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**DRAFT**

**ITU Council Contribution to the High-Level Political Forum on Sustainable Development (HLPF)**

ECOSOC functional commissions and other intergovernmental bodies and forums are invited to provide substantive inputs to the 2017 HLPF showcasing the intergovernmental body’s contribution towards the 2030 Agenda in general, and particularly for the Sustainable Development Goals (SDGs) and respective targets that are most relevant to the intergovernmental body’s mandate.

The following template, inspired by the report of the Secretary-General on global follow-up and review of the 2030 Agenda for Sustainable Development (A/70/684), could be considered in providing inputs.

Contributions can be sent no later than **28 April 2017** to the Secretariat’s e-mail pietracci@un.org

**Submission Template**

1. **An assessment of the situation regarding the principle of "ensuring that no one is left behind" at the global level:**

ITU is **committed to connecting all the world's people** – wherever they live and whatever their means. Through our work, we protect and support everyone's fundamental right to communicate. Access to affordable, reliable and secure telecommunication/ICT networks, including broadband, and to related services and applications, can facilitate economic, social and cultural development and implement digital inclusion through these means.

In pursuance of its mission, ITU annually monitors the digital divide, including the gender digital divide (see below), to assess and track who has access, where, to information and communication technologies (ICTs) and telecommunication networks.

ICTs are recognised as cross-cutting enablers of sustainable development. Increased Internet use can reduce poverty and create jobs through improved efficiency and transparency, applications and services, such as e-agriculture and digital finance, help end poverty and hunger as well as monitor and mitigate climate change and sustaining our natural resources.

Over the last ten years, there has been substantial growth in access to ICTs and their use, particularly mobile phones and the Internet, while the last six years have seen major growth in the availability and use of broadband networks and services. The percentage of individuals using the Internet has increased steadily from 17.6 per cent in 2006 to an estimated 47.1 per cent by end of 2016. The same applies to households that have Internet access at home - which grew from only 20.5 per cent in 2006 to an estimated 52.3 per cent by end of 2016.

The mobile sector continues to grow dynamically, with mobile-cellular penetration increasing from 41.7 per cent in 2006 to almost 100 per cent by the end of 2016. Mobile-broadband subscriptions grew more rapidly than fixed-broadband subscriptions, in the last six years, fixed-broadband penetration increased from 7.6 to almost 12.0 per cent, while mobile-broadband penetration saw a four-fold increase to reach an estimated 49.4 per 100 inhabitants. This indicates that the spread of Internet access has been largely driven by mobile technologies. Around 84 per cent and 53 per cent of the population are now within reach of a 3G and LTE mobile-broadband signal, respectively.

Despite the high growth rates, LDCs are starting from a much lower baseline and therefore the progress in absolute terms is smaller – with an estimated 11.1 per cent of households having access to the Internet at the end of 2016 underscoring the importance of SDG9.c which aims, in line with ITU’s Connect 2020 Agenda, for significant progress in the number of people connected in LDCs by 2020.

1. **The identification of gaps, areas requiring urgent attention, risks and challenges:**

Broadband-enabled services and ICT applications offer new opportunities for interaction among people, for sharing the world's knowledge resources and expertise, for transforming peoples' lives and for contributing to inclusive and sustainable development across the world. Developing telecommunication/ICT infrastructure in rural and remote areas and ensuring the availability of affordable and accessible ICTs is a key priority for many countries, for which effective, innovative and affordable solutions need to be identified.

In adopting the Connect 2020 Agenda, at the ITU 2014 Plenipotentiary Conference, ITU Member States committed themselves to the shared vision of “an information society, empowered by the interconnected world, where telecommunications/ICTs enable and accelerate social, economic and environmentally sustainable growth and development for everyone”.

The 2016 edition of the ITU’s annual Measuring the Information Society Report, features key ICT data and benchmarking tools to measure the information society, including the ICT Development Index (IDI), and also includes an analysis of various aspects of the Connect 2020 goals and targets. ITU has developed the ICT Regulatory Tracker that covers over 150 countries for a period of 15 years, and showcases regulatory progress within the same country, amongst regions and worldwide under four key topics: regulatory authority, regulatory mandate, regulatory regime and competition framework.

ITU has developed a set of tools to assist developing countries to assess and improve their access and use of information and communication technologies:

1. The Spectrum Management System for Developing Countries (SMS4DC) which manages the limited radio spectrum resources has 68 users worldwide.
2. 9 countries were assisted in 2015 and 2016 Spectrum Management Master Plan
3. ITU’s Conformity and Interoperability programme, designed to increase market opportunities for ICT equipment and encourage global integration and trade, provided support (assistance, guidelines, assessment studies, MRA, or training) to over 80 countries since 2013.
4. Migration to Digital Broadcasting activities reached more than 50 countries from 2011 to 2016.
5. Assistance on upgrading to Internet Protocol Version 6 (IPv6) and with Internet Exchange Points (IXPs) has also been provided.
6. Info Highway paths are critical to increase access to the last mile, the ITU Interactive Transmission Map is a unique data mapping platform that takes stock of national backbone connectivity (optical fibers, microwave links, and satellite earth stations) as well as of other key metrics of the ICT sector. Currently the Map contains more than 2.3 billion of networks drawn; 23,895 transmission links; 16,266 nodes; and 374 operators.

***Access and use of Information and Communication Technologies***

The spread of 3G and 4G networks across the world has brought the Internet to more and more people. In 2016, mobile-broadband networks covered 84 per cent of the world’s population, yet with 47.1 per cent Internet user penetration, the number of Internet users remains well below the number of people with network access. While infrastructure deployment is crucial, high prices, poor quality of service and other barriers are serious obstacles to getting more people to enter the digital world. Affordability is the main barrier to mobile uptake. The mobile device is the main cost barrier along with, to a lesser extent, credit recharge.

The increasing deployment of wireless-broadband networks in rural areas of developing countries and the replacement of feature phones by smartphones are expected to accelerate the pace of growth and connectivity in developing countries.

However, continued and significant divide exists between regions, between developed and developed countries, and between the majority of developing countries and LDCs. While penetration rates for mobile-cellular subscriptions are now high in all regions, and exceed 100 subscriptions per 100 inhabitants in most of them, they are still significantly lower in the Asia-Pacific and Africa regions.

***Affordability of ICTs***

Looking at the evolution of mobile-cellular and fixed-broadband prices at the global level, there was a significant drop in fixed-broadband prices over the period 2008-2015, despite the fact that average fixed-broadband prices are still relatively unaffordable in a number of LDCs. Mobile-cellular prices continued to fall during the period 2008-2015, and more steeply than in previous years.

The difference in the affordability of mobile-cellular services between developed and developing countries fell steadily and significantly during the period 2008-2015, followed by a slowdown in the period 2012-2015. On the other hand, the difference in the affordability of mobile broadband between developed and developing countries narrowed from 2013 to 2015.

***The gender digital divide***

The gender digital divide has been tracked by ITU in developed and developing countries in 2013 and again in 2016. In 2016, female Internet user penetration is 12.2 percent lower than males. The gap is lowest in developed countries (at 2.8 per cent in 2016), significantly higher in developing countries (16.8 per cent in 2016), and highest in LDCs (30.9 per cent in 2016).

Significantly, the global gender digital divide has actually widened by 1.2 per cent since 2013, equivalent to a total gap of some 257 million more men online than women and a significant gap in terms of female empowerment, and everything we know about the correlation between better maternal education and improved education rates and school completion rates for the children in families with better educated mothers.

In addition, there are far fewer women than men who study science, technology, engineering and math (STEM) or who work in jobs requiring ICT skills such as computer scientists, computer engineers and software, website and mobile apps developers. Given the global shortage for people with STEM skills, there are unfilled jobs that could be performed by qualified women, but young women and girls are often discouraged from entering these fields. Moreover, given the importance that ICTs play in our daily lives, it is necessary that ICTs be developed by both women and men to address their daily challenges.

**Digital Financial Services**

In recent years, ICT has been instrumental to developing new and more affordable digital financial products that better respond to the needs of unbanked people in the world today, most notably rural and remote communities. Significant challenges remain to quickly and effectively leverage ICT to drive full financial inclusion. The full potential of mobile money has not yet been realised, with two billion people in developing countries still lacking a viable alternative to the cash economy and informal financial services, 1.6 billion of whom have access to a mobile phone. Yet, the industry has found it challenging to scale services for the unbanked mostly due to regulatory frameworks being out of step.

To address this the ITU brought together financial and telecommunications regulators at the global level to address regulation and supervision challenges. In addition to financial and telecommunications regulators, the ITU convened private-sector stakeholders, consumer advocates, digital finance technical experts, development partners, and other key DFS stakeholders to:

1. **Increase and formalize** the collaboration between financial and telecommunications regulators with respect to digital financial services;
2. **Identify** key issues limiting the development of safe, enabling DFS ecosystems;
3. **Analyze** how these issues have been addressed in practice and exchange information on best practices; and
4. **Develop** policyrecommendations for regulators and other stakeholders on how to approach these issues in their countries.

The main outcomes of this work are directly linked to the SDGs:

* ***SDG 1: No poverty—***“By 2030, ensure that all men and women, in particular the poor and the vulnerable, have…access to financial services including microfinance”.
* ***SDG 5: Gender equality***—“access to…. financial services” for women.
* ***SDG 9****:* ***Industry, innovation and infrastructure*—**byproviding small enterprises with access to financial services (digitizing payments thereby reducing the need for cash-in and cash-out).
* ***SDG 10: Reduced inequalities—***reducing the costs for remittances.

**ICT accessibility for persons with disabilities**

The importance of accessibility was recognized when United Nations Member States adopted in 2006 the *United Nations Convention for the Rights of Persons with Disabilities* (UNCRPD). Article 9 of UNCRDP requires that States Parties take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment, to transportation**, to information and communications, including information and communications technologies and systems**, and to other facilities and services open or provided to the public, both in urban and in rural areas.

Article 9 calls for States Parties to:

* Promote access for persons with disabilities to new information and communications technologies and systems, including the Internet
* Promote the design, development, production and distribution of accessible information and communications technologies and systems at an early stage, so that these technologies and systems become accessible at minimum cost

Article 9 obligations require countries to develop policies and regulations that require ICT accessibility and offer training to ICT service providers, vendors, government website developers and disabled persons organization on ICT accessibility for persons with disabilities. Likewise, Art. 18 of the Tunis Commitment, under the auspices of the World Summit on the Information Society (2005) strives “to promote universal, ubiquitous, equitable and affordable access to ICTs, including universal design and assistive technologies, for all people, especially those with disabilities, everywhere, to ensure that the benefits are more evenly distributed between and within societies.”

Countries that have adopted ICT accessibility policies and which use government purchasing power by requiring accessible ICTs in their calls for tender have shown the greatest progress in ensuring that accessible ICTs are available for persons with disabilities to ensure that persons with disabilities can live independently and participate fully in all aspects of life.

ITU has developed a Model ICT Accessibility Policy to support its members meet their United Nations Convention for the Rights of Persons with Disabilities (UNCRPD) Article 9 obligations on ICT Accessibility. ITU has provided training to its members on ICT policy and regulatory framework development, and offered technical assistance to the East Africa Community and Egypt in developing ICT accessibility policies. In addition, ITU offers training on web accessibility designed for governments, web developers and disabled persons organizations as well as training on the public procurement of accessible ICTs.

**Cybersecurity**

With ICTs increasingly underpinning a broad range of human activities, modern societies have developed a growing dependency on ICTs in their daily operations and management of critical infrastructure. However, this creates risks that need to be managed at all levels – national, regional and international.

In the Post-2015 era, ICTs are expected to have an enabling role in all aspects of socioeconomic development, as it was also made clear with the adoption of Goal 9.c ”Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020”. However such development cannot be sustainable without ensuring confidence and security in the use of ICTs, as lack of trust could hinder the adoption of ICTs and minimize their positive impact in countries’ development process.

