HIGH-LEVEL TRACK OUTCOMES AND EXECUTIVE BRIEF

Version 1.3 (work in progress)

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Coordinated by: ITU

Organized by: ITU, UNESCO United Nations Educational, Scientific and Cultural Organization, UNITED NATIONS UNCTAD, UNDP

Table of Contents

1. Introduction

High-Level Policy Sessions

At the WSIS Forum 2017, moderated High-Level Policy Sessions of the High-level Track (HLT) took place on the 13 and 14 of June. During these sessions, moderated Policy Sessions with high-ranking officials of the WSIS Stakeholder community, representing the Government, Private Sector, Civil Society, Academia and International Organizations were held.

2. WSIS Forum 2017: Chairman

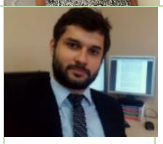
H.E. Mr. Jean Philbert Nsengimana
Minister of Youth and ICT
Rwanda

World Summit on the Information Society

3. Moderation: High-level Track Facilitators (HLTFs)

All the High-level policy sessions were moderated by High-level Track Facilitators nominated by the different stakeholder types, i.e Civil Society, Academia, Private Sector and Technical Community.

Session No.	Picture	Name	Designation	Organization	Country	Type of Stakeholder
ONE WSIS Action Lines and the 2030 Agenda		**Dr. Jovan Kurbalija**	Founding Director	Diplo Foundation	Switzerland	Civil Society
TWO Access to Information and Knowledge for All		**Dr. Yury Grin**	Deputy Director General	Intervale	Russia	Private sector
THREE WSIS Action Lines and the 2030 Agenda		**Ms. Reine Essobmadje**	CO-Founder	Digital Coalition	Cameroon	Civil Society
FOUR Access to Information and Knowledge for All		**Mr. Justin Caso**	Technology Policy and International Affairs Senior Advisor at the Institute of Electrical and Electronics Engineers (IEEE)	IEEE	USA	Technical Community

FIVE Bridging Digital Divides		**Dr. Nitya Khemka**	Affiliate Lecturer	Center for Development Studies, Fellow Clare Hall, University of Cambridge	UK	Academia
SIX Knowledge Societies, Capacity Building and e-Learning		**Ms. Jessica Dheere**	CO-Founder and CO-Director	Social Media Exchange [SMEX]	Lebanon-APC MENA	Civil Society
SEVEN Bridging Digital Divides		**Dr. Habib Kammoun**	- Chairperson of the IEEE Tunisia Section. - Leader in the REGIM-Lab (Research Groups in Intelligent Machines)	University of Sfax	Tunisia	Academia
EIGHT Applications and Services		**Ms. Gayatri Khandhadai**	Project Coordinator	Association for Progressive Communications [APC]	India-Asia	Civil Society
NINE Enabling Environment		**Mr. André Lucas Fernandes**	- High Level Facilitator on behalf of the Youth SIG - President of the Commission on Technology and Information Law of the Bar Association of Brazil/PE (CDTI-OAB/PE). - Founding member of ISOC's Youth SIG	Lawyer and researcher on Law and Technology at the Federal University of Pernambuco	Brazil	Academia

TEN Digital Economy and Trade		**Ms. Dominique Lazanski**	Public Policy Director	GSM Association	UK	Private sector
ELEVEN Building Confidence and Security in the Use of ICTs		**Ms. Brenda Aynsley**	Chairman IP3 ACS Fellow and Honorary Life Member, CP	International Federation for Information Processing [IFIP]	International	Civil Society
TWELVE Applications and Services, Digital, Economy and Trade, Climate Change		**Mr. Shernon Osepa**	Regional Affairs Manager for Latin America & The Caribbean Bureau	Internet Society [ISOC]	Curacao	Technical Community
THIRTEEN Gender Mainstreaming		**Ms. Shuchita Thapar**	Project Manager Cybersecurity Team	National Law University, Delhi	India-Asia	Academia
FOURTEEN Ethical Dimensions of Information and Knowledge Societies and Media		**Ms. Mehwish Abid Ansari**	Programme Assistant at Digital Programme	ARTICLE 19		Civil Society

4. Official Opening Segment - Opening Ceremony

Opening Segment

Opening Ceremony

The Opening Ceremony sets the priorities of the WSIS Forum 2017, bringing forth a wide range of topics within the Global Information and Knowledge Societies while emphasizing the role of Information and Communication Technologies (ICTs), WSIS Action Lines in particular, regarding the recently adopted Sustainable Development Goals (SDGs). In this way, the WSIS Forum 2017 builds upon the outcomes of the UN General Assembly Overall Review of the implementation of the WSIS outcomes (UNGA Resolution 70/125), which recognized the necessity of holding this Forum on an annual basis and called for a close alignment between WSIS and the SDG processes.

The WSIS Forum 2017 will therefore serve as a key forum for discussing the role of ICTs as a means of implementation of the SDGs and targets, with due regard to the global mechanism for follow-up and review of the implementation of the 2030 Agenda for Sustainable Development (UNGA Resolution A/70/1). The WSIS-SDG Matrix, developed by UN WSIS Action Line Facilitator and presented at the WSIS Forum 2015, will serve as the mechanism to map, analyze and coordinate the implementation of WSIS Action Lines, and more specifically, ICTs as enablers and accelerators of the SDGs.

The ceremony will begin with opening statements from the host, co-organizers, partners and representatives of stakeholders engaged in the WSIS Process. The Opening Ceremony will conclude with the handing out of the WSIS prizes.

The format, agenda, and the thematic focus of the Forum is a result of an open consultation process with the involvement of all WSIS Stakeholders. The Forum will build upon two tracks, the High-Level Track, and the Forum Track.

Please note that the captioning text of the Opening Ceremony is available online:
https://www.itu.int/net4/wsis/forum/2017/Agenda/Session/281

Written Statements

United Nations

Mr. António Guterres, Secretary-General

Message to the WSIS Forum 2017

Welcome to the WSIS Forum 2017

Information and communications technology can advance human rights, sustainable development and peace, the three pillars of UN Activity.

With mobile phones, farmers can monitor prices, refugees can let their families know that they are safe, and health workers can respond to emergencies, and this is why the United Nations is working to unleash the power of Information and Communications Technology, for our common future.

We want to ensure that big data will bring the big impact that so many people need. And this forum can forge partnerships among governments, the private sector, civil society, and technical community and academia.

Together, we can make the most of Information and Communications Technology, to realize the 2030 Agenda for Sustainable Development and keep its promise, of a life of dignity for all.

Thank you.

International Telecommunication Union (ITU)
Mr. Houlin Zhao, Secretary-General

Ms. Arancha González, Executive Director of ITC; **Mr. Bishar Hussein**, Secretary General of UPU; **Mr. Mukhisa Kituyi**, Secretary General of UNCTAD; **Mr. Frank Larue**, Assistant Director-General of UNESCO; **Ms. Deborah Greenfield**, Deputy Director-General of ILO; **Ms. Elena Manaenkova**, Deputy Secretary-General of WMO; My dear colleagues from UN Agencies; Excellencies, Ministers, Ambassadors; My dear colleagues of ITU Distinguished Delegates; WSIS Stakeholders; Ladies and Gentlemen, good morning. On behalf of the organizing committee, it is a tremendous pleasure to welcome all WSIS Stakeholders – here onsite and all those following remotely – to the WSIS Forum 2017.

I am grateful to **UN Secretary-General António Guterres**, who has reaffirmed the importance of ICTs in achieving the Sustainable Development Goals.

The overall theme of the Forum this year is **"Information and Knowledge Societies for the SDGs"**. The objective is to ensure that WSIS goals enables a strong international framework for a trusted connected world and for achieving the SDGs.

This week, we are here with fresh ideas, renewed energy and the determination to work together to identify key priorities in the implementation of ICT for sustainable development for the year ahead.

WSIS is now clearly the world's leading ICTs for development event. This year, we welcome **more than 2,000 stakeholders from 150 countries**, **with more than 80 Ministers, deputies and regulators. And we have many heads of NGOs and industries**. The increased participation in the WSIS Forum is a testament to the commitment and dedication of ***existing*** stakeholders, as well as the growing interest of ***new*** partners.

I am pleased to welcome many heads and deputies of the UN family. The commitment of UN Agencies, set out by UNGA in 2015, to integrate ICTs into their approach to implement the SDGs is essential.

Today, for example, **ILO Deputy Director General Deborah Greenfield** will update us on the progress of **the Global Initiative on Decent Jobs for Youth**. ITU is proud to be one of the founding members of this initiative. Our Development Sector has been working very closely with ILO to ensure that the Global

Initiative provides youth around the world with critical digital skills. Other UN Agencies will announce new initiatives during the Forum.

Ladies and gentlemen,

The **open consultation process** is a unique feature of the WSIS Forum. The collaborative effort has resulted in a content-rich agenda, **with more than 150 sessions** during this event.

This year, we are introducing a few innovations -- a Hackathon focusing on E-health; a new Virtual Reality Track; a Photo Contest, TEDx talks and Innovation Track, an exciting exhibition space that encourages networking.

Most of you are familiar with the **High-Level Track**. This year, high-level policy sessions will feature **more than 120 speakers**, **including 80 Ministers, deputies and heads of regulatory authorities**. We appreciate and count on the participation of these important members of the WSIS Stakeholder community.

18 WSIS Prizes will be awarded later today to honour and recognize the important work done on the ground. The winners went through a rigorous selection process that saw WSIS stakeholders cast **more than 1 million votes**.

The WSIS Stocktaking Process continues to give us real stories of on-the-ground implementation and case studies of how ICTs are transforming the lives of countless people around the world. The online platform, which engages a community of **over 300,000 participating entities**, remains a unique platform for **ICT4SDG projects**.

In today's data-driven world, statistics are more important than ever. **The Partnership on Measuring ICT for Development** is a key component of the WSIS Process. That's why I want to invite you to the **15th edition of the World Telecommunication/ICT Indicators Symposium** (WTIS) to be held from 14 to 16 November 2017 in Tunisia.

Distinguished Delegates, WSIS Stakeholders,

WSIS Forum relies *entirely* on voluntary contributions. I would like to take a moment to thank the partners who so generously contributed to making this year's WSIS Forum a success:

- Our strategic partner, **the World's Global Telecom**, who's on its way to become the new sector member of the ITU;

- Our Partner for Specific Activities -- **Japan, Switzerland and IEEE**;
- Our contributing partners -- **Poland, Rwanda, GeSI, ICANN, the Internet Society (ISOC), and VEON**;
- And our supporting partners, including **the Philippines, IFIP, CMAI, TEMA India and Swiss Engineering**.

Thank you. We are very grateful for your support. I encourage others to contribute in the future.

Ladies and gentlemen,

All your inputs will form the Official Outcomes of the WSIS Forum that will be available already this Friday. This will be an important reference point for the future implementation of WSIS, as well as an important contribution to the upcoming **UN High-Level Political Forum,** which will be held very soon.

Welcome to the WSIS Forum 2017!

Universal Postal Union (UPU)
Mr. Bishar Abdirahman Hussein, Secretary General

The UN Secretary General, Mr. Antonio Guterres,
Heads UN agencies and other international organizations,
Distinguished Ministers and Country representatives,
Dear speakers and participants,
Ladies and gentlemen,

I am honoured to participate in this year's World Summit on the Information Society that is discussing the role of information and knowledge societies in the attainment of Sustainable Development Goals.

At the Universal Postal Union we have focused on using the extensive postal network to deliver to the citizens of the world value through a vital link that is trusted, reliable and affordable.

As the closest link to populations in developed and remote parts of the world, the post is diversifying its products by use of modern technology and through innovation to provide social and economic inclusion to improve the living standards of global citizens.

Our guiding tenets of innovation, inclusion and integration resonate very well with the delivery for SDGs. In fact, by our very nature of being able to offer services everywhere, sometimes beyond strict profit motives, we are in a better position than most industries to empower economically weak and marginal communities to realize their potential and enable them participate in national development.

We are working with governments and their designated operators to achieve digital transformation of the post to enable them deliver inclusive electronic commerce and financial inclusion that are key components to achieving Goals 5, 8, 9 and 17 of the SDGs.

Furthermore, we are proud to say that for each of the 17 goals, the post can contribute significantly in their attainment. Our inclusiveness agenda in the economic and financial sphere, for example, enables achievement of gender equality and empower all women and girls. This is achieved through sustained financial inclusion that enables small-scale trade and access to cheaper money.

This inclusiveness, apart from empowerment of communities also provides sustainable economic growth, productive employment opportunities, and decent work for all.

To facilitate attainment of the various goals that mainly address empowerment and inclusion, the UPU in collaboration with various governments and postal operators has come up with products like Easy Export, Ecom@Africa and .POST. The latter is a secure Top Level Domain facility that powers postal financial services. This is one of the largest growth area for postal business. The same provides secure transaction platform for Medium, Small, Micro Enterprises for export of products in an affordable manner.

Our current primary focus is on the development of electronic commerce, financial services and diversification of products through innovation. All these address empowerment of communities through making access to basic economic services, including trade, achievable and affordable.

Through the rollout of our newest product, Ecom@Africa, we are focusing on connecting the African continent, billed as the weakest link of our global network, to intra-country as well as continental and international trade. This is focused to benefit small-scale traders, women and youth. The product is also transforming the continent's post to diversify on its products so as to cope with the trends and needs of the society.

We have engaged African government to help develop this virtual trading platform that we believe will not only empower their communities but will also contribute immensely to national economic development.

Modern technology, which at first seemed like the death knell of the post, has paradoxically emerged to be its solutions to sustainability and profitability. It is through modern technology that the post is able to innovate and come up with new products and services that resonates with the needs of the population.

These are the products that are key drivers to the attainment of various goals for sustainable development.

Thanks you very much for your attention.

World Summit on the Information Society

International Trade Center (ITC)
Ms. Arancha González, Executive Director

Secretary-General Houlin Zhao,
Ministers,
Ladies and Gentlemen,

Thank you for inviting me to address you on behalf of the International Trade Centre, the joint agency of the World Trade Organisation and the United Nations focused on supporting the internationalisation of micro, small and medium sized enterprises (MSMEs).

Just last week, at the European development Days, ITC had the pleasure of bringing to Brussels three delegations of young entrepreneurs from Rwanda, Morocco and Senegal whom we have been supporting to sell their products and services on-line.

For them internationalisation is about better using digital technologies to bring their goods and services closer to bigger markets; it is about using digital innovation to leapfrog; it is about **connecting the unconnected**.

Let me start with Anna, from **Let's Sequoia**, a Rwandan start up selling biodegradable coffee capsules on-line; the beauty of the capsules is not only that they are Nespresso compatible, but also that they are the means for cooperatives of hundreds of small women coffee producers to get greater value for their Arabica coffee.

We also had Oumar, a young Senegalese entrepreneur who has set up a logistics company in Dakar to manage the distribution of on-line traded products. For him e-commerce means new business in the services sector.

We also had Zineb, a young Moroccan selling argan oil and cosmetics providing an income for hundreds of farmers in the Southern region of Morocco. Every time she sells her products, the farmers get a decent income for their labour.

E-commerce, now more than 12% of international trade, is working as an enabler of growth and poverty

reduction. UN Global Goal number 17 – trade as a means, not as an end – combined with Goal 9 – access to internet – can help us end extreme poverty by 2030.

But all of this cannot just happen organically. We need concerted efforts linking infrastructure, policies and hands on support on the ground.

4 billion people in developing countries still remain offline. And less than 10% of LDCs use the internet. We have to accelerate actions to narrow this gap.

We also need smart policies. And for that partnerships are key. I am pleased that ITC is a founding partner of UNCTAD's 'E-trade for All' which is doing an excellent job at helping countries develop conducive policies to support e-commerce. I am also pleased that ITC is working with the ILO on the Global Initiative for Decent Jobs for Youth to ensure that digital and entrepreneurship work hand in hand in creating employment opportunities for youth.

But we should also address connectivity issues at the firm level. A survey that ITC has run through thousands of companies worldwide shows that small firms are **10 times less likely**to use email to communicate with buyers and suppliers than large firms; and are **8 times less likely** to have a business website than large firms. And in developing countries are largely absent from e-commerce channels.

This matters because SMEs generate more than 50% of the world's GDP and the majority of jobs and are central to entrepreneurial led growth. E-commerce is indeed increasing in the domestic markets of many developing countries – but so far at the expense of SMEs and local production. By failing to promote access to e-commerce, small firms are slowly being crowded out by larger, and often foreign, platforms. There is a need to build an indigenous culture of e-commerce and bring these local SMEs onto this e-commerce highway.

We should also address the gender gap in connectivity: women owned and led firms are far less likely to be engaged in e-commerce. **They are 12% less likely to use email** than men-managed firms which is an important proxy for internet usage. As part of ITC's SheTrades initiative, we have pledged - working with our partners in-country- to connect one million women entrepreneurs to market by 2020, including by promoting the use of digital technologies and an application "SheTrades.com". We are well ahead of schedule with almost 800, 000 women already connected. The demand is there and we have to harness it.

Back to where I started. We first listened to the SMEs and their needs. And on that basis we have

developed a suite of tools along the value chain that address their bottleneck to go to digital markets.

In all three countries we have helped build local “Made in” e-commerce platforms that have helped SMEs try their first trade on-line directly, without intermediaries. The solution includes building on-line catalogues, international online payments, advice on logistics and much more. We are delivering this with the support of our valuable private sector partners, DHL, E-bay, Alibaba and others. Most importantly, these interventions are scalable and can easily be replicated.

My message is simple: let’s not forget the soft infrastructure dimension of e-commerce.
To conclude, in December at the WTO Ministerial Conference in Buenos Aires, your colleagues trade Minister will have a chance to discuss how trade policies can be enablers for SMEs to e-trade. Make sure they hear your voice. Make sure they act to help connect the unconnected.

Thank you for your attention.

International Labour Office (ILO)
Ms. Deborah Greenfield, Deputy Director General

Mr. Houlin Zhao, Secretary-General of the International Telecommunications Union

Honourable Ministers,

Directors and chiefs of United Nations agencies,

Representatives from the private sector, civil society and the academia,

Ladies and gentlemen,

I am delighted to join this influential World Summit on the Information Society Forum on behalf of the Director General of the International Labour Organization, Mr. Guy Ryder, who sends warm regards and regrets not being able to join this opening session due to his duty to our concurrent International Labour Conference at the Palais de Nations, which this year has brought to Geneva 5,700 government and social partners delegates from all over the world.

70 million young people are unemployed globally and more than 150 million young women and men work, but live in poverty.

This is a striking reality that must not escape our discussions about the unique opportunities that a development-oriented information society offers for the achievement of the Sustainable Development Goals.

As we begin this important forum today, it is with the recognition that investing in youth employment pays off and is a unique catalyst for inclusive growth and a prosperous digital economy.

With two out of five youth who are either unemployed or working but living in poverty worldwide, our challenge is not only to just create jobs. Our goal is to ensure quality jobs, decent jobs, for young women and men, who are often underemployed, or working in the informal economy, or engaged in vulnerable employment.

We must also keep pace with rapid technological developments that are impacting the labour markets and the skills we need in so many different ways. Our commitment is to continuously find new and innovative solutions looking into the future.

With this in mind, the International Labour Organization, on behalf of more than 20 agencies, funds and programmes of the United Nations system launched the "Global Initiative on Decent Jobs for Youth" in February 2016.

I am pleased to share the podium today with some of those UN entities, including

ITU, UNESCO, UNCTAD, ITC and WMO.

The Global Initiative is the first ever, comprehensive UN system-wide effort for the promotion of youth employment that relies on active collaboration with governments, social partners, the private sector, youth organizations and civil society, the academia, regional and multilateral organizations, parliamentarians, foundations and the media.

Endorsed by the UN's Chief Executives Board for Coordination, the Global Initiative on Decent Jobs for Youth represents a unique collaboration and partnership platform to join our efforts to tackle the youth employment challenge and assist countries in targeting a crucial goal of the 2030 Agenda for Sustainable Development.

This Initiative's main aim is to scale up action at the country-level and to increase impact through effective, innovative and evidence-based interventions.

Our actions under the Global Initiative are concrete. We are focusing on scaling up action on digital skills; quality apprenticeships; green jobs for youth; support young people in the rural economy; facilitate transition from the informal to the formal economy and youth entrepreneurship.

We also target disadvantaged youth for example those workers, age 15 to 17, who are in hazardous occupations, or those in fragile situations affected by conflict, instability, and natural disasters.

In this context and under the aegis of this Global Initiative, the ILO and the

International Telecommunication Union are pleased to launch the campaign: “Digital

Skills for Decent Jobs for Youth”.

Digital skills are the key to unlock the doors that lead to economic opportunities and decent work.

We invite you all to join us as we set to:

i. Mobilize investments to equip youth with digital skills, within the education system and on the job, in and for all workplaces, to close the digital divide within and across countries,

ii. Realize the potential of the growing digital economy not only in the ICT sector but a host of digitally-driven sectors to employ young people with decent jobs, promoting gender equality and rights; and

iii. Promote an enabling environment where young women and men can translate their entrepreneurial spirit into viable and sustainable businesses in the digital economy.

Our aim is to reach 5 million young women and men by 2030 through Digital Skills development.

I invite you to support and engage with this campaign and with the Global Initiative on Decent Jobs for Youth with full energy and might, through multiple paths at global and country level. WSIS will take a closer look at this Campaign tomorrow in the High Level Dialogue on Digital Skills for Decent Jobs for Youth.

Please join our campaign.

Together, we can make a difference for young people and deliver on the 2030

Agenda for Sustainable Development.

UN Commission on Science and Technology for Development
Mr. Peter Major, Vice-Chair

Chairman of the WSIS Forum, Honorable Ministers, Excellencies, Colleagues, Ladies and Gentlemen.

On behalf of the UN Commission on Science and Technology for Development it is an honor for me to greet the participants of the WSIS Forum 2017. Let me take the opportunity to express my appreciation to the co-organizers of the Forum, to the ITU, UNESCO, UNCTAD and UNDP all specialized agencies of the UN, the regional organizations and all stakeholders, last but not least to sponsors who contributed to the holding this event.
Reading the program of the Forum it is evident that the Forum this year is reach in content, innovative in format and follows the guidance of the WSIS+10 outcome document approved by all member states of the United Nations December 2015 in New York.

As you may know the United Nations Commission on Science and Technology for Development (CSTD) is a subsidiary body of the Economic and Social Council (ECOSOC). It was established in 1992 to provide the General Assembly and ECOSOC with high-level advice on relevant issues related to science, technology and innovation through analysis and appropriate policy recommendations or options in order to enable those organs to guide the future work of the United Nations, develop common policies and agree on appropriate actions.
The Commission acts as a forum for:

- the examination of science and technology questions and their implications for development; the advancement of understanding on science and technology policies, particularly in respect of developing countries and
- the formulation of recommendations and guidelines on science and technology matters within the United Nations system.

Since 2006, the Commission has been mandated by ECOSOC to serve as the focal point in the system-wide follow-up to the outcomes of the World Summit on the information Society (WSIS) and to advise the Council thereon, including through the elaboration of recommendations to the Council aimed at furthering the implementation of the Summit outcomes. The Commission:

- Reviews and assesses progress at the international and regional levels in the implementation of action lines, recommendations and commitments contained in the outcome documents of the Summit;
- Shares best and effective practices and lessons learned and identifies obstacles and constraints encountered, actions and initiatives to overcome them and important measures for further implementation of the Summit outcomes;
- Promotes dialogue and foster partnerships, in coordination with other appropriate United Nations funds, programmes and specialized agencies, to contribute to the attainment of the Summit objectives and the implementation of its outcomes and to use information and communication technologies for development and the achievement of internationally agreed development goals, with the participation of Governments, the private sector, civil society, the United Nations and other international organizations in accordance with their different roles and responsibilities
- CSTD through its Secretariat prepares the report of UN Secretary General on "Progress made in the implementation of and the follow-up to the World Summit on the Information Society (WSIS) outcomes at the regional and international levels" based on input from UN specialized agencies, regional organizations and IGF Secretariat.

The Commission meets annually for a period of one week

According to its mandate the CSTD prepares the ECOSOC draft resolutions related to

- Science and Technology for Development
- Assessment of the progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society

These resolutions are further considered as input to the UN GA resolutions related to

- Science and Technology for Development
- Information and communication technologies for development

The resolution on Assessment of the progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society drafted during the 20th session of the Commission and to be endorsed by ECOSOC this July "*Recognizes* the value and principle of multi-stakeholder cooperation and engagement that have characterized the World Summit process since its inception and that are clearly recognized in the 2030 Agenda, and notes that many activities that support the objectives of the World Summit and the Sustainable Development Goals are being implemented by Governments, international organizations, the private sector, civil society, academic and technical communities and multi-stakeholder partnerships in their respective roles and responsibilities"

World Summit on the Information Society

The resolution encourages WSIS "action line facilitators to use the Geneva Plan of Action as the framework for identifying practical measures to use information and communications technologies to help to achieve the 2030 Agenda, noting the World Summit on the Information Society-Sustainable Development Goals Matrix, developed by United Nations agencies".
I have to mention the two working groups of the CSTD:
1. Working Group on Improvements to the Internet Governance Forum (WGIGF) – in its final document produced 45 recommendations, approved by ECOSOC and noted by the UN GA in its WSIS+10 outcome document. I am pleased to note that the majority of the recommendations have implemented
2. Working group on Enhanced Cooperation (WGEC) – work recognized by ECOSOC and the UN GA to be continued

The WSIS + 10 outcome document contains 10 explicit references to the CSTD. I quote only 2:

"33. We call for a special focus on actions that improve the enabling environment for information and communications technologies and expand related education and capacity-building opportunities. We also request the Commission on Science and Technology for Development, within its mandate related to the follow-up to the World Summit on the Information Society, and all action line facilitators, within their respective mandates and existing resources, to work with all stakeholders to regularly identify and promote specific, detailed actions to support the enabling environment for information and communications technologies and development and provide the demand-driven policy advice, technical assistance and capacity-building, as appropriate, to realize them."

"67. We call for the continuation of annual reports on the implementation of outcomes of the World Summit on the Information Society, through the Commission on Science and Technology for Development, to the Economic and Social Council, taking into account the follow-up and review of the 2030 Agenda for Sustainable Development, and in this regard invite the high-level political forum on sustainable development to consider the annual reports of the Commission on Science and Technology for Development. We encourage the members of the United Nations Group on the Information Society to contribute to the reports."

Ladies and Gentlemen,

I hope to have given you some insight into the work of the Commission in general and related to WSIS in particular. Let me reiterate my appreciation to the co-organizers and let me take the opportunity to wish you a very successful WSIS Forum.

Thank you for your attention

World Summit on the Information Society

International Chamber of Commerce (ICC)
Dr. Carolyn Nguyen, Vice-Chair of the ICC Commission on the Digital Economy and Director, Technology Policy, Microsoft

Good morning Secretary-General Zhao, Excellencies, Distinguished Delegates, Ladies and Gentlemen from the various stakeholder groups at the conference. Thank you for the opportunity for the private sector to participate in this opening plenary.

As the final speaker, I would like to pull together many of the points that have been made by my distinguished co-panelists into a holistic policy framework that is required to attract the level of sustainable investment that would realize sustainable and inclusive development within a trusted environment. This framework draws on the practical experience and best practices that business has gained from deploying technology globally. Yesterday, the International Chamber of Commerce Digital Economy Commission launched a paper on "ICT, Policy and Sustainable Economic Development" that describes the elements of this framework in more details – a few copies are available in the room. I will describe the framework in more details in my statement.

As was mentioned by Secretary-General Zhao, we live in an amazing time when technology is changing almost every aspect of our lives – at breathtaking speed. As a business that operates in almost every country in the world, Microsoft sees first-hand the impact that technology has on advancing healthcare, education, quality of life, and empowering people so that everyone, inclusively, can have opportunities for a better life. I will make three points in my remarks:

• Technology, as mentioned by others, is an essential foundation for the realization of the SDGs and economic development – but technology alone is not sufficient;
• Business needs to partner with local governments and other community organizations to enable changes that are impactful, economically sustainable, and relevant to communities around the world; and
• A holistic policy framework is necessary to enable the level of investment necessary for such economic transformation.

Let me share with you some examples and practical experience.

With Microsoft's Affordable Access Initiatives, we provide support to local companies to enable and build a knowledge society one community at a time around the world. We work with rural and remote communities to first understand what challenges the communities are facing and how technologies can help provide solutions. We then identify and work together with local organizations, and in addition to small grants, provide them with additional resources such as mentorship, software, and cloud resources to help develop solutions and enable the creation of a local digital economy ecosystem. The solutions that have been deployed included livestock management solutions in Argentina, wireless broadband and cloud services for small and medium-sized enterprises in Nigeria – echoing the comments that were made by APC earlier that SMEs are the building blocks of the digital economy – and practical solutions such as a micro-grid in a box that comes ready for use with built-in billing plans and cloud management capabilities.

Another specific example of the ICT as an essential element in realizing sustainable economic development comes from the Dzaleka Refugee Camp in Malawi, which has 28,000 refugees from Somalia, Burundi, Rwanda, Ethiopia, and elsewhere. In 2017, Microsoft partnered with the UN High Commissioner for Refugees, the local government, a local operator, and an Affordable Access grant winner to develop and launch an AppFactory that is powered by TV White Spaces, to empower and create economic opportunities for refugees. This echoes the themes of jobs- and capacity-building that have been mentioned previously. Siwema is a 21-year old young woman from the Congo – whose parents were killed when she was young during the Tutsi fighting. She moved to a Rwanda refugee camp, then ended up alone at Dzaleka in Malawi. She is leveraging the AppFactory to self-study social science and wants to become an epidemiologist to help understand diseases in the camp. She will work with the Malawi Ministry of Health to better implement public health care there. Remy, a 22-year old Burundian, is a self-taught developer who created his own "lab" to teach people how to use a computer. He will be leading the AppFactory and building the online community to share the experience of the refugees with the world at large. He is also developing a group of mentors to grow a future generation that has the skills necessary to succeed in the modern world. He plans to turn his voluntary "lab" into a full-blown company.

From our work in the range of initiatives above, we have learned that local knowledge, innovation, affordable connectivity, access to remote resources such as those available in the cloud, and sources of energy are essential for "success" – which we define as activities and initiatives that will continue, long after these very small initiatives have ended. In other words, "sustainable development." We are a firm believer in the use of technologies for realizing global good – to "empower every person and every organization on the planet to achieve more."
Business have engaged in multiple initiatives globally to encourage local technology development and skills building, to support both the supply and demand sides. For example, the Cloud for Global Good Philanthropies Fund was created in 2016 by Microsoft to enable the creation of a strong social

ecosystem that can realize the promise of technology for development. The Fund committed $1 billion dollars in cloud services over three years for nonprofits and researchers around the world to support the public good and individuals who lack affordable broadband access. To date, the fund has donated $465 million to 71,000 organizations around the world. We rely on local communities and organizations to help identify the partners and initiatives that can make the most impact locally.

In May 2017, the UN High Commissioner for Human Rights also announced a five-year partnership with Microsoft, where we will provide a grant of $5 million to support the development and use of advanced technology, including a data-driven dashboard, designed to better predict, analyze and respond to critical human rights situations.

These are just some examples of the types of initiatives businesses have deployed worldwide. However, to enable impactful global progress at the level that was envisioned by the Tunis Agenda, these initiatives need to scale and be replicated in countries around the world. For that to happen, longer-term sustained investment is necessary, requiring a stable and enabling policy framework that encourages long term partnerships and multistakeholder approaches.

Such enabling policy environment balances considerations in four dimensions:

• First, economic considerations on how to promote sustained investment and encourage innovation and entrepreneurship that can lead to national economic growth;
• Second, social and cultural considerations on how to foster ICT and digital literacy skills to enable consumption as well as the creation of relevant content, services, and applications for the local communities that are respectful of human rights;
• Third, technical infrastructure and innovation are important for maintaining a safe, secure, resilient and globally interoperable infrastructure that supports the above objectives; and
• Finally, governance approaches that (1) encourage public-private partnerships and initiatives that can leverage the unique contributions of each stakeholder group, including government, business, civil society and the technical community, and furthermore, (2) reflect the needs of stakeholders and the different considerations that are required to achieve sustainable economic development.

It is important that we consider this framework holistically as these issues cannot be dealt with in "silos," without consideration for their broader potential economic consequences, either on investment or development.

In conclusion, stakeholders must work together to guide the development of trustworthy, responsible, and inclusive technology to enable the potential of the digital economy and Information Society with an enabling policy framework. On behalf of business, we call for a practical and holistic policy framework

that focuses on sustained investment to realize the SDGs. We look forward to engaging in further dialogues with everyone on this framework for investment, and look forward to engaging with all of you throughout the Forum. Good luck and have a productive week.

Thank you very much.

5. Multistakeholder Partnership for WSIS Implementation

High-level Speakers:

- Mr. Malcolm Johnson, Deputy Secretary-General, ITU
- Chairman: H.E. Mr. Jean Philbert Nsengimana, Minister of Youth & ICT, Rwanda

1. **Japan** — H.E. Mr. Shigeki Suzuki, Vice-Minister for Policy Coordination, Ministry of Internal Affairs and Communications
2. **Poland** — Mr. Marcin Cichy, President, Office for Electronic Communications
3. **Switzerland** – H.E. Mr. Thomas Schneider, Ambassador and Director of International Affairs, Swiss Federal Office of Communication (OFCOM)
4. **ICANN** — Mr. Tarek Kamel, Senior VP and Adviser to President, ICANN
5. **Institute of Electrical and Electronics Engineers (IEEE)** — Ms. Karen Bartleson, President
6. **Internet Society (ISOC)** — Mr. Raúl Echeberría, Vice President
7. **GeSI** – Mr. Luis Neves, Group Sustainability and Climate Protection Officer
8. **VEON** – Mr. Tomas Lamanauskas, Group Director Public Policy

Japan

H.E. Mr. Shigeki Suzuki, Vice Minister for Policy Coordination, Ministry of Internal Affairs and Communications

Excellencies, distinguished guests, ladies and gentleman, Good morning. I would like to express my sincere appreciation to the Secretary-General of ITU Mr. Houlin Zhao, and the members of the WSIS Secretariat and all stakeholders.

・To accomplish this year's WSIS forum theme, "Information and Knowledge Societies for SDGs", I'd like to comment on 3 Key Factors today from a view point of multi-stakeholders partnership.

■ **3 Key Success Factors**

<u>The first is to ensure access to ICT for all people everywhere.</u>

・Building an enabling environment for access to ICT and the Internet is the essential foundation for inclusive growth.
・Bridging digital divides is the most crucial and urgent issue because still half of people on globe do not have access.
・Japan promotes the public-private initiative named "Quality Infrastructure Investment" and contributes bridging digital divides through developing ICT infrastructure in the world.
・From a long-term perspective, the key is how to reduce Life Cycle Cost of infrastructure considering operation and maintenance cost, not only focusing on cheap initial cost.
・This initiative includes not only developing long-term sustainable infrastructure with a high operation rate, but also capacity building and technological transfer for operation and maintenance.
・It is also important to make fair and transparent policy and regulatory frameworks that encourage competition and investment through open process of decision making or joining multi-stakeholders.
・These can achieve affordable access, and as a consequence, people around the world regardless of income, region, gender and disability can have an access means to ICT.

<u>The second is to promote and protect the free flow of information.</u>

・The free flow of information is essential for multi-stakeholder approach to make the best use of ICT and innovation such as AI and Big Data by every stakeholders.
・ Effective utilization of information is a powerful enabler of further innovation and economic development.

The third is to promote and utilize Innovation.

・Promoting innovation will increase the number of entrepreneurs, provision of new services and goods, and create a new business and market.
・Then create employment and wealth will be created. This will contribute to sustainable economic growth.
・Innovation like IoT, big data and AI is a great opportunity for economic development.
・AI can improve productivity and quality of life by relieving workers of monotonous and tedious labor.

To address these 3 points, we need to strengthen collaboration among all stakeholders, at national, regional and international levels.

・Last year, Japan hosted the G7 ICT Ministers' Meeting after an interval of about 20 years.
・In response to that momentum, this April, "G20 Digital Economy Ministerial Conference" related to Information and communications was held for the first time at the G20.
・At the conference, the new common goal was set, as "We will encourage the domestic deployment of connectivity to all people by 2025".
・We, the government of Japan, will continue to put forth our best possible efforts to achieve this goal and SDGs, together with all stakeholders.

Thank you for your attention.

■ **Question from the moderator**

In order to promote ICT innovation, what kind of activities do you do in partnership with multi-stakeholders?

■ **Answer**

・In Japan, when we make new decision and activities such as IoT and AI, we always establish an dialogue platform including multi-stakeholders such as private sector, academia, citizen and government.

- For example, now in Japan, in collaboration with related stakeholders, we are working on the standardization of IoT and 5G, development of Big Data analysis method and creating AI R&D Guideline.
- This AI guideline is the unbinding soft law, so that related stakeholders like private sector, citizen and academia can develop and utilize AI without any concern.

Poland
Mr. Marcin Cichy, President, Office of Electronic Communications

Mr. Secretary General,

Excellencies,

Distinguished delegates

Ladies and Gentlemen,

Poland has a long history of contributing to the WSIS Forum. We have been committed to this process since its beginning. The potential of ICTs for achieving the Sustainable Development Goals is endless. We can all agree that ICTs form the backbone of today's digital economy. They drive progress on the Sustainable Development Goals and improve people's lives.

Poland has recently adopted some strategic documents to push development further and to create an information society. These are: Responsible Development Strategy (developed by the Council of Ministers, implemented by the Deputy Prime Minister and the Minister of Economic Development and Finance) and Strategic Action Priorities of the Minister of Digital Affairs in computerization of public services (by the Minister of Digital Affairs, Anna Streżyńska) with the main focus on development of an electronic ID card (e-ID) and an adoption of a unified standard of digital identification of citizens.

Moreover, the Office of Electronic Communications (UKE) is finalizing work on its 2017 – 2021 Strategy. It will be based on the Act on supporting the development of telecommunications services and networks

(Mega-law) and the Telecommunications Act. Implementation of the Strategy will be based on 4 pillars: consumer protection, optimal regulation increasing competition, infrastructure and broadband services development, investments and last but not least UKE 3.0 project, which intends to establish the Polish NRA as a modern knowledge hub.

UKE's mission as a regulator is providing Poles with access to modern telecommunications and postal services in a competitive and growing market and in a dynamic international environment. Our vision is to act as an objective, competent and credible moderator of the development of telecommunications and postal services, working with an understanding of the needs of the Polish society as well as the functioning of the business sector.

The development of the information society depends in great measure on innovation, which we want to support and focus on. We even brought to Geneva tech companies and startups presented during yesterday's Donors Dinner – to show Poland from the new innovative side. The role of governments and regulators in supporting innovation is crucial. The public administration has important tools to spread the use of technologies, ensure competition, encourage collaboration, protect consumers as well as eliminate legal barriers for innovators.

However, the development of the information society, innovation and connecting more and more people drives constant demand for mobile data. This creates the need for 5G networks. 5G in practice means a cloud of solutions based on the common infrastructure: wired, wireless and satellite as well as integration of different technologies to deliver services optimal for certain use cases. 5G will offer throughputs higher than 1GBps, delays reduced to less than 5 ms and the connection of even 100 devices per one square meter.

A regulator, such as UKE, can undertake some specific actions to ensure the development of the infrastructure so much needed to connect people to the digital world.

First of all, we can prepare the legal environment and implement pro-investment approaches. It can be done through the distribution of frequencies under pilot and commercial schemes (tenders and auctions),

support in designing vendor and operator business models, analysis on competition and consumer preferences, as well as initiatives to reduce bureaucracy in the investment processes of private entities.

Successful implementation of 5G requires spectrum in the key frequency bands to deliver widespread coverage and support all use cases. This includes the 700 MHz band, 1 to 6 GHz and above 6 GHz. Release of 700 MHz band implies the migration and transfer of TV services to the lower band, i.e. 470-694 MHz, which will involve reconfiguration and optimization of the multiplex broadcasting networks. We also need to work on spectrum refarming of the 3.4 – 3.8 GHz, which would require changes in many administrative decisions. Spectrum above 6 GHz for new wider bands is to be determined by the WRC-19. UKE will support research and activities aimed at making available the highest frequency resources available for 5G systems.

However, we should keep in mind that the 5G standard is not only about frequencies. Poland has 1 bln Euro for investments in the infrastructure: these funds will enable us to connect over 10% of Polish households to high-speed Internet, where it is not available today (the backbone distribution and last mile networks). Over the last 5 years we have noted growth in both the number of fiber optic nodes (from 90 thousand in 2014 to 108,5 thousand in 2015, an increase of 20%) as well as fiber optic lines (from 315 thousand km in 2014 to 420 thousand km in 2015, an increase of 33% from 2014 to 2015). Today, more than 64% of households in Poland are in the 30Mb/s coverage.

To conclude, UKE wants to support new trends and technologies, not only to regulate, keeping in mind that digital innovation in telecommunications needs to be more than just connectivity. We are committed to including as many people as possible in the digital opportunity and to continue our support for WSIS Forum. We believe that the Forum is an important platform for a high-level interactive debate on the trends, challenges and opportunities in the ICT ecosystem. As a country promoting new technologies, innovations and the development of high-speed networks Poland supports this initiative.

Thank you.

World Summit on the Information Society

Switzerland

Mr. Thomas Schneider, Ambassador, Head of International Relations Service, Federal Office of Communications (OFCOM), Federal Department of Environment, Transport, Energy and Communications (DETEC)

Mr. Secretary-General,
Ministers,
Excellencies,
Distinguished Delegates,
Ladies and Gentlemen,

What is the role of multistakeholder partnership for WSIS implementation on national level?

Why talk about the national level in a global meeting? Because very often, things only work on a big scale, if they are solid on the small scale!

So, in order to **harness ICTs' full potential for the sustainable development of our national economies and societies**, we first need to make sure that **all stakeholders**, across all sectors, are **aware** of the vast **opportunities** that ICTs offer – but also of their challenges.

Then, **national governments need to know what citizens and businesses need**, what the local priority issues are for boosting development. And they need to **listen to everybody** including minorities and vulnerable groups and find a **balance between all different interest and needs**, so that – also on national level – no one is left behind. **Only then**, governments can provide for an enabling environment for a sustainable development and for peace at the national level.

This requires not just **networking between all stakeholders, but also openness of mind and respect of the values and needs of all stakeholder groups** in order to enhance mutual comprehension and cross-sectoral, interdisciplinary cooperation between them.

So, enhancing cooperation between all stakeholders is not a new idea, but it is still not sufficiently done and often not with the right attitude.

We need a **new culture, a new spirit of cooperation and sharing among all stakeholders** – starting from the national and then moving up to the international level.

On national level, there are a **number of obstacles** to overcome:

- **Between different ministries and government agencies**, sometimes they are not aware of each other's activities or even fall into competition for resources, attention and recognition;
- There is often **mistrust and prejudices between stakeholders** on national level;
- And there are **too many voices of people active on the ground** that are not heard.

We need to understand and **show by example on the national level** that it is a **win-win for all ministries and government agencies to cooperate** and support each other in their work.

Governments need to earn the trust of all stakeholders and their willingness to cooperate through being accountable to them, but we also need to build capacities of businesses and citizens that they do understand that it is also in their interest that they act responsibly and accountably to society as well.

In 2016, **Switzerland adopted its strategy called „Digital Switzerland".** This strategy will be continuously developed in a **dialogue with representatives from the economy, civil society, the technical and academic community – and media as well**. To that end, a new national dialogue will be launched to enable all relevant stakeholders to contribute to the further development of Digital Switzerland. **To succeed in the digital arena it is crucial for all stakeholders to work closely together.**

What is important on international level?

As indicated before, a **constructive, respectful and responsible cooperation among all stakeholders** is in our view crucial if we want to successfully benefit of the digital opportunities so that no one is left behind.

Therefore, **Switzerland is very committed to capacity-building efforts to allow all stakeholders to take part in the discussions and the decision-making** on national, regional and global levels.

Multistakeholder cooperation, however, does **NOT mean that we are all equal** in the sense that we have the same **roles and responsibilities.** We are, however, equal that we have **to share the overall responsibility for developing our digital societies.** In order to **find out what our respective roles are** and in order to also **mutually agree on** and **accept our respective roles,** we need to **sit together** and **openly discuss digital policies** including all opportunities and challenges, and taking into account all special needs - and **then identify each other's roles and responsibilities**, to foster awareness of the needs of various stakeholders, and to identify new partnerships and solutions.

To **contribute to the global capacity-building** in particular but not only for stakeholders from developing countries, the Swiss government in 2014 launched the **Geneva Internet Platform** – operated by DiploFoundation. This initiative aims to serve as

- an online platform,
- as an observatory,
- as a capacity-building center, and
- as a permanent and neutral venue for discussion.

We hope that **GIP can continue making a meaningful contribution to capacity-building** in the field of digital policy and invite all interested parties from all stakeholder groups to actively take part and make good use of it.

And of course, Switzerland supports a number of useful fora for multistakeholder dialogue and exchange of experience, like the annual WSIS Forum here in Geneva. From its early days, Switzerland has been supporting the WSIS Forum as a partner for specific activities – as we are doing again this year.

Besides the WSIS forum, Switzerland also attaches great importance other for a like the **European Dialogue on Internet Governance**, which took place last week in Tallinn, and the **global UN Internet Governance Forum**.

Over the **past decade**, these **multistakeholder fora have been pivotal** in bringing together engaged experts and decision-makers from all over the world and all stakeholder groups. In addition, they offer a

unique venue to identify and discuss decisive and emerging policy issues related to the digitization of our societies and economies.

As you might be aware of, **Switzerland will be the host of the 12th annual IGF**, which will be held from 18 to 21 December 2017 at the Palais des Nations here in Geneva. The overarching theme for this year's annual meeting is "Shape your Digital Future!"

On behalf of the Swiss Government, **I would like invite you all and your colleagues to actively engage in the preparations and participate at the IGF**, fully benefiting from exchanges with key stakeholders from all over the world to shaping the digital future.

En guise de conclusion, nous aimerions saisir cette opportunité pour **remercier l'UIT, l'UNESCO, le PNUD et la CNUCED** ainsi que les **facilitateurs** des lignes d'action et les **co-facilitateurs** qui ont contribué à la mise en œuvre des objectifs du Sommet Mondial sur la Société de l'Information.

Nous sommes conscients que **davantage de contributions de nous tous** sont nécessaires afin de faciliter de manière concrète l'émergence d'une société de l'information inclusive et de tirer avantage des immenses possibilités offertes par les technologies de l'information et de la communication.

Finalement, au nom des autorités fédérales suisses ainsi qu'au nom du canton et de la ville de Genève, j'ai le plaisir de vous inviter à une réception qui se tiendra ce soir dans les locaux du CICG.

Je vous remercie de votre attention.

ICANN

Mr. Tarek Kamel, Senior VP and Adviser to President

Thank you Malcolm (Johnson). Delighted to participate on behalf of ICANN. We are honoured to be a partner of ITU for the WSIS Forum and look forward to success of this event.

ICANN coordinates the Internet's unique identifiers with others; and for for the last two years, we have undergone a major process to transfer stewardship of the so called IANA functions from the US Authorities to the wider Internet community. This was a unique and complex multi-stakeholder process; involving over a thousand stakeholders, many here and elsewhere, it was completed in October 2016.

We now have to ensure that the new Accountability arrangements (agreed during the Transition and still, in part, on-going) make ICANN more global in nature and more accountable to the wider Community. We invite all stakeholders, and especially the organisations here at WSIS Forum, to play a role in the ICANN Community and thus help us to make sure we indeed contribute to global Internet development consistent with our Mission and the wishes of our Empowered Community.

We have a limited role in terms of global Internet development, but that does not mean we are shy; we are involved with others in capacity building and are (and intend to remain) a keen member of the Internet Ecosystem.

We currently have around 3.7bn users globally with Internet connection; but we know that the next bullion will mainly come through younger people in developing countries; thus enabling the Internet to become more global (in reach) but also local needs of the user, where local content and services are important. We do not have a role in content provision but do support increased multilinguism through the provision of International Domain Names (IDNs) which in themselves help contribute to the implementation of the SDGs.

Llooking ahead, we are very keen to work with DIPLO, ISOC and others in looking at capacity building (especially in underserved regions) and are proud to be running workshops here at WSIS Forum, one yesterday (Monday) and one later in week on Thursday.

I look forward to the rest of week.

Institute of Electrical and Electronics Engineers (IEEE)
Ms. Karen Bartleson, President

Secretary General, Honorable Ministers, Distinguished Guests, Ladies and Gentlemen, I am honored to be here today, and to deliver this statement on behalf of IEEE as a Specific Activity Partner of the 2017 WSIS Forum.

As the world's largest technical professional association, IEEE represents over 420,000 members worldwide from over 190 countries. As an international body it has a vital role in impactful technology development and standardization, and our members continue to shape Information Communication Technologies for current and future generations. Grounded in the principles of openness, transparency and inclusiveness, we work in collaboration with all stakeholders around the globe to advance technology for the benefit of humanity.

IEEE shares the vision of a people-centered, inclusive and development-oriented information society as outlined by the United Nations through the World Summit on the Information Society (WSIS). ICTs will play a central role in sustainable development. Connecting the citizens of the world and achieving this crucial development is our common responsibility. IEEE is committed to supporting ICT development and adoption, as well as global connectivity, as these are foundational to accelerating social and economic growth and sustainable development with a specific focus on local, grassroots efforts to ensure that the solutions are tailored to the unique needs and strengths of each individual community.

Importantly, our members are pursuing these efforts on a daily basis. One example is the work of the IEEE Special Interest Group on Humanitarian Technology in Tunisia. This group consists mostly of students most of whom are at the university level. Their goal is to create technology hubs at schools throughout Tunisia and to provide the necessary ICT skills training, so that the access to these technologies is both meaningful and beneficial to their local communities.

Another example was the first ever Hackathon at the WSIS Forum, which IEEE had the honor to cohost. In this Hackathon students from around the world came together to develop innovative digital solutions to reduce exposure to common risk factors for non-communicable diseases in smart, healthy cities in middle- and lower-income countries. Using technology to create practical solutions to societal concerns is at the heart of IEEE's mission.

IEEE endorses the goal of universal access to the internet and supports national initiatives and international collaborations designed to expand access to the billions of people in both developed and developing countries around the world who do not have access to the internet.

Through its global reach and capabilities, IEEE has an important role to play in advancing solutions to the global internet access challenge. Promoting universal internet access is inherent in our mission of fostering technology innovation and excellence for the benefit of humanity. To this end, we call upon the world-wide community of engineers, scientists, industry leaders, policy experts and others to apply their knowledge and skills to address the challenge of universal access to the internet. As the internet's value in all areas of global community and economy grows, we draw attention to the need to address the issues of trust, safety and security, which can become barriers to achieving global benefits of the internet, particularly for currently underserved countries and communities. We call upon the global community to work collectively to address these issues and to ensure digital inclusion through trust and agency.

IEEE is committed to working with all stakeholders seeking to leverage information and communication technologies in order to implement the WSIS vision. Last year, during this opening ceremony of the WSIS Forum, IEEE stated that achieving the SDGs is not an easy task but one that everyone in this room is willing to accept. We are heartened to see the significant achievements supporting the 2030 Agenda for Sustainable Development, but there is still much work to be done. We stand ready for continued collaboration with all of you as we work united by a shared vision of a truly global information and knowledge society.

Thank you.

GeSI

Mr. Luis Neves, Group Sustainability and Climate Protection Officer

We are glad to have added another chapter to the long and successful history of collaboration between GeSI and the ITU, with our participation in the WSIS Forum 2017. Over the last decade, GeSI has advocated for the enabling role of ICT to be widely recognized and embraced; this message was central to our landmark SMART series of studies, quantifying the benefits of ICT for people, growth, and the environment; and to the #SystemTransformation report, assessing the potential contribution of ICT in achieving the Sustainable Development Goals.

The SDGs are the most ambitious target the world has given itself for the coming years. Without ICT, meeting it will be impossible. That is why GeSI and the ITU have been promoting awareness of the tremendous potential of the technology, and called for action from all relevant stakeholders. The sheer size of the Goals means no actor – government, business, civil society – can achieve them alone. GeSI has been working and will continue to engage to bring the ICT industry voice to the table, to make sure that decision-makers around the world are aware of the multiple ways in which ICT solutions can help them on the path to achieving the SDGs and successfully making the transition to a low-carbon economy.

Veon
Mr. Tomas Lamanauskas, Group Director Public Policy

What is needed to unleash the power of ICTs to accelerate the progress towards SDGs?

Amid discussions on fake news, terrorism, hacking attacks, ransomware and scares of automation induced job losses, we could be forgiven for getting an impression that digital technologies are dangerous or even evil conspiracy that we should resist at all cost. Therefore, we first need to reclaim the narrative of ICTs as a force for good; rather than a harm that needs to be contained with intrusive regulation and protectionist policies.

Of course, this is just a start. What are the three key ingredients for unlocking digital opportunities for everyone?

First – connectivity. Let's recognize, we have already come a long way. Compared to just five years ago, mobile internet subscriptions have tripled across the globe. Imagine, however, how much further we could go if we were to address investment hampering punitive taxation as well as overregulated market structures, and enabled more infrastructure players to increase efficiency of their investments through such models as network sharing.

Focusing on infrastructure alone is not enough though: while 84% of the global population is covered by mobile-broadband, 53% are not using the Internet. Clearly, people need a reason to use it – relevant content and services. But this cannot be achieved by a few global players filling the Internet with content. Everyone, especially locally businesses, including SMEs, needs to be empowered to take part. Digital finance and data are key enablers for this.

Digital economy, as every economy, is impossible without the financial infrastructure. However, in some countries we serve 98% of financial transactions are still in cash.

Digital business and operational models increasingly depend on unlocking the value of data. However, relevant legislative and policy frameworks are often outdated, incompatible or nonexistent. 108 countries do not have appropriate frameworks in place. Lack of clear regulation reduces consumer confidence and increases corporate risk. At the same time, overly stringent requirements harm digital businesses too. For example, data localization requirements increase costs to local businesses, whose computation costs may rise by 30-60%, and restrain the economic growth.

Finally, basic ICT and even such more advanced technical skills as coding are not enough. "Softer" skills such as business administration and digital entrepreneurship are crucial to empower every individual not

only to survive but thrive in the world where fewer of us will be employees, and an increasing number will create opportunities for ourselves in the digital economy driven by platforms and partnerships.

It is important to recognize - digital development will continue to fundamentally transform our way of life. It seems, however, that the way to survive in this turmoil is to embrace rather than shield ourselves from progress. By some estimates economies with low levels of digitization put 70% of their labor force at risk of automation, while this number is only 6% for more digitally advanced economies.

This is why it is important to be here, at a place where we, governments, private sector, academia, civil society and other stakeholders, can work together to achieve inclusive digital development – not ignoring the risks that we will face along the road, but keeping our eyes on the goal of bringing digital opportunities to everyone.

What is VEON's contribution in this regard?

First, we connect our more than 235 million customers across 12 markets to the world of digital opportunities. Whenever spectrum policies allow us, we have deployed 4G networks, which are now available in 10 out of 12 of our markets.

We go further than providing connectivity though. Since the end of the last year, we have been progressively rolling out across our footprint the VEON Personal Internet Platform. And we have now adopted its name as the new name for the company. This platform will enable users to intuitively and contextually discover and use services they need when they need them. At the same time, it will provide our partners, both international and local, small and large, with an opportunity to serve our large customer base, and power their services with an authenticated digital identity, digital financial platform as well as data analytics capabilities.

We provide mobile financial services to 48 million registered users; and would like to play are larger and deeper role in the digital financial inclusion - by providing increasingly sophisticated digital financial services to expanding number of users. However, our role in this is severely restrained by, we would argue, outdated regulations foreclosing financial services to technology players without regard to risk profile of specific services.

We believe that vibrant local digital ecosystems are needed to give people a reason to come onto the Internet. Everyone needs to be empowered to be not only a passive beneficiary, but an active contributor to the digital development. Currently, just 10 countries capture 95 percent of all value in the app economy . Through our group program Make Your Mark we support start-ups and young people across our markets in building new businesses and finding solutions to challenges faced by their communities.

While we prefer to enable our partners to develop digital services for everyone, we do catalyse an introduction of certain digital services important for development – for example, we provide services such as mobile agriculture, which in Pakistan has seen tremendous growth, with 500,000 users within three months after launch.

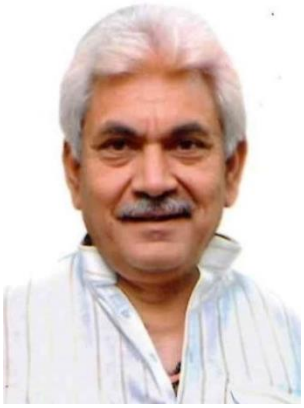
Finally, through our support to such policy platforms as the WSIS Forum, we are encouraging partnerships necessary to unlock digital opportunities and find solutions to digital challengers.

6. High-level Strategic Dialogue - ICTs for Advancing the Implementation of SDGs: Cross-Sectoral Engagement, Linkages and Implementation

High-level Speakers:

- Mr. Brahima Sanou, Director, Telecommunication Development Bureau, ITU
- Chairman of WSIS Forum 2017: H.E. Mr. Jean Philbert Nsengimana, Minister of Youth & ICT, Rwanda

1. **Public Administration** – H.E. Mr. Boris Koprivnikar, Deputy Prime Minister, Minister for Public Administration and Chief Digital Officer of the Government, Slovenia
2. **Communications** - H.E. Mr. Oscar Aguad, Minister, Ministry of Communications, Argentina
3. **Communications** - H.E. Mr. Manoj Sinha, Minister of State for Communications (Independent Charge), India
4. **Digital Economy** - H.E. Mr. Habib Dabbabi, Secretary of State in charge of Digital Economy, Ministry of ICT & Digital Economy, Tunisia
5. **Labour and Social Protection of Population** - H.E. Mr. Idris Isayev, Deputy Minister of Labour and Social Protection of Population, Azerbaijan
6. **United Nations Economic Commission for Africa** (UNECA) - Dr. Fatima Denton, Director, Special Initiatives Division
7. **Royal Academy of Science International Trust (RASIT)** - H.E. Princess Nisreen El-Hashemite, Executive Director



Communications
H.E. Mr. Manoj Sinha, Minister of State for Communications (Independent Charge), India

Distinguished Excellencies, Ladies and Gentlemen

1. In recent times, India, the world's largest and a vibrant democracy has seen remarkable transformation in all walks of life. We have successfully leveraged ICTs and the mobile network with over 1 billion connections is key to deliver citizen centric information and services in a timely and reliable manner. Liberal and transparent pro-business environment along with availability of strong ICT infrastructure has created an ecosystem for growth of knowledge based industries including BPOs, KPOs, start-up ventures etc., in all sectors of economy. This has laid a strong foundation for future economic growth and an empowering tool to provide State's welfare services to the most vulnerable. The visionary leadership of the Prime Minister of India, Mr. Narendra Modi, has identified ICTs as a key enabler of governance, based on the principles of *'sabka saath sabka vikas'* which means 'inclusive growth through collective efforts.

2. Some of the key policy decisions under implementation include broadband connectivity to over 250 thousand Local Elected Bodies (gram panchayats) via indigenously developed Gigabit Passive Optical Network which costs a fraction of international price. As part of this project, 206 thousand kilometers of optical cable has been laid and 91 thousand Local Elected Bodies are connected with fibre, over 100 thousand public wi-fi hotspots in rural areas are at various stages of implementation. Special provisions have been made to fully leverage the IT infrastructure and available resources through efficient utilisation in transparent manner. The State owned enterprises like BSNL, Railtel and PGCIL etc., are extensively used in providing ICT services in those geographical areas which were left out.

3. Inclusive development is India's goal in action and spirit. Whether it was in MDGs or in new SDGs, the focus of the world did not change, may be some of the delivery mechanisms are altered here and there. Focus remains on providing the basic needs, reducing poverty, making people healthy through sustainable development and most importantly empowering people in

all aspects. Through SDGs, we have recreated our commitment to the core needs and expanded the domains and horizons.

4. India, the world's most populous democracy, is in the cusp of digital transformation. The strong winds of leadership are providing a definite course and causing unprecedented results. A country with over 1.2 billion people, with over 1 billion phones, 450 million internet users is vying to build a knowledge society to serve the humanity.

5. Ladies & Gentlemen, Let me tell you. India's unique characteristics - diverse cultures, languages and its size, strongly demand Information and Communication technologies at the core of its development programmes. India's thought process is fully in tune with SDGs. Aim of development is not serving the basic needs alone. Empowering the common man with equality of opportunity, access to all services and enabling participation in governance are critical for us. ICTs are an important vehicle to accomplish this objective.

6. India's thought leadership under the direction of Prime Minister has rightly identified that holistic solutions are our goals and not mere ad hoc solutions causing results in isolation. The Indian dynamic leadership carved out the Digital India programme to transform India into a knowledge economy. In the words of our Prime Minister, Mr. Narendra Modi, the Digital India is an enterprise for India's transformation on a scale that is, perhaps, unmatched in human history. The Digital India programme weaves together a large number of ideas and thoughts into a single, comprehensive vision so that each of them is seen as part of a larger goal. The three visions of Digital India are - Digital Infrastructure as a Utility to Every Citizen, Governance & Services on Demand, Digital Empowerment of Citizens. The programme is developed on nine pillars, in which establishing broadband highways is a key component to establish information superhighways.

7. India's overall teledensity is around 93% and we are making rapid strides to increase the rural teledensity from the current figure of 56%. Out of 600 thousand villages, 544 thousand villages are covered by mobile services and we have developed concrete plans to cover the rest 8%. Coming to broadband services, there are 240 million broadband connections and over 450 million internet users. Estimates show that by 2020, there will be 730 million internet users in the country. To give a push to digitization in the country, the government has allocated 965

Megahertz spectrum through auction in October, 2016 to various telecom service providers for access services. This will enable the telecom service providers to roll-out 3G and 4G services which will facilitate proliferation of high speed internet facility. In addition, India also framed various thought out sharing policies and guidelines on Spectrum Sharing, Active infra sharing etc which would help not only in improving Spectrum efficiencies but also in reduction of CAPEX and OPEX in rural and remote areas thus facilitating further penetration of telecom services in rural areas.

8. Ministry of Communications is driving an ambitious plan to lay broadband services to villages in the nook and corner of India to cover 250 thousand gram panchayats (a cluster of villages) using indigenously developed Gigabit Passive Optical Network. As part of the project, 206 thousand kilometres of optical cable has been laid and 91 thousand gram pachayats are connected. In this 19 thousand gram panchayats are up and running. The unique thing of this programme is that the GPON equipment is locally developed, which costs a fraction of international price and India is willing to offer its transfer of technology to other developing countries for development of low cost solutions to use of ICTs in these regions. In this year we have another ambitious plan to provide 100 thousand public wi-fi hotspots in rural areas focusing mainly on rural health and education which will further help in moving towards our Sustainable Developmental Goals.

9. The Ministry has initiated several reforms and took up process re-engineering to enhance ease of doing business. Spectrum sharing, Spectrum trading, harmonization of spectrum, aadhar based E-KYC services, revising right of way rules are some of them in this direction which will result in efficient use of natural resources like spectrum and facilitate faster growth of telecom sector. Considering the proliferation of mobile services, we have realized that public awareness and education are key elements to drive myths about EMF Radiation issues. The government has recently launched a website - Tarang Sanchar which gives transparent information on nearly 1.4 million mobile towers and their EMF (electromagnetic field) radiation emission details across the country to disseminate the information to the public. And The Govt is also further engaging all stakeholders to reach out to all common man through further development of the same in regional languages as well in due course.

10. The holistic approach to provide digital solutions under Digital India programme has resulted in a great success transforming the rural landscape of huge masses. One of them is digital financial

inclusion – banking the unbanked. Using India's locally developed Unique ID system called Aadhar and mobile technology, 286 million people were benefitted. Cumulative money distributed under Direct Benefit Transfer through several schemes is around thirty billion dollars (USD 30 Billion) plugging the loop holes.

11. Creation of National Information Infrastructure (NII) is on top of the Indian agenda bringing all the ICT infrastructures established by the Government of India and States together. The NII integrates the States' Wide Area Networks (SWAN), National Knowledge Network (NKN), National Optical Fibre Network (NOFN), Government User Network (GUN) and the MeghRaj (Cloud), so that there is a single network and cloud infrastructure with high speed connectivity to government departments.

12. Universal access to customer services is critical to enable public access to the information services. We have an objective to provide 250 thousand Common Service Centres (CSCs) and 150 thousand post offices as Multi Service Centres.

13. As part of taking the governance to the door step of citizen, services are being deployed through integrated platforms such as 'Digi Locker' - a public cloud service for citizens to save their official documents and for the governments agencies to issues & check the credentials; Mobile seva platform – m-governance platform for delivery of public information and services to all citizens and businesses (5.5 billion push sms in 2016, over 700 services are provided under pull sms, Around 15000 departments are integrated in different states.

14. Transparency is one of the basic tenets of government's policy. An online platform for government procurements called 'Government E-market Place' GeM for G2B engagements is established for government procurements from market.

15. A pan India Gigabit digital network called 'National Knowledge Network' - connecting institutions and research centres is established and it has connected over 1600 institutions and research organizations creating a collaborative platform.

16. ICT skill development is critical in creating information societies and transitioning to knowledge societies. Under National Digital Literacy Mission, we have set a target to provide digital literacy

training to 60 million rural households by 2019. A special programme called Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA) was launched recently for providing digital literacy covering 60 Million persons. This is one of the biggest such initiatives in the world.

17. Digital India programme espouses democratization of information. Open Data Platform is aimed to make the data available in public domain and feedback on its utilization is highly encouraging (73,067 resources, 4,109 catalogues, 105 departments, 10.2 million times viewed, 4.13 million times downloaded, 111 Chief Data Officers, 444 Apps, 1,039 visualizations); The G2C engagement is critical for the participation of citizens in the governance. The MyGov.in is an important platform for citizen engagement with resounding success (4 million registered, 3 million comments) that also hosts Hackathons, Draft proposals, innovative suggestions etc., from citizens.

18. Appreciating and acknowledging the efforts of distinguished member states present here in bridging the digital divide, I reiterate that inclusive development and integrated solutions are India's motto and India would be happy to share and support India's success solutions and experiences among the global fraternity for overall Socio economic development.

19. Global Partnership for development of mankind has always been part of India's cultural ethos and philosophy of '*Vasudhaika Kutumbakam'* which symbolises that the world is one family. I am happy to inform that the present Indian leadership is not only addressing the needs of its own people through ICTs but also leveraging its scarce resources to extend help to neighbouring counties as well. The recently launched South Asia Geostationary Communication Satellite, fully developed and funded by India, provides improved communication, weather forecasting, natural resource mapping, disaster information transfer etc. among the South Asian countries. In addition, we are also sharing ICT infrastructure and providing capacity building to fill the critical gaps so as to ensure that no one is left behind not only in India but also in our neighborhood and beyond. We may say that the world has become a global village due to ICTs and became very close knit. But what is important is whether all the members of the village experience self-reliant or a mere consumers of global supplies. I stress that 'Think local and serve global' is one of key themes of Indian solutions.

20. In this direction, India has a firm view and has been standing for making the other developing countries self reliant. We have great low cost technologies developed by the Centre for Development of Telematics (CDoT), the government R&D centre. As I mentioned we offer its technologies and solutions to other developing countries to make them self reliant too. It has Terabit routers, High capacity optical fibre equipment, Wifi equipment, Common services platform for smart cities, Solar based digital village solutions and many other to serve your needs that too at low costs which will make services affordable.

21. India's stand has been re-confirmed by the 'Addis Ababa Action Agenda of the third international conference on financing for development (2015)'. It emphasizes that "The creation, development and diffusion of new innovations and technologies and associated know-how, including the transfer of technology on mutually agreed terms, are powerful drivers of economic growth and sustainable development.' I make this offer to the distinguished members present here that India is a microcosm of the world and Indian solutions are relevant to address many of global challenges. Our delegation will support you on sidelines to share with you on our solutions for technology transfer to address our common ICT and social challenges.

22. Several countries have expressed their interest to learn on India's Aadhar, the Unique ID system, which has registered over 1130 million people in the country. Indian e-governance solutions could support empowering the common man in developing countries.

23. India firmly believes in developing partnership with other members to bridge digital divide in all forms. India has offered several digital connectivity projects to ASEAN and SAARC countries that include infrastructure, tele-education and tele-medicine solutions. South Asia Sub Regional Economic Cooperation (SASEC) information highway is in final stages of completion and likely to be launched shortly to serve common service centres in rural areas in capacity building and e-governance applications in the region.

24. India has established Centres of excellence in software training and development in some of the ASEAN countries to build capacities and skillsets. They offer programmes in software training, training the trainers and development of digital curriculum. India has deputed several ICT experts to some of the countries in Africa, Latin America and Asia to develop policies and ICT programmes as part of its technology support programmes. We got a very good feedback from

the distinguished members who are very happy and seeking the continuity about their services under Indian technology assistance programme.

25. India has a large pool of Telecommunication and IT experts and I offer their support to work with you for the development of ICT policy, regulatory expertise, infrastructure and national ICT programmes along with capacity building programmes.

26. Here I also want to thank the African Community for their consistent support and encouragement for the Pan National project deployed in 48 countries and delivering tele-education and tele-medicine services. Under this programme, several African Universities and hospitals have tied up with Indian super specialty hospitals, premium institutes. I am happy to share with you a few figures what we accomplished together under this flagship programme:

    Total students admitted: over 19000; Tele education sessions: 5640; Tele-medicine consultations: 730

27. India is happy to extend this project for all African countries for further 5 years with a resource of 150 millions to strengthen our partnership for inclusive global development.

28. The WSIS+10 process has made a comprehensive review on way forward in 2015 and its linkages within the UN system. But I feel, still there is a need to strengthen some of the forward and backward linkages to enable concrete outcomes. As a process, the WSIS has produced good results on many domains especially in enhancing the penetration of ICTs, but there are a few issues which are still at large. India believes that an international mechanism that defines and agrees on ‘common minimum important issues’ is the need of the hour for effective cooperation to combat internet from becoming a crowd sourcing platform of terror and fraud. This is critical to enhance the safe use of internet and most importantly for the growth of digital economy.

29. Through 'Digital India' a campaign launched by the Government of India on Mission Mode Approach has been a great success story in ensuring that the Government services are made available to citizens electronically by improved online infrastructure. We wish to leverage it further to build a truly knowledge based society.

30. I take this opportunity to reiterate our commitment for SDGs and India's stand to support the member states with technology and resources to forward our common vision of building knowledge societies.

7. High-level session on 'ITU enabling the wireless ecosystem'

High-level Speakers:

1. Mr. François Rancy, Director ITU Radiocommunication Bureau
2. Mr. Eric Fournier, Chairman of ECC and Co-President of CEPT
3. Dr. Shiv K. Bakhshi, Vice President Industry Relations, Group Function Technology. Ericsson
4. Dr. Aarti Holla Maini, Secretary General EMEA satellite Operators Association (ESOA)
5. Mr. Peter MacAvock, Head of Distribution and Services, Technology and Innovation, European Broadcasting Union (EBU). Chairman, Digital Video Broadcasting (DVB)
6. H.E. Mr. Ped Peter Shanel Agovaka, Minister for Communication and Aviation. Solomon Islands
7. H.E. Prof. Irini Reljin, Assistant Minister for Electronic Communications and Postal Services. Serbia
8. Mr. Piro Xhixho, Chairman, Albania Electronic and Postal Communication Authority (AKEP). Albania
9. Ing. Jaime Herrera Santiesteban, Miembro Suplente del Consejo de la SUTEL (on behalf of Ing. Gilbert Camacho Mora, Presidente del Consejo de la SUTEL). Costa Rica
10. Dr. Dražen Lučić, President of Council, Croatian Regulatory Authority for Network Industries (HAKOM). Croatia
11. Sra Adriana Sofía Labardini Inzunza, Comisionada, Instituto Federal de Telecomunicaciones (IFETEL) (on behalf of Sr. Gabriel Oswaldo Contrera-Saldivar, Presidente, IFETEL). Mexico
12. Mr. Christophe Pierre, Directeur, Département de l'Equipement, de l'Environnement et de l'Urbanisme. Monaco
13. Prof. Fátima Barros, Chair of the Board of Directors, ANACOM. Portugal

Mr. François Rancy, Director, ITU Radiocommunication Bureau
Opening Speech

Excellences Ministers, Ambassadors and Heads of regulators, dear colleagues, Ladies and Gentlemen,

It is privilege to welcome you to this high-level session within the 2017 WSIS Forum to address how the ITU is enabling the wireless ecosystem.

Just six months ago, we celebrated the 110th anniversary of the ITU Radio Regulations, and how these regulations help in providing certainty for the development of the radiocommunications ecosystem, by committing all the world's governments and regulators to the application of a single set of international regulations on the use of spectrum, which evolves with technologies and practices whilst protecting both existing and future investments.

This year will mark the 90th Anniversary of the CCIR, which was superseded by the ITU-R Study Groups 25 years ago. We are happy to start this celebration with you today, by discussing how the adoption of standards, reports and handbooks by the ITU-R membership in a process driven by consensus, is complementing the ITU Radio Regulations review process by World Radiocommunication Conferences so as to enable all spectrum stakeholders to invest in the manufacturing of equipment and devices, in the production of content and in the deployment of networks and services to develop and maintain a sustainable and vibrant wireless ecosystem.

Today most of the attention of government and regulators is focused on ensuring that internet access is made available to all the citizens in their countries. By 1Q 2017, global Internet penetration was reaching 49.6%, with mobile internet penetration at 49.1%. This highlights the role that wireless is playing and will continue to play in providing access to information worldwide, and the importance of ensuring that the wireless ecosystem continues to grow in a sustainable manner.

Because spectrum is becoming so important, governments and regulators will be increasingly subject to pressure from vested parties to take decisions that affect the wireless ecosystem. In this context, the ITU-R process, which associates all spectrum stakeholders, guarantees that ITUR outputs will continue to provide you with the best guidance and practices to manage spectrum and ensure that the citizens in your countries enjoy the most efficient, affordable and sustainable wireless solutions.

For the discussion of this afternoon, we have invited several ministers and regulators to present their views on this topic. We have also invited four keynote speakers, who are prominent actors in building the global wireless ecosystem and I would like to give them the floor now.

Mr. Eric Fournier, Chairman of ECC and Co-President of CEPT
The Vision of Spectrum Regulators on the role of ITU

Excellences, Director of the Bureau, Ladies and Gentlemen,

I am proud to present my vision about the role of ITU in the wireless ecosystem, as coPresident of CEPT, the Regional Organization representing Europe in ITU.

In a nutshell, for each country, the ITU Radio Regulations are the first source of rights for spectrum use. It is the basis for all national tables of allocations. It is the basis for the regional harmonization that we are carrying out within CEPT. Of course, it shapes the worldwide harmonization.

As you know, usages in radiocommunication evolve at considerable pace. And spectrum regulations have to follow the same pace.

The more obvious recent revolution in radio is mobile cellular communications, anecdotic in the 80s and which is now so important that children cannot imagine a life without smartphones. Since 1992, spectrum regulators have constantly changed their frequency plans to provide the necessary frequency resources to industry and to mobile operators. At the World Radio Conferences of 1992, 2000, 2007, 2015, ITU and spectrum regulators have harmonized the spectrum for cellular mobile communications. All of these conferences were preceded by intensive preparatory work in the study groups of the ITU radiocommunication sector so that these conferences could identify suitable frequency bands and include in the radio regulations the associated technical conditions to ensure spectrum efficiency and protection of other important radiocommunication services such as broadcasting, scientific services or satellites. Again, the launch of 5G in the next few years will rely on the successful outcome of WRC-19 for identifying spectrum above 24 GHz for 5G. At WRC-15, it was striking to see the unanimity of all regional organizations and ITU member states in putting this item with the highest priority in WRC-19 agenda. This is the consequence of the unanimity of industry to claim for harmonized spectrum for 5G. Now, experts are

meeting regularly in ITU until WRC-19 to carry out compatibility studies and all other technical and regulatory studies for identifying new spectrum in higher bands for 5G.

Not only spectrum is harmonized by ITU, but also standards. Who is defining what is 3G, 4G, 5G? Who is defining what is IMT-2000, IMT-Advanced, IMT-2020 … and what is not ? The standard harmonization process inside ITU has offered to industry the tool for ensuring the best of harmonization for mobile cellular technology. The spectrum regulators, while not defining or picking up technologies themselves, have put all efforts in the ITU work to ensure harmonization inside the IMT family. The key words: "Consensus building", which is part of the ITU process for defining IMT and which has succeeded in reaching the right balance between harmonization and innovation.

The cellular ecosystem deserves much to ITU. Today, if consumers can buy cheap and performant handsets, if they can travel around the world with seamless communications, this is owing to harmonization, this is owing to ITU.

One second major revolution is the TV digitalization. From the beginning of television, ITU has defined television standards, from program production to broadcasting delivery. So, when industry and spectrum regulators have decided to move broadcasting to digital in the end of the 90s, ITU study groups have been successful in adopting an impressive list of standards which have paved the way for the introduction of digital TV.

For a spectrum regulator, as important was the development of new plans for digital terrestrial TV. In Region 1, ie. Europe, Africa and Middle East, the outcome of the 2006 conference in Geneva, has guided administration in the migration from analogue to digital TV and has resulted in a massive move towards digital TV.

We also have to recognize that the GE-06 agreement has shown its inherent flexibility. It has allowed Member states to evolve their TV digital plan to introduce the first and second digital dividend as a result of the decisions taken at WRC07, WRC-12 and WRC-15. These digital dividends were both the result of the high improvement in terrestrial TV spectrum efficiency and of the high demand for large mobile coverage that can only be achieved in this spectrum, so that it is called gold spectrum.

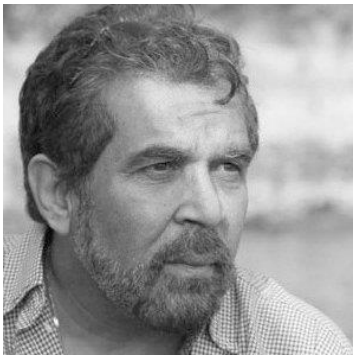
In this respect, the Radiocommunication Bureau has provided to all regions an efficient and very appreciated support in this complex cross-border coordination and re-planning of television in the remaining TV spectrum. The bureau is gathering all the necessary technical expertise and has play the role of a trusted third party for all ITU Member states. What they achieved could not have been done by anybody else.

As a spectrum regulator, I cannot forget to stress the key importance of ITU for the satellite ecosystem. As you know, the outer space treaty states as a principle that "Outer space shall be free for exploration and use by all States without discrimination of any kind, on a basis of equality and in accordance with international law". In terms of spectrum and orbit use, international law means ITU. In practice, the rules for accessing spectrum and orbit resource, are governed by the procedures for coordination and notification of the Radio Regulations and are managed by the Radiocommunication Bureau of the ITU. All satellite operators, all national space Agencies know the importance of ITU in securing rights for satellite, in ensuring equitable access among ITU member states and in avoiding spectrum and orbit hoarding owing to the BR active policy. This is ITU which provides the necessary investment security which has been key in the satellite industry development.

As concluding remarks: spectrum regulators are facing more and more requests from all part of the industry: cellular, satellite, WiFi, IoT, transports. More spectrum, which means shared spectrum. Worldwide Harmonized spectrum, which means spectrum regulators have to talk to each other. I have no doubt that, the work in ITU, the decisions of world radio conference, the activity in the study groups, the assistance from the BR will be more and more essential for the development of usage, for the innovation, for the investment in radio communications.

Thank you.

Eric Fournier



Dr. Shiv K. Bakhshi, Vice President Industry Relations, Group Function
Technology, Ericsson

Honorable Ministers, Secretary General Zhao, Director Rancy, Ladies and Gentlemen,

It is an honor and a privilege to have the opportunity to address this august gathering on the subject of the mobile industry ecosystem and the role of the ITU in its development over the years, specifically the Radio sector.

In their 30 odd years of existence, mobile technologies have touched and revolutionized practically every form of human endeavor.

The mobile revolution is reconstituting social, economic and political relationships, transforming institutions and businesses, and redefining the way we work and play. The mobile technology, aided and abetted by concomitant improvements in processing, storage, display and other associated information technologies, has transformed the world.
The culture of mobile data consumption, wrought by the growing ubiquity and maturity of mobile networks and smart devices, and by digitization, has invited the transformation of industry after industry and it constitutes the societal mainstay that anchors the emerging platform economy – the likes of Ubers and AirBnB's, Facebooks and Snapchats, and what have you.

According to several scholars, the impact of the mobile revolution far exceeds that of the industrial revolution in terms of technology evolution and economic growth worldwide. But perhaps, most important, the mobile technologies have given voice to millions, both in the literal and the political sense – not to mention access to information that can dramatically improve and transform their lives.

Some numbers might help put in perspective the size and scope of the mobile industry.

According to the Ericsson Mobility Report, a report we publish every six months, as of the first quarter of this year, Q1 2017:

- There were 5.2 billion mobile subscribers (that is, individuals with mobile connectivity)
- There were 7.6 billion mobile subscriptions
- Of these, 4.6 billion were mobile Broadband subscriptions. (By MBB we refer to 3G and 4G technologies, that is WCDMA, HSPA and LTE technologies)
- Today, the mobile networks cover 95% of the world population. (This means 95% of the world population live in areas that have sufficient radio signal to connect to the mobile network.) Mobile Broadband covers about 80% of the world population, and is likely to cover 95% of the world population by 2022.
- There were nearly 1.5 billion smartphones shipped last year, in 2016, a remarkable increase from about 300 million smartphones shipped in 2010. The smartphone numbers are important, because for an overwhelming share of the world population, especially in developing economies, smartphones provide the only form of access to the Internet.

- The mobile data traffic grew to 8.8 Exabytes – one exabytes is a quintillion bytes of information, that is, one with 18 zeroes. And, more than half of it was driven by video. Likewise, when one considers mobile industry's economic contribution, the numbers are equally impressive.
- In 2016, mobile technologies and services generated 4.4% of GDP globally, equivalent to around $3.3 trillion of economic value. It contributed about $450 billion to the public sector in the form of general taxation, and several more billions through spectrum auctions.
- Mobile operators have spent more than a trillion dollars in capex since 2010, and are expected to invest another 700 billion dollars by the end of this decade.
- The mobile ecosystem supported approximately 28 million jobs in 2016.

I could go on, but you get the idea. And I have not even spoken about the tremendous societal transformation that awaits us as 5G – with its three-fold promise of enhanced mobile Broadband, massive and critical MTC – is deployed and takes hold. The promise of 5G is that it will transform industries as varied as automotive and health care, financial services and manufacturing, transport and utilities, media and entertainment and public safety.

In September 2015, the United Nations Member States adopted the Sustainable Development Goals (or SDGs) — a 17-point plan to end poverty, combat climate change and fight injustice and inequality by 2030. The UN SDGs and their associated targets outline a broad and ambitious agenda that integrates economic, social and environmental issues across all geographies and applies to both developed and developing economies.

Mobile is essential to achieving the SDGs.

In its 2016 Mobile Industry Impact report, which assess the impact of mobile industry on SDGs, the GSMA reported that mobile is already contributing to all 17 SDGs to varying degrees.

BUT markets and technologies do not fall like manna from heaven. They are built painstakingly by careful management and planning of fundamental resources. The case for mobile is no different. We often forget that when we speak of mobile technologies, we are essentially speaking of the radio – the mainstay of all that is mobile. And radio requires spectrum to function, which is why we hold that Spectrum is the lifeblood of all that is mobile.

And ever since the advent of the radio, spectrum has required thoughtful management and planning – a task that the ITU's Radio Sector, since its earlier incarnation as the CCIR, has essayed admirably.

The ITU-R, as we know, coordinates the vast and growing range of radiocommunication services, and manages the international radio-frequency spectrum and satellite orbits. That is, it registers frequency assignments and orbital slots.

What is perhaps less known, is that the ITU's Radiocommunication Bureau, the executive arm of the ITU-R, beyond providing administrative and technical support to radio-communications conferences, assemblies, and study groups, also develops and publishes handbooks and reports on best practices in national spectrum management that help member states understand fair and effective use of the radio-frequency spectrum and satellite orbits. The importance of the ITU-R's spectrum related publications is evident from the fact that they have assumed the status of a bible, as it were, to quote a friend.

But trying to define the contribution of the ITU-R in these terms misses the point. What is salient is that, through its many study groups, and working parties, the ITU-R provides the necessary platform for discussion and debate on matters relating to spectrum by all the spectrum stakeholders in industry, research, academic and governments sectors.

The public nature of the peer review and debate in the many study groups and working parties constitutes an inherent safeguard against opportunistic play by self-proclaimed experts and the "new age" prophets in spectrum management who often posit that we trust them on faith.

Further, in providing the platform for developing consensus that translates into globally harmonized bands, the ITU-R helps ensure both the protection of investments (through sharing studies which are the basis of WRC decisions) and the definition of worldwide harmonized standards and best practices.

This global harmonization of spectrum and development of standards together create the market certainty necessary for investment and the development of scale that in turn makes things affordable. Equally important, the creation and dissemination of standards, allows new players, both entrepreneurs and small companies, an opportunity to join and grow the ecosystem.

Given the fast pace of technology change and rapid evolution of technologies, it is sometimes argued that the ITU-R is somewhat of an impediment to things. I can understand where that critique may be coming from. But here is the question, should we deliberate and reflect hownto use a critical resource like spectrum, or should we leave it to the opportunistic whims and vagaries of the marketplace?

Deliberation and reflection require time. And so does the building of consensus and the achievement of harmonization. The cost of coordination is invariably paid in the currency of time. But, as my wise friends in Africa have it, Travel Alone, If you Wish to Travel Fast. Travel Together If You Wish To Travel Far.

What the industry is doing, and the ITU-R is supporting, is serious work with long term effects. It needs to continue to invite the world to debate and reflect and not fall prey to the falls messiah of opportunism.

Thank you for your attention.

Dr. Aarti Holla Maini, Secretary General EMEA satellite Operators Association (ESOA)

The ITU enjoys a credibility established over many, many years and the constant participation of so many Member States in its activities is testimony to the great work done by this institution. Treaty organizations are usually slow and so quickly become out-of-touch but the ITU succeeds in convening its Members together every four years to agree on updates and modifications to its Radio Regulations. It is not only consensual and efficient but it is also effective.

The ITU Membership is diverse bringing together the most developed economies and emerging economies on an equal footing. Satellites match this diversity: they are blind to national borders; blind to political regimes; they make no difference between rich and poor or between urban and rural citizens. This inclusive approach on both government and industrial level is what is needed if we are to successfully achieve the Sustainable Development Goals.

It is thanks to the international regulations and standards of the ITU that the satellite sector is able to work with governments to deliver on so many different policy objectives and many countries participating in the WSIS 2017 are space-faring nations. To highlight just a few:

- Vietnam launched its first satellite in 2008 and in 2016 decided to use mobile satellite communications to bring connectivity everywhere in the country.

- Burkina Faso established a history of implementing true democracy by using satellite to make sure that as many citizens as possible can securely participate in elections, both in 2012 and again in 2015. In June 2017, it entered an agreement to provide education and healthcare via satellite across the country.
- Already back in 2003, Pakistan was a pioneer in offering free education via satellite.

There are many more examples[1] but the investment that has gone into providing these services would never have happened without the harmonization and certainty provided by the spectrum decisions taken by more than 150 countries at the WRCs of the ITU.

The role of the ITU goes far beyond just spectrum: it has elaborated recommendations and reports that have guided the introduction of satellite broadcasting from the analogue world into the digital domain and now taking us into the era of high definition and Ultra High Definition TV. Today TV is more than just entertainment, it is a window on information that informs and educates and even makes the world a safer place. We only have to consider how many children are removed from the streets in poor and dangerous areas because they have been motivated by the sports they have been able to see on TV.

The role of the ITU in enabling disaster response by using emergency communications highlights yet another area of vital ITU work. Numerous mobile operators for example Ericsson Response work closely with ESOA members to make sure that victims of disasters can still use their mobile phones thanks to satellite backhaul even when mobile networks have been destroyed by hurricanes, earthquakes or other disasters. The only reason why mobile technology and satellite technology can work together like this is because the ITU has made sure that each one can use its own spectrum without the risk interference.

[1] **Education:** In Ghana the Ministry of Education is training teachers and disadvantaged girls by filming a Master teacher in the capital Accra and transmitting that feed live via satellite to up to 70 schools at the same time to both teachers and pupils.
Healthcare: In South Africa local companies are educating healthcare workers, patients, out-of-school youths and the general public by transmitting content on health-related topics such as HIV/AIDS, Ebola, TB & child survival as well as general & personal hygiene via satellite.
Money transfer or microfinance: In Kenya remote citizens can check and clear transactions and receive funds wherever they live without having to walk 100's of miles to get to a bank in a city centre thanks to ATMs and remote centers being connected via satellite.

In reflecting on the diverse areas where satellite, mobile and other technologies play such an important role, we can appreciate the value of the thousands of expert and study group meetings that the ITU has organised over all these years, and how they in end effect, make a difference to real peoples' lives. This is so important today because we live in a world of harsh realities and "have not's" - those who have no food, have no education, have no healthcare - people cut off from the rest of the world because they have no Internet or even have no phone signal.

Such big problems require many solutions - fixed networks, mobile networks, satellite networks are all part of the solution and the ITU makes sure they can all be used where they are needed. Other fora do exist for the necessary technical discussions such as the 3GPP for instance, but there is none as non-discriminatory as the ITU, which places all on an equal footing, both technologies and countries.

Today the momentum to roll out 5G is dominant but not universal while so much of the world is still without 4G or even 2G/3G coverage. While in every continent we can see countries with 5G ambitions, the reality remains that with so much of the world without coverage, the momentum or will to roll out 5G cannot be universal. ESOA members share the ambition of making sure that every world citizen has a mobile phone or connectivity in some form or other but we cannot be blind to the fact that we are a diverse planet and the interests of every country must be taken into account.

This is particularly important for spectrum decisions because if policymakers just followed "the noise" of 5G, the result would be to take from the poor to give to the rich. So while we need to look at the future and embrace new services, we must make sure, that in our haste to do so, we do not harm the legacy of services and infrastructure that has been cautiously and carefully built over so many decades and that the world has come to rely on and will still rely on to solve some of those big problems. The citizen comes first and it is incumbent upon policymakers to protect the incumbent services that already serve millions of them: broadcasting, emergency, aviation security, any other service - especially when new entrants do not offer any alternative. Without an organization like the ITU, the entire globe would be at the mercy of a few rich nations & large corporations: the world would become even more disparate with the urban elite benefiting from next generation services while other citizens go without.

Ultimately ITU mechanisms, study groups and Radio Regulations have served the wireless communication industries well in balancing the world's connectivity needs and bridging digital divides. With today's increasing pressures on spectrum and sharing, it is only by maintaining, not diminishing, the relevance of the ITU and its Radio Regulations that that we can assure global best practices that benefit all telecommunications industries and all regions of the world.

H.E. Ms. Houda-Imane Faraoun, Minister for Post, Telecommunications, Technologies and Digitalization, Algeria

Your excellence, Mr Secretary-General of the International Telecommunication Union, Ministers, Honourable participants,

On behalf of my country, Algeria, I should like to thank the Secretary-General of ITU, my friend Mr Houlin Zhao, for his invitation to participate in the World Summit on the Information Society Forum, which remains the opportunity for all stakeholders in the world of telecommunications to converge towards a shared understanding of the issues involved in aligning the imperatives of technological development and the processes employed to achieve the sustainable development goals (SDGs).

With the players involved in the regulation of radiocommunications and the radiocommunication industry gathered today to highlight the benefits of the wireless ecosystem, it is indeed high time we stressed the undeniable benefits of its impact on implementation of the SDGs. Nevertheless, and since we are indeed talking about sustainable development, it is also high time we identified the difficulties it may bring, not least in terms of investment in telecommunication infrastructures.

The role played by ITU is undeniably important, and above all decisive, given ITU's missions, particularly in regard to promoting the effective and harmonious use of spectrum and ITU's development activities focused on diversifying services and the means employed to achieve a prosperous economy worldwide.

In my country, the wireless ecosystem is evolving day by day, thus mobile telecommunications have been expanding considerably. Our market is one of the largest and most competitive on the African continent, with three telecommunication operators deploying GSM, 3G and 4G dynamically over the entire national territory.

Algeria has taken up the major challenge in terms of investment and deployment of telecommunication infrastructures, in order to open up remote, sparsely populated areas and those with difficult terrains with the aim of ensuring equal access for all.

It should be stressed that the Development Programme of the President of the Republic has established access to the Web as a right of all citizens, which is why the Government strives and spares no effort to

put in place the means and mechanisms required to provide the population with access to a very high-speed, secure, resilient and robust telecommunication infrastructure that offers my fellow citizens a high-quality service nationwide, including in isolated and sparsely populated areas.

In the course of 2016, the global mobile subscriber base exceeded 47 million, as compared with 43 million in 2015, representing a rise of over 4 million in just one year, bringing the penetration rate to over 117 per cent and reflecting the enthusiasm of a population of young people – our population – hungry for technologies.

Both our operators and our regulator are aware that wireless telecommunications represent the future and the best means of ensuring widespread access, and they are therefore preparing for the arrival of 5G, particularly in terms of spectrum resources and deployment planning.

Nevertheless, with regard to economic efficiency, it is also our role to measure the impacts of investments both past and future in two areas, both of equal importance.

The continuous changes to standards that accompany each new technology are endured not only in my country but also in all the countries of my continent, Africa, where we shoulder the investment required to deploy infrastructure to the major profit of the equipment manufacturers, whose generated dividends do not benefit our economies.

You will also agree that regulation of the content exchanged on the Web is not such as to encourage telecommunication operators to invest at sustained rates or governments to continue to finance infrastructure without seeing a positive return for the national economy. For as you know, it is pointless to regulate or legislate at national level for a global network. Pursuit of the SDGs and the proven efficiency of wireless networks should motivate ITU to ensure, in so far as possible, that technological development does not undermine infrastructure already deployed before it has been amortized. Otherwise, we may well be faced with the straightforward, inescapable bankruptcy of all initiatives aimed at bridging the digital divide.

As part of the same context, it is not only the users and economic players that endure the frenetic changes in equipment deployed; it is also the environment, our planet, that sees its resources run dry and pollution run riot, as each year we replace thousands of tons of equipment for the benefit of a next generation offering just one more add-on – an add-on that is rarely vital or of paramount importance to humanity.

4G certainly offers the cybernaut greater comfort, particularly for watching video. But have we measured the cost our planet pays in terms of non-renewable resources to introduce a 4G access infrastructure to replace the 3G infrastructure we have only just deployed? Is it worth the cost?

ITU, as a United Nations agency, must strive for the good of humanity, and that good can derive only from that of the planet. It must do so even if it means making choices not necessarily matched to the economic models based on immediate profit. Adopting a new technology and deploying it at global level must be subject to it making a significant contribution to the human condition: saving lives, facilitating access to education where there are no schools, making access to healthcare more extensively available, …

Secondly, it must be recognized that the security and treatment of the privacy of data over a wireless ecosystem currently represent the main weakness of such networks. The wireless ecosystem is of concern to all members of our societies undergoing an unprecedented digital transformation, and as today we prepare for a world dominated by interconnected objects, IoTs, it is important for us to equip ourselves with a collaborative and sovereign international body mandated to develop the technical means of protection required to tackle illegal intrusions into networks, particularly for fraudulent and even criminal purposes – a problem amplified by the arrival of the wireless ecosystem.

Excellences, ladies and gentlemen

Today, wireless networks offer us the possibility of a connected world accessible to everyone. Let us not miss this opportunity. ITU provides the ideal framework for establishing dialogue at various levels. It should enable the efforts made by each State to cater for the expectations of the most underprivileged members of society in terms of access to new technologies and the emergence of national economies capable of effectively achieving the SDGs.

This dialogue must be based on a spirit of collaboration that transcends borders and the tenets of commercial profit. We count on the contribution of ITU, which remains essential in ensuring that telecommunications can contribute to guaranteeing the well-being of all populations of the world, without exception.

Thank you for your attention.

H.E. Prof. Irini Reljin, Assistant Minister for Electronic Communications and Postal Services, Serbia

Honorably Director of the Radiocommunication Bureau, Mr. Rancy,

Dear colleagues,

I would like to express my gratitude to Mr. Rancy for organization of such an important event.

In the era of Digital Single Market that we all are planning, it is important to be fully aware of the necessity for developing of new strategies and new rules by all administrations. Especially, it is urgent from the radio frequency spectrum view point.

The most prominent technology now is IoT as one of the building blocks of the DSM. It needs to introduce different cloud services. Unfortunately, the only system that can fully support IoT and Cloud computing is wireless, mostly the mobile one. Thus, 5G now, and 6G tomorrow, are in the focus of nowadays development.

So, we come to the very urgent requirement for new harmonized spectrum. It seems that we continually have this requirement. That means that exhaustive research based on the technology innovations has to be done. It seems that ITU is important more than ever as technology is changing fast and the role of ITU is to prevent any possibility of chaotic behavior that could be introduced by different manufacturers or by unconscious operators. We need interoperability standards. For instance there are 600 standards for the IoT, now, meaning that there is no standard.

ITU on international level, similarly regulators and administrations on national levels, have role to prepare new regulations even faster than until now. I would dare to say that different conferences, such as World Radio one should be held with lower periodicity, for instance every three year.

H.E. Mr. Ped Peter Shanel Agovaka, Minister for Communication and Aviation, Solomon Islands
Telecommunications Policy Statement

This policy expresses the intention of the Government of Solomon Islands to liberalize the telecommunication and ICT market to ensure competition and promote growth of the economy.

The Solomon Islands is an Archipelago of approximately 1000 islands with a total land mass of 28,400 square kilometres and sea area of 11,000 square miles. The country is divided into 9 provinces and total population as of 2015 is 642,000. The Solomon Islands is a former colony of the United Kingdom and obtained independence on 7 th July 1978.

Geographical location, sparsely populated and long distances between the Islands and proximity to existing networks is a challenge in Solomon Islands. Cost of doing business is high and telecommunication costs remains high and penetration relatively low in early development.

Telecommunications in Solomon Islands was first regulated through the Telecommunications Act 1971. Further amendment to the same Act was made in 1978 and 1982. Early practices in Solomon Islands saw the government playing major roles in both regulation and policy development of telecommunication. Telecommunication service delivery and level of connectivity continues to be limited to only to the urban areas in the capital and provincial headquarters.

The only telecommunication service provider in Solomon Islands until 2009 is Solomon Telekom with an exclusive licence.

The issues with this approach results in:
- Restricted telecommunications market
- Mobile penetration in Solomon Islands is only 25% and fixed line penetration only 2%
- Poor connectivity
- Costly customers
- Constraints to economic growth

Change finally came in 2009 when the government repealed the Telecommunications Act 1971 and passed a new Telecommunication Act 2009. The reason for the new Act was to liberalise the telecommunication market in Solomon Islands.

Since 2009, an independent telecommunication regulator was established to issue licences, manage and monitor activities in the telecommunication sector. Complimentary to the regulator, the communication policing role has been retained with the Minister for Communication.

The introduction of the change ended the monopoly of Solomon Telekom and additional competitor in the form of BeMobile Ltd entered the market. The incumbent remains the sole landline service provider. The liberalised market saw rapid increases in participation of populations and businesses and organisations in the use of products as a result of competition (Telecommunication Commission Annual report, 2015).

The coverage also increased as a result of direct competition when competitors compete for market share (Telecommunication Commission Annual report, 2015).

There is also change within government with the establishment of a single data centre.

The SIG ICT policies:
- Government moving to E-Governance
- Government ICT Procurement Policies
- Email policy
- Asset management and disposal policies
- SIG ICT Standard Operating Environment policy
- SIG ICT Data Security Protection Policy

Current development in Solomon Islands telecommunications sector includes:
- Draft National Broadcasting Policy now approved by Cabinet
- Draft National ICT Policy now approved by Cabinet
- Development of National Cybersecurity Policy
- Universal Access Policy
- Telecommunications Policy Statement-reviews
- Fibre Optic cable from Sydney to Honiara-and to Noro (Western Province) and Auki (Malaita Province)
- Reviews of current Telecommunications Act 2009 to reflect current changes and development

The Government wishes to adopt international best practice and to ensure services are widely accessed in the country and is affordable through competition. The policy is focused on creating stability, fair competition, private investment in telecommunication investment and universal services obligations to be meet where traditional market conditions may fail to work.

This policy also expresses the importance and intention to establish a legally, institutionally & financially separate independent regulator from the Government to regulate the telecommunication industry and sector in Solomon Islands. This is to be accompanied by a modern, independent and proportionate regulation based on international best practice.

The government will continue to develop policies that promote and enhance the sector that reflect current changes but also protect the rights of its citizens as they are exposed to modern advances in communication technology.

Mr. Piro Xhixho, Chairman, Albania Electronic and Postal Communication Authority (AKEP), Albania

Dear Your Excellency, Mr Houlin Zhao, (Secretary-General, ITU)
Dear Your Excellency, Mr. Malcolm Johnson (Deputy Secretary-General International Telecommunication Union)
Dear Your Excellency, Mr. François Rancy (Director of the Radiocommunication Bureau) (BR)
Dear Your Excellency, Mr. Brahima Sanou (Director of the Telecommunication Development Bureau) (BDT) Dear Your Excellency, Mr. Chaesub Lee (Director of the Telecommunication Standardization Bureau)
Dear Your Excellency, Chairman: H.E. Mr. Jean Philbert Nsengimana (Minister of Youth and ICT) Rwanda Dear Your Excellency, Ambassadors
Dear, _____
Dear, _____
Dear participants,

First, I would like to thank ITU for the invitation to have this word on behalf of the Albanian government and I would like to take the opportunity, in the framework of the world summit on the Information Society Forum 2017 to present an overview of the situation and the steps being taken by the Albanian government, towards the development of the wireless network.

During 2016, the electronic communications market has increased in terms of the use of mobile networks services and broadband Internet access.

With the rapid development of information and communication technologies, the globally connected world has become a reality faster than expected, where the IoT and ultra-high speed broadband technologies play a fundamental role in the fields of energy, transportation, health, agriculture, banking, disaster management, public safety and home network.

Recognizing the role of ICTs in economic and social development, including the development and evolution of world class commerce, education, health, and government administration services, the Government of Albania has identified digital connectivity and broadband infrastructure as a key priority in the strategic documents, and last year it also initiated the cooperation for a regional broadband development in the Western Balkans.

It is possible to provide 4G services at the same time with other countries, and this was enabled thanks to the policy for accelerating the processes of removing technological constraints on the use of spectrum and the regulatory measures undertaken by the regulatory authority - AKEP.

In the recent years, we have carried out ICT reforms for the state modernization. For this purpose, in the last three years the Government has invested for the first time from the state budget, an amount of about 100 million Euros, at central and local governmental level.

Some of most important results of modernization and reforms in each sector include the field such as:
• Energy sector reform,
• Police, modernization of State Police in the function of transparency for the police we want - body cameras,
• Control over the territory was supported by the modern systems that were established for the first time,
• Modernization in healthcare across the country, which allows us to serve as many citizens as possible.
• Public service reform includes a significant number of online services on the E-Albania portal,
• Reform in education,
• Reform of economic assistance,

• The fight against informality for state building was supported by the development of electronic commerce and electronic payments and the new entirely online tax filing system.

The development of global communications network and communications is a feature of the world economy today.

The main trends of the electronic communications Albanian market in 2016 were:
• Significant increase in the use of broadband access services from mobile networks 3G networks / 4G.
• Significant increase in the number of subscribers to broadband access from fixed and mobile networks.
• Increased use of active infrastructure sharing (bitstream) and passive (pipes) networks.
• The number of subscribers with integrated services in triple play (Telephony, Internet and TV) during 2016 has increased by 25%, compared with 2015.
• The number of domains in 2016 has increased by over 12%, compared with 2015.

With regard to the number of mobile users by the end of 2016, there were increasing by 7.8 % compared to 2015.

In Albania, the three mobile operators have already deployed LTE (4G) networks. That was a good basis to develop mobile networks.

The number of active users (using the last 3 months) of broadband access services from mobile networks (3G / 4G from mobile devices and USB / modem cards) in 2016 represents a 30% increase compared to 2015.

For a more effective usage of spectrum AKEP adopted technological neutrality in the bands 900, 1800 and 2600. The main purpose was to encourage entrepreneurs to invest in new service offering 4G (IMT Advanced) in the electronic communications market.

AKEP has implemented a process with major mobile operators for network signal coverage with GSM / UMTS some remote areas and improve the quality of service offered by UMTS network in some areas with low population density. Each operator agreed to improve service quality in areas identified individual and operators signed a cooperation framework.

Mobile broadband continues to grow rapidly. By the end of 2016, this number has grown by almost 30% more than in 2015; increased use of broadband access from 3G/4G mobile networks in recent years may also be noticed by the increase in the volume of data transmitted to mobile networks. In 2014, the annual

growth of data traffic in mobile networks was 148%, and this trend continues in 2015 and 2016, with an annual growth of 103% and 110% respectively. During the period 2013-2016, the volume of Internet access data to mobile networks has increased more than 10 times.

Thus, the periodic measurements carried out, show that the download speed average is:
• By the seaside: UMTS/3G ranges from 4 to 7 Mbps, in LTE/4G ranges from 8 Mbps to 20 Mbps
• In the main cities: UMTS/3G ranges from 6 Mbps to 10 Mbps and LTE/4G ranges from 8.5 to 20 Mbps
• In the main roads: the average speed in UMTS/3G is 3.6 Mbps
which are in line with other European countries.

Web services are provided in a similar manner to mobile hosts as for fixed hosts. Mobile social networking sites are the same that are used through mobile and fixed hosts, Facebook, Twitter, and other social networks, are referred to as mobile social networks when they are used through a mobile device (a smartphone).

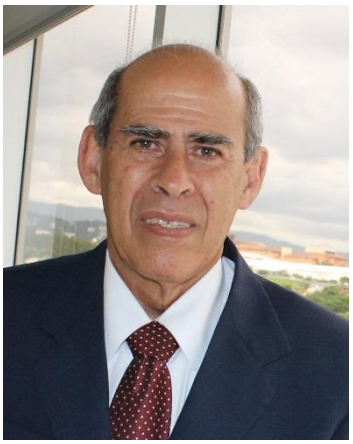
We would like to thank ITU for supporting our two Regional Initiatives for the period 2018- 2021, for submission to WTDC-17 as follows:
• Broadband infrastructure, broadcasting and spectrum management,
• ICT-centric innovation ecosystems.

The broadband mobile is a big challenge, so let's continue to work together under the leadership of ITU, in order to make the ambition of "The big data for the Big impact" a reality, so as to achieve a sustainable development of our economies.

The Albanian Government is ready to be part of any initiative which requires our contribution at Regional level and beyond, with ITU as the leader of these processes.

Wishing to this Forum a complete success.

Thank you for your attention



Mr. Jaime Herrera Santiesteban, Member of the Board of SUTEL (on behalf of Mr. Gilbert Camacho Mora, Director General of SUTEL), Costa Rica

Costa Rica has a long tradition working together with the ITU. To show how ITU is promoting the development of the wireless ecosystem, I will give you two examples of actions going on in Costa Rica, supported by all the standards and recommendations of ITU.

FIRST EXAMPLE: Managing and monitoring the spectrum

Costa Rica, in 2014, consolidated a Management and Monitoring National System of the spectrum, allow to make analysis of the spectrum in the range of 30 KHz to 6 GHz, with 5 fixed stations, and with capacity to arrive to 40 GHz with two mobile stations.

This system, model in the Region, is formed by two mobile unites equipped with the last technology, to make measurements from any place in the country, and five fix stations placed at: Pérez Zeledón, San Rafael de Heredia, Oreamuno de Cartago, Liberia Guanacaste and Puntarenas. All the stations joint in between and with the Monitoring Center placed in SUTEL.

This permanent surveillance of the use of the spectrum is made with the standards of the International Telecommunication Union (ITU), allowing to promote the efficient use of the radioelectric spectrum.

SECOND EXAMPLE: Auction of spectrum

Costa Rica had the first spectrum auction in between 2010 and 2011. The objectives of this process where:
- Open the mobile telecommunication market to the competence.
- To provide mobile services in the total of the Costa Rican territory.
- Efficient use of the spectrum.
- Environmental Sustainability

The frequencies for the auction where (3 blocks)
2x5 MHz in the band of 850 MHz
2x55 MHz in the band of 1800 MHz
2x40 MHz in the band of 1900/2100 MHz

Were collected a total of US$ 170 million for 130 MHz.
• US$0,27/MHz/pop
• Telefónica presented the biggest offer: US$ 95 millions
• The offer of Claro was US$ 75 millions
• Rested 70 MHz available, for a future assignation.

New auction of spectrum 2016-2017

The 11 May where received the technical offers to participate in the new tender of the 70MHz available, in the bands of 1800 MHz and 1900/2100 MHz, to be assigned in one “clock auction” process.

Objectives of this new process:
• Improve the quality of service
• Avoid spectrum concentration
• Environment sustainability Type of auction
• Clock auction
• Generic blocks (5 MHz)
• Re-organization phase.

Thank you very much
Eng. Jaime Herrera
SUTEL

Dr. Dražen Lučić, President of Council, Croatian Regulatory Authority for Network Industries (HAKOM), Croatia

Mr. Secretary – General,
Distinguished Ministers and Excellences,
Ladies and Gentlemen,
Good afternoon.

Thank you, Secretary – General Houlin Zhao, for the invitation to address the World Summit on the Information Society. It is both an honour and a pleasure to be here at this esteemed event that brings together an exceptional blend of policy makers, industry leaders and innovative people. Almost every country pursue the promotion of access to ICT, but it is also essential not to forget the need to capacity building and for a local content bearing in mind specific local conditions and creating a local eco-system. We can't talk about the digital market that reaches everybody without the connection to the internet, since there is no digital service available without internet. The backbone of the digital market is, of course, the network but high speed networks today are not only wireline. There is a huge potential in a wireless networks.

Rural areas cover the majority of Croatian national territory, including 1200 islands, and population density there is low. Today's rural areas are faced with numerous problems like exposure to degradation process with significant differences between strongly urbanized areas and the prevailing rural areas. Insufficient and uneven distribution of broadband internet access has resulted in the digital gap. The creation of conditions for a balanced development of broadband internet access is a national interest for the Republic of Croatia. In order to speed up that process, Croatian Regulatory Authority for Network Industries (HAKOM), together with some Croatian universities, started in 2010 the multidisciplinary research project "Looking to the future". The project has been aimed at preparing stake holders in the electronic communications market for challenges to be encountered in this market in the near future. In parallel, HAKOM executed a new project of state aid for the development of Broadband Internet in the rural areas. More than 13 million € were spent out in last five years for the development of infrastructure, the purchase of terminal equipment and the development of end-user services and applications.

Croatia completed switching-over process for terrestrial digital broadcasting of television by the end of 2010 thus creating preconditions for availability of the digital dividend. A new strategy for switching-over

process to DVB-T2 is undergoing and completion of the process is expected by the year 2020 as latest. The objective is to prepare a proposal for an efficient use of the free radiofrequency spectrum for the provision of new services based on broadband internet access and high transmission data rates. Regulatory strategy is to optimise usage and benefits of radiofrequency spectrum by developing and implementing flexible, market-oriented spectrum regulation policies that promote highly efficient use of spectrum in a way that simulate innovation, investment, job creation and increased end-user benefits. One of the results of such regulatory policy in Croatia so far are thousands of LTE base stations in operation in all three mobile networks in Croatia thus providing high quality services to almost 80 % of Croatian endusers that uses mobile broadband, not only in urban but also in rural areas.

This result is fully in line with the statements of Director ITU-R, Mr. Francois Rancy, given in his introductory speech to this session.

Mr. Christophe Pierre, Directeur, Département de l'Equipement, de l'Environnement et de l'Urbanisme, Monaco

"Transforming our world", that is the ambition claimed by the 2030 program for sustainable development adopted by the General Assembly of the United Nations.

According to Jeremy Rifkin, we are in the middle of the Third Industrial Revolution, due to a combination of technologies and renewable energies. Those Sustainable Development Goals are a priority to the Prince's government.

Therefore, building a terrestrial ecosystem contributes undoubtedly to the achievement of the SDGs: Ultra Mobile Broadband, develop and secure our Administration's communication network, prepare a massive Internet of Things and encourage new uses of the access to information and knowledge sharing.

However, the Principality has very specific characteristics; with only 2 sq.km, 38,000 inhabitants, and 40,000 commuters every day, Monaco has the highest density in the world.

But don't be mistaken, frequency management is not easier in such a small country. Monaco is landlocked in France between mountain and sea, with the Italian coast at 8 km, hence international coordination to ensure the optimal use of radio spectrum is our everyday struggle. But it works!

Not only can we provide 1Gbps on our locals' fixed Internet, but moreover, since April, our operator can offer this speed on mobiles, thanks to the aggregation of four LTE carriers.

For that matter, the ITU radio regulations is a valuable resource of recommendations and the BR teams provide useful advice for their application. This is why I think that all cross-border regions can be thankful to these experts.

The ITU has an invaluable asset, the trio of its Bureaux : Development, Standardization and Radiocommunication.

This triad depicts a virtuous circle: being on the lookout for applications and implications of the digital in todays' and future society, bring relevant standards for an efficient use of the States' resources in telecommunication and finally adopt the guidelines of application and transformations in order to optimize every kHz of the spectrum.

Having the support of the ITU is a key success factor for the SDGs, and is part of the relevant technological policy of the recommendations of UN General Assembly.

Thank you for listening.

Prof Fátima Barros, Chair of the Board of Directors, ICP - Autoridade Nacional de Comunicações (ANACOM), Portugal

I consider the ITU role on shaping the future wireless ecosystem of paramount importance for the success of this new ecosystem. As the ITU is the organization for worldwide frequency spectrum coordination, it cannot be envisaged the creation of wireless systems without its valuable contribution in this context as well as the creation of standards and development activities to promote the use of new technologies and electronic communications services. The future wireless system is a new paradigm for communications whose enabler are the 5G networks.

From a regulator's point of view, the most important factor to consider is the design of new approaches and new processes to address the challenges put forward by the new paradigm. We are already feeling the pressure of being part of a wider economic and social system and we must integrate into it as actors and not just as the referee. Agility in addressing new issues affecting the markets and our own internal operations is also a major challenge, as the issues are placed in front of us almost on a daily basis.

We must now work closer than ever with industrial partners, standards organizations, academia, research and development institutions and find new ways to address the 'verticals', i.e., the 5G applications that are now at the core of the wireless ecosystem.

Nonetheless, traditional regulatory actions such as spectrum allocation, technical harmonization, licensing models, privacy and security will continue to be important. Consequently, we must now take into account with increased importance what comes before the aforementioned traditional regulatory activities.

The investment in 5G networks will also be a major concern. However, the evaluation of investments will have to be done within each regional and national reality.

Measures for spectrum allocation for 5G are actually one of the major lines of work in regulatory authorities. As members of the EU, we fully embrace the approved strategy for the digital single market. As such, I point out the "5G Action Plan" and the "Connectivity for a Competitive Digital Single Market - Towards a European Gigabit Society" initiatives as major enablers of the new wireless ecosystem. These

initiatives present the strategic objectives for connectivity up to 2025 and provide the basis for the 'Gigabit Society'.
The main goals are:

- All major social and economic agents must have access to gigabit rated connection, allowing users the download and upload at least at 1 gigabit/second;
- All households across Europe must have available a connection of at least 100 Mbps downstream, upgradeable to speeds in the order of gigabits/second;
- All urban areas and major road and railway lines must have seamless and continuous 5G coverage. An intermediate objective for 5G is to have it commercially available in at least one major city of each EU member-state by 2020.

These objectives are to be attained under three measures:
A. WiFi4EU – a regulatory proposal by the European Council and European Parliament to promote Internet connectivity in all local communications and public areas;
B. The 5G action plan; and,
C. The proposed directive of a European Code for electronic communications.

Some frequency utilization matters that are also relevant: the duration of licenses, the calendar for spectrum allocation and the establishment of associated governance policies.

As stakeholders of this new ecosystem with a greater social dimension, NRA's and the ITU must continue to work together in defining inclusive standards. Here a special word must be said to provide users with disabilities the same level of access as all other end users regarding WSIS Forum 2017 'ITUs role on shaping the future wireless ecosystem' 3/3 publicly available telephone services, including access to emergency services, directory enquiry services and directories.

I firmly believe that the coordination and collaboration with the ITU in this context does provide a role for us all in shaping the future of the new wireless ecosystem.

8. High-level Policy Sessions

SESSION ONE: WSIS Action Lines and the 2030 Agenda

High-Level Track Facilitator (HLTF): Dr. Jovan Kurbalija, Founding Director, Diplo Foundation.

High Level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator ITU** – Ms. Doreen Bogdan-Martin, Strategic Planning and Membership Department
3. **Burkina Faso** – H.E. Ms. Ouattara née Sanon Hadja Fatimata, Minister, Ministère du Développement de l'Economie Numérique et des Postes
4. **Argentina** – H.E. Ms. Clarisa Estol, Secretary of Investment Promotion, Ministry of Communications
5. **Bangladesh** - Mr. Anir Chowdhury, a2i's Policy Advisor
6. **Group of Fifteen** – H.E. Mr. Ravinatha Aryasinha, Permanent Representative of Sri Lanka to the UN Geneva and Chairman of the Personal Representatives of the Group of Fifteen (Sri Lanka (Democratic Socialist Republic of))
7. **International Network of Women Engineers & Scientists** – Dr. Yvette Ramos, International Network of Women Engineers & Scientists (Switzerland)
8. **International Federation for Information Processing (IFIP)** — Mike Hinchey, President (Represented by Dr. Yuko Murayama, Vice President)
9. **Société Civile Africaine sur la Société de l'Information (ACSIS)** – Dr. Cisse Kane, President (Senegal (Republic of))

Introduction

- Strengthening the interconnections and synergies between the WSIS action lines and the sustainable development goals (SDGs) is an essential element in advancing the ICTs for development agenda.
- Enhanced coordination is also needed between the different organisations working on various ICT-related issues, as well as between the international discussions taking place in Geneva, and the regional and local realities around the world.

- ICTs are powerful tools for inclusion and poverty eradication, and it is imperative to empower everyone to make use of these tools.

Vision

- ICTs, as the 'invisible SDG', are a key element that impact all SDGs. They should be leveraged in the implementation of SDGs.

Priorities

- In order to fully explore the potential of ICTs in the realisation of Agenda 2030, the digital divide must be overcome.

Modalities

- Stakeholders working together to bridge the digital divide and achieve sustainable development through the use of ICTs.
- Building infrastructures in remote, unconnected areas is a first step towards boosting inclusive socio-economic development.
- The deployment of infrastructures should be complemented with actions such as providing local content (in the form of e-government services, for example) and strengthening digital literacy among end-users.

Emerging trends

- Public-private partnerships in promoting development and innovation through the use of ICTs.
- Incentivising innovative thinking across all sector of the society.

Opportunities

- Using digital technologies to improve people's quality of life and support their personal development and autonomy.
- Exploiting the role of ICTs as a powerful tool for inclusion and for eradication of poverty.
- Leveraging new technologies such as the Internet of Things to transform societies.

Key challenges

- Many countries are still dealing with high poverty rates.
- Deploying infrastructures in remote areas often proves to be challenging, especially when there are not enough incentives for the private sector to invest.
- Governmental actions aimed at supporting digital development need a holistic approach, and silos must be avoided.
- Mobilizing financial resources to bridge the digital divide across the world is still a challenge.

Case examples

- Linkages between WSIS action lines and the SDGs:
    - ITU developed a matrix combining SDGs and WSIS action lines, a mapping exercise which improved the understanding of the synergies between the two agenda.
    - ITU also incorporated the SDG agenda in its strategic and operational plans.
- Overcoming the digital divide
    - In Bangladesh, the government is employing innovation and technology to solve citizen's problems and increase civic participation. For example, public services are increasingly being delivered through electronic means, and social media channels are used for communication between public officers and citizens.
    - Burkina Faso is carrying out infrastructure projects to connect villages and cities, and is part of a regional broadband connectivity project for West Africa. The country is also implementing e-government initiatives that provide online services to citizens.
    - Argentina runs a programme aimed to expand access to smartphones for underprivileged communities.
    - The Group of 15 (gathering 15 developing countries from Asia, Africa, and Latin America) is facilitating cooperation among its member states in the area of digital development.

Road ahead

Simple and concrete approaches to digital development challenges and actions plans that can have a positive impact for all.

Burkina Faso
S.E. Mme Hadja Fatimata Ouattara/Sanon, Minister, Ministère du Développement de l'Economie numérique et des Postes

Monsieur le Secrétaire Général de l'UIT,
Excellences, Mesdames et Messieurs les Ministres,
Excellences Mesdames et Messieurs les Ambassadeurs, et les Représentants des Organisations Internationales,
Distingués délégués,
Mesdames et Messieurs.

C'est avec un réel plaisir que je prends la parole à cet important rendez-vous annuel qu'est le Forum du Sommet Mondial de la Société de l'Information (SMSI). Je voudrais particulièrement féliciter **M. Houlin ZHAO, Secrétaire Général de l'UIT,** les premiers responsables de toutes les agences des nations Unies impliquées, notamment, l'UNESCO, la CNUCED, et le PNUD pour la parfaite organisation de cette manifestation.

Excellence, Mesdames et Messieurs,
Le thème général du présent Forum : «Les sociétés de l'information et du savoir au service du développement durable» nous interpelle tous à réfléchir sur les voies et moyens pour que chaque habitant de la terre puisse vivre la réalité de la Contribution des Télécommunications et des TIC à l'amélioration de la qualité de vie.
Pour sa part, le Burkina Faso accorde une très grande priorité au développement de l'économie numérique aux fins de soutenir sa croissance et de créer les conditions d'une plus grande employabilité de ses citoyens et particulièrement de sa jeunesse, et les conditions de l'autonomisation des jeunes filles et des femmes.

Excellence, Mesdames et Messieurs,
Le Burkina Faso poursuit inlassablement ses efforts dans le sillage des lignes d'action tracés dans le cadre du SMSI.
Aussi, et en vue de garantir l'accès du plus grand nombre à des services de qualité, le Gouvernement conjugue ses efforts avec ceux des opérateurs privés établis afin d'assurer à notre pays une infrastructure

adéquate qui va contribuer substantiellement à l'amélioration de la qualité de service et d'une manière générale à intégrer notre pays dans la société mondiale de l'information.

Les nouvelles orientations stratégiques nationales, contenues dans le nouveau référentiel de développement qu'est le Plan National de Développement Economique et Social (PNDES) réaffirment l'importance des télécommunications/TIC comme facteurs de développement et nourrissent de grandes ambitions pour le secteur.

Excellence, Mesdames et Messieurs,

La mise en œuvre des lignes d'actions issues du SMSI constitue est un facteur essentiel pour la réalisation des ambitions de développement de nos Etats et des Objectifs de développement durable(ODD). La situation pour le Burkina Faso se présente comme suit ;

- Sur le plan de la mise en œuvre de l'environnement propice,

Le Burkina Faso s'est doté d'un cadre juridique intégral et holistique pour le développement des réseaux et des services de Télécommunications et des TIC. A l'actif de ces réformes, notre pays connait en ce moment un environnement compétitif et ouvert en matière des Télécommunications et des TIC, conforme aux règles communautaires et aux normes internationales.

- Sur le plan du développement de l'Infrastructure,

En vue de contribuer à l'accès universel aux services de qualité, le Gouvernement a mis en œuvre des projets structurants dans le domaine des infrastructures et des applications. Il s'agit en premier lieu, de la réalisation de réseaux en fibre optique reliant les provinces et principales villes et les localités rurales, pour résorber l'enclavement géographique et la fracture numérique vers le «large bande pour tous». Ce projet, en cours de réalisation, va certainement permettre d'utiliser pleinement les TIC pour le développement socio-économique inclusif et durable du Burkina Faso.

Aussi, le Gouvernement avec l'appui de partenaires financiers, a initié la réalisation d'un point d'atterrissement virtuel et celle d'un point d'échange Internet, afin de contribuer à la disponibilité d'Internet à moindre coût au profit des opérateurs de télécommunications.

Excellence, Mesdames et Messieurs,

- Sur le plan du développement des applications et des usages des TIC,

L'administration de mon pays poursuit ses efforts de modernisation pour faciliter l'accès des citoyens et des entreprises à des services en ligne ainsi que pour l'amélioration de la transparence de son action. Au nombre des acquis, on peut retenir notamment la télé-déclaration des impôts, le suivi des dossiers de paiement des fournisseurs, le suivi des dossiers de carrière et de solde des agents publics de l'Etat, les inscriptions aux concours de la fonction publique. Bien d'autres e-services sont en cours d'élaboration dans tous les secteurs de la vie (santé, éducation, monde rural, administration publique..).

La mise en place par le Burkina Faso, d'une infrastructure de Cloud Gouvernemental (G-Cloud) sera effective dans les mois à venir pour renforcer l'efficacité de l'offre de service de l'Etat et offrir une plateforme robuste, ouverte aux acteurs privés du secteur pour renforcer la sécurisation de leurs données ainsi que leurs capacités d'innovation dans l'offre de services répondant au besoin du marché.

La mise à disposition des données ouvertes est également en cours avec l'initiative OPEN DATA. Cette initiative permet de rassembler sur une même plateforme les données statistiques, non sensibles, qui sont produites par le gouvernement, le secteur privé et la société civile afin de permettre leur réutilisation dans le cadre de projets innovants.

Notons également que notre pays a mis en place une plateforme E-Conseil des Ministres avec l'appui de l'UIT et tient régulièrement, depuis une dizaine d'années, sans discontinuer, les éditions annuelles de la Semaine Nationale de l'Internet.

Excellence, Mesdames et Messieurs,

Au Burkina Faso nous croyons très fermement au potentiel des TICs pour accélérer le développement socio-économique. L'utilisation des technologies émergentes comme l'internet des objets, l'intelligence artificielle et la recherche de modèles innovants de partenariat public privé sont autant de moyens que nous explorons pour la mise en œuvre des lignes d'action tracés dans le cadre du SMSI pour accélérer l'atteinte des ODD. Si dans les pays en développement les TIC peuvent être perçus comme des services d'appoint, dans un pays en développement comme le mien les TIC constituent la force motrice de notre développement socio-économique. Nous y croyons et nous travaillons dans ce sens.

Je vous remercie

Bangladesh

Mr. Anir Chowdhury, Political Advisor, Access to Information (a2i) Program

How is the Government of Bangladesh capitalizing on public-private-people partnerships for enabling development leapfrogging?

In Bangladesh, we recognize that a country cannot achieve fast track development without the combined efforts of all relevant stakeholders and development partners. It is with this conviction that the Government of Bangladesh has been on a transformative journey from being a conservative body to becoming a facilitator for impact driven partnerships catalyzed by the a2i Program at the Prime Minister's Office.

Citizens who previously had to make the time-consuming, painful and often unnecessary travel of around 20-40 kms to the nearest government offices for important services, can now easily visit one of the 4,500 plus Union Digital Centres within walking distance located in local government premises, and run by young entrepreneurs, both male and female. Such public-private partnerships have given us a new generation of local service providers who are not only better aligned with local socio-cultural context but more importantly driven to succeed because it is their own business that they are running. These micro-entrepreneurs deliver over 100 types of public and private services ranging from birth registration, land records and financial services to over 5 million underserved every month. Time and cost of service delivery have come down by 50 to 60% nationally.

The Government of Bangladesh has gone further to come up with ingenious and manageable ways of allowing and encouraging citizen participation in policy level decision making. All 64 district administrators are using social media to do thousands of citizens grievance redressals every month. This phenomenon is completely revolutionizing our traditional grievance redressal system. This platform is giving rise to a new cadre of 'citizen journalists' creating unprecedented interaction with citizens who are contributing to policy formulation.

It is this ICT enabled empowerment powered by public-private-people partnerships that we believe will take both South and North nations into a completely new level of service innovation and equip us for development leapfrogging.

We know that your government is implementing the Digital Bangladesh vision and that you have made some significant strides in the last 10 years in the ICT4D indicators. How can the other developing countries and South-South nations learn from your experience?

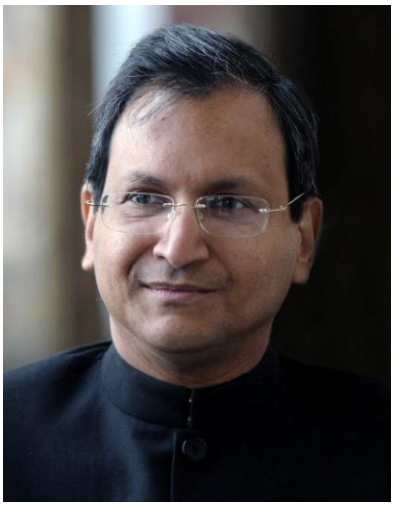
The Bangladesh government is embracing approaches and tools to become more citizen-centric, responsive and participatory.

First of all, we are cautious about developing citizen-centric approaches rather than technology-centric approaches when designing or bringing innovation in public services. Through ICT-based service design trainings, we are building capacity among our civil servants to come up with original ideas on how to bring innovation in public service delivery mechanism.

Next, to make the Bangladesh Civil Service fully understand the perspectives of the citizens, especially the underserved, and modify its own structure and processes to incorporate this new understanding, the Bangladesh government is employing tools such as 'design thinking' and 'behavioral insights'.

Finally, the Bangladesh government has taken a definite move towards result based experimentation and citizen centric innovation while leveraging on the strengths of private sector, academia and think tanks through public-private partnerships.

We believe that by sharing these insights and knowledge, understanding not just what innovation happened, but how it happened and why it happened – and in full glory of the context it happened in – will allow us to "build on the shoulders of giants" in those countries, avoid the mistakes they made and thus accelerate our own progress. This will help us achieve SDG 17 of strengthening global partnerships for sustainable development.



Group of Fifteen

H.E. Mr. Ravinatha Aryasinha, Permanent Representative of Sri Lanka to the UN Geneva and Chairman of the Personal Representatives of the Group of Fifteen

Mr. President,

I have the honour to deliver this statement on behalf of the Group of Fifteen (G-15), a Group of Developing Countries representing Asia, Africa and Latin America that aims for mutually beneficial cooperation and collaboration for realizing sustainable development and economic progress. Our Group is deeply pleased to be part of the World Summit on the Information Society (WSIS), the world's largest annual gathering of the 'ICT for the development community.'

As a niche Group of the Global South, the G-15 has identified the 2030 Agenda for Sustainable Development as an important global process to be involved. The G-15 also wishes to acknowledge the concerted efforts made by the International Telecommunication Union to highlight the role that ICTs play in achieving the Sustainable Development Goals. In this regard we are particularly encouraged by the WSIS Action Lines in support of the implementation of the SDGs. Our Group believes that ICTs continue to play a critical role in promoting, advancing and measuring the SDGs and wish to enhance the capacities of our member countries in this regard. We believe that ICTs are an important engine for achievement of the Sustainable Development Goals. Goals 9 and 17 are among the most relevant. Goal 9 addresses the promotion of inclusive and sustainable industrialization and fostering innovation in general and information and communications technology, in particular Goal 17 refers to science, technology development and transfer, and capacity building as means of implementation which play crucial roles in achievement of the 2030 Development Agenda. Although the SDGs, and also the Tunis Agenda make several direct and indirect references to transfer of technology, their cross- cutting relevance is not properly reflected in the SDG indicator framework. A major challenge that is facing many developing countries is the lack of appropriate technology that is required for the achievement of the SDGs. In this regard, resolution E/RES/2016/22, titled: "Assessment of the progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society" calls upon all stakeholders to provide adequate resources, enhanced capacity-building and transfer of technology and knowledge to developing countries.

The G-15 views Information Communication Technology as a key area for focused cooperation among the members. In this context, we are glad to engage with the WSIS Forum and ITU in a constructive manner in order to further enhance capacities among our member countries.

The past year has seen significant developments in the interactions between the G-15 and the ITU. On two separate occasions there have been high level meetings with participation of representatives of G-15 and ITU officials on numerous avenues of cooperation that could be enhanced between our two organizations.

In this respect the G-15 is committed to enhancing capacities among its member countries through robust South-South cooperation initiatives and also seeks opportunities for collaboration with international organisations, including the ITU. There are serious concerns with regard to the digital divide between the developed and the developing countries while there are closer relationships between the two in all walks of life. While progress has been made in terms of closing the gaps and differences in some areas, a considerable technological divide still exists between and within countries. Such divides often act as impediments in harnessing the potential of science, technology and innovation for the ongoing processes, such as the implementation of the Sustainable Development Goals. To overcome this gap, technology development and transfer and capacity building have a crucial role to play. These provide means for empowerment of people and communities, and are an essential element towards creating an inclusive information society. It is also the observation of the G-15 that much could be achieved through sharing of resources and experiences among the developing countries with the support of international partners such as the ITU. In this regard the G-15 wishes to further engage with the ITU to seek opportunities and arrangements for training and capacity building for its member countries which would offer tangible benefits. This could be done in partnership with other States and regional and international organisations.

On behalf of the G-15, I would like to wish every success to the WSIS Forum.

International Network of Women Engineers & Scientists
Dr. Yvette Ramos

Distinguished dignitaries,
Ladies and gentlemen,

It is a great honour to address such an august gathering in the World City of Peace today. I wish to congratulate the International Telecommunication Union (ITU) for organizing for so many years now such a laudable Summit, the WSIS, to reflect on what has become practically inevitable in today's global economy, that is, the emergence of the ICTs as key booster for inclusive development.

1. Which stakeholders do you represent here today?
I represent here today on one hand:

- Women Engineers and Scientists of the world, thanks to the International Network of Women Engineers and Scientists (INWES), created in 2002 as an incorporated not-for-profit organization in Canada and;

- Swiss Engineering, the Swiss engineers society with over 13'000 members in Switzerland, partner of the ITU for the WSIS for 2 years now, and potential partner of the ITU in a longer term in two strategic areas:

    1. Industry 4.0 and digital transformation of our societies through innovation

    2. Role of women & men engineers and scientists in the XX1st century!

What is your contribution at the WSIS and further recommendations to the ITU?
Ladies and gentlemen, we are very honoured to try and empower the WSIS forum so to build a better future worldwide through our Engineering and Scientific societies, including men and women's participation in ICTs. There used to be times when the invisibility cloak would give you extreme power! Maybe our human fantasy will never contradict this (cf. Harry Potter) but:…..Women need now to be put under the spotlight and it is time to show that we not only smile or cry, we also manage and are experts in ICTs. Industry 4.0 PLUS we want to have the power!

We deal everyday with complexity, and finance is just a mean to develop inclusion at all levels. We do know how to build complex projects, with time pressure, people constantly increasing needs for innovation, efficiency and effectiveness, infrastructure developments and overall political wills to progress in every sector of activity.

On the 15th June this week, we will have a wonderful Workshop about women Engineers & Scientists in the digital economy and industry 4.0: this will put the light on the role of women engineers & scientists all along the past decades and will raise the profile of our role models. As a follow-up activity of the 2016 workshop on building a Code of Ethics in engineering, we, engineers in ICTs, and more generally engineers worldwide, do offer and implement solutions for the protection of the global environment, do implement sound and sustainable economic development and contribute positively to poverty reduction strategies and actions.

As women engineers and scientists are included in the process, on equal basis, we believe our major strength is to contribute to Goal 5 (Gender equality) of the Sustainable Development Goals, but not only!

We want to achieve and help achieve the Sustainable Development Agenda towards 2030 with direct and simple approaches, and act and accelerate change with positive impacts for all. Especially, we are happy to see initiatives in ITU and other instances implemented to promote equality and to support women in technical areas, in particular in ICTs.

However, there is still much to be done. INWES members through its regional networks and partners are all actively working very concretely to:

- represent the interests of all women in STEM
- reinforce the key role of women in STEM in building a sustainable and inclusive
- society
- leverage diversity and create innovative synergies
- promote a balanced life in modern ways for all

We, INWES organizational Member, Swiss Engineering, together with other INWES partners in Europe, including women engineers & scientists active in STEM (Science, technology, Engineering and Maths), propose to sign a partnership with the ITU and key other players in the sector, on specific projects and programmes aligned with Actions Lines and SDGs we are working on.

Thank you for your attention

International Federation for Information Processing
Prof. Mike Hinchey, President

As President of the International Federation for Information Processing (IFIP), I am delighted to take a few moments at the WSIS Forum 2017 to reflect on the sustainable development goals and provide some examples on the way IFIP is able to contribute to achieving them.

IFIP is the global federation of national and international scientific, technical and professional ICT societies. Combined, these societies represent an enormous source of knowledge and experience in all aspects of ICT and STEM. This knowledge and experience has to be, is and will be used to contribute to the 2030 Agenda.

In summary, IFIP aims at achieving a worldwide professional and socially responsible development and application of ICT, by:

- enhancing international cooperation between national and international organizations, and among individuals, in all aspects of research, development and application of ICT
- increasing professionalism and ethical behaviour in the ICT workforce
- promoting digital equity
- educating the public and enhancing public understanding
- disseminating and exchanging information

.

The model that IFIP uses involves multi-stakeholder participation, in working groups, in technical committees, at forums and special interest groups and conferences across the globe. This it has done in all of its 60 plus years. Is this still a valid methodology to achieve its aims? We believe that our approach like that of WSIS itself is still valid and effective, however the challenge is to accelerate the actions in order to realize the 2030 Agenda.

IFIP has always been a partnership based organisation, we believe that this is a major factor to help increase the effectiveness of our largely voluntary efforts. This plays perfectly into SDG exhortation to revitalise and enhance global partnerships. IFIP has 117 working groups and technical committees which are global, we have the International Professional Practice Partnership (IP3) and our Global Industry Council comprised of senior leaders in industry committed to improving and promoting professional practice in ICT.

IFIP is keen to contribute to the 2030 Agenda and invites all WSIS stakeholders to discuss possibilities for effective and efficient partnerships, in various ways for various goals and action lines.

Société Civile Africaine sur la Société de l'Information (ACSIS)
Dr. Cisse Kane, President

Monsieur le Président du Forum du SMSI 2017,
Monsieur le Secrétaire Général de l'Union Internationale des Télécommunications,
Excellences, Mesdames, Messieurs les ministres,
Chers participants (tes)

Au nom d'ACSIS, nous vous exprimons nos félicitations ainsi qu'à M. Houlin Zhao Secrétaire Général de l'Union Internationale des Télécommunications, son équipe et l'ensemble de ses partenaires de l'UNESCO, du PNUD et de la CUNCED, pour l'organisation du WSIS FORUM 2017, qui a été le cadre de consultations vivantes avec des sessions de très haut niveau organisées en vue de répondre à la question des liens entre les TIC et les ODD. Nous nous félicitons également de la participation forte et de la contribution substantielle de l'Afrique au Forum 2017 du SMSI ainsi que de la forte mobilisation des membres d'ACSIS Suisse et de la Société Civile Africaine en général.
La relation entre les TIC et les Objectifs de Développement Durable des Nations Unies est une évidence en ce sens que les TIC sont l'outil capacitateur global pour tous les autres ODD des Nations Unies. Les TIC font partie des plus grands créateurs d'emplois dans le monde. Il faut en faire une opportunité dans le monde mais surtout en Afrique

Pour ce qui concerne l'Afrique les défis majeurs restent importants. En effet, les fractures sont toujours très béantes en Afrique avec un très bas taux de connectivité en Afrique. Nous avons tous démarré ensemble il y a 25 ans mais il y en des pays qui en sont à 90% et d'autres à 3% de

connexion Internet (surtout en Afrique). L'explosion mobile en Afrique ne saurait masquer un accès très partiel à la société de l'information et des connaissances.

En Afrique il y a encore beaucoup de barrières comme l'accès (coûts et infrastructures), la langue, l'analphabétisme numérique). Nous risquons de continuer encore longtemps à recueillir aussi beaucoup de méfaits des TIC.

Les dangers de l'Internet liés à la cybersécurité, à l'environnement (les déchets électroniques mais aussi ondes de toutes sortes, la gadgetisation, rendent l'Afrique encore plus vulnérable que les autres continents.

Il s'agira donc, pour répondre à la question du thème central du Forum SMSI de cette année, de mettre les TIC au cœur des processus (tous les ministères, toutes les activités), d'inscrire la dimension numérique comme un pré-requis dans toute action que l'on entreprend, dans toute politique à mettre en œuvre, dans tout plan de développement.
Cela implique de gros efforts de formation et de sensibilisation sur la place capitale des TIC dans le processus de transformation numérique de l'Afrique, et davantage de moyens pour l'appropriation des processus de gouvernance de l'Internet

Monsieur le Président du SMSI,
Monsieur le Secrétaire Général de l'Union Internationale des Télécommunications
Excellences, Mesdames, Messieurs les ministres,
Chers participants (tes)

Comme l'a dit un des participants au Panel organisé par ACSIS sur l'économie numérique en Afrique, Pertes, Gains et stratégies : "Même si on donne toute la connectivité en Afrique, on restera des consommateurs tant qu'on n'a pas résolu la question des langues et contenus locaux ». Il est donc nécessaire de veiller à une appropriation plus locale et plus localisée des outils et des opportunités liées aux TIC.

La digestion de ce processus ne saurait se faire sans de gros efforts dans la localisation des processus en Afrique qui passe par la mise à profit des savoirs et cultures locaux, la multiplication des points d'échanges et la généralisation des contenus locaux qui ouvrira de nouvelles opportunités pour les investisseurs et boostera l'innovation. Aujourd'hui seuls 3% des contenus

Internet en Afrique se font dans les langues africaines. Si on n'y prend garde, l'Afrique va continuer à être ce qu'elle fondamentalement aujourd'hui, une consommatrice de l'Economique numérique qui n'a aucune prise sur les processus, un marché à la merci des multinationales. De sorte qu'elle risque de ne bénéficier que des miettes de l'économie numérique.

C'est pourquoi nous pensons que la Communauté internationale devrait se pencher sur la question de la mobilisation de ressources encore plus conséquentes pour que l'Afrique bénéficie davantage des retombées de l'Economie Numérique. ACSIS se réjouit de toutes les initiatives qui se développent en Afrique comme Smart Africa et lance un appel à tous les pays Africains pour soutenir l'organisation prochaine au Tchad du Sommet Panafricain sur l'Economie Numérique et la Croissance Durable.

Monsieur le Président,
Monsieur le Secrétaire Général de l'Union Internationale des Télécommunications
Excellences, Mesdames, Messieurs les ministres,
Chers participants (tes)

La Société Civile africaine se félicite de l'existence de ce cadre unique qu'est le Forum du SMSI qui permet la plus grande interaction entre tous les acteurs du secteur. Ce qui est essentiel dans notre présent et dans notre futur. Nous présentons nos félicitations à toute l'équipe organisatrice du Forum autour de M. Houlin Zhao, Secrétaire Général de l'UIT.

Nous estimons cependant que, compte tenu des enjeux, la communauté internationale doit se mobiliser davantage pour doter le Forum du SMSI de moyens conséquents pour assurer plus d'inclusion et une participation plus équitable de tous les pays du monde et de toutes les parties prenantes (Gouvernements, secteur privé, Société Civile, Collectivités locales, Communauté technique, Secteur académique, etc.)

Aujourd'hui le site du Forum du SMSI est entièrement en anglais. Le concours du WSIS Prize est entièrement en anglais. Cela veut dire que si l'on ne peut pas remplir le formulaire en anglais on ne pourra pas participer au concours du WSIS Prize, même si on a un très beau projet. Il est également évident que si on n'est pas anglophone on risque grandement de ne pas pouvoir voter puisque l'interface de vote est uniquement en anglais. Ce concours risque donc de continuer encore longtemps à favoriser les candidats maniant l'anglais comme c'est le cas cette année

encore. Par ailleurs, durant le WSIS FORUM, seules les rencontres de haut niveau sont interprétées dans les langues des Nations Unies. ACSIS lance donc un appel solennel à la communauté Internationale pour doter le forum du SMSI de moyens suffisants pour un soutien plus significatif au Forum du SMSI en renforçant son caractère inclusif et en accroissant sa résonnance. Cela passe par plus de multilinguisme dans le processus du Forum. Un soutien significatif du Secrétariat permettrait de:

1. Traduire tout le site Internet du WSIS FORUM au moins dans toutes les langues officielles des Nations Unies
2. Veiller à ce que toutes les sessions du WSIS FORUM bénéficient d'interprétation dans toutes les langues officielles des Nations Unies
3. Traduire l'agenda du Forum du SMSI dans toutes les langues des Nations Unies
4. Offrir un nombre de bourses conséquentes (au moins 20 par continent) chaque année afin de permettre aux membres de la Société Civile les plus méritants de faire le voyage de Genève et de participer au Forum du SMSI
5. Prévoir l'opportunité de compléter les délégations gouvernementales par quelques membres méritants de la Société Civile

ACSIS demeure convaincu que ces mesures sont salutaires pour assurer plus d'inclusion, une participation plus juste et plus équitable à notre Forum mondial. ACSIS est convaincu que la Communauté internationale a les moyens de soutenir ce processus de passage au multilinguisme et à une participation plus inclusive qui va ouvrir d'autres horizons à la communauté internationale. Nous pensons que le secteur privé des TIC est très prospère et nous lui lançons un appel pour soutenir cette proposition pour d'avantage d'inclusion. Nous lançons cet appel aux gouvernements, à la Communauté technique, aux collectivités locales à la société Civile de tous les pays membres des Nations Unies pour accompagner ce processus qui vise à davantage d'inclusion.

Monsieur le Président,
Monsieur le Secrétaire Général de l'Union Internationale des Télécommunications
Excellences, Mesdames, Messieurs les ministres,
Chers participants (tes)

Je vous remercie de votre attention.

SESSION TWO: Access to Information and Knowledge for All

High-Level Track Facilitator (HLTF): Dr Yury Grin, Deputy Director General, Intervale

High Level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator ITU** – Mr. Kemal Huseinovic, Chief, Department of Infrastructure, Enabling Environment and E-Applications (IEE)
3. **Slovenia** – H.E. Mr Boris Koprivnikar, Deputy Prime Minister, Minister for Public Administration
4. **Thailand** – H.E. Mr. Pansak Siriruchatapong, Vice Minister, Ministry of Digital Economy and Society
5. **United States** – H.E. Ms. Julie Napier Zoller, Acting U.S. Coordinator for International Communications and Information Policy, International Communications and Information Policy (CIP), United States Department of State
6. **Zimbabwe** – H. E. Dr. Win Busayi Juyana Mlambo, Deputy Minister, Ministry of Information Communication Technology, Postal and Courier Services
7. **Colombia** – Dr. Martha Liliana Suárez Peñaloza, Director General, Agencia Nacional del Espectro
8. **Facebook** – Mr. Robert Pepper, Head, Global Connectivity Policy & Planning (United States)
9. **Association for Progressive Communications** – Ms. Deborah Brown, Global Advocacy Lead (South Africa (Republic of))

Introduction

Information and communication technology is the most inclusive technologies that we all use. It is widely accessible and now quite cheap to use it. And there is no differences between gender and should be less and less problematic for some unfortunate groups of people.

Vision

Learning now is not something that we do separately. Learning is something that we are doing very much on fly. So when we work we learn, when we go home, we learn. And today technologies for learning are much more effective than before.

Increasing power and efficiency of ICT for economical and humanitarian development worldwide

Fresh Priorities

Use of Artificial Intelligence and cognitive sciences - this is something that can really improve how fast we accept the new knowledge and be successful in using new technologies.

Emerging trends

New technical and organizational solutions to speed up deployment of the networks and to facilitate access and learning

Opportunities

- New technologies to provide access like high altitude aircraft unmanned that will fly at 20 kilometer three months at a time, solar powered and meshed together with laser and radio beams
- Artificial intelligence and cognitive sciences

Key Challenges

- Broadband uptake due to high costs
- Access to knowledge about ICTs for development
- Lack of local content and languages issue
- Bigger involvement of civil society at local level

Case Examples

- The rapid and successful deployment of fast broadband and different platforms for e-services in Thailand
- Efficient use of such limited resources as radio spectrum in Colombia
- Countrywide projects implanted in the Zimbabwe with special attention to languages issues
- International cooperation and assistance

Road ahead

Coming World Radio Conference of 2019 to make important decision further facilitating use of radio spectrum Access to Information and Knowledge for All

The WSIS Forum and related initiatives are important to providing countries with practical help and assistance.

Link with the WSIS Action Lines and Sustainable Development Goals (SDGs)

There were clear links to the WSIS Actions Lines but also to specific SDGs such as those concerning education; access; healthcare and poverty reductions.

Thailand
H.E. Mr. Pansak Siriruchatapong, Vice Minister, Ministry of Digital Economy and Society

Your Excellencies,

Distinguished Guests,

Ladies and Gentlemen,

Good Afternoon.

On behalf of the Ministry of Digital Economy of Thailand, it is a great honor for me to be here taking part in the global policy platform and a great pleasure to have this opportunity to speak at the WSIS Forum 2017 under the theme of "inclusiveness – access to information and knowledge for all". The theme comes at a perfect time for Thailand. As the current government's Thailand 4.0 policy is aimed at transforming Thailand from a production-based economy relying on producing commodities into an innovation-driven, value-based, service-based economy, ultimately leading to economic prosperity, social stability, and long-term sustainability. In other words, while we will be aggressively pursuing economic growth utilizing technology and innovation, we are also stressing the importance of achieving sustainability, by being friendly to the environment, as well as guaranteeing social inclusion through equitable distribution of wealth and opportunity.

Then the next question people will probably want to ask is "how do we translate the Thailand 4.0 policy into reality?" From the digital development standpoint, we argue that digital technology is one of the easiest and most accessible enablers that can help us realize such developmental goal. It has also become very clear to us that Thailand must proceed with the process of digitalizing the country without leaving any group of people behind. Therefore, ladies and gentlemen, today I would like to share with you two points: what Thailand has been doing recently to ensure inclusiveness of access to broadband infrastructure and how we are trying to ensure that people can maximize the benefits of such infrastructure.

On the first point – ensuring inclusiveness of access to broadband infrastructure -- early this year we launched the village broadband initiative to ensure that everyone in Thailand can connect to broadband services. This will be done by deploying fiber broadband to all villages in the country (74,965 of them in 2017) -- with one free Wi-Fi hotspot for each village -- to ensure that everyone in Thailand can connect to broadband services. While about one-third of villages have already got the existing infrastructure, by the end of this year we will cover 24,700 more villages and will complete the rest by the end of next year. As for the most remote parts of the country that the deployment of optical fiber is not viable or practical, we opt for the use of satellite and 3G/ 4G mobile connection to ensure broadband inclusiveness.

On the second point -- maximizing the benefits of broadband infrastructure – we understand that we must tackle the empowerment issue before the Thai people can fully benefit from having broadband connection. Therefore, we are currently launching the digital community initiative that will be be built on top of the village broadband infrastructure, aiming to help local villagers all over the country to generate more income and better the quality of life. This will be done in three themes: digital community e-commerce, digital health, and digital local government.

- For the first theme, we are focusing on e-commerce, helping farmers, craftspeople, villagers, and little village shops, all over the country to sell their products and services online so that they can generate additional income and even innovate new products and services. In order to achieve this, our steps range from providing marketplaces that welcome local community products and services, to installing a highly trusted payment system, to putting in place a seamless, country-wide logistics system that will help make e-commerce to-and-from the most remote parts of the country possible, to empowering sellers from all over the country so that they have basic digital literacy skills, e-commerce skills, and even knowledge of how to improve their products and services both in quality and quantity.
- For the second theme, we are implementing a digital health program. In the past, this used to be difficult but now that we have the basic infrastructure in place, telemedicine has become much more doable. Now we are linking hospitals, country-wide, with high-speed broadband and a conference system so doctors from smallest hospitals can consult with medical specialists from large medical facilities. We are building a digital chat platform and mobile application to enable about 1 million village health

volunteers to talk to medical personnel in real time. Also, we are working to build health literacy using digital media to prepare the Thai population for aging society.

- On the third theme, we are focusing on digital local government. For the past decade or so, Thailand has been developing e-Government focusing on central administration. But this year the Ministry of Digital Economy and Society will work with local government players to ensure that now that we have broadband everywhere people can actually access central government services as well as local government services via online channels. Also, to increase transparency and civic participation we are turning the open data policy into implementation at the local government level as well.

Your Excellencies,

Ladies and gentlemen,

For all my professional life, I have been working at varying capacities in the field of science and technology development and I truly feel that by deploying country-wide broadband infrastructure and empowering local people through e-commerce, digital health, and digital local government, we are working on something that will produce profound and long-lasting impacts on people and society as a whole – ones that can speed up the pace of development for Thailand in a most inclusive manner. I look forward to coming back to this forum next year to share with you our success stories and learned lessons from our endeavor.

Thank you.

United States

H.E. Ms Julie Napier Zoller, Acting U.S. Coordinator for International Communications and Information Policy, International Communications and Information Policy (CIP), United States Department of State

I am honored to be here as a high level representative to this 2017 WSIS Forum on "Information and Knowledge Societies for SDGs".

I join with so many others here at the Forum in our common pursuit of increasing access to and use of the Internet for the world's citizens and businesses. We believe this goal is at the heart of creating "Information and Knowledge Societies for SDGs" and that it can be achieved when countries integrate Internet connectivity as a key part of their national development strategies, international institutions prioritize Internet connectivity as a development goal, and we all take action to enable and deploy innovative technologies.

The McKinsey Global Institute found that the direct impact of data flows raised world GDP by 3.0 percent annually, or $2.2 trillion in 2014. According to a World Bank study, a 10 percent increase in broadband penetration in developing countries correlates with a 1.4 percent increase in GDP (a remarkable multiplier and return on investment). These often cited statistics bear repeating.

This isn't just theoretical – this is happening before our eyes right now. The Boston Consulting Group estimates that India's internet economy will double to $250 billion by 2020, making up 7.5% of India's GDP. In order to promote this kind of internet-driven economic development, the

U.S. Overseas Private Investment Corporation ("OPIC"), has extended over $1 billion in current financing for information and communications technology projects worldwide. In India, OPIC provided up to $171 million in financing to Tikona Digital Networks to expand its low-cost, scalable wireless broadband networks across India, which increases Internet adoption among residential and commercial consumers alike.

These benefits do not accrue only to "technology" companies. It is estimated that 75 percent of the benefits derived from information and communication technologies (ICTs) go to businesses in other sectors. It is rapidly becoming a reality that all companies are "technology companies."

This extension of technology to the broader economy has tangible benefits for people's daily lives. With Internet technology, doctors are using new tools and better tracking the health of their patients, farmers

can access weather and market data, companies manage supply chains across borders more effectively, governments can more accurately track and project their tax revenues and expenditures, and countless other applications. As I've travelled around the world, I've seen first-hand how entrepreneurship, economic growth, and social well-being blooms where connectivity is good and suffers where connectivity is poor.

Half the world's population or nearly 3.8 billion people are connected to the Internet today. And trillions of devices are set up to join them with the Internet of Things. That aggregate connectivity holds the potential to lift people out of poverty, formalize the informal economy, increase the efficiency of supply chains and the productivity of workers, and in turn raise wages and make possible activities that we have not even dreamed up yet.

It will take open markets, stakeholder participation, and thoughtful, forward-looking policies, to enable the Internet's future potential for accelerating social and economic development. It is so important that we work together to create the right policy, legal, and regulatory conditions in our countries and across borders. This means maintaining an open, interoperable, reliable, and secure internet that fosters efficiency, innovation, communication, and economic prosperity, while respecting privacy and guarding against disruption, fraud, and theft. It also means ensuring the free flow of data across borders and rejecting the impulse to regulate or tax value-added services or new technologies like

Artificial Intelligence. If we get the policies wrong, we risk stifling rather than stimulating innovation and missing out on that 1.4 percent increase in GDP that comes with a 10 percent increase in broadband penetration.

Colombia
Dr. Martha Liliana Suárez Peñaloza, Director General, Agencia Nacional del Espectro (ANE)

El Gobierno de la República de Colombia, presente en la Cumbre Mundial de la Sociedad de la Información, que se está llevando a cabo entre los días 12 al 16 de junio en Ginebra, Suiza:

Comprometido con la Declaración de Principios de Ginebra sobre "Construir la Sociedad de la Información: un desafío global para el nuevo milenio", así como con el compromiso de todos los pueblos del mundo de enmarcar esta construcción alrededor de la persona humana, el derecho de los países al desarrollo y que todas las comunidades puedan emplear plenamente sus posibilidades en la promoción del desarrollo sostenible;

Comprometido en la consecución de los lineamientos de la Declaración de Principios de Ginebra, especialmente, aquellos tendientes a garantizar los derechos de los niños, las mujeres, las poblaciones

vulnerables de la Sociedad, en particular, las personas internamente desplazadas, los desempleados, las personas menos favorecidas, en condición de discapacidad, indígenas y grupos tribales, personas de bajos recursos y las personas mayores.

Comprometido con el cumplimiento e implementación de la Agenda 2030 y los Objetivos de Desarrollo

Sostenible, por lo cual, el Presidente Juan Manuel Santos firmó el Decreto 280 del 2015, "Por el cual se crea la Comisión Interinstitucional de Alto Nivel para el alistamiento y la efectiva implementación de la Agenda de

Desarrollo Post 2015 y sus Objetivos de Desarrollo Sostenible –ODS".

Comprometido con las siguientes iniciativas:

a) El uso de datos abiertos para implementar el sistema de monitoreo para el seguimiento al cumplimiento de los ODS.

b) El rol transversal en la utilización de datos abiertos, en el marco de los 17 ODS, sus 169 metas y sus

230 indicadores.

c) La Política del Plan Vive Digital y el Plan Vive Digital para la Gente y su alineación con la agenda de desarrollo enmarcada en los ODS.

d) La política de espectro 2015-2018 propuesta por la Agencia Nacional del Espectro y adoptada por el

Ministerio de TIC.

e) El Centro de Innovación en Gobierno Electrónico del Ministerio de Tecnologías de la Información y las

Comunicaciones - MinTIC, como herramienta de implementación de los ODS, específicamente en relación con los criterios de selección de las temáticas trabajadas.

f) Por parte del MinTIC: (i) la meta 1.4 referente al acceso a nuevas tecnologías, (ii) la meta 4.9 que hace referencia a al aumento en las oportunidades de estudio en programas TIC a través de becas y

(iii) la meta 9.8 sobre el aumento del acceso a las TIC y al acceso universal y asequible a Internet, teniendo siempre presente las interrelaciones con los demás Objetivos y metas de la Agenda.

Reconociendo la existencia de la brecha digital en el acceso a la información, así como los inconvenientes que ésta provoca en los países en vías de desarrollo, y la necesidad de generar recursos públicos para facilitar el acceso a las TIC, se estableció la Agenda de Túnez, con el fin de crear una Sociedad de la Información inclusiva y para todos, que realice un despliegue de infraestructura, reduzca la brecha digital y genere capacidades y competencias TIC en todos los sectores de la población;

Reconociendo la importancia de materializar las acciones contenidas en la Agenda de Túnez;

Reconociendo la importancia del espectro como un recurso escaso fundamental para el desarrollo de las TIC en el mundo, cuya adecuada gestión y planeación son fundamentales para el desarrollo de la economía de los países.

Declara que diseñó e implantó una política de conectividad y despliegue de la infraestructura de Internet en todo el territorio colombiano, la cual se integró en dos planes de política pública, a saber: el Plan Vive Digital

(2010 – 2014) y el Plan Vive Digital para la Gente (2014 – 2018). Los dos con el siguiente objetivo:

“Impulsar la masificación del uso de Internet, la apropiación de tecnología y de la creación de empleos

TIC directos e indirectos para contribuir de esta manera a reducir el desempleo, disminuir la pobreza y aumentar la competitividad del país”.

Declara que para efectos de darle continuidad al Plan Vive Digital, creó en el 2014 el Plan Vive Digital para la Gente (2014 – 2018). En este caso, tuvo como pilares fundamentales, la promoción del desarrollo de aplicaciones y contenidos con impacto social, la consolidación de un gobierno digital y la apropiación de las TIC en todo el país. Esto es, la necesidad de generar diferentes enfoques de región, empleo y educación para que las personas, de acuerdo con sus principales necesidades, pudieren hacer uso de la tecnología para conectarse.

Declara haber dado un salto en materia de datos abiertos, para así, transformar el Gobierno, pasando de ser un Gobierno en Línea a ser un Gobierno Digital, es decir, pasando de proveer servicios en línea, a constituirse en un Gobierno cuyos datos e información sean abiertos y transparentes para todos los ciudadanos.

Manifiesta que, como resultado, en la implantación del Plan Vive Digital y el Plan Vive Digital para la Gente, se han cumplido las siguientes metas:

a) Municipios conectados con fibra óptica: en el 2010 eran 200, hoy en día son 1.075.

b) Conexiones de banda ancha: en el 2010 había 2,8 millones, hoy en día son 15,3 millones.

c) Internet móvil por demanda (3G y 4G): en el 2010 eran 0,8 millones, hoy en día son 13,4 millones.

d) Internet de Alta Velocidad en zonas apartadas: en el 2010 no existían, hoy en día tenemos 15 y la meta que tenemos son 47 zonas apartadas.

e) Cables submarinos: en el 2010 contábamos con 3, hoy en día tenemos 10.

f) Centros de acceso a internet y tecnología - Puntos y Kioskos Vive Digital: en el 2010 no existían, hoy en día tenemos 2.642.

g) Y finalmente, para el 5 de junio de este año, se logró instalar 568 Zonas Wifi Gratis en diferentes regiones del país.

Manifiesta que con el objetivo de lograr que la inclusión digital sea una realidad:

a) En el 2010, únicamente 100.000 ciudadanos contaban con acceso a alfabetización digital, hoy en día, contamos con 6.700.000.

b) La aplicación de “Convertic #TecnologíaParaVer” cuenta con 260 mil descargas. Esta aplicación promueve la inclusión y autonomía de 1.2 millones de personas con discapacidad visual y baja visión en Colombia gracias al uso y apropiación de las TIC. Por medio de este proyecto se ofrece a nivel nacional la descarga gratuita del lector de pantalla JAWS y el magnificador MAGIC.

c) El Centro de Relevo ha gestionado 1.800.000 llamadas efectivamente realizadas. Este es un proyecto diseñado entre el MinTIC y la Federación Nacional de Sordos de Colombia, FENASCOL, por medio del cual las personas sordas: 1. pueden comunicarse con cualquier persona en todo el país y viceversa. 2. pueden solicitar el servicio de interpretación cuando necesiten ser atendidos en las diferentes instituciones del país. 3. Pueden acceder al conocimiento y uso de las TIC y 4. Pueden formarse como intérpretes de la Lengua de Señas Colombiana.

d) Para el 2010, la media era de 24 niños por terminal en sedes educativas públicas, actualmente, por cada 2 niños se accede a un terminal.

e) Finalmente, Cine para Todos ha realizado 400 funciones en 12 ciudades del país. Este proyecto hace

parte de la iniciativa TIC y Discapacidad que liderada el MinTIC, y que es realizada en convenio con la Fundación Saldarriaga Concha y en alianza con Cine Colombia, que busca ofrecer a las personas con discapacidad nuevos espacios de entretenimiento gracias a las facilidades de inclusión y producción de contenido que brindan las TIC.

Manifiesta que con el fin de promover la Industria TI para que esta compita con empresas de talla mundial, ha:

a) Promovido los beneficiarios para becas de talento TI: hoy en día tenemos 9.274 beneficiarios. Talento

TI es una iniciativa del Plan Vive Digital para la Gente que busca promover la formación de los colombianos en carreras relacionadas con las tecnologías de la información para impulsar la competitividad, la investigación, la innovación y la proyección internacional del sector TI del país.

b) Promovido el porcentaje de pequeñas y medianas empresas que usan las TIC: en el 2010 únicamente el 7% las utilizaba y hoy en día el 75% de las MYPIMES usan las TIC.

c) Fomentado la creación de Empresas del Sector TI: para el 2011 existían 2.657 y hoy en día existen

5.404.

d) Acercado a los emprendedores con la demanda de sectores productivos: se crearon 1288 equipos de emprendedores acompañados en 29 ciudades y se incentivó en la creación de una estrategia de impulso para nuestro “Team Startup”. Este equipo está conformado por emprendimientos digitales que por sus buenas prácticas, logros, tracción, ventas, crecimiento, inmersión en nuevos mercados, inversión, entre otros, están a nivel de importantes Startups mundiales y son referente para los colombianos a nivel nacional e internacional.

e) Por último, ha alentado las ventas del Sector TI se han incrementado: para el 2013 eran de $2.034 billones de dólares y hoy en día son de $3.300 billones de dólares.

De igual forma, manifiesta que ha adelantado actividades de planeación de espectro para garantizar la disponibilidad del recurso que permite soportar el crecimiento de las redes móviles de próxima generación.

Estas iniciativas para la gestión eficiente e innovadora del espectro radioeléctrico han sido premiadas por organismos internacionales como la GSMA (en 2016) y la DSA (en 2017).

Finalmente, manifiesta haber avanzado hacia un Gobierno digital transparente y eficiente, situación que lo posiciona como el #1 en Latinoamérica y el #4 en el mundo en temas de datos abiertos1. Se ha generado una Política Nacional de Seguridad Digital que define los lineamientos para la efectiva gestión pública y privada de los riesgos inherentes al nuevo entorno digital, ha creado y fomentado dos Centros de Excelencia y Apropiación en temas de Big Data e Internet of Things que promueven el aprovechamiento de estas tecnologías en el gobierno y el sector privado, ha desarrollado la página web www.sivirtual.gov.co, la cual le permite al ciudadano gestionar aproximadamente 714 trámites en línea, y por último, ha instado por promover la interoperabilidad de 103 entidades con servicios de intercambio de información publicados.

Association for Progressive Communications (APC)
Ms. Deborah Brown, Global Advocacy Lead

Access to information and knowledge has been recognised as a key principle for achieving the WSIS vision since 2003. Information and knowledge for all are key for achieving the Sustainable Development Goals (SDGs) because they link to empowerment and mobility, enabling people to improve their lives.

Access to information supports development by empowering people, especially marginalised people and those living in poverty, to:

Exercise their human rights, beyond freedom of expression, which is of course essential for self-actualisation and empowerment. Access to information enables people to exercise a wide range of rights that are integral to sustainable development: the right to health, education, work, etc.

Be economically active, productive and innovative.

Learn and apply new skills.

Enrich cultural identity and expression.

Take part in decision making and participate in an active and engaged civil society.

Create community-based solutions to development challenges.

Ensure accountability, transparency, good governance, participation and empowerment.

Measure progress on public and private commitments on sustainable development.

Improving access to information and knowledge is not a new goal. It was also recognised as essential for achieving the information society in the Geneva Declaration at the first phase of WSIS in 2003. In the last 14 years, there has not been nearly enough progress in this area.

Challenges come in many forms. In today's world, access to information and knowledge increasingly requires access to the internet. APC sees six major barriers to meaningful access to the internet today:

It's about cost. High internet access costs, due to lack of competitive open markets, continue to be among the biggest factors stopping "the rest" from getting connected. The main reason that the internet is still poorly dispersed and unaffordable for many is the poor distribution of basic telecommunications infrastructure and limited access to radio spectrum.

It's about data. In order to solve access inequalities, we need disaggregated data to better meet the needs of disadvantaged groups – particularly women, the poor, rural populations and the less abled.

It's about rights. Restricted and filtered access is not real access. Real access should be free of censorship, surveillance, discrimination, harassment, and any other form of violation of human rights.

It's about more than mobile. Expansion of mobile broadband by itself will not meet the connectivity needs of "the rest". It is necessary to improve the affordability and coverage of both fixed and mobile services, along with the technical and human capacity to ensure reliability, the ability to deploy low-cost locally owned networks, and the ability to use the applications and content effectively.

It's about content. There is a lack of investment in local content creation; most initiatives to bridge the digital divide are still very supply-driven.

It's not only about infrastructure. Increased access to infrastructure should be coupled with efforts to address political, economic, social and cultural barriers that prevent people from fully accessing the internet.

The final challenge is that conversations like this one about improving access to information and knowledge through ICTs at the WSIS Forum are very disconnected from the main discussions at the UN on sustainable development. WSIS is largely unknown by the SDG community. However, with SDG 9 on industry, innovation, and infrastructure and SDG 5 on gender equality – which both include a target on ICTs – in focus this year at the High Level Political Forum in New York, we have the chance to change that.

Since the theme for this session is inclusiveness, we would like to recommend several inclusive approaches to improve access to information and knowledge for all.

Inclusiveness is a key pillar of a human rights-based framework and should be part of efforts to bridge the digital divide. It is critical that any action taken in response to issues of access to the internet and ICTs be guided by international human rights norms and principles, especially equality, nondiscrimination, inclusion, participation and the provision of effective remedies.

When deployed without an inclusive and human rights-based approach, technology reinforces or deepens inequalities and discrimination in society. This is because social norms and structural inequalities tend to determine how people interact with technology. Therefore, when underlying socio-cultural and economic barriers to internet access are not being addressed, the result is often digital exclusion.

This is especially true when we look at the impact of the internet on economic, social and cultural rights. For example, communities that are in most need of mobile health initiatives are also the ones who do not have affordable and reliable access to the internet; people who could most benefit from online learning are more likely to have access to mobile devices rather than large-format screens, which are better suited for educational purposes, such as online courses; women, who can use mobile phones to run businesses, or facilitate more flexible working arrangements that fit into their other responsibilities, are less likely than men to own or have access to such devices.

Inclusive approaches are key to overcoming such barriers and leveraging technology to improve people's lives. Community-based local access networks embody such approaches by encouraging entire villages to work together to establish their own communications infrastructure. This model has great promise, not only for helping to ensure everyone is connected, but also by setting an example of how those in underserved areas can collaborate together to meet their own needs. This type of empowerment can help build the capacity of communities to address other local development challenges. APC and our members are developing community-based local access networks in India, Brazil, Mexico, Spain and Nigeria, among other places, and examining the type of policy and regulatory environments needed to support such initiatives.

Today at the Human Rights Council, the Office of the High Commissioner for Human Rights is presenting a report on bridging the gender digital divide that asserts that states should look at

expanding access to the internet as part of their obligations to promote, protect, and fulfil human rights, and calls on states in particular remove barriers that prevent politically, economically and socially marginalised groups from gaining access. We see community-based local access networks as a promising approach, and encourage governments to develop policy and regulatory environments that support such initiatives, as well as other inclusive approaches. Otherwise, the internet will not improve access to information and knowledge for all, and will deepen offline inequalities, create new divides, and result in digital exclusion.

SESSION THREE: WSIS Action Lines and the 2030 Agenda

High-Level Track Facilitator (HLTF): Ms Reine Essobmadje, CO-Founder, Digital Coalition

High Level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator UNDESA** – Ms Marion Barthelemy, Director, Division for Public Administration and Development Management (DPADM)
3. **Côte d'Ivoire** – S.E. M. Bruno Nabagné Koné, Minister, Spokesman for the Government, Ministère de l'Economie Numérique et de la Poste
4. **Nigeria –** H.E. Mr. Abdur-Raheem Adebayo Shittu, Minister of Communication
5. **Malawi** – Mr. Godfrey Itaye, Director General, Malawi Communications Regulatory Authority (MACRA)
6. **Kuwait** – Mr. Mohammad J. Al-Tura, Chief, Information Technology Sector
7. **FAO** – Mr. Samuel Varas, Director, Information Technology Division (CIO)
8. **IEEE** – Ms. Karen Bartleson, IEEE President (United States)
9. **CMAI –** Mr. NK Goyal, President
10. **Just Net Coalition –** Mr. Norbert Bollow, Co-convenor (India (Republic of))

Introduction:

Stakeholders are exploring the lessons learnt and their next move as to achieve the WSIS action lines within the 2030 agenda

Vision:

- To adapt SDGs per country economic and social context
- To Integrate SDGs in governmental policies
- To integrate ICT in all high level political forum
- To integrate ICT in national financial Law
- To have multi-stakeholder's forum where ICT shall be cross-functional
- To connect the unconnected as access must be anywhere, anytime with any devices

Fresh priorities:

- Financing ICT

- Balance Power between private sector interests and netizens concerns
- ICT role for social regulation, peace and transparency

Emerging Trends:

- Communities program to better address communities' needs
- Digital financing services within trustworthy and secure cyberspace
- Promotion of Trust and confidence in usage of ICT
- Rethink international financing programs by integrating ICT as an enabler in each project (e.g Food Program,…)
- The greater innovations are coming out of technology

Opportunities

- Increase ICT contribution to GDP for oil dependant countries
- Reduce unemployment as ICT sector is a great provider of jobs
- Smart cities start with basic needs such as smart water and smart energy
- Transparency, efficiency and good Governance with e-Government solutions
- Young innovators shall be active in producing local content based on their user experience

Key Challenges

- Connecting the unconnected with cost-efficient solutions (satellite solutions)
- Financing ICT programs
- Attracting Foreign Direct investments

Link with WSIS actions lines C1, C7 e-Gov, C11

- C1 :
    - ICT to be include in budget during annual budget statement at National Assembly
    - ICT to be cross-functional to primary, secondary and tertiary sectors
- C7, e-Gov
    - ICT as an enabler of greater efficiency
- C11,
    - Multistakeholders forum should include ICT as cross-functional disregard to the thematic

Case examples:

- **Côte D'Ivoire**: ANSUT is the universal service agency in Côte d'ivoire (www.ansut.ci) in charge of bridging the digital divide across country. To finance connectivity, Ansut has an initial funding based on a national Tax of 2% of Telecommunications operators. Ansut has been able to raise additional funds (> 100 billion euros) from the market to finance its broadband's program in Côte d'Ivoire.
- **Malawi:** Using PPP to finance fiber optic networks, launch of connected schools program
- **Kuwait:** Focus on access (infrastructures), education, healthcare, smart cities, smart e-commerce and cybersecurity
- **Nigeria:** National ICT roadmap 2017-2020 with the launch in August 2017 of Smart cities program. Increase penetration rate with various solutions such as satellite. NIGCOMSAT is a national agency in charge of satellite communications.

Road Ahead

- Align SDGs with ICT and national priorities which may differ across regions and countries
- Increase collaboration between UN agencies and other stakeholders
- We leave in a VUCA environment
    - V for Vulnerability and we need a clear Vision
    - U for Uncertainty and we need Understanding
    - C for Complexity and we need Clarity
    - A for Ambiguity and we need Agility

A clear ICT vision will tackle national challenges providing clarity and understanding to offline communities as to achieve the 2030 agenda with agile and flexible solutions.

Côte d'Ivoire
S.E. M. Bruno Nabagné Koné, Minister, Spokesman for the Government, Ministère de l'Economie Numérique et de la Poste

Quelles mesures avez-vous prises pour mieux mobiliser les ressources domestiques dans le secteur des TIC ?

En Côte d'Ivoire, le développement et la promotion de l'Economie numérique font l'objet d'une attention constante de la part du Gouvernement, cela, dans le cadre de l'ambition affichée par Le Président de la République, Son Excellence Monsieur ALASSANE OUATTARA, de conduire notre Pays à l'émergence en 2020.

Dans la mise en œuvre du plan ambitieux conçu à cet effet, nous pouvons noter que l'écosystème des TIC aura fait de réels progrès ces dernières années. A titre d'illustration je m'arrêterai aux quelques résultats suivants produits sur la période de 2012 à 2015 :

- l'accès à l'usage d'un téléphone fait désormais parti du quotidien de tous les ivoiriens. Cela est matérialisé par les abonnements aux services de télécommunications mobiles qui sont passés de 16 millions en fin 2011 à 25 millions en 2015 ;
- l'accès internet enregistre plus de 8 millions d'abonnements en fin 2015, alors que ce nombre n'excédait pas 200 mille en fin 2011. Cette croissance forte a été rendue possible par les services de mobilité et notamment par le lancement en 2013 de la 3G et la 4G a été lancée ;
- Le succès du Mobile Money, qui permet une plus grande inclusion financière. Cette activité, auparavant inexistante continue de s'accroitre de façon exponentielle. Le volume journalier des transactions enregistrées dans les réseaux des opérateurs est ainsi passé en l'espace de 3 ans à près de 15 milliards de francs CFA (près de 23 millions d'euros / 28 millions de dollars par jour) ;
- Nous pouvons également mentionner l'éclosion de nouveaux métiers générateurs de valeurs et d'emplois, tels que le commerce électronique, le paiement mobile, l'infogérance, la production d'applicatifs informatiques, la production audiovisuelle, la sécurité informatique, etc.
- L'école d'excellence des TIC dénommée ESATIC est à présent un centre d'excellence de l'UIT.

Ces réalisations n'ont étés possibles qu'avec un fort concours du secteur privé à plusieurs niveaux :

1. L'investissement du secteur privé n'a cessé de croitre les 5 dernières années ;

2. Le secteur de l'économie numérique en Côte d'Ivoire, représente environ 8% du PIB, et les objectifs à l'horizon 2020 sont fixés à 15% du PIB
3. La contribution du secteur au budget de l'état s'est accrue considérablement même sans tenir compte des 100 milliards de francs CFA que les opérateurs ont payé pour avoir accès à une licence globale. Investissements, qu'ils ont effectués au vue des possibilités de développement du secteur.

Les ressources pour les investissements réalisés proviennent essentiellement :

1. Du budget de l'Etat ;
2. De la parafiscalité de 2% du revenu des opérateurs de téléphonie mobiles allouée au fond du service universel ;
3. De la taxe specifique aux TIC introduite en 2012.

Aussi, nous continuons à mettre en œuvre des modèles innovant tels que celui développé pour faciliter l'accessibilité terminaux TIC en les défiscalisant, ce qui s'est traduit par une explosion de la demande et de la consommation, suivie par un fort accroissement de la production de contenu locaux de tous types, couronné par un accroissement de l'assiette fiscale dû à l'augmentation de la consommation de services sur le cycle de vie de l'équipement.

Et en termes d'ODA (Official Development Assistance) ?

En termes de mobilisation des ODA nous avons mené un travail de longue haleine pour amener le gouvernement à aligner son discours avec ses actions. En effet, initialement les TIC n'étaient pas identifiés comme une priorité dans les requêtes du gouvernement aux bailleurs de fonds institutionnels.

Seuls les secteurs classiques (énergie, infrastructure, etc.) étaient sollicités par le gouvernement pour les ODA. Ce n'est qu'après avoir pu faire la preuve des bénéfices que les TIC pouvaient apporter à l'ensemble de l'économie au vu de leur transversalité que le gouvernement s'est engagé à requérir des ODA pour ce secteur.

Les premiers projets dans le domaine de l'Agriculture, au nombre de deux, sont en train d'être mis en œuvre :

- Le premier relatif au développement d'eServices dans le cadre du développement d'agropoles ;
- Le second relatif à un vaste programme de désenclavement des zones rurales

Malawi

Mr. Godfrey Itaye, Director General, Malawi Communications Regulatory Authority (MACRA)

The Chairman of the Session

Distinguished Honourable Ministers and your Delegations

Excellences

Colleagues

Ladies and Gentlemen

In the first place, let me extend to you warm greetings from the Republic of Malawi as we once again meet in this beautiful city of Geneva for this year's World Summit on the Information Society (WSIS) Forum. As a member of the International Telecommunications Union (ITU) Malawi takes pride in the role the WSIS Forum is playing in strengthening the alignment between the WSIS Action Lines and the Sustainable Development Goals.

We also cherish the pivotal role this forum plays in discussing the role of ICTs as a means of implementation of the Sustainable Development Goals and targets, with due regard to the global mechanism for follow-up and review of the implementation of the 2030 Agenda for Sustainable Development.

Chairperson,

Malawi has taken great steps to ensure that there is progress in the usage of Information and Communications Technologies (ICTs) which have become a critical driver for socio-economic development. The deployment and adoption of ICTs across the nation has resulted in noteworthy improvements in all aspects of life and institutional operations. This has enhanced the delivery of services both in the public and private sector in areas such as health, education, governance, agriculture and commerce.

My organization, the Malawi Communications Regulatory Authority (MACRA) with support from Government and other players in the ICT sector, has pursued various programmes and projects in efforts to accelerate the promotion of universal access to ICTs.

The initiatives include the following: Connecting communities, Connecting schools, Connecting libraries, Connecting public institutions and capacity building at various levels. In order not to leave out the youth in this ecosystem, MACRA in partnership with other stakeholders is in the process of establishing innovation hubs which will enhance creativity among the youths and support tech entrepreneurship.

We also take cognizant of the fact that despite all the positives that ICTs bring the cyberspace may not be entirely safe. It is for this reason that MACRA in close collaboration with the Commonwealth Telecommunications Organisation (CTO) kick started the development of the National Cyber Security Strategy for Malawi. This Strategy aims to provide a national framework for ensuring secure, safe and resilient cyberspace, as well as fostering trust and confidence in cyberspace by Malawians, by describing the high level Strategic Goals and Specific Objectives that provide the basis of the nation's direction with respect to cybersecurity, and establishes the Actions that need to be taken for each.

Thank you very much.

FAO

Mr. Samuel Varas, Director, Information Technology Division (CIO)

Madam Irina Bokova, Chairperson of UNGIS
Ministries of Telecommunications, ICTs and other sectors
My colleagues from the UN System
All WSIS Forum participants,

We are in Geneva this week to take a new step towards a consensus within the SDGs framework. More than to promote the 17 goals and to discuss theoretical problems, we need to collect experiences in order to learn in collaboration with civil society, universities and private companies, the best way to use information and communication technologies (ICTs) to face the real challenges.

Today, as stated by our Director General, Mr. José Graziano da Silva, nearly 800 million people are extremely poor and chronically undernourished, while 1.9 billion are overweight, of which 600 million are obese. In the rural areas, reality is most dramatic, considering that 80 percent of the world's hungry and poor live there. FAO believes that food security can be the common thread that links the different challenges the world faces in building a sustainable future.

In FAO's case, ICTs focusing on development have strong potential for driving economic growth, promoting climate smart agriculture, improving livelihoods and increasing the efficiency of agricultural value chains. Digital solutions that can be harnessed for e-agriculture may include devices, networks, services and applications. These can range from cutting edge internet-based applications, sensing tools, artificial intelligence and data analysis technologies to others that have been around for much longer, such as radio, telephones, television, telecommunication networks, mobile phones and satellites. We can make a difference if are able to combine, in an innovative perspective, the best channels, the best processes and the best tools to make a change where it is most necessary.

Improving access to valuable information can help agricultural stakeholders to make informed decisions and use the resources available in the most productive and sustainable manner. In a sector that is becoming increasingly knowledge-intensive, having access to the right information, at the right time, in the right format, and through the right channels can make a crucial difference in the livelihoods of people involved in agriculture and related fields.

Ladies and Gentlemen,

Applying innovative ways to use ICTs in the rural domain, with a primary focus on agriculture (including farming, fisheries, livestock, forestry etc.) can boost agricultural and rural development. FAO is developing and deploying new ways of packaging and delivering digital value added services to combat hunger and all forms of malnutrition; reduce poverty; promote food security; increase incomes; improve resilience and mitigate the effects of climate change. The proposed innovative solutions seek to maximize economic, social and environmental impact by finding scalable and sustainable models for the process and networks that bring existing or new agricultural products, processes and practices into social and economic use, connecting promising ideas and impact investment funders. Here, the keyword is “replicable”.

FAO believes that UNGIS and this High Level audience play an important role to build a framework of cooperation and to facilitate collaboration between UN System and other stakeholders in terms of ICT for development. We need to construct partnerships to conceive and to develop policies and programs that help the inhabitants living mainly in the least developed countries to access the best and most suitable experiences with ICTs in order to reduce the lack of information and communication, improving livelihoods and incomes for families in rural communities.

CMAI
Mr. NK Goyal, President

1. Hackthone are organized world over. There is always need to involve people from across the Country and also to see that this results in some useful solutions/products for commercial use. To address this in India, AICTE organized it in different way. It asked about 75 Government departments and PSUCs, as to what are their issues and problem, which they would like to solve. In this background about 500 problems were identified and then hackthone organized at 33 centers at the same time across INDIA. This was participated by about 3,000 students and citizens. The solutions arrived are now being supported by Government and venture funds for commercial use by the concerned Government departments. This way hacktone has resulted into several startups and innovative solutions which ware being put to use, rather than just an academic exercise. This was done by AICTE. The CMAI offered this expertise to other Countries and would take help from AICTE.

2. Physically challenged persons are responsibility of society and also one of SDG goals. They need several innovative solutions for empowerment. To address this, AICTE in India organized a competition among engineering and management students pursuing higher education to suggest software/products/idea to help physically challenged persons. Lots of good ideas are coming up, like simple wheel chair for stairs, mouse by face expressions, ICT products/solutions, simple sensor based sticks, which can navigate the person etc. and all of these are very low cost. For example the sensor based stick just costs USD 20-25 in the lab. CMAI offered this to other countries and would take help from AICTE.

3. Most of developing countries face the problem of education to rural and far flung areas. To overcome this in India, AICTE has started SWAYM project, wherein more than 1,000 courses with full study material are offered FREE of charge. Students can study at their leisure time anytime anywhere and appears in exams at their convenience. On the basis of credits, they get diploma/degree. Another important feature of this concept is that students can study their hobby topics like music, dance, painting etc. etc. upto 20% of total credits required for the degree/diploma. SO it is feasible that students get an engineering/management degree with 80% credits and for 20% he studies music/arts/photogaphy. CMAI offered that they will connect the interested Countries to AICTE for adoption of such programs in their Countries.

4. World over one of issue faced is coordination between academia and university for syllabus, tie ups, jobs. To address this in India, AICTE has planned to make internship in industrial unit compulsory on the lines it is for medical students in hospital. The industry experts can be appointed as adjunct faculty. There would also be compulsory training for teachers every year. CMAI offered that for such initiatives, CMAI would connect the concerned countries to AICTE for further adoption and help.

5. Cyber security skills are other critical areas. It is seen that the experts come from all across of life and all areas. To address this issue, CMAI has started cyber courses on line in association with colleges/universities. This is added up with physical training at the campus/designated levels. CMAI offered this expertise to other countries.

6. India has developed low cost, solar/wind based wireless equipment for connecting unconnected. CMAI announced that it will offer these to other countries at subsidized rates.

CMAI also offered that their members would be willing to start local manufacturing. Some of their members have experience of more than 30 countries in this behalf.

7. It was found that several countries have developed innovations and initiatives for ICT implementation. There is need for country to country dialogue for adopting the same. CMAI offered assistance in this behalf.

8. Hon'ble Minister for Nigeria announced that they would like to have cooperation with

India on four points. CMAI Offered support and assured that soon an Indian delegation would visit Nigeria for this purpose.

(i) Local manufacturing of mobile phones/tablets specially economical costs based on Indian experience

(ii) Low cost base stations from India for which requirement of about 1,200 numbers have already been placed

(iii) Cooperation for Optical fibre deployment and enterprise networks.

(iv) They are starting an African CT University and seek support from Indian universities for the same.

Just Net Coalition
Mr Norbert Bollow, Co-convenor

From your civil society perspective, what is the greatest obstacle to sustainable development as per the 2030 agenda?

I would suggest that **complexity** is the greatest obstacle.

The digital transformation is a driver of rapid change and great complexity. Even with the best intentions of truly furthering the 2030 agenda, the complexity of it all can easily be overwhelming.

It is really hard to personally work your way through all this complexity in order to develop views and convictions which are both technically and socially aligned with reality and with the 2030 agenda. Consequently, business lobbyists have an unhealthy, great amount of influence on us. What the business lobbyists tell us are often not bad things. They propose practical solutions to challenges that we care about. Still what they tell us is also very much driven by their business interests.

For obvious political reasons, law enforcement institutions, in particular those who are tasked with trying to prevent terrorism, are also very influential. By contrast, there is no such powerful lobby for the human rights of refugees or for the social and economic human rights of the people who are part of other disadvantaged communities.

Civil servants bring with them some awareness of issues that they personally have cared about for a long time. But once in office, complexity paralysis can set in, the symptoms of which are that it becomes very difficult to listen and learn and take appropriate action on further concerns beyond some good causes that you already care about personally and some of the government action that businesses ask for, and some of the government action that law enforcement asks for. This means that in many other regards, essentially only lip service will be given.

Complexity paralysis makes governments unable to truly listen to *all* the various important civil society concerns. It prevents truly implementing the 2030 agenda. Some of these failures to fully implement the 2030 agenda are in fact human rights violations.

What do you recommend to governments for overcoming this obstacle?

I think the first step consists in recognizing that the digital transformation does not consist only in opportunities, but that it is also a driver of great complexity which presents a huge challenge.

Then invest in building the capacity for adequately dealing with this complexity. At the personal level, this means to learn to use cognitive tools for managing complexity, such as the *logic trees* of the *theory of constraints.*

More broadly, governments need to organize formal discourse processes on public policy topics which must be designed to allow everyone to ensure that their views and concerns are adequately taken into consideration.

A good discourse process is one which reaches a consensus when that is possible, and which in other cases will explore and document the disagreements. In regard to many practical matters of public policy relating to digital governance, the views and perspectives of social movements differ very significantly from the views and perspectives of the global digital companies. In those cases, the discourse process needs to clarify what precisely these different views are and what the corresponding public policy options are — taking into consideration that international human rights law provides absolute constraints, so that nothing which conflicts with international human rights law is acceptable for consideration as a policy option. Then these policy options can be given as an input to a democratic parliamentary process to decide between them.

SESSION FOUR: Access to Information and Knowledge for All

High-Level Track Facilitator (HLTF): Mr. Justin Caso, Technology Policy and International Affairs Senior Advisor, Institute of Electrical and Electronics Engineers (IEEE)

High Level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator UNESCO** – Dr. Indrajit Banerjee, Director, Knowledge Societies Division, Communication and Information Sector
3. **Cuba** – S.E. Sr. Wilfredo González Vidal, Viceministro, Ministerio de Comunicaciones
4. **Sri Lanka (Democratic Socialist Republic of)** – Mr. Kingsly Fernando, Director General, Telecommunications Regulatory Commission of Sri Lanka
5. **European Commission, DG CONNECT** – Mr. Marco Marsella, Head of Learning, Multilingualism, and Accessibility Unit (Luxembourg)
6. **25th Century Technology Limited** – Dr. Kwaku Ofosu-Adarkwa, Chief Executive Officer (Ghana)
7. **European Language Technology Company "Tilde"** – Dr. Andrejs Vasiļjevs, Chief Executive Officer (Latvia)
8. **Centre for Communication Governance at National Law University Delhi** – Ms. Chinmayi Arun, Executive Director (India (Republic of))
9. **ARTICLE 19** – Ms. Mehwish Ansari, Digital Programme Assistant

Introduction:

While there are many remaining challenges in achieving access to information and knowledge for all, there are also many opportunities to achieve this goal through collective action of all stakeholders.

Vision:

Through innovative technical solutions in collaboration with various groups, access to information and knowledge for all can achieved in order to provide access and the necessary local content in order to all them to thrive.

Fresh Priorities:

- Local content and language are vital to spur economic and social development
- In order to successful achieve access to information and knowledge for all, the costs to connect must be reduced to gain widespread adoption

Emerging Trends:

There is a greater understanding that it is necessary to do more than merely connect the unconnected. While have a connection is necessary, education and training is vital to successful implementation that will lead to economic and social development.

Opportunities:

Deployment can occur much more rapidly through collaborative efforts, such as public/private partnerships. In addition, widespread adoption could occur through the government regulations that are aligned to the needs of the local community.

Key challenges:

- Government regulations that do not address local needs.
- Very little options to access the internet for individuals with disabilities

Link with the WSIS Action Lines and the SDGs:

There are clear links to the WSIS Action Lines and the SDGs, especially in regards to gender equality and the empowerment of women and girls.

Road ahead:

Even though there are challenges, there is a very positive vision for the future and that by working together, achievement of the SDGs is within sight through collaborative and innovative activities by all stakeholders working together.

Cuba
S.E. Sr. Wilfredo González Vidal, Vice Minister, Ministerio de Comunicaciones

Intervención de Wilfredo González Vidal, viceministro del Ministerio de comunicaciones de la República de Cuba, en el segmento de Alto Nivel del Foro de la Cumbre d la sociedad de la Información, en Ginebra, Suiza, el martes 13 de junio de 2017.

Señor Presidente, Ministros, Jefes de Delegaciones, representantes de Organismos Internacionales y otros delegados:

Reciba, señor Presidente, a nombre de la República de Cuba la más sincera felicitación por su elección a presidir este importante Foro, y el compromiso de contribuir al éxito de este segmento de Alto Nivel.

Nuestro gobierno sostiene que la tecnología no es neutral; responde siempre a los intereses de quienes la poseen y la aplican. Por ello la extensión de las TIC en el mundo, paradójicamente, ha contribuido al incremento de la brecha socioeconómica y cultural entre ricos y pobres; poseedores y desposeídos; y explotadores y explotados.

Es fundamental eliminar los obstáculos para acceder a las nuevas tecnologías por parte de los países en desarrollo por lo cual se debe prestar atención a la insuficiencia de infraestructura de los países del tercer mundo. Es preciso lograr que los beneficios de las nuevas tecnologías, especialmente las TIC, estén al alcance de todos, pero ello tiene que ser de forma segura.

El ciberespacio y el acceso a Internet deben ser considerados como recursos estratégicos y bienes comunes de toda la humanidad. La multiplicación de ciberataques a escala mundial constituye una grave amenaza a la que la UIT debe prestar mucha atención.

Por consiguiente, nos preocupa la potencial militarización del ciberespacio y el incremento del uso ilícito de las TIC con propósitos de que se utilicen para subvertir el orden constitucional soberanamente decidido en cada país.

Los principios de igualdad soberana, integridad territorial y la no intervención en los asuntos internos de los Estados, consagrados en la Carta de las Naciones Unidas, deben respetarse en el espacio virtual. Por lo tanto, constituye un imperativo impostergable la elaboración de instrumentos jurídicos complementarios al Derecho Internacional para la regulación de las actividades en el ciberespacio

Señor Presidente:

A pesar de las limitaciones financieras de nuestro país, y del Bloqueo económico, financiero y tecnológico que el gobierno de los Estados Unidos de América mantiene sobre Cuba, continuamos avanzando en la creación y fortalecimiento de la infraestructura tecnológica. Por otra parte hemos desarrollado importantes aplicaciones en los principales sectores del país, algunas de ellas mostradas en el taller que realizamos en la tarde de ayer.

El gobierno cubano realiza grandes esfuerzos para el desarrollo de las TIC, dando prioridad a su uso en la educación, la salud, el desarrollo científico y cultural, y como medio para incrementar la productividad y el crecimiento económico. Además, se le da preferencia a los servicios destinados a la población, creando miles de centros públicos desde los cuales se accede a la información.

Le expresamos la voluntad del estado cubano de continuar realizando esfuerzos para fortalecer y desarrollar el acceso a las TIC, dentro de un marco económico de limitaciones, siempre con la visión de nuestros líderes de conectarnos al conocimiento, y participar del concepto de compartir y no excluir, como un imperativo estratégico para la supervivencia de nuestras identidades culturales.

Por último, invitamos a todos a participar en el evento CIBERSOCIEDAD 2017 que se desarrollará en octubre del presente año en Varadero, y en la XVII edición de la Convención y Feria Internacional INFORMATICA 2018 que se desarrollará en La Habana en marzo del próximo año.

MUCHAS GRACIAS

Sri Lanka (Democratic Socialist Republic of)
Mr. Kingsly Fernando, Director General,
Telecommunications Regulatory Commission of Sri Lanka

The basic foundation for an information society is the availability of ubiquitous information and communication infrastructure. Sri Lanka has implemented the specific WSIS outcomes to a great extent with connectivity being ubiquitous and affordable throughout the Country. The Telecommunication Regulatory Commission of Sri Lanka has created a regulatory framework that fosters investments in networks, stimulates growth and provides connectivity at affordable rates.

Sri Lanka's mobile operators have deployed cutting edge technologies for the provision of mobile broadband. Sri Lanka is a pioneer in the region in launching 3G technology and the first to deploy 4G-LTE networks. 3G and 4G technologies cover in excess of 85% of the population and this is expected to grow further with the promotion of healthy competition. Wide availability of mobile broadband services has increased internet penetration providing equal access information and e-services resulting in inclusive development. The recent introduction of low cost smart devices will increase the affordability of mobile broadband services.

The aim of the Government through its many initiatives is to improve the quality of life of citizens through greater connectivity to access better public services, competitive market environments and greater learning opportunities.

The Government has initiated projects to encourage the use of ICT's by SME's and especially self-employed persons and school leavers.

High quality internet is a pre-requisite to enabling freedom of expression, enhancing the skills of our people and ensuring socio economic growth. The access to free wifi programmes of all licensed operators in setting up of hotspots in public places across the country is a step towards achieving this goal. Concurrently we are promoting and accelerating high speed broadband development reaching out to all parts of the country including rural villages for digital education and digital commerce.

Finally, the vision of the country is to make broadband affordable and ubiquitous so that all citizens can access the Internet irrespective of their locality which leads to information society.

European Commission, DG CONNECT
Mr. Marco Marsella, Head of Learning, Multilingualism, and Accessibility Unit (Luxembourg)

Thank you, Mr Chairman for the opportunity I am given to present the European Commission action towards an inclusive digital society

Distinguished panelists, ladies and gentleman,

As you know, the EU is committed to implementing the Agenda for Sustainable Development and the SDGs internally and globally, in cooperation with our partners.

Digital technologies and services are proven enablers of sustainable development and inclusive growth. They are key to improving lives, empowering people, providing access to knowledge and learning opportunities, and boosting productivity

The Digital Single Market for Europe (DSM) strategy recognises the significant impact that digitalisation has on growth and job creation within the European economy.

Building smarter cities, human centered next generation Internet human, access to e-government, e-learning, e-health services and digital skills are key determinants to enable a truly digital society. The 2017 Digital Economy and Society Index (DESI) shows that the EU is making progress
79% of Europeans go online at least once per week, up by 3 percentage points on 2016. 63% use social networks (57% in 2013). 66% shop online (61% in 2013).

76% of European homes can access high-speed broadband. Mobile data subscriptions are increasing: from 58 subscribers per 100 people in 2013 to 84 in 2016.

4G mobile services cover 84% of the EU population.

Internet traffic is growing by 20% annually; and by more than 40% each year on mobile networks.

When it comes to the Human Capital dimension which measures the skills needed to take advantage of the possibilities offered by a digital society, the DESI report shows that the EU has more digital specialists than before but skills gaps remain.

The EU has more graduates in Science, Technology, Engineering and Mathematics than before (19 graduates per 1000 people in their 20s).

There are more ICT specialists in the workforce (3.5% in 2015 as opposed to 3.2% in 2012).

However, almost half of Europeans (44%) still lack basic digital skills such as using a mailbox, editing tools or installing new devices.

The report also shows that Europeans use more public services online. 34% of internet users submitted forms to their public administration online instead of handing in a paper copy (up from 27% in 2013).

Overall the EU has progressed and improved its digital performance by 3 percentage points compared to last year,

On digital inclusion

The European Commission's efforts are geared towards ensuring that everybody can contribute to and benefit from the digital economy and society as tackling inequality will make our societies fairer and our economies stronger.

Internally, the EU Commission is promoting access to broadband connectivity, ensuring that equally trained men and women can access and create content and services that are beneficial for themselves and their societies

Inclusion is key to achieving the Digital single market, as we need to ensure that digital opportunities are available to all people and business, so that individuals and businesses can seamlessly access and exercise online activities under conditions of fair competition, and a high level of consumer and personal data protection, irrespective of their nationality or place of residence.

Among the actions, we have:

1) Accessibility

The EC supports actions to making ICT more accessible for all and fostering new methodologies for technology development. This includes work on the Web Accessibility Directive (website and mobile apps accessible) and Research & Innovation actions on Assistive technologies, supporting the development of ICT that assists people with disabilities

2) Digital Learning

- Skills and digital skills are key to empowering citizens to fight marginalisation and social exclusion. The EC supports R&I for enhancing learning and opening up opportunities for all in an inclusive digital society

- The Digital Skills and Jobs Coalition, launched in December 2016 is working with Member States, industry and social partners to develop a large digital talent pool and ensure that individuals and the labour force in Europe are equipped with adequate digital skill

2) Multilingualism
The European Commission promotes language learning and linguistic diversity across Europe.
Language technologies are key to overcome language barriers that prevent people to access digital services online. R&I actions focus on on speech technologies, machine translation and information retrieval

On 4th may The European Commission presented the "Digital4Development" strategy to mainstream digital technologies into European Union development policy, contributing to the achievement of the Sustainable Development Goals.

Commission services are committed to reinforcing the support for the development of digital technologies and services in the context of the EU development policy across four main priority areas:

- promotion of access to affordable and secure broadband connectivity and to digital infrastructure, including the necessary regulatory reforms;
- promotion of digital literacy and skills;
- fostering of digital entrepreneurship and job creation; and
- promotion of use of digital technologies as an enabler for sustainable development.

This will be achieved through a well-coordinated and targeted set of measures, using already existing or planned delivery instruments and tools.

25th Century Technology Limited
Dr. Kwaku Ofosu-Adarkwa, Chief Executive Officer (Ghana)

Improving Inclusive Business Models to Enable the Private Sector Play Key Role in ICT Innovative Solutions

Inclusiveness and Access to Information and Knowledge for All, irrespective of geographic location, is a key theme that continues to receive the attention and discussions on all WSIS platforms. This is so because nations, worldwide, have recognised the developmental opportunities that the emerging information age, characterised by Information and Communication Technologies (ICTs), bring to close the digital divide. Under the MDGs, ambitious agenda was therefore set to address the critical issue of including the populace in far flung areas in the policy decision making process. This was with the view to bridge the growing levels of inequality in governance, culminating in the exclusion of majority of the populace from enjoying the benefits that ICT brings. To sustain the efforts to build inclusiveness of the entire citizenry, under the Sustainable Development Goals (SDGs) Goal 5, the aim is to "***achieve gender equality and empower all women and girls***", while under Goal 16 the aim is to "promote just, peaceful ***and inclusive societies***".

In facilitating the attainment of the goal of inclusiveness, that will also empower knowledge development, two questions are posed bearing in mind the case study of Ghana. The evaluation of the questions is to enable the examination of the involvement, importance and usefulness of innovations to the citizenry, particularly those at the local levels of governance; the confirmation and addition to the digital divide and speak to the preferred bridging approach paying attention to gender issues.

These two questions are:

a) What level of impacts are ICT-enabled changes having at the local, and traditional governance levels?

b) What is the extent of the gap in the diffusion of ICT in governance at the local level?

In the case study, Ghana, like many developing countries, since 2003 has embraced the deployment of ICT as an inclusive tool to drive national development efforts following the development of the Ghana ICT for Accelerated Development (ICT4AD) Policy. Within the policy context strategies have been developed to help to focus and facilitate the development, deployment and usage of ICT to improve service delivery to enhance the livelihood of Ghanaians. The objective is to help optimise the contribution of ICTs for the socio-economic development of the country. It is in this context that an e-Government strategy for Ghana had been developed with a focus on facilitating effective delivery of government services to the citizenry at the local level. Notwithstanding the challenges of the era have been enormous necessitating the need to bridge the digital divide between the urban and the rural populace.

Degree of change and the consequences:

The changes brought by the introduction of ICTs in Ghana have culminated in huge preference for the use of the Internet as a consultation platform. Also on high demand as a new IT mode of communication is the smart phone. Notwithstanding these gains there is also the observed phenomenon of high level of imposition of ICT services on the rural populace creating in its wake a digital divide due to low level of effective consultation. This has culminated in low level of innovation acceptance due mainly to the absence of local content. With regard to ICT access, use and knowledge there is high digital illiteracy and seclusion resulting in low degree of confirmation of innovations that benefit the poor and vulnerable in society. The absence of open data/databases and the Freedom of Information Act (FOI) is also a barrier to grass roots communication.

How can this be remedied.

There is the need for Ghana to develop digital policies that will promote and build upon the level of integration, collaboration and innovation between the public sector, private sector, NGOs and the civil society at large. Such digital policies dimension (absent in its 2003 ICT4AD Policy Framework) should address the integration of the poor into their strategic focus. Through that

collaborative approach, innovations that work for the poor including women and girls' access to ICT can be meaningfully accepted and appreciated. Subsequently the collaborative innovative tools that will be developed by the Private Sector will aid the mass uptake of ICT tools for interaction in the related areas to close the digital divide. Some of the policy areas that need re-examination to make ICT tools cost effective and accessible include: Infrastructure Sharing & Open Access, Market Structure, Spectrum Policies, Device Access, Digital literacy, Local content, etc.

In general, Ghana's communication networks, though massive, have not had optimal comprehensive usage because of high cost of service delivery considered unaffordable by the majority of the citizenry. Efforts should therefore be made to achieve universal access and reach to communication networks and services regardless of where one lives. The digital policy review process should also aim at working towards consumer programmes to reverse the trend where women tend to have less access than men to ICT facilities that do exist such as smart phones and access to community information centres.

Fostering an active collaboration between policy makers, entrepreneurs and private sector and allowing innovation practitioners to work across the entire ICT ecosystem is thus key to bridging the digital divide. In Ghana, for instance, an International NGO - Alliance for Affordable Internet (A4AI) - operates its lobbying initiatives with an objective geared towards the goal of making Internet and broadband services affordable for all by ensuring that no one pays more than 2% of Gross National Income Per Capita for 1G broadband connection. This the benchmark that has been set for affordability and embraced by the government. It behoves the public sector to support the private sector to aid this transformation which will largely aid Internet affordability to propel knowledge management in all the settings including schools, health centres etc.

Ghana is among many countries where the Digital Innovation ecosystems are flourishing yet the country is struggling to reach critical use of ICT to aid total inclusion of the citizenry in the knowledge management revolution. Going forward there is no need for Ghana to reinvent the wheel in addressing these challenges. Thankfully, the ITU has developed a multi-stakeholder and multi-sectoral Digital Innovation Framework (DIF), with aim to help countries, cities and

ecosystems to be empowered to accelerate digital transformation that promotes total inclusiveness.

The uniqueness of the DIF is that it is based on a model that requires governments and for that matter the public sector to partner the private sector to help build entrepreneurial skills set. The private sector and indeed NGOs are considered as viable stakeholders to help co-create specific policy conditions out of which specific innovative projects can be developed to propel the inclusive digital transformation in each country. It is in the realisation of the role of the private sector that the 25th Century Technology Ltd, a fully-owned Ghanaian Company registered to undertake the principal activity of ICT Services and Telecommunication Solutions with vast experience in ICT value-added services and supportive infrastructure has positioned itself to participate in such collaborative partnerships. ICT is indeed the platform for inclusiveness and knowledge management and all efforts should be made to achieve this goal.

European Language Technology Company "Tilde"
Dr. Andrejs Vasiļjevs, Chief Executive Officer (Latvia)

I would like to draw your attention to the importance of language diversity in the Information and Knowledge Society. Language enables us to think, to communicate, to preserve and share knowledge and culture, and to pass it to the next generations. Language is the key element of our social and business communication, it is an essential part of our identity, it's the social and cultural treasure of every nation.

Diversity of languages on our planet is a source of richness and diversity of humankind. Language diversity opens numerous windows to conceptualize and understand the world we live in.

For only half of the world's population is their mother tongue one of the world's 15 largest languages. Limiting content and technologies to just a few dozens of the world's economically

powerful languages would exclude hundreds of millions of people from the benefits of the Internet and digital technologies.

Nobody should be discriminated against in the digital world because of his or her mother tongue. This is why the WSIS Plan of Actions urge the development of content and technical conditions to facilitate the use of all world languages on the Internet.

Language technologies are essential to make information technologies and the Internet truly multilingual. Those languages that are not sufficiently supported in the digital technologies face the risk of digital extinction.

Technological development of language cannot be left solely to market forces. Technology for a smaller language requires as much or even more investments than for a world dominating language. For this reason, support for many languages in digital technologies is still rudimentary or non-existent at all.

Concerted actions on the local, national and international levels can efficiently address this situation.

Let me share an example of Latvia. Latvia is not a big country and the Latvian language is spoken by about 2 million people only. Nevertheless, it's the language of a rich cultural heritage, active social and economic development. It is one of the 24 official languages of European Union.

Like most of European languages, soon after the PC revolution Latvian got basic language support such as fonts, keyboards, and spelling checking to enable writing in Latvian. At the same time a comparative study of the situation of European languages showed that Latvian is among those 21 European languages that are weakly supported to be efficiently used in the digital age and face a long-term risk of digital extinction.

Awareness of this situation helped to launch targeted actions to advance the development of essential language technologies and tools. Efficient cooperation of language technology developers, researchers and Government lead to rapid and fruitful advancements. Our company

Tilde is happy to be among the key participants in these exciting developments of innovative language tools and resources.

Novel neural network technologies enabled us to create the world's best machine translation systems that significantly surpass offerings by global players like Google and Microsoft. Machine translation is integrated in the Latvian e-Government infrastructure to enable multilingual e-services. Latvian in now one of the few world's languages which has grammar checking tools. New spoken language technologies now make it possible to dictate text and communicate with your computer and smartphone with your voice. Now Latvian is also a language of artificial intelligence with virtual assistants and chatbots who can talk and answer questions in Latvian. Novel techniques for such a complex language as Latvian have proved to also work well for many other languages.

European Union programmes for the development and utilization of language technologies have served as a major catalyzer of national activities. Concerted actions on the national and European level are successfully cracking the language barriers in Europe, making Europe more united.

To fully achieve the vision of a multilingual Europe without language barriers, the European Parliament has carried out a complex study on scientific and technological option assessment. It provides a number of policy options for the European Union, and proposes to launch an ambitious break-through effort tentatively titled "the Human Language Project". Its ambition is to enable computers to come closer to human ability in understanding the meaning that we express with the help of a language. Although targeted at Europe, this study may be useful to guide other multilingual regions as well.

We believe that targeted actions on all levels and close international cooperation between different regions and stakeholders is essential for creating a truly inclusive multilingual information society.

Thank you.

ARTICLE 19
Ms. Mehwish Ansari, Digital Programme Assistant

ARTICLE 19 welcomes the opportunity to address the 2017 WSIS Forum as part of the High-Level Policy Session. ARTICLE 19 is an international human rights organization that is committed to the protection and promotion of freedom of expression and information. The work of ARTICLE 19's Digital Programme focuses on the nexus of human rights, Internet infrastructure, and governance. As such, we actively participate in forums across the Internet governance and standards development landscape, including ICANN, the IETF, the IEEE, the ITU, and the IGF.

We commend the commitment of WSIS stakeholders to increase inclusiveness and access to information and knowledge in pursuit of the UN Sustainable Development Goals. The notions of inclusiveness and access pervade the discourse of the information society. Connecting the unconnected. The next billion. These touchstones have become familiar—even foundational—to the policies and practices of WSIS stakeholders across sectors and around the world. However, we remain concerned that the WSIS Forum and its stakeholders have yet to engage with these principles fully.

The outcome of the WSIS+10 review affirmed the commitment of the Tunis Agenda to the right to freedom of opinion and expression and other rights as guaranteed to all individuals by the Universal Declaration of Human Rights (UDHR). In its conclusion, the WSIS review was unequivocal: human rights comprise the very core of the WSIS vision.

How, then, should the information society improve inclusiveness on the Internet in the context of human rights?

The Action Lines framework stemming from the WSIS process attempts to explore what universal accessibility truly means. The result cleaves into two major considerations: how many people are connected to the Internet, and how much information is freely available. Clearly, these indicators are important for measuring progress towards greater inclusiveness. But inclusiveness is not simply a numbers game.

The human rights framework necessitates universal access to the Internet. The UN Special Rapporteur on Freedom of Expression first affirmed universal access as a priority for the development of the Internet.[2] The OAS Special Rapporteur on Freedom of Expression subsequently delineated this universality, asserting that, in accordance with international human rights, access to the Internet must be guaranteed across divisions of geography, political affiliation, education, socioeconomic status, gender, and disability.[3] The WSIS Action Lines attempt to recognize some element of this intersectionality, noting the importance of affordability to access. Nevertheless, it does not go far enough.

The consideration of the civil, political, economic, social, and cultural rights of all Internet users pushes our understanding of what it means to be truly inclusive beyond the myopathy of a quantitative economic perspective. To ensure inclusiveness, a focus on extending and refining the Internet's infrastructure to provide greater and cheaper connectivity is not enough. The information society must also consider how powerful actors can and do exert control over this infrastructure to create, reinforce, and magnify the systems of repression and marginalization that already exist offline. It is from this understanding that we can develop truly meaningful policies to ensure access to information and knowledge for everyone, everywhere.

How, then, should the information society consider access to information and knowledge in the context of human rights? ARTICLE 19 recognizes the importance of ensuring access to information as an indelible part of achieving the ninth Sustainable Development Goal: building a resilient global Internet infrastructure. However, the recent actions of public and private sector stakeholders alike—those that are part of the information society itself—have undermined the right to freedom of expression online, including the right to information. To uphold the integrity of the WSIS vision, all stakeholders of the information society must resolve to:

- **Protect online anonymity and security of Internet users.** The UN Special Rapporteur on Freedom of Expression has previously established that the opportunity for online anonymity and availability of encryption tools are vital to ensuring freedom of expression.[4] Anonymity through tools such as the

[2] Human Rights Council, *Report of the Special Rapporteur on the promotion and protection of the right to freedom of opinion and expression, Frank La Rue*, 2011, p. 22.
[3] Office of the Special Rapporteur for Freedom of Expression, Inter-American Commission on Human Rights, *Freedom of Expression and the Internet*, 2013, p. 6.

[4] Human Rights Council, *Report of the Special Rapporteur on the promotion and protection of the right to freedom of opinion and expression, David Kaye*, 2015.

Tor browser allows individuals to disseminate and access any and all information without fear of repression or reprisal. The use of encryption tools, including secure messaging applications and virtual private networks (VPNs), and the use of secure communication protocols, such as HTTPS to encrypt web traffic, facilitate the open access to information that may be otherwise throttled by censorship or chilled by surveillance.

Recently, the United States and the United Kingdom led a worldwide wave of governments in issuing policies that undermine anonymity and the use of encryption on the Internet. These policies typically orient the restrictions as responses to terrorism and other threats to national security. However, efforts to subvert anonymity and encryption are ineffectual and blunt policy responses that disproportionately impact all Internet users, thereby failing to meet the standards set by the human rights framework. Without the protection of anonymity, open access to information will be a luxury that eludes the most marginalized, including political dissidents and human rights defenders.

If individuals lose trust in the Internet as a civic space and lose confidence in the security of their communications online, accessibility and connectivity as envisioned in the WSIS Action Lines will cease to be salient measures of success; existing and potential users alike will turn away from accessing the Internet altogether.

- **Put an end to Internet shutdowns and other efforts to block or filter the free flow of information.** The prevalence of Internet shutdowns and incidents of censorship are on the rise. Earlier this year, the government of Cameroon ordered CAMTEL, the state-owned telecommunications company, and its subsidiaries to restrict access to social media applications and communications tools throughout the western regions of the country. Earlier this month, the government of Ethiopia ordered an Internet shutdown affecting both the public and private sectors—this incident marks the third shutdown within the state over the last year. The incidents aren't simply disruptions in connectivity. These shutdowns are blunt political tools that are designed to control the flow of information over the networks, thereby stifling protests and other forms of legitimate expression. The impact is clear: Internet users' access to information is fundamentally constrained.

  Internet shutdowns and other efforts to block or throttle access to particular content online are explicitly denounced in accordance with the international human rights framework. The Human Rights

Council has condemned outright any measure to prevent or disrupt the exchange of information on the Internet.[5]

The WSIS Action Lines evaluate access to information and knowledge in limited terms, focusing on the number of resources to which Internet users can connect. It is not enough. Access to information must be open and unrestricted across the full diversity of content available on the Internet. The human rights framework emphasizes the discretion of Internet users to decide what information to access.

- **Meaningfully engage with the UN Guiding Principles on Business and Human Rights.** Protecting freedom of expression online is not solely the responsibility of the public sector. The majority of the Internet's infrastructure—as well as the applications running over it—are developed, operated, and maintained by the private sector. As governments increasingly turn to infrastructure to meet political aims, these intermediaries have been increasingly compelled to filter or block individuals' access to information online. At the same time, they may independently engage in practices that challenge the rights of Internet users, without transparency, clear guidelines to which users can refer, or appropriate mechanisms for appeal. WSIS stakeholders must take steps to address this accountability gap.

  Recently, Vodafone—a telecommunications company based in the United Kingdom—announced its planned partnership with the government of Iran. This partnership will likely result in major improvements to Iran's existing telecommunications infrastructure, facilitating greater connectivity. However, concerns remain that Vodafone's activities in Iran will facilitate the ongoing censorship regime by abetting the infrastructural system of surveillance already in place. With little transparency, how can we consider the potential impacts of Vodafone and other private actors on the rights of users?

  All WSIS stakeholders should recognize the 2011 UN Guiding Principles on Business and Human Rights (UNGPs). The UNGPs reaffirm states' responsibilities to protect human rights and to ensure access to effective remedy according to existing human rights obligations. However, the UNGPs also formally recognize the *corporate* responsibility to respect human rights, using the human rights framework to establish rigorous benchmarks. The UNGPs are designed to engender a process of due diligence within the private sector. As the first step in this process, private actors should develop and implement human rights impact assessments that systematically identify any adverse impacts of their policies and practices on human rights.

[5] Human Rights Council, *Resolution on the promotion, protection and enjoyment of human rights on the Internet*, 2016, p. 2.

It is clear that the consideration of human rights is essential to ensuring inclusiveness and access to information and knowledge, and ultimately to ensuring the sustainability of economic and social development. Yet, the discussions of the WSIS Forum have yet to truly engage the UDHR and the international human rights framework as part of these efforts. The policy points above are not exhaustive. Corporate interests throttle fair use and other forms of expression under the pretense of innovation; states seek to stifle any online service that threatens to disrupt their hold over the market. But the brash vision for a free and open Internet persists. As the information society looks forward to WSIS 2025 and the future of the Internet, it cannot lose focus of what exists at the core of this vision.

SESSION FIVE: Bridging Digital Divides

High-Level Track Facilitator (HLTF): Dr. Nitya Khemka, Affiliate Lecturer, University of Cambridge

High Level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator ITU** – Mr. Yushi Torigoe, Deputy Director, Telecommunication Development Bureau
3. **Ethiopia** – H.E. Dr. Debretsion Gebremichael Measho, Minister, Ministry of Communication and Information Technology
4. **Mexico** – H.E. Edgar Olvera Jiménez, Vice Minister of Communications, Secretariat of Communications and Transportation
5. **Japan** – H.E. Mr. Shigeki Suzuki, Vice Minister for Policy Coordination, Ministry of Internal Affairs and Communications
6. **Russian Federation** – H.E. Mr. Rashid Ismailov, Deputy Minister, Ministry of Telecom and Mass Communications of the Russian Federation
7. **Costa Rica** – Mr. Jaime Herrera, Member of the Board, Superintendencia de Telecomunicaciones (SUTEL)
8. **Pakistan** – Dr. Syed Ismail Shah, Chairman, Pakistan Telecommunication Authority (PTA)
9. **Portugal** – Ms Fátima Barros, Chair of ANACOM's Board of Directors, ICP - Autoridade Nacional de Comunicações (ANACOM)
10. **International Chamber of Commerce (AT&T)** – Mr. Virat Bhatia, Vice-Chair, Commission on the Digital Economy (France)
11. **Internet Society** – Ms. Constance Bommelaer, Senior Director of Global Internet Policy (Switzerland)

Introduction:

- The digital divide continues to remain a critical challenge.
- There are gaps in access and usage of ICT due to lack of infrastructure, affordability, adoption rates, awareness and relevant content.

Vision

- The digital divide is a problem not only of access to technology but also a serious social issue that has several interconnections with poverty and social deprivation.
- A holistic approach needs to be adopted to overcome the digital divide that is based on infrastructure development, good governance, capacity building and strong local communities that can support the ecosystem.

Fresh Priorities

- Building the next generation of ICT infrastructure and reducing cost of access.
- Improving broadband connectivity/ bandwidth especially in rural communities.
- The government can play an important role in providing the necessary enabling environment to facilitate competition amongst private players, to incent private sector to invest and to deploy resources in cases of market failure.
- Integrating breakthrough technologies into everyday life including healthcare, governance, education and smart cities.
- Human resources- skilling people and improving digital literacy so that they are able to take advantage of the internet.

Emerging trends

- Emergence of local access solutions such as community networks as a critical element in expanding internet access.
- A blended approach to leapfrog into greater digital access and adoption using a combination of government initiative, private sector investment/ competition, and cutting edge technology.

Opportunities

- Lack of access to connectivity is closely linked to poverty and hence the digital divide cannot be treated in a silo but has to be linked to anti-poverty and education programmes to improve digital literacy.
- In remote areas with low population densities where there is no business case for the private sector, the government needs to step in and ensure the development of infrastructure and connectivity through Public/Private partnerships that are open access.

Key Challenges

- Making sure that the connectivity is utilized in a way that adds value and can impact the economic/social status of the people using it.
- Ensuring there is enough local content and affordability of connectivity.
- Translating the success of cell phone penetration into improving internet access.
- Need to identify and overcome different types of digital divides caused by barriers due to affordability, efficacy, skill-levels, disability and gender.
- Challenges in rate of adoption of new technologies especially in areas with elderly populations with low digital literacy.

Link with the WSIS Action Lines and Sustainable Development Goals (SDGs)

- If we want to ensure universal access to the internet by 2030, we will require new approaches to ensure no one is left behind.
- In order to fully embrace the potential of ICTs to achieve the SDGs, countries must adopt a holistic approach in fields such as health, education and the environment.

Case Examples

- ITU's interactive terrestrial transmission labs that are a cutting edge ICT data mapping platform to highlight missing links in transmission.
- Mexico has amended its constitution to ensure that equitable access to ICTs is a human right.
- Japan has developed movable and deployable ICT resource units that can quickly provide connectivity in areas where there is low population density and in times of natural disasters.
- The e-library in Russia which is a free, open-access platform that pulls together resources from libraries all over Russia on to a single platform.
- The Government of India is doing several things under its Digital India programme including biometric access, smart cities and direct benefit transfers to improve access to the most vulnerable communities.
- Pakistan has a separate provision in its IT policy document that examines issues relating to bridging the digital divide for people with disabilities.
- Costa Rica has a fund financed out of resources from the spectrum assigned to the telecom and internet operators to ensure equity in digital access for the country.

Road ahead

- ITU has developed master plans for broadband networks for eight countries for high speed transmission of voice, video and data.
- Large scale infrastructure projects undertaken by the EU that can host electronic communications networks like roads, utilities and fiber optic networks.
- Report by Internet Society that maps community networks across Africa and identifies various initiatives to bridge the divide in the region.

Mexico
H.E. Mr. Edgar Olvera Jimenez, Vice Minister, Secretariat of Communications and Transportation

(SALUDO) Muy buenas tardes a todos.

· Agradezco a la Cumbre Mundial de la Sociedad de la Información la oportunidad para comentarles algunos de los más importantes avances que hemos tenido en México para cerrar la brecha digