should consider reliable and sustainable electric sources at the local level.</li> <li>● Low Maintenance: internet infrastructure should be easy to maintain using locally available resources.</li> <li>● Low Learning Curve: training modules and curricula should be easy to understand so that all members of the community can learn easily regardless of their technical and gender background.</li> <li>● Local Support: importance of multi stakeholder approach and community engagement - the support from local stakeholders is also essential to develop, maintain, as well as to utilize the internet access and connectivity in rural and remote places.</li> </ul> <p>The SCN training and capacity building program was also enhanced with Rural ICT Camp, an annual event organized since 2020 aimed to support and consolidate ongoing effort to sustain community-centered internet access and meaningful connectivity in rural areas and remote places. This event facilitates policy dialogue, a series of workshops on technical skills for community-centered internet infrastructure and digital literacy, as well as arts and cultural events.</p>
<p><b>Results / Impact / Lessons learned (what worked / remaining challenges)</b></p>	<ul style="list-style-type: none"> <li>● Results: <ul style="list-style-type: none"> <li>○ The School of Community Networks (SCN) training and capacity building program has been developed in around 13 locations in 11 different provinces in Indonesia. The total number of participants involved was 891 people, consisting of 302 female and 589 male participants.</li> <li>○ SCN program also able to develop 12 training module and curricula, ranging from (1) COVID-19 pandemic prevention protocols, (2) basic computer, (3) computer networking, (4) internet infrastructure, (5) managing community-centered internet services, (6) internet safety and security, (7) internet utilization for village administration, (8) remote education, (9) internet for SME development, (10) health service and telemedicine, (11) Internet of Things (IoT) and (12) disaster risk reduction (DRR).</li> <li>○ Community-centered internet infrastructure prototyping has been successfully developed in Ciptagelar indigenous community village (2019) and Ciracap Sub-district (2020). Later on the prototype was expanded to other areas such as Ketemenggungan Tae (2022), Sukadana Village (2022), Mata Redi Village (2022), Tembok Village (2022), Pulo Aceh (2022), Nimboran District (2023), Don Bosco Training Center (2023), Bobong Village (2023), and Toro Village (2024). Some of the prototypes have been able to achieve an advanced level, while others are still in the development process.</li> <li>○ In early 2023 the community-centered internet infrastructure development was also enhanced with bamboo towers for internet backhaul as an alternative solution for utilizing locally sourced materials and promoting the sustainable development of internet infrastructure in rural areas by addressing the environmental impact of the internet infrastructure. The bamboo tower prototyping was deployed in Buka Tanah Village (2022), Tembok Village (2022), Ketemenggungan Tae (2023), Ciptagelar indigenous village (2023), Don Bosco Training Center (2023), and Ciracap Sub-district (2024).</li> <li>○ This program was also enhanced with a research and policy advocacy process. From 2021 until present, research and policy advocacy has delivered some policy brief documents, position papers, joint statements, and publications in academic journals.</li> </ul> </li> </ul>

- From 2020 until 2024, Rural ICT Camp has involved 2.268 participants, consisting of 1.076 female and 1.192 male participants from 13 SCN project locations in Indonesia, including national CSOs, and international participants. This also includes online participants from 35 different provinces in Indonesia.
- Recently the SCN training and capacity building program was also integrated with climate adaptation and mitigation programs while deploying weather stations in some SCN project locations to collect microclimate data to increase knowledge and awareness about climate change, as well as to increase climate resilience at the local level.
- **Impact:**
  - This initiative has been able to map and identify the digital divide challenges in Indonesia;
  - The project has been able to increase recognition and visibility of community-centered meaningful connectivity initiatives in Indonesia;
  - The project has been able to introduce and identify various community-centered internet service governance model, as well as to implement and develop them with diverse and contextual approach;
  - SCN training and capacity building program has been actively engaged in the development of peer-to-peer learning ecosystem;
  - Provide and facilitate a space for policy dialogue, as well as multi-stakeholder collaboration involving government representatives, civil society organisation (CSO), the business sector, academic institutions, technical communities and communities in rural and remote areas.
- **Lessons learned:**
  - SCN training and capacity building program is a long-term effort that needs to be developed gradually and sustainably;
  - Internet technology is not rocket science. But it still requires contextual approaches and training techniques in terms of capacity building for rural and remote communities who have never interacted with computers and digital technology;
  - Community engagement can be built if the shared interests and common needs of local communities can be met through the development and utilization of community-centered internet infrastructure;
  - Acceleration can occur through collaboration with the village government and local stakeholders who share the same vision and interests, in addition to having the knowledge to integrate community-centered internet infrastructure into rural development, including other needs such as job creation, economic empowerment, disaster risk reduction (DRR), climate change adaptation and mitigation, etc;
  - Technology transfer in rural communities cannot happen in a hurry. It requires a gradual process with hands-on learning through a human-centered approach;
  - Determination of location and beneficiaries needs to be articulated through a thorough survey and needs assessment that directly involves local communities;
  - There are several SCN locations that failed and could not be continued due to several technical constraints, including transparency and accountability issues. To sustain community-centered internet infrastructure, long-term commitment that includes transparency and accountability is crucial. Ongoing efforts to develop community-centered internet infrastructure can also be improved and refined by learning from failures;
  - In order to sustain community-centered connectivity in underserved areas, a diverse, flexible and responsible funding support is needed;
  - In regards to the development and utilization of community-centered internet infrastructure in underserved areas, local adaptation and contextualization is required to meet the needs and technical challenges in addressing diverse geographic and social contexts;
  - Ongoing efforts are needed to mitigate and anticipate potential conflicts, in addition to anticipating the impact of technological disruption on the local values and traditions among rural and remote communities, including to anticipate the unintended consequences of internet and digital tech adoption such as the spread of hoax news, disinformation, misinformation, online gender-based violence, etc.

<b>Case CD02</b>	<b>Towards an Enabling Policy Environment for Sustainable Community Telecommunications (2024)</b>
<b>Location:</b>	The Americas. Facilitated from Mexico. All OAS member states invited.
<b>Time Frame:</b>	2024 (first edition). January-March (11 weeks)
<b>Funding:</b>	APC covered the costs for transferring content to the OAS learning platform.
<b>Responsible institutions / partners / people:</b>	CITEL partnered with Rhizomatica and APC to embed the program as part of PCC1 2024 training and invite all CITEL members. APC covered platform content costs and several of APC and Rhizomatica collaborators were guest speakers.
<b>What is the problem?</b>	Regulation as a barrier to local models of connectivity; urban-rural digital divide; old paradigms for new technologies
<b>Which were the actions taken to address the problem(s)?</b>	An online training program for regulators and policymakers in Latin America and the Caribbean where paradigms of regulation are reviewed, myths unveiled, and collectively we build an enabling policy and regulation framework for meaningful access to connectivity.
<b>Results / Impact / Lessons learned (what worked / remaining challenges)</b>	<p>Results:</p> <ul style="list-style-type: none"> <li>● 35 trainees admitted, from 153 applicants from 12 LAC countries.</li> <li>● 12 received their certificate of completion.</li> </ul> <p>Impact:</p> <ul style="list-style-type: none"> <li>● Methodology to help them identify bias, dated paradigms, myths or legacy regulation that hinders inclusion and how to revert that thinking, has proved to be a success.</li> <li>● Training sessions like this help regulators think out-of-the-box, unlearning myths that are not fit for purpose; act really for the public interest. Know that many colleagues face the same challenges and succeed when doing things differently if using the correct information and methodology.</li> <li>● Too soon to tell if regulators will put in practice what they learned here.</li> </ul> <p>Lessons learned:</p> <ul style="list-style-type: none"> <li>● Chatham House Rule worked great to create a circle of trust. Hands-on exercises of analytical thinking, create their own roadmap to inclusion, diversity of group, speakers and facilitators. Tutoring is intense in time. Daily feedback is key and deadlines so no one lags behind. Live webinars (1/unit) were fundamental and we all learned from peer experiences and diverse ways of thinking.</li> <li>● Admit around 50 as only 50% or less will complete the program.</li> <li>● Only for regulators, policy makers, law makers, not aimed at community network advocates/ reps, but one or two may be guest speakers.</li> <li>● Book guest speakers far in advance so that all webinars may be calendarized since day 1 of training.</li> </ul>



<b>Case CD03</b>	<b>Central American Training Programme in Telecommunications and Broadcasting</b>
<b>Location:</b>	Central America (Guatemala, El Salvador, Belize, Costa Rica & Panamá)
<b>Time Frame:</b>	Two years, one year ongoing
<b>Funding:</b>	<ul style="list-style-type: none"> <li>● CLUA (Climate and Land Use Alliance)</li> <li>● Open Society</li> </ul>
<b>Responsible institutions / partners / people:</b>	<ul style="list-style-type: none"> <li>● Escuela Mesoamericana de Liderazgo</li> <li>● Red Centroamericana de Radios Comunitarias Indígenas</li> <li>● Alianza Mesoamericana de Pueblos y Bosques</li> <li>● Cooperativa Sula Batsú</li> <li>● Redes por la Diversidad, Equidad y Sustentabilidad A.C.</li> <li>● Rhizomática</li> </ul>
<b>What is the problem?</b>	Insufficient technical and organizational capacity building for establishing and sustaining community-centered connectivity and own communication projects in rural and indigenous communities in Central America.
<b>Which were the actions taken to address the problem(s)?</b>	Development of a training program for capacity building in rural and indigenous communities in Central America, focusing on sustaining community-centered connectivity efforts and advocating for the necessary regulatory changes for their recognition.
<b>Results / Impact / Lessons learned (what worked / remaining challenges)</b>	<p>Results:</p> <ul style="list-style-type: none"> <li>● Completion of four in-person modules focused on community communication, electricity, community networks, participatory content creation, broadcasting, and sustainability, held in El Salvador, Guatemala, Costa Rica, and Belize.</li> <li>● Culmination of three virtual sessions focusing on the themes: legal framework and self-determination of indigenous peoples, digital security and critical vision of social networks.</li> </ul> <p>Impact:</p> <ul style="list-style-type: none"> <li>● Strengthening a network of individuals, organisations and collectives working to strengthen community-centred connectivity projects in Central America.</li> <li>● Bring visibility to the issues and challenges for community-centred connectivity and communication projects by indigenous communities in Central America.</li> <li>● Generate alliances for the transformation of regulatory frameworks to facilitate the creation of community-centred communication and connectivity projects.</li> </ul> <p>Lessons learned:</p> <ul style="list-style-type: none"> <li>● The importance of generating processes of encounter and capacity building with indigenous communities in Central America.</li> <li>● Major challenges in Central America in terms of regulation and policy, almost entirely designed for large companies.</li> <li>● Challenges in terms of infrastructure in order to have better connectivity conditions in rural and indigenous communities.</li> </ul>

Case CD04	Community Networks Training Program
<b>Location:</b>	23 countries in LAC (Latin America and Caribbean) Region
<b>Timeframe:</b>	2023, 2024
<b>Funding:</b>	Internet Society Foundation
<b>Responsible institutions / partners / people:</b>	<ul style="list-style-type: none"> <li>● ISOC Foundation</li> <li>● Inter-American Telecommunication Commission (CITEL)</li> </ul>
<b>What is the problem?</b>	<ul style="list-style-type: none"> <li>● Training requirements in rural communities</li> <li>● Lack of awareness among policymakers</li> <li>● Specifics (if any)               <ul style="list-style-type: none"> <li>○ Community networks need holistic approaches, including technical components on affordable technologies, community engagement, and financial sustainability issues.</li> <li>○ Policymakers need to be trained in similar programs to create awareness among them, so they can provide a positive influence to authorities.</li> </ul> </li> </ul>
<b>Which were the actions taken to address the problem(s)?</b>	<ul style="list-style-type: none"> <li>● ISOC and CITEL decided to improve a program that started back in 2017, originally designed to train participants from the LAC region in the course: “Building Wireless Community Networks”</li> <li>● In 2023 the program included two courses: Building Wireless Community Networks, and Community Networks Readiness Assessment. Each of them has a duration of 6 weeks. The same approach was conducted in 2024.</li> <li>● The main audience for the course were participants from American member states, belonging to ICT government agencies and regulator offices. Some other participants came from civil society, involved in Community Networks projects.</li> </ul>
<b>Results / Impact / Lessons learned (what worked / remaining challenges)</b>	<p>Results:</p> <ul style="list-style-type: none"> <li>● Two training programs with two courses each during 2023 and 2024</li> <li>● More than 500 hundred participants completed the program, most of them senior professionals and middle and high-level authorities in government ICT offices such as Telecommunication Agencies and regulators. But also individuals in charge or related to Community Network deployment projects.</li> <li>● Participants came from more than 20 countries in the LAC region.</li> </ul> <p>Impact:</p> <ul style="list-style-type: none"> <li>● Positive influence and awareness among government officers, policy, and decision-makers, about the importance of Community Networks as an alternative for affordable connectivity solutions for rural areas.</li> <li>● Training content going beyond technical components and including community engagement and sustainability strategies.</li> </ul> <p>Lessons learned:</p> <ul style="list-style-type: none"> <li>● Aiming for this kind of audience promotes Community Networks as an important approach for advancing into Universal and Meaningful Access.</li> <li>● The practical component is critical to achieving skills development among participants, so practical face-to-face activities should and will be included as part of the training programs.</li> </ul>



#### 4.4. Monitoring of the implementation of best practices experiences identified in previous years

This subsection aims to showcase the development, successes and challenges faced by the good practices identified in previous reports. The focal point of each case was directly contacted by the PNMA, with the opportunity to provide updated information via a standardised form and report back to the policy network by mid-December on its current status.

Please visit the PNMA Output Reports [2022](#) and [2023](#) to access all good practices collated back then. Papua New Guinea’s Digital Strategy updates are included below; ICANN’s new details on the Coalition for Digital Africa Project and ITU’s status on measuring UMC are found in Section 6 - Intersectional Works.

Update 1:	Papua New Guinea’s Digital Strategy (2023)
Presented at the 2023 PNMA Plenary Session:	Yes
Location:	Papua New Guinea
Funding:	Government Funding Plus support for several international advisers funded by the Economic Social Infrastructure Program administered by DT Global and funded by the Australian Department of Foreign Aid and Trade
Responsible institutions / partners / people:	Department of ICT, Secretary Steven Matainaho
What is the problem?	<ul style="list-style-type: none"> <li>● How to get people in our rural communities to have the means to access government goods and services through mobile phones without the expense and wasted time of travel and queues?</li> <li>● Currently much of the country does not have connectivity to the Internet and it is very difficult to close the connectivity and digital gap without access. Affordable, accessible, and reliable infrastructure is the foundation to achieve an inclusive digital transformation.</li> <li>● How do we get private sector companies to drive down the price of Internet access, expand coverage to the millions that remain unconnected, and build the inclusive foundation for a robust digital economy?</li> <li>● How does PNG build an inclusive and strong digital economy when most of the nation does not have access to the Internet?</li> <li>● What policies and incentives do we need to encourage operators and other providers to make connectivity affordable, especially those in remote rural areas?</li> <li>● How do we incentivise operators to invest the needed infrastructure in the country?</li> <li>● What actions are needed to build an inclusive community and leave no one behind, with a particular focus on women, indigenous groups and persons with disabilities? These marginalised groups tend to be significantly less likely to own a phone, access the Internet and on-line services, and integrate ICT functions in their daily lives.</li> <li>● How do we overcome the lack of digital readiness and cultural challenges to transform the country into a strong digital economy? The same is true with overcoming entrenched legacy policies and regulatory frameworks which are siloed and do not work in a digital economy.</li> </ul> <p>Our Vision is to transform the nation to become a fully modern, prosperous, and integrated digital/information age economy and society. This will mean that all citizens will have the ability to access and utilise advanced, high-quality information and communication technology (ICT) services, devices, applications, and resources. Access to ICT networks, services, and connectivity has little or no value if people are unable to afford or own modern, multipurpose digital devices, which connect to, and use those networks and services. This policy aims to ensure that appropriate and fully functional devices can be made affordable to all who need them, via a combination of programs, partnerships, incentives, and other mechanisms.</p>

<p><b>Which were the actions taken to address the problem(s)?</b></p>	<ul style="list-style-type: none"> <li>● Developed Several Key Digital Economy Policies.</li> <li>● Passed Digital Transformation Policy 2020</li> <li>● Passed Cybersecurity Policy 2021</li> <li>● Passed Digital Government Legislation 2022</li> <li>● Passed a Digital Government five-year plan and worked to implement the plan to build the needed connectivity infrastructure to implement the plan</li> <li>● Revised UAS Policy 2023, currently in front of the NEC</li> <li>● Developed the First National Broadband Plan to meet Connectivity. Infrastructure, Digital Government and other goals.</li> <li>● Developed Data Governance and Data Protection Policy 2023</li> <li>● Worked to get funding for the ICT sector in the Government’s Medium Term Development Plan. Previously ICT sector was not captured in the Government’s 5-year plan to Department worked and collaborated with National Planning and other Ministries to get the sector included into the Government’s 5-year plans so Digital Government can be funded</li> <li>● Developed a Media Policy to create standards for the media to help eliminate mis-information and dis-information in the media.</li> <li>● Conducted a series of workshops on the new policies in each of the 5 regions of the country to educate the public about digital economy and digital government policies</li> <li>● Brought in IT officers (Digital Transformation Officers) into the capital for several days of training so they can train colleagues in their provinces</li> <li>● Working with the local and regional offices to train and educate them about the new polices.</li> <li>● Worked with our stakeholders to gain their comments and suggestions for improvement on policies.</li> </ul>
<p><b>Results / Impact / Lessons learned (what worked / remaining challenges)</b></p>	<ul style="list-style-type: none"> <li>● Results: <ul style="list-style-type: none"> <li>○ Passed several policies and laws, and working to pass other key digital economy policies that underpin any digital transformation</li> <li>○ Trained and made aware many stakeholders, agencies, and others about the new policies and the strategies for going forward.</li> <li>○ Worked to involve stakeholders into the policy process while policies are still in draft form so we can gather their input and feedback allowing them to take ownership of the policies which will help their implementation.</li> <li>○ Breaking down the transformation process into manageable units, and aligning them with core principles, allows for synergy and scale and binding factor for enabling seamless progress, are effective collaboration and coordination</li> </ul> </li> <li>● Many lessons were learned: <ul style="list-style-type: none"> <li>○ Developing a strategic roadmap for addressing and rectifying technological, cultural and policy/regulatory issues is paramount for progress and advancement.</li> <li>○ Collaborating and coordinating with other agencies and with all stakeholders, government, private sector, and civil society is key</li> <li>○ Take a bird's-eye view of the shifting landscape, understanding the guiding principles of each component, and devising strategies to navigate failures. The small growths that define success, and collaboration and coordination that allow for a shifting culture to seamlessly complement adoption</li> <li>○ Breaking down the transformation process into manageable units, and aligning them with core principles, allows for synergy and scale and binding factors for enabling seamless progress, are effective collaboration and coordination.</li> </ul> </li> <li>● Remaining Challenges: <ul style="list-style-type: none"> <li>○ How to implement the plan and strategy in a country where readiness and aversion to change is at different levels? Also, when certain agencies are fixated on legacy policies and entrenched regulatory frameworks that do not work in today’s economy?</li> </ul> </li> </ul>
<p><b>2024 Update</b></p>	
<p><b>Has the problem been solved?</b></p>	<p>Connectivity still remains a problem within PNG because there are so many rural and remote areas to be covered and also that connectivity costs are too high for most people.</p>

<p><b>Did any new problems emerge during implementation?</b></p>	<p>Had to resolve some authentication issues and also worked to develop and implement the digital government portal. Some policies took longer than planned as priorities shifted.</p>
<p><b>Do 2022/2023 solutions still work to tackle the problem? New solutions needed to be developed?</b></p>	<p>Yes but other methods are also needed. Currently working to revise the ICT Act to provide more licensing options and increase competition, provide increased consumer protection, seeking to increase the number of operators and provide greater customer choice. Passed some new legislation but still working on others. Also working on other connectivity solutions that have not been tried.</p>
<p><b>Was the solution scaled or localised to other regions? If so, please share examples</b></p>	<p>Several of the policies and legislation that were created were copied by other similar sized countries. Also working to implement an action plan for all Pacific island countries on Cyber, climate resilience, cybercrime, disaster preparedness, digital government and digital infrastructure issues. Also working to increase capacity building.</p>
<p><b>New milestones:</b></p>	<ul style="list-style-type: none"> <li>● Passed a Data Governance and Data Protection Policy</li> <li>● Passed a Cybersecurity strategy; working on developing legislations for each of these two policies.</li> <li>● Also revising the Digital Government Act to close up some loopholes and tighten up some missing gaps.</li> <li>● Rolled out the first series of Digital Government services a few months ago and began implementing the single window and Digital Government Portal</li> </ul>
<p><b>New challenges:</b></p>	<p>Connectivity is still a problem as lawsuits and other obstacles are delaying change. It is hoped that the ongoing work to update the ICT Act will speed up competition in the market and also allow for new competitions and solutions to enhancing connectivity through Papua New Guinea.</p>
<p><b>Lessons learned:</b></p>	<p>Keep being focused on the problem and looking at creative ways to solve it. Policy, legislation are only part of the answer, also need to increase awareness and get more agencies involved in helping solve these issues.</p>
<p><b>Next steps:</b></p>	<p>Update of the ICT Act is ongoing and expected to be completed this year. Also work on updating the cyber crime and related legislation so that PNG can finish up the processes needed before acceding to the Budapest Convention.</p>

## 5. Collaboration streams within the IGF

### 5.1. IGF Leadership Panel

The PNMA acknowledges the close relationship with the IGF Leadership Panel, which is represented in the policy network's meetings by Mr. Vint Cerf. The community discussions and policy analyses reflect beneficial ways of working between the intersessional activities and the Panel, always with an outlook of maximising the utility of meaningful access.

### 5.2. Intersessional work with Youth IGF, DCs, and/or NRIs

Work continues to create alignment on several key issues with NRIs and DCs, especially surrounding the Global Digital Compact. Amongst these, it is worth highlighting the Dynamic Coalition on Accessibility and Disability (DCAD), which was present in the 2024 PNMA process throughout the year. The DC has put forward an example of digital financial inclusion for persons with disabilities, included in Subsection 4.2.

### 5.3. An effective contribution to other related UN processes: GDC and Summit of the Future

Based on the 2023 output report and on the new suggestions collected this year during the intersessional work, the PNMA leadership has taken part in the GDC process through written contributions and oral interventions at some of the Open Consultations held by the facilitator-countries. In addition, the PNMA leadership joined in-person both the Summit of the Future action days and the Summit. The concept of meaningful access has been supported by many and has found a proper recognition not only in the GDC final text, but also in the overarching Pact for the Future (see recommendations 59 and 64 of the [outcome document](#), as well as Subsection 3.2. of this output report).

## 6. Collaboration streams beyond the IGF: Intersectional Works

Collaboration across intersectional works is essential for the IGF because it brings diverse perspectives, expertise, and resources together to address the complex, multifaceted challenges of internet governance. Engaging stakeholders from governments, private sector, civil society, academia, and technical communities ensures that policies address the needs of all groups, and promotes a sustainable and equitable digital future for all.

The PNMA acknowledges the close and fruitful partnerships with institutions such as the Internet Corporation for Assigned Names and Numbers (ICANN); World Intellectual Property Organization (WIPO); the UN (UNDESA) and its agencies such as the International Telecommunication Union (ITU), the United Nations High Commissioner for Refugees (UNHCR), and the United Nations Educational, Scientific and Cultural Organization (UNESCO); Internet Society (ISOC), and Organisation of American States (OAS), amongst others. This section explores a relevant part of their work with meaningful access in 2024.

### 6.1. ITU

<p><b>Case 1</b></p>	<p><b>ITU-D: ICT Promoting and Measuring Universal and Meaningful Connectivity</b></p>
<p><b>Location:</b></p>	<p>Global</p>
<p><b>Funding:</b></p>	<p>EUR 3 million funding from the EU Global Gateway Program from May 2023 to May 2026</p>
<p><b>Responsible institutions / partners / people:</b></p>	<p>ITU-D/DKS/IDA (ICT Data and Analytics Division)</p>
<p><b>What is the problem?</b></p>	<p>Depriving vast swaths of humanity from the possibilities offered by the Internet is costly, deepens inequalities, and undermines development. Over the past 30 years, the number of Internet users surged from a few million to 5.5 billion. Yet the potential of the Internet for social and economic good remains untapped: one third of humanity remains offline, and many users only enjoy basic connectivity. Multiple digital divides persist across and within countries, between men and women, between youth and older persons, between cities and rural areas, between those who enjoy a fibre connection and those who struggle on a spotty 3G connection. UMC is the new imperative. To maximize its impact on society and the economy, digital connectivity must be universal and meaningful. “Universal connectivity” means connectivity for all. “Meaningful connectivity” is a level of connectivity that allows users to have a safe, satisfying, enriching, and productive online experience at an affordable cost. The two dimensions are complementary: neither universal connectivity with poor quality nor meaningful connectivity for the few will yield significant, society-wide benefits. At the same time, the two dimensions obviously reinforce each other: more use can lead to more meaningful connectivity, and vice versa.</p>
<p><b>Which were the actions taken to address the problem(s)?</b></p>	<p>ITU and the European Commission (EC) have joined forces in the context of a project on “Promoting and Measuring Universal and Meaningful Digital Connectivity”, funded by the European Union. Through advocacy at the global, regional, and country levels, the project aims to mainstream UMC and encourage countries and their partners to adapt their digital strategy from a narrow focus on infrastructure to a holistic approach that includes the other enablers of connectivity. The project will monitor and report on progress towards achieving the UMC targets. It will enhance the statistical capacity of countries to measure various aspects of UMC with greater accuracy, timeliness, and granularity. The project will also identify best practices and policy recommendations to accelerate progress towards UMC.</p> <p>Four work streams are being implemented.</p> <p><b>Advocacy:</b></p> <ul style="list-style-type: none"> <li>● Sessions in UN system events, World Telecommunication Indicators Symposium (WTIS), G20, IGF, and other global and regional events</li> <li>● Mentions of UMC in Global Digital Compact</li> <li>● G20 Guidelines on Measuring UMC</li> <li>● Creation of digital communication assets, social media campaigns</li> </ul> <p><b>Data collection and dissemination:</b></p> <ul style="list-style-type: none"> <li>● Aspirational targets for the UN SG Roadmap on Digital Cooperation</li> <li>● UMC website, including a UMC Dashboard</li> <li>● Online course on the collection and use of UMC indicators (in partnership with ITU Academy)</li> <li>● Manual on ICT price basket statistics</li> <li>● Exploratory use of secondary data sources to support UMC measurement</li> </ul> <p><b>Capacity building:</b></p> <ul style="list-style-type: none"> <li>● 8 regional workshops for users and producers of UMC statistics</li> <li>● A dialogue between users and producers of statistics.</li> <li>● A solid understanding of the concept of universal and meaningful connectivity.</li> <li>● Greater awareness of the critical role of data in policymaking and the ability to advocate for investment in data infrastructure and capabilities.</li> <li>● Improved capacity to produce reliable data on UMC.</li> </ul> <p><b>Evidence-based research on effective interventions towards achieving UMC:</b></p> <ul style="list-style-type: none"> <li>● Global Connectivity Report</li> <li>● Regional and thematic analyses</li> </ul>

<b>Results / Impact / Lessons learned (what worked / remaining challenges)</b>	<p><b>Results:</b></p> <ul style="list-style-type: none"> <li>• More than 200 professionals from around 110 countries’ National Statistical Offices, ICT Ministries, and regulators have been briefed about the UMC policy principle and its measurement. It has been also communicated at international fora of statisticians, policymakers, diplomats, humanitarian NGOs.</li> <li>• Contacts between users and producers of ICT statistics to monitor progress towards UMC have been strengthened.</li> <li>• Guidelines for the statistical measurement of UMC have been established by joint work of the Brazilian G20 Presidency and the ITU, publicly available in the project webpage.</li> </ul> <p><b>Lessons learned:</b></p> <ul style="list-style-type: none"> <li>• There is a need for sustainable dialogue between users and producers of ICT statistics at the national level, including on the financial resources that should be devoted to the activity.</li> <li>• Focusing the measurement debate in low-dimensional, composite indicators hides the many inequalities of meaningful connectivity within countries, as well as the different paths towards UMC that countries may adopt. Instead, a rich multivariate set of indicators covering the different dimensions of UMC can help better identify policy alternatives.</li> </ul> <p><b>Remaining challenges:</b></p> <ul style="list-style-type: none"> <li>• A significant number of developing countries have weak statistical systems and low levels of connectivity. This is a vicious circle where lack of data hampers the design of efficient policies towards UMC.</li> <li>• The lack of skilled staff and financial resources are barriers to statistical development. There is no earmarked international funding for statistical systems on UMC.</li> </ul>
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<b>2024 Updates</b>
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<b>Has the problem been solved?</b>	<ul style="list-style-type: none"> <li>• The problem of lack of statistical capacity is persistent in developing countries. This affects not only the capacity for producing, but also of using statistics.</li> <li>• The problem of lack of meaningful connectivity is not directly addressed by the project, except indirectly by improving the evidence base for digital policies.</li> </ul>
<b>Did any new problems emerge during implementation?</b>	Problems during the implementation are related to management issues unrelated to the problem that the project addresses.
<b>Do 2022/2023 solutions still work to tackle the problem? New solutions needed to be developed?</b>	n/a
<b>Was the solution scaled or localised to other regions? If so, please share examples</b>	n/a
<b>New milestones:</b>	n/a
<b>New challenges:</b>	The adoption of the Global Digital Compact by the UN opens an opportunity window as it sparks demand for ICT data for its monitoring and includes a commitment to strengthen the corresponding statistical systems. However, the financial resources much needed to implement household surveys on access and use of ICT – the scarcest source of data to monitor progress towards UMC - are not yet identified.
<b>Lessons learned:</b>	see above
<b>Next steps:</b>	<ul style="list-style-type: none"> <li>• Geographical extension of the project to Western Balkans, Georgia, Moldova and Ukraine</li> <li>• Strengthening the communication and research activities of the project</li> </ul>



## 6.2. ICANN

Case 2	ICANN: Coalition for Digital Africa (2024 update)
<b>Location:</b>	1st Phase: 10 countries; 2nd Phase: 20 countries
<b>Timeframe:</b>	Started in 2022
<b>Funding:</b>	ICANN - budget n/a
<b>Responsible institutions / partners / people:</b>	<ul style="list-style-type: none"> <li>● ICANN</li> <li>● ITU</li> <li>● Africa Telecommunications Union (ATU)</li> <li>● Africa Top Level Domain Organization (AFTLD)</li> <li>● Association of African Universities (AAU)</li> <li>● Africa Network Operators Group,</li> <li>● Internet Society (ISOC)</li> <li>● Africa Computer Emergency Response Team (AfricaCERT)</li> <li>● Network Startup Resource Center (NSRC)</li> <li>● Association Française pour le Nommage Internet en Coopération (AFNIC)</li> <li>● Associação de ccTLDs de língua portuguesa (LusNIC)</li> <li>● Smart Africa</li> <li>● Commonwealth Telecommunications Organisation</li> <li>● Lawyers Hub</li> </ul>
<b>What is the problem?</b>	<p>The Coalition for Digital Africa, initiated by ICANN, addresses key challenges in Africa’s digital transformation while harnessing its immense potential. Despite significant progress, with a growing \$115 billion digital economy and increasing Internet adoption, Africa’s Internet penetration remains at 43%, well below the global average. The Coalition brings together regional and global partners to enhance Internet accessibility, security, and multilingualism while fostering Africa’s participation in global Internet governance. By strengthening infrastructure and promoting collaboration, the initiative seeks to bridge digital divides, support sustainable growth, and empower Africa’s dynamic and rapidly evolving digital ecosystem.</p>
<b>Which were the actions taken to address the problem(s)?</b>	<p>Launched in December 2022, the Coalition focuses on three key areas:</p> <ul style="list-style-type: none"> <li>● <b>A Robust DNS:</b> Strengthening the Internet infrastructure in Africa by enhancing the security, stability, and resiliency of the DNS.</li> <li>● <b>Meaningful Connectivity:</b> Promoting multilingualism and fostering local content development across the continent.</li> <li>● <b>Capacity Development:</b> Building skills and knowledge within Africa’s workforce to enable greater participation in multistakeholder Internet governance processes.</li> </ul> <p>In partnership with governments and local stakeholders, ICANN has implemented numerous activities aligned with its core mandate of improving the security, stability, and resiliency of the Internet, managing unique identifiers, and developing capacity in DNS management.</p> <p><b>Initiatives Implemented</b></p> <ul style="list-style-type: none"> <li>● <b>Capacity Development for Country Code Top-Level Domain (ccTLD) Registries</b> Training and mentoring was provided to 10 African ccTLD registries to enable them to operate more effectively in the domain industry. The project partners include ICANN, AFNIC, AFTLD, ITU, and NSRC. This project was announced during the World Telecommunication Development Conference in Kigali in June 2022 in the context of the ITU’s Partner2Connect roundtable.</li> <li>● <b>ICANN Managed Root Server (IMRS (L-Root)) Infrastructure</b> The Coalition is committed to expanding the L-Root (IMRS) infrastructure to contribute to a more stable and resilient Internet in Africa. The coalition received expressions of interest for organizations interested to host an L-Root Single, a single-server “appliance”.</li> <li>● <b>Universal Acceptance Readiness in Academic Institutions</b></li> </ul>



	<p>ICANN is partnering with the AAU to encourage higher education institutions to include UA in their academic curricula and have their systems fully compatible with UA. ICANN provides specialized training, workshops, and educational material to AAU and its members to increase institutional expertise on UA matters.</p> <ul style="list-style-type: none"> <li>● <b>2023 Africa Domain Name Industry Study</b> This study leverages the methodology of the 2016 Africa DNS Study and examines the current realities of the African domain name industry landscape. The outcomes help inform the coalition of future growth opportunities and development. The study, commissioned by ICANN, was conducted by PowerSoft Africa.</li> <li>● <b>DNS Security Extension (DNSSEC) Roadshows</b> This initiative aims to increase DNSSEC adoption and deployment in 15 countries in Africa through awareness building and capacity development. The roadshows will encourage DNS operators, registries, and registrars in select countries to implement and deploy DNSSEC, while working with network operators to turn on DNSSEC validation. This effort will include the development of an enhanced DNS resource portal for Africa.</li> <li>● <b>Internet Exchange Points (IXP) Development in Africa</b> ICANN is supporting ISOC's efforts to strengthen peering in the region by developing IXPs and interconnection across the continent so that the Internet is cheaper, faster, and more resilient for African users. ISOC is leading the implementation of this project, which supports activities to help the IXPs improve their services and infrastructure.</li> <li>● <b>Internet Governance Capacity Development for Governments and Lawmakers</b> Strengthening the African Internet ecosystem by assisting governmental bodies in understanding the technical functioning of the Internet, especially the DNS. Launched earlier this year in partnership with Smart Africa and collaboration from the African Parliamentary Network on Internet Governance (APNIG).</li> <li>● <b>ICANN's Service Level Agreement Monitoring (SLAM) System</b> Expansion and enhancement of the SLAM system in Africa by deploying monitoring two probe nodes, in addition to an existing node in Johannesburg, South Africa. Improvements have enabled these nodes to meticulously monitor support of both IPv4 and IPv6 transport for the Registration Data Directory Service (RDDS) and DNS services provided by TLD registry operators.</li> </ul>
<p><b>Results / Impact / Lessons learned (what worked / remaining challenges)</b></p>	<p>Key accomplishments to date:</p> <ul style="list-style-type: none"> <li>● Deployment of <b>two L-Root (IMRS) installations</b>, in Kenya (November 2022) and Egypt (October 2023), enabling 80% of Africa-based Internet DNS root queries to be resolved within the region for improved resiliency and stability.</li> <li>● <b>Extension of the SLAM system</b> with new monitoring probe nodes in Lagos, Nigeria, and Cairo, Egypt..</li> <li>● <b>Strengthened three IXPs in Benin, Malawi, and Rwanda</b>, allowing them to enhance their technical infrastructure and local capabilities..</li> <li>● <b>DNSSEC deployment for Botswana (.bw)</b> in May 2024.</li> <li>● Published the <b>2023 Africa Domain Name Industry Study and Trial Observatory</b>.</li> <li>● ICANN and Smart Africa MoU to boost Internet governance across Africa</li> <li>● In 2024, capacity development for 58 African parliamentarians (23 from 15 countries attended in-person)</li> </ul> <p>These efforts have bolstered Africa's DNS infrastructure, enhanced local Internet services, and increased stakeholder participation in ICANN's policy processes.</p>

<b>Case 3</b>	<b>Digital Inclusion with the Universal Acceptance of Internationalized Domain Names</b>
<b>Location:</b>	Global
<b>Timeframe:</b>	Since 2009
<b>Funding:</b>	n/a
<b>Responsible institutions / partners / people:</b>	Internet Corporation for Assigned Names and Numbers (ICANN) Organization and Community
<b>What is the problem?</b>	<ul style="list-style-type: none"> <li>● Many people around the world are currently excluded from experiencing the full benefits of the Internet simply because they are unable to use a domain name or email address of choice in their language and script.</li> <li>● Internationalized Domain Names (IDNs) are domain names in local languages or scripts. IDNs allow organizations, governments, and businesses the ability to reach citizens and consumers in their native language or script.</li> <li>● Based on protocol set by Internet Engineering Task Force (IETF), ICANN and its community have worked to make IDN labels available at the second level of domain names since 2003, and IDN Top-Level Domains (TLDs) since 2009.</li> <li>● However, many software applications do not recognize or appropriately process them, e.g., by not automatically linking IDNs or not allowing a user to register for an app with an email address in local language.</li> <li>● This issue is called Universal Acceptance (UA), and many Internet-enabled applications, devices, software and systems have not kept up with changes in the Domain Name System and are not UA-ready.</li> <li>● Becoming UA-ready ensures that all valid domain names and email addresses, regardless of script, language, or character length, can be used seamlessly by all Internet-enabled applications, devices, and systems.</li> <li>● UA is essential for meaningful access to the multilingual Internet.</li> </ul>
<b>Which were the actions taken to address the problem(s)?</b>	<p>ICANN and its community are committed to supporting a digitally inclusive and multilingual Internet by enabling domain names in local languages and scripts, which requires UA-readiness. ICANN has worked with the community for this purpose:</p> <ul style="list-style-type: none"> <li>● Delegating both country code TLDs and generic TLDs.</li> <li>● Creating awareness of IDNs and the need for UA globally. ICANN has supported the <a href="#">Universal Acceptance Steering Group</a>, a focused community initiative to promote UA, since 2015. ICANN also supports the UA Committee of the Country Code Name Supporting Organization and IDN Working Group of At-Large Advisory Group.</li> <li>● Organizing <a href="#">UA Day</a> on or around 28 March each year since 2023, to develop capacity in addressing UA challenges.</li> <li>● Interacting with both the open-source software maintainers and technology organizations, encouraging them to make their software applications UA-ready, and providing the technical documentation they need to accomplish that.</li> <li>● Promoting integration of IDNs and UA topics in the technical curricula of the universities.</li> <li>● The next round of generic TLDs will continue to expand the DNS and give new opportunities to billions of people to access a multilingual Internet in their language or script.</li> </ul>
<b>Results / Impact / Lessons learned (what worked / remaining challenges)</b>	<ul style="list-style-type: none"> <li>● Results: <ul style="list-style-type: none"> <li>○ A total of 151 IDN TLDs have been delegated since 2010, in 37 languages and 23 scripts, with millions of IDNs registered for use around the world.</li> <li>○ UA Day is raising awareness of IDNs and UA. For <a href="#">UA Day 2024</a>, 52 events were organized in 47 countries and territories, attended by more than 6500 people.</li> </ul> </li> </ul>

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|--|--|
|  | <ul style="list-style-type: none"><li>○ Many open-source communities and technical organizations are now supporting domain names and email addresses in local languages and scripts.</li><li>○ Universities are evaluating the integration of IDN and UA concepts in their technical curricula.</li><li>● <b>Impact:</b><ul style="list-style-type: none"><li>○ Achieving UA is enabling important economic and social benefits by allowing multilingual Internet users to access and connect to businesses, e-commerce and local communities, as well as embrace cultural traditions.</li></ul></li><li>● <b>Lessons learned:</b><ul style="list-style-type: none"><li>○ Awareness of IDNs and UA is a key towards adoption.</li><li>○ Adoption of IDNs, and their UA, requires collaboration of and concrete measures from many stakeholders, including the domain name industry, software technology organizations, open-source communities, public sector, and academia.</li><li>○ Sustainable capacity development is needed to enable software professionals to acquire skills to build UA-ready applications.</li></ul></li></ul> |
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### 6.3. UN DESA

The United Nations Department of Economic and Social Affairs (UN DESA) serves as a central entity within the United Nations system, dedicated to advancing sustainable development globally. Its mandate includes fostering international cooperation on economic, social, and environmental issues, delivering policy analysis, and supporting Member States in achieving the 2030 Sustainable Development Goals (SDGs).

Within UN DESA, the Division for Public Institutions and Digital Government (DPIDG) plays a pivotal role in leveraging digital transformation to support sustainable development. Through its work, including the production of the United Nations E-Government Survey, DPIDG aids Member States in enhancing digital governance, fostering digital inclusion, and building capacities to harness technology for development.

The [UN E-Government Survey](#), now in its thirteenth edition (2024), evaluates the digitalisation of public administration across all 193 Member States, providing valuable insights and benchmarking opportunities. The Survey highlights areas of progress, such as increased investments in resilient infrastructures, while also identifying regions facing persistent digital divides that need to be addressed to meet global targets for digital government transformation.

The Survey offers a model framework to guide Member States in planning, implementing, and assessing their digital government initiatives. Evaluations cover both [national](#) and [local](#) levels, supported by toolkits designed to facilitate these processes. Additionally, the Survey encourages Member States to contribute success stories to a [public compendium](#), fostering information exchange and collaboration.

A detailed repository of selected projects and best practices from the 2024 Survey, including national and local examples, can be found in [Annex II \(PNMA Repository\)](#). These cases provide valuable insights into effective strategies and innovative approaches for digital transformation.

## 6.4. UNESCO-IFAP

Despite the transformative potential of digital technologies, 2.6 billion people still remain offline. Among them, women, girls, and vulnerable populations are disproportionately affected. Furthermore, 1.2 billion persons with disabilities must be included in our digital strategies to ensure equitable access.

Digital technologies shape our lives and economies. Yet, for many women and girls in marginalised communities, the lack of digital connectivity exacerbates inequalities. IFAP's - Information for All Program of UNESCO - grass-roots efforts seek to reduce digital literacy disparities, ensuring that everyone can access and utilize these tools to their full potential.

IFAP has updated its [Strategic Plan for 2023-2029](#) to address the pressing challenges of our time. This plan prioritises bridging digital divides and promoting inclusion for women, girls, rural communities, and persons with disabilities. It ensures all individuals can create and access digital and AI-driven content in their local languages. By addressing inequalities both within and between countries and communities, IFAP aims to build inclusive, equitable, and sustainable knowledge societies.

A recent [survey](#)<sup>7</sup> from the Global Digital Inclusion Partnership (GDIP) of over 6,000 women in India, Mozambique, Nigeria, and the Philippines revealed the significant barriers they face in achieving meaningful connectivity, such as the lack of affordable high-speed internet and suitable devices. As emerging technologies like AI and quantum computing rapidly evolve, UNESCO calls on all partners to empower Member States and stakeholders in crafting policies that promote inclusive, equitable and sustainable digital societies. These policies must balance opportunities with the ethical and societal risks posed by these technologies.

IFAP actively addresses these gaps. Through collaborations with the International Federation of Library Associations and Institutions (IFLA), we have developed policy briefs on leveraging digital technologies while mitigating risks. In India, IFAP's project empowered 265 rural women with digital skills through the "Swawlamban" program. In Georgia, 60 women - including Ukrainian refugees - mastered digital technologies through targeted training. In Iran, women participants of IFAP training now proficiently use digital tools, exemplifying the transformative power of inclusive interventions.

Three main points of consideration for IFAP's policy development are

- Embrace everyone: digital technologies shape our lives and economies. In today's world, it is critical to ensure that everyone can learn how to use these new tools for receiving and creating information, especially women and girls living in marginalised communities.
- Do not forget the gender gap: the COVID-19 pandemic revealed that digital disparities are more likely to leave women at risk of disconnection. The lack of digital connectivity for women is exacerbating existing inequalities and restricting access to crucial digital resources.
- Work with them, where they are: IFAP is taking up the challenge and working on the ground to reduce gender and divide digital literacy disparities.

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<sup>7</sup> [Connected Resilience: Gendered Experiences of Meaningful Connectivity through a Global Pandemic](#). Global Digital Inclusion Partnership (GDIP), March 2024.

## 6.5. UNHCR

Connectivity is a lifeline for refugees. For the UN High Commissioner for Refugees - UNHCR, it is vital that forcibly displaced and host communities have accessible and affordable connectivity to support their digital inclusion, so that they can access increasingly digital humanitarian services, and so that they can use the internet for whatever they choose. It is equally vital that the humanitarian community has the connectivity it needs to transform digitally and to meet the needs of the communities they serve.

While connectivity is a matter broader than humanitarian response or UNHCR's own work, the agency acknowledges its importance in its [2022 Digital Transformation Strategy](#). This document committed UNHCR to:

- Gather baseline data on connectivity needs and enhance the mapping network availability;
- Develop stronger relationships with the private sector to deliver sustainable connectivity solutions;
- Strengthen links with development finance to ensure inclusion of forcibly displaced people in large scale infrastructure investment supported by development banks and multilateral organisations;
- Explore innovative and transformative models of extending connectivity in hard-to-reach refugee-hosting areas;
- Coordinate connectivity in emergency preparedness and response.

Work is ongoing within UNHCR to meet these commitments - much of it is taking place under the umbrella of the multistakeholder [Connectivity for Refugees Initiative](#), which is co-convened with the GSMA, ITU, and the Government of Luxembourg.

Case 4	<b><u>Connectivity for Refugees Initiative (CfR)</u></b>
<b>Location:</b>	CfR is a global initiative currently prioritising 15 countries across multiple continents.
<b>Timeframe:</b>	CfR was launched in 2023 and will run until 2030, aiming to advance the availability and affordability of connectivity for 20 million forcibly displaced people and the communities who host them.
<b>Funding:</b>	CfR currently receives direct funding from the Governments of Luxembourg and Spain, as well as from Cisco. Indirect funding is also provided from CfR initiative partners.
<b>Responsible institutions / partners / people:</b>	CfR was founded and convened by UNHCR, ITU, GSMA and the Government of Luxembourg in 2023, as a multi-stakeholder pledge at the Global Refugee Forum. Through the Global Refugee Forum (GRF) process the initiative expanded its base of supporters and implementers, including the Government of Spain and Cisco. Other stakeholders are invited to support the work of the initiative in any way they can.
<b>What is the problem?</b>	<p>Connectivity has never been more critical for people forced to flee. It supports access to potentially life-saving information, as well as education, livelihoods, leisure and hobby activities, and enhanced humanitarian protection. Forcibly displaced people are articulating, with urgency, the importance of connectivity as a basic and fundamental need and a right.</p> <p>However, refugees and the communities who host them are often disproportionately excluded from accessing connectivity services. This could be due to their rural locations having limited network access, poor financial resources pricing them out, restrictive regulatory environments, and much more.</p> <p>Whilst there have been several discreet initiatives supporting connectivity access for refugees and those who host them over the years, there has not been, until now, a global concerted effort to shift this at a systematic level.</p>
<b>Which were the actions taken to address the problem(s)?</b>	<p>To start with, the initiative was launched as a multi-stakeholder pledge within the auspices of the 2023 Global Refugee Forum, galvanizing commitments from a range of stakeholders around the world from multiple sectors.</p> <p>The initiative has grown into a delivery focused multi-stakeholder and cross-sectoral initiative, currently prioritizing interventions in 15 countries around the world, as well as global policy and influence interventions.</p> <p>At a country level, the initiative is working in partnership with a range of in-country stakeholder partners to develop evidence backed country plans which will expand the availability and affordability of connectivity services in refugee hosting areas. Going forward, from 2025 dedicated Connectivity for Refugees Coordinators will be recruited in a number of UNHCR offices to support project delivery and coordination amongst local stakeholders.</p> <p>At a global level, the initiative is working with range of global partners to continue advocating in key fora on the importance of connectivity in situations of forced displacement, to share lessons and evidence around successful approaches, coordinate amongst global stakeholders with an interest in this issue, and to support with connectivity responses to future displacement emergencies. Going into 2025, CfR will be seeking to expand the network of initiative partners.</p>
<b>Results / Impact / Lessons learned (what worked / remaining challenges)</b>	<p>At the Global Refugee Forum in 2023, the initiative solicited 55 pledges from 25 entities to take action in support of connectivity for refugees. This included pledges from the private sector, academia, non-profit organisations and 10 member states.</p> <p>The work of the initiative and its programming is still nascent, with major impact and results expecting to be identified in future years. The programming is building on the lessons learned from many years of focus on these topics by all of the initiative partners, and future lessons will be incorporated in public outputs.</p>



## 7. Looking Ahead

### 7.1. Connecting the dots with the IGF Community and IGF 2024 Themes

The PNMA Process is closely aligned with the IGF Community’s goals reflected in the subtheme “Advancing human rights and inclusion in the digital age”. The related workshops and other varied sessions and forums that took place in Riyadh strived to address the broader implications of access, including the quality of connectivity, the devices used, and the contextual opportunities available to users, particularly marginalised groups. Discussions revolved around how meaningful connectivity can serve as a critical tool to ensure that policies and initiatives promote equity and dignity, allowing all individuals - regardless of gender, socio-economic status, age, or geographic location - to participate in the digital landscape effectively.

Furthermore, the workshops also addressed the responsibilities of other stakeholders (e.g., governments and private sector) in deploying technology in a rights-compliant manner. This comprehensive approach is essential for fostering an environment where digital rights are recognised and protected, which is a key concern of the PNMA's mandate.

Overall, both the PNMA and the IGF Community’s activities are interconnected in their goal to create frameworks that support access, inclusion, and uphold human rights, ensuring that all individuals can benefit from the digital transformation.

### 7.2. Revisiting the 2023 PNMA Key Messages and Considerations

At the [2023 PNMA Plenary Session](#), which marks the end of the year’s deliberation cycle, many remarks were brought forward by the policy network on topics related to connectivity, digital inclusion, and capacity development. They reflect the community’s discussions, case analyses, and refer to issues for consideration and action via the IGF Secretariat. It was established that the PNMA community would base its follow-up activities taking into account those statements.

The issues described were revisited in 2024 and discussed in monthly meetings, as well as presented during this year’s Plenary Session. Key actions and/or possible solutions are explored in the cases included in this output report.

#### 7.2.1. On Connectivity

*“Universal and meaningful digital connectivity - the possibility for everyone to enjoy a safe, satisfying, enriching, productive and affordable online experience - is key for enabling digital transformation and achieving the SDGs. Achieving universal and meaningful digital connectivity requires policy makers to embrace the concept, set targets, and include it in national digital strategies and policy plans.*

*Good quality data on all aspects of universal and meaningful connectivity are essential to inform and monitor digital policies, highlight to policy makers where the digital divides in a country are, and how severe they are. In the absence of these data, policymakers should request these data from the relevant statistical agencies in the country and fund data collection.*

[...]

*We call governments and intergovernmental agencies to reinforce the relevance of universal and meaningful connectivity as a fundamental enabler of human rights and elaborate on this relevance for the protection, promotion, and enjoyment of civil and political rights, in addition to economic and social development.*



*We ask policy makers and governments from around the world to stand against the imposition of direct payment obligations to the benefit of only a handful of telecommunication operators.*

*Solving the connectivity gap will take a multistakeholder approach - much like the PNMA itself and the contributions coming from different venues at IGF.*

*Current issues are being solved through coalitions tackling regulatory and policy-making arenas, hence partnerships are key.*

*Data must be gathered to identify gaps: ITU, ICANN and other international organisations are looking at those solutions.*

*Innovative financing approaches need to be made to support and build networks, ccTLDs and Data Centres”.*<sup>8</sup>

### 7.2.2. On Digital Inclusion

*[...]*

*It is important that educational resources developed with public funds should be made available as OER. Investments from government and different stakeholders should be made to ensure the quality of teaching and learning experiences by providing inclusive and accessible OER for all learners.*

*It is important to have localised awareness of content to build a knowledge commons, with incentives in place for stakeholders to contribute and use such material.*

*Initiatives need to be led by the target communities, and the voices of those who will benefit from these initiatives have to be in the conversation. Best practices from other Open Solutions – Open Access, Open Data - can be useful for ensuring the interoperability of repositories and increased sharing of knowledge through OER.*

*Purpose-driven content means culturally-relevant content; it needs incentives and funding to be sustainable, from production to distribution*

*[...]*

*It is not only necessary to include youth people online, but also to hear them in a way that is meaningful and can be included in the final decision-making process. Regarding women and gender diverse people, it is necessary to understand that access is not enough, there are variables and intersectionalities in the offline spaces that translate into the online spaces reproducing these inequalities and affectation. Therefore, there must be strong ccTLDs and cybersecurity matters to ensure gender digital inclusion and combat gender-based violence online.*

*Accessibility for persons with disabilities is also a share of the work around digital inclusion; divides can only be overcome when the Internet is available to all. On a similar note, inclusion needs to contemplate the illiterate and the diversity of languages online.*

*Technology design, development, implementation, and use, as well as the design of policies, must include young people, women, and gender-diverse people at all stages to ensure not only inclusion and representation, but also diversity and real impact in the technologies we want. Again, multistakeholderism is key to addressing the rights of young people, women and gender diverse people online. Only through this can we envision an Internet that is truly inclusive and successful”.*<sup>9</sup>

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<sup>8</sup> [IGF 2023 PNMA Output Report](#), pp. 41-42.

<sup>9</sup> *Idem*, pp. 42-43.

### 7.2.3. On Capacity Development

*“Technical skills are needed to understand emerging technologies and make them address and offer solutions.*

*Digital skills are needed to ensure quality services and address cybersecurity challenges. Likewise, thorough statistics are needed to determine skills needed to achieve meaningful access and use.*

*Training the trainers with localised information/data and perspectives is critical. Technical capacity support should also benefit from this.*

*Finally, a holistic approach on capacity development is key to achieve sustainable meaningful access”.*<sup>10</sup>

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<sup>10</sup> [IGF 2023 PNMA Output Report](#), pp. 43.

## 8. 2024 IGF PNMA Plenary Session and Process: key messages and concluding remarks

The PNMA Plenary Session focused into two aspects: the traditional highlights of meaningful access success stories - this time with focus on the Arab region -, and the role of meaningful access in the proper setup, use, and reporting of crisis response mechanisms (e.g., alert and emergency systems connected to natural disasters). Entitled “**Eight possible ways to conciliate ‘access’ with ‘meaningful’**”, eight speakers from varied stakeholder groups presented their cases or best practices to the audience, highlighting their wins and next steps for scaling their results. The session was moderated by the PNMA co-chairs and had Mr. Vint Cerf as special guest. PNMA members assisted with the online and offline moderation. Here are their credentials and activities:

**Onsite Moderation:** Hon Alhagie Mbow (MAG) and Mr. Giacomo Mazzone (independent), co-chairs PNMA

**Online/Offline Q&A Moderation:** Ms. Judith Hellerstein and Mr. Roberto Zambrana (PNMA Members)

**Special Guest [remote]:** Vint Cerf - Leadership Panel

**Speakers and Cases:**

- [remote] Ms. Syeda Shafaq Karim, Director (Wireless Licensing), Pakistan Telecom Authority / Pakistan’s [Digital Gender Inclusion Strategy](#)
- Prof. Mohamed-Slim Alouini, Al-Khwarizmi Distinguished Professor of Electrical and Computer Engineering; [UNESCO Chair in Education to Connect the Unconnected](#) at the King Abdullah University of Science and Technology (KAUST), Saudi Arabia / [Airborne 5G communications](#)
- Mr. Martin Schaaper, Senior ICT Analyst, ICT Data and Analytics Division, International Telecommunication Union (ITU) / [Universal and Meaningful Connectivity](#) yearly update
- [video message] Mr. Oscar León, CITEC, Organization of American States (OAS)
- Mr. Talant Sultanov, Chair and Co-Founder, Kyrgyz Internet Society (ISOC Kyrgyz Chapter); Policy Advocacy Advisor, Global Digital Inclusion Partnership (GDIP) / [Low-Cost Weather Stations in Kyrgyzstan’s Challenging Terrain](#)
- Mrs. Lina Viltrakienė, Ambassador-at-large for Economic and Digital Diplomacy, Ministry of the Foreign Affairs of Lithuania / No One Left Behind - [Digital literacy for the elderly](#)
- Mr. Bobby Bedi, Content Flow Studios FZ LLC / Meaningful access to local communities via media

The Plenary started with Vint Cerf’s remarks that “access that isn’t useful can’t be meaningful”. He concentrated his statement on the importance of proper measurement of said access - considering security, utility, affordability, and accessibility - and on the good work that the PNMA has been doing on the topic. As a yearly process, the policy network can timely follow discussions and respond to quick changes in technology. As Chair of the Leadership Panel, Vint Cerf stated that a message to the UN Secretary-General on the permanence of IGF, regarding the upcoming WSIS, is being prepared: “Our work is not done. Our work continues to be extremely important, and I believe that we should persist, beyond the WSIS+20 timeline”.

Following such timely remarks, the speakers presented their cases to the audience. It is worth noting common key challenges identified by all of them:

- Persistent digital divide in gender, geography, and socioeconomic status;
- Inadequate data to assess and monitor the progress of digital inclusion efforts;
- Lack of affordable and reliable infrastructure in remote and rural areas.

In addition to such implementation issues, the audience raised concerns during the Q&A that involved funding; cybersecurity risks associated with expanded digital inclusion; and stakeholder accountability. The importance of involving youth and marginalised voices in policymaking was brought up by a participant.

Similarities in strategies and solutions were also observed amongst the featured cases. Each speaker highlighted the importance of having localised, targeted data that allows multistakeholder models to flourish, aiming at a collaborative implementation. This ensures proper measurement of meaningful connectivity, as well as an effective identification of underserved populations - launching tailored, culturally-relevant programs to them.

The Plenary Session ended with the agreement that meaningful access needs a holistic approach to its success. It also requires affordability, reliability and relevance for users. Building a digital transformation strategy needs to include the target groups as well. A complete version of the PNMA Plenary Report is available in [Annex III](#).

The discussions in Riyadh close the 2024 PNMA Process on a good footing: this output report reflects the goals and priorities defined by the community and pinpoints to policy and practice to solve them. At the end of this yearly commitment, the Policy Network on Meaningful Access' key takeaways are:

- Meaningful access is a concept and practice rapidly expanding across all regions; as recognised by the approved Global Digital Compact back in September, 2024, this is the right way to ensure connectivity through the provision of content in local languages, and establishing services that actually improve the community's livelihoods.
- A “whole of society approach” while dealing with meaningful access is essential: connectivity, digital inclusion, and capacity development goals may only be achieved by multistakeholder cross-collaboration and multidisciplinary operating lenses.
- Reliable measurement tools are needed: after many years of discussing policy loopholes, it is now clear that reliable tools to frequently measure where the issues persist are still in demand, as well as to assess policy effectiveness. Alternative solutions for such measures, beyond direct regulation, can be explored in order to avoid unnecessary burdens.
- Access is not possible without affordability: the price of access (of services, devices, and infrastructure) persists as one of the main barriers to connectivity. This needs to be urgently addressed if we really want the other half of humanity to join the Internet.
- Good practices' acknowledgment: the success cases raised by the PNMA during its operation years – collated both in its Repository and presented at the Annual Meetings – shall be proactively promoted by the IGF and the Leadership Panel, throughout regions and institutions, so their impact is amplified.

The Policy Network on Meaningful Access reaffirms its commitment to the multistakeholder public debate on Internet governance; offers itself as a model for the implementation of the GDC built on policies based on best practices; and welcomes new likeminded partners to build together the future that will be defined during the ongoing WSIS+20 and IGF+20 processes.

## References

- Airborne 5G Communications. <https://theconversation.com/a-third-of-the-worlds-population-lacks-internet-connectivity-airborne-communications-stations-could-change-that-234986>
- Australia's Be Connected Initiative. <https://beconnected.esafety.gov.au/>
- Communications Regulatory Authority (CRA) of Lithuania. <https://www.rrt.lt/en/cra-launches-a-project-to-reduce-the-digital-exclusion-of-seniors/>
- Connected Resilience: Gendered Experiences of Meaningful Connectivity through a Global Pandemic. GDIP. <https://globaldigitalinclusion.org/2024/03/14/connected-resilience-gendered-experiences-of-meaningful-connectivity-through-a-global-pandemic/>
- Connectivity for Refugees Initiative. <https://refugeeconnectivity.org/>
- G20 DEWG declaration. <https://www.gov.br/mcom/pt-br/acao-a-informacao/governanca/governanca-de-tic-1/documentos-g20/p1-g20-dewg-brasil-2024-umc.pdf/view>
- GSMA Mobile Gender Gap Report 2024. <https://www.gsma.com/r/gender-gap/>
- Guidelines on Indicators and Metrics for Universal and Meaningful Connectivity. <https://cetic.br/pt/publicacao/universal-and-meaningful-connectivity-a-framework-for-indicators-and-metrics/>
- Inclusive Internet Index. The Economist. <https://impact.economist.com/projects/inclusive-internet-index>
- Information to All (IFAP) Strategic Plan 2023-2029. <https://unesdoc.unesco.org/ark:/48223/pf0000386173>
- ITU - Universal and Meaningful Connectivity. <https://www.itu.int/itu-d/sites/projectumc/>
- Low-Cost Weather Stations in Kyrgyzstan's Challenging Terrain. <https://isoc.kg/news/low-cost-weather-stations-kyrgyzstan-research/>
- Meaningful Connectivity: Measurement Proposals and the Portrait of the Population in Brazil. [https://cetic.br/media/docs/publicacoes/7/20240606120030/sectoral\\_studies-meaningful\\_connectivity.pdf](https://cetic.br/media/docs/publicacoes/7/20240606120030/sectoral_studies-meaningful_connectivity.pdf)
- New Zealand's Digital Strategy. <https://www.digital.govt.nz/>
- Pact for the Future, Global Digital Compact and Declaration on Future Generations. [https://www.un.org/sites/un2.un.org/files/soft-pact\\_for\\_the\\_future\\_adopted.pdf](https://www.un.org/sites/un2.un.org/files/soft-pact_for_the_future_adopted.pdf)
- Pakistan Digital Gender Inclusion in ICTs Strategy. [https://www.pta.gov.pk/assets/media/digital\\_gender\\_inclusion\\_strategy\\_28-02-2024.pdf](https://www.pta.gov.pk/assets/media/digital_gender_inclusion_strategy_28-02-2024.pdf)
- República Dominicana. Conectividad significativa. [https://www.one.gob.do/media/ly5hkxs3/informe-conectividad-significativa\\_.pdf](https://www.one.gob.do/media/ly5hkxs3/informe-conectividad-significativa_.pdf)
- Resolution 70/125, 16 December 2015: [https://unctad.org/en/PublicationsLibrary/ares70d125\\_en.pdf](https://unctad.org/en/PublicationsLibrary/ares70d125_en.pdf)

- The Global Findex Database. The World Bank. <https://www.worldbank.org/en/publication/globalindex>
- The Government of Canada's Digital Ambition. <https://www.canada.ca/en/government/system/digital-government/digital-ambition.html>
- UA Day - ICANN. <https://www.icann.org/ua-day-en>
- UN Compendium of Digital Initiatives. <https://publicadministration.desa.un.org/good-practices-for-digital-government/compendium>
- UN E-Government Survey. <https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2024>
- UN Local E-Government Toolkit. <https://publicadministration.un.org/egovkb/en-us/About/E-Government-at-Local-Level/Local-E-government-Toolkit>
- UN National E-Government Toolkit. <https://publicadministration.un.org/egovkb/en-us/About/Overview/National-E-Government-Toolkit>
- UNDP Gender Inequality Index. <https://hdr.undp.org/data-center/thematic-composite-indices/gender-inequality-index#/indicies/GII>
- UNHCR 2022 Digital Transformation Strategy. <https://www.unhcr.org/digitalstrategy/wp-content/uploads/sites/161/2023/07/Digital-Transformation-Strategy-2022-2026-UNHCR-Web.pdf>
- Universal Acceptance Steering Group. <https://uasg.tech/>
- WEF's Global Gender Gap Report. <https://www.weforum.org/publications/series/global-gender-gap-report/>

## Annexes

### Annex I – 2024 PNMA Work Plan

- Link: [https://www.intgovforum.org/en/filedepot\\_download/256/27883](https://www.intgovforum.org/en/filedepot_download/256/27883)

### Annex II – PNMA Repository / Literature List

- Link: <https://intgovforum.org/en/content/pnma-repository>

### Annex III – 2024 IGF PNMA Plenary Session

- Session Details: <https://intgovforum.org/en/content/igf-2024-best-practice-forum-bpf-and-policy-networks-pn-sessions>
- Transcript: <https://intgovforum.org/en/content/igf-2024-day-2-plenary-main-session-policy-network-on-meaningful-access-raw>
- Recording: <https://webtv.un.org/en/asset/k1b/k1br5aupz4>
- Report: [https://intgovforum.org/en/filedepot\\_download/256/28586](https://intgovforum.org/en/filedepot_download/256/28586)

### Annex IV – 2023 IGF PNMA Output Report

- Link: [https://www.intgovforum.org/en/filedepot\\_download/277/26685](https://www.intgovforum.org/en/filedepot_download/277/26685)

### Annex V – 2022 IGF PNMA Output Report

- Link: [https://www.intgovforum.org/en/filedepot\\_download/255/24314](https://www.intgovforum.org/en/filedepot_download/255/24314)