ITU as the facilitator of WSIS Action Line C5 on “Building confidence and security in the use of ICTs” contributed to the [WSIS-SDG Matrix](https://www.itu.int/net4/wsis/sdg/Content/wsis-sdg_matrix_document.pdf), which elaborates on areas of the SDG framework, where security in the use of ICTs could foster and accelerate implementation. These include inter alia access to electronic financial services (1.4), access to online information as part of education (4.1, 4.3, 4.5), empowerment of women through ICTs (5b), development of resilient infrastructure and sustainable economic growth (7.1, 7a, 7b, 8.1, 9.1, 17.8), transition to Smart Cities (11.3, 11b), and end of child violence and exploitation, especially in the online world (16.2).

Increasing ICT access alone should therefore not be the end-goal. Ensuring that ICT access can be sustainable and secure should further be one of the key priorities of all actors involved. Based on ITU’s Global Cybersecurity Agenda (GCA) launched in 2007 a holistic approach is necessary for promoting ICT security, building on five strategic pillars: Legal Measures, Technical & Procedural Measures, Organizational Structures, Capacity Building and International Cooperation.

The GCA put forward an international framework for collaboration, which has been guiding ITU’s Cybersecurity work since its launch. The following are some *examples* from ITU’s work:

* **Child Online Protection (COP) Initiative:** ITU launched the Child Online Protection (COP) Initiative in November 2008 as a multi- stakeholder effort within the Global Cybersecurity Agenda (GCA) framework. The initiative brings together partners from all sectors of the global community to create a safe and empowering online experience for children around the world. In cooperation with diverse stakeholders, ITU has been providing guidance and building capacity in various countries - involving policy makers, parents, educators and children.
* **National CIRT Programme:** ITU’s National CIRT Programme is helping countries build their national capacity in responding to cyber-attacks and protecting their national critical infrastructure from cyber- threats. ITU provides assistance to its Member States in four phases: a) Assessment phase of cybersecurity readiness, b) Design phase: identifying services, resource requirements etc., c) CIRT establishment phase; d) Improvement/Enhancement phase (including through the organization of Cyber-exercises (Cyber-drills)).
* **Global Cybersecurity Index:** The Global Cybersecurity Index (GCI) is a multi- stakeholder initiative to measure the commitment of countries to cybersecurity within five categories: Legal Measures, Technical Measures, Organizational Measures, Capacity Building and Cooperation.
* **National Cybersecurity Strategy (NCS) Initiative:** ITU has partnered with some 15 entities who have been active in implementing cybersecurity strategies and devising models, in order to produce a reference guide on devising a national cybersecurity strategy. The reference guide will represent a single resource for any country to gain a clear understanding of the purpose, content and development of a national cybersecurity strategy.
* **Technical Standards:** The ITU Standardization Sector through its Study Group 17 “Security” has produced over 330 Recommendations (Standards) in the area of cybersecurity, anti-spam, identity management, X.509 certificates, information security management, ubiquitous sensors networks, telebiometrics, IPTV security, virtualization security towards cloud computing security, and security architecture and application security, often in cooperation with external SDOs and Consortia.

 ICT applications, such as e-Government, e-Commerce, e-Education, e-Health and e-Environment, are enablers for sustainable development, as they provide an efficient channel to deliver a wide range of services, especially important to remote and rural areas. ICT applications facilitate the achievement of SDG targets, reducing poverty and improving health and environmental conditions in developing countries. Given the right approach, context and implementation processes, investments in ICT applications and tools can result in productivity and quality improvements. In turn, e-applications may liberate technical and human capacity and enable greater access to basic services.

**Climate change**

Telecommunications/ICTs, play a key role in providing solutions to the major challenges related to climate change and sustainable development. ICT is fundamental for monitoring climate change, mitigating and adapting to its effects and assisting to further advance the implementation of SDGs. Developing green energy standards and tracking e-waste are just two examples of how ITU is promoting innovative solutions that can support a sustainable future for all.

**Smart Sustainable Cities**

The New Urban Agenda, the outcome document agreed upon at the UN Conference on Housing and Sustainable Urban Development (Habitat III) in October 2016, presents guidelines to address the challenges of rapid urban growth and offers a new model of urbanization. In order to deal with increasing urbanization trends, smarter and more sustainable means of **managing urban complexities**, **reducing urban expenditure**, **increasing energy efficiency** and **improving the quality of life for urban residents**, have to be developed. In this regard, the development of Smart Sustainable Cites (SSC) and the utilization of modern technologies for everyday urban life will be crucial. ICTs have a key role in SSC as it acts as the platform for the aggregation of information and data to help enable an improved understanding of how the city is functioning in terms of resource consumption and services.

1. **Valuable lessons learned on eradicating poverty and promoting prosperity:**

Today, over 40 countries include broadband in their universal service or universal access definitions, although there are regional differences. “Ensuring that no one is left behind” has a specific meaning in telecommunications – that of ***universal access and service (UAS***). In telecommunications, the marginal costs of connecting the last subscribers to be connected escalate quickly, as these include people living in remote and hard-to-reach areas. The key to unlocking UAS lies in innovative investment and partnership solutions to connect the last 5-10% of subscribers.

Affordable access and availability of communications services requires an interplay between interdependent elements, including cross-sectoral collaboration focusing on supply as well as demand-side measures. According to ITU data, 75 percent of ITU Member States have some kind of UAS policy and regulations in place through: telecom policy and regulatory frameworks; National Broadband Plans; legal rights for citizens; Universal Service Obligations, Universal Access and Service Funds (USFs) or other forms of universal service financing mechanisms (PPPs, etc.); and/or some other combination.

The growth of Internet and broadband technologies highlights the link between ICTs and economic growth and social opportunity and brings into focus the increased importance of universal access to ICTs to achieve the SDGs.

Supporting Member States in addressing special needs of indigenous people to equitable access, use and knowledge of ICTs, based on the preservation of their heritage and cultural legacy contributes to leverage their social and economic community development and to promote, preserve and protect their indigenous cultural development.

Youth and children with access to information and communication technologies (ICTs) are coming of age as digital natives, the early adopters of ICTs and better positioned than their parents to harness the power of digital technologies in new and imaginative ways. Youth can only leverage the transformative power of ICTs when they have access to ICT services and are equipped with a range of digital skills. ICTs can enhance education, reduce youth unemployment and promote social and economic development.

Capacity building also refers to strengthening the human and institutional capacity of developing countries to adapt to an evolving ICT and telecommunication sector. Building broad telecommunication/ICT and digital literacy enables citizens to access and contribute information, ideas and knowledge to create an inclusive and sustainable information society.

Moreover, by managing spectrum resources, providing globally harmonized spectrum and standards, disseminating the related information, best-practices, and know-how, ITU is also enabling the development of:

* Broadband infrastructure throughout the world supporting the development of high quality, reliable, sustainable and resilient infrastructures accessible to all under affordable and equitable conditions.
* Mobile broadband and its wider penetration, thus permitting E-learning and E-health to become available throughout the world.
* Internet of Things (IoT), drones, radio navigation, meteorology and Earth-exploration satellite systems, thus contributing to the development and sustainability of E-agriculture.
* Intelligent Transport Systems (ITS), radio navigation-satellite systems and IoT, thus contributing to a safer world.
* Weather forecasting, Earth Exploration satellites, sound and television broadcasting and mobile networks, thus contributing to more accurate weather predictions, early detection of natural disasters, climate change monitoring and mitigation, timely information of populations and mitigation decisions, public protection and disaster relief, as well as search and rescue.
* Earth observation systems, thus supporting the monitoring and conservation of oceans, seas and marine resources for sustainable development. In particular, understanding the forces behind changing weather patterns requires mapping variations in ocean surface conditions worldwide and using the collected data to develop and run powerful models of ocean behaviour.
* Global Navigation Satellite Systems (GNSS), sea drones and satellite oceanic observations, increase scientific knowledge and sustainability. of oceans and marine resources.

By disseminating its outputs through on-line publications, seminars and workshops, ITU contributes to:

* Capacity building on information and communication technologies throughout the World.
* Enhance the use of enabling technologies, in particular information and communications technologies.
1. **Emerging issues likely to affect the realization of poverty eradication and achieving prosperity:**

The growing cost of providing even basic telecommunication services means that universal service has become even more challenging to achieve. A recent Broadband Commission study published in January 2016 estimated the cost of connecting the next 1.5 billion people with Internet access at around US$ 450 billion. The cost of connecting the total remaining 3.9 billion people without Internet access could be several multiples of this.

Soft measures encouraging the private sector to make ICTs accessible are not going to achieve all the expected results; mandatory legislations are also required. Policies that require government agencies to procure accessible ICTs are a proven force in ensuring that accessible ICTs are readily available in the countries that have such policies. Effective policies require a related standard to be used by procurers, manufacturers and service providers.

One of the key challenge is to contribute to enable developing countries to achieve smooth migration from analogue to digital broadcasting including terrestrial TV, mobile TV and sound broadcasting, and follow with the countries the post-transition activities like e.g. introducing new broadcasting services, allocation of the digital dividend. One particular aspect is to provide assistance on policy and regulatory frameworks for digital broadcasting and organising regional meetings for member states on the use of spectrum for broadcasting or other services.

There is a high mobile-network coverage reported in most countries, including the developing world.

In addition to 3G mobile broadband, mobile broadband networks based on LTE and other advanced technologies are being deployed and are now available in 70 per cent of countries worldwide. However, the availability of LTE broadband networks varies across development levels: LTE technologies have been deployed only in 38 per cent of LDCs, as against 58 per cent of developing countries and 91 per cent of developed countries.

This suggests that the speed and the quality enjoyed by mobile-broadband users may differ significantly across countries. In fact, in several developing countries, the quality of the basic mobile network may still be an issue.

1. **Areas where political guidance by the high-level political forum is required:**

The High-level Political Forum may wish to consider addressing the following key measures as a means of promoting access and use of ICTs, and in particular broadband, as a foundation for sustainable development:

1. Review and update regulatory frameworks for broadband
2. Review policy frameworks for IoT and Smart Sustainable Cities
3. Review and develop policies which ensure that ICTs are recognized as cross cutting enablers of all three pillars of sustainable development and deployed as a part of all SDG implementation strategies and tactics.
4. Encourage Investment by both the public and private sectors through investment incentives and promote Advanced Market Commitments for Rural Broadband Access, including through coordination with disabilities stakeholders, and other national entities involved and collaboration at the regional and international levels.
5. Adopt funding mechanisms to foster public and private investment in broadband, defining the policy and regulatory framework, goals and achievements expected, including making full use of Universal Service Obligations (USOs);
6. Consider infrastructure-sharing and other regulatory tools to foster continued investment and innovation;
7. Consider measures to make broadband more affordable;
8. Consider fiscal incentives including to reduce taxes and import duties on telecommunication/ICT equipment and services;
9. Promote training and measures to stimulate demand;
10. Stimulate innovation and development of applications and services, including by encouraging local innovation through strategic local hosting;
11. Promote Free Flows of Information;
12. Benchmark and Monitor Developments in Telecom and ICT.
13. Expand Digital literacy.[[1]](#footnote-2)
14. Technology Security and Privacy

The development of the Internet of Things (IoT) enables numerous desirable applications, such as e-agriculture and e-health. However the deployment of globally interconnected systems may require further studies and regulations on issues such as: data privacy, interoperability and standardization.

Thus political guidance may be required so that regulation adequately balances the benefits of innovation with the advantages of interoperability and standardization, and the collection of data with the protection of data and the privacy of the user.

The deployment of IoT is expected to connect an estimated 50 billion devices to the network by year 2020. IoT is a key enabler of the Information Society and offers an opportunity to transform city infrastructure, benefiting from the efficiencies of intelligent buildings and transportation systems, smart energy and water networks. For the effective deployment of IoT, standards are required to enable interoperability of IoT applications and datasets employed by various vertically oriented industry sectors IoT systems.

ITU and the United Nations Economic Commission for Europe (UNECE) have developed an internationally agreed definition for a smart sustainable city (SSC) and launched the United for Smart Sustainable Cities (U4SSC) initiative on 18 May 2016. The U4SSC develops a set of international key performance indicators (KPIs) for smart sustainable cities, and advocates for public policies to encourage the use of innovative urban technologies and tools, including ICTs, to facilitate the transition to smart sustainable cities.

1. **Policy recommendations on ways to accelerate progress in poverty eradication:**

ICT regulators and policy makers as well as industry and the wider community of stakeholders recognize that ICTs play a crucial role in the achievement of the SDGs, and that issues such as affordability and availability, including with regard to creating incentives for innovation and entrepreneurship, must be addressed at the policy level in both a comprehensive and integrated manner. The issues are complex and multi-faceted, but what is clear is that there is an interdependence of targets and goals and that ICTs have a pivotal role to play to achieve the SDGs.

The ITU **2013 GSR Best Practice Guidelines** recognized that governments should work collaboratively with all stakeholders and in particular with the industry and regulators to facilitate and support the development of infrastructure and provision of services, particularly in rural, un-served and underserved areas. A range of policy options are available to maximize access to ICTs, and to capitalize on its benefits. These policy options can broadly be divided into both supply and demand sides’ measures, although some policy measures can promote both – for example, the adoption of a National Broadband Plan promoting development of content and human capacities; monitoring; and tax reductions to reduce overall tariffs and promote affordability. From the supply side, predictable and stable regulations are needed to maintain effective competition and drive the development of innovative services.

In particular, regulators are encouraged to modernize Universal Service programs to extend broadband to the un-served and underserved, notably through a redefinition of the scope of universal service. From the demand side, measures such as deferring or altogether discouraging heavy or special taxes on ICT equipment and services, encouraging research and development, and endorsing special programs to stimulate e-literacy, will result in higher penetration, increased demand, better social inclusion and contribute to national economic growth. Governments and regulators have a key role to play in promoting and increasing awareness of the use and benefits of ICTs[[2]](#footnote-3). Focus on STEM skills development such as coding skills where jobs are currently going unfilled due to a lack of qualified workers.

To promote ICT accessibility for persons with disabilities, countries should put in place mandatory ICT accessible procurement policies and standards with an enforcement mechanism. This should be accompanied by raising awareness, providing technical assistances to users, building capacity of public procurers and including ICT accessibility as a competition criteria in procurement processes so that products are not evaluated only on price. It is also important to include ICT accessibility requirements in foreign development aid and to have accessibility standards linked to the provision of development aid and international cooperation. Harmonized international standards will ensure that ICTs will be accessible by default, lead to lower prices and innovative solutions. They could also consider the following specific policy measures:

1. develop, within their national legal frameworks, guidelines or other mechanisms to enhance the accessibility, compatibility and usability of telecommunication/ICT services, products and terminals;
2. encourage to develop national policies and regulatory frameworks for utilizing the USOFs to enhance the accessibility of telecommunication/ICT services and products;
3. introduce telecommunication relay services to enable persons with hearing and speech disabilities to utilize telecommunication services that are functionally equivalent to telecommunication services for persons without disabilities;
4. implement international standards on ICT accessibility and support self-representation by persons with disabilities in international standardization process so as to ensure their experiences, views and opinions are taken into account;
5. encourage the provision of differentiated and affordable service plans for persons with disabilities in order to increase the accessibility and usability of telecommunications/ICT for these persons;
6. encourage the development of applications for telecommunication products and terminals to increase the accessibility and usability of telecommunications/ICT for persons with visual, auditory, verbal and other physical and mental disabilities.
1. <https://www.itu.int/ITU-D/treg/Events/Seminars/GSR/GSR11/consultation/GSR11_BPG_E.pdf> [↑](#footnote-ref-2)
2. <http://www.itu.int/en/ITU-D/Regulatory-Market/Documents/GSRBestPracticeGuidelines_2013.pdf> [↑](#footnote-ref-3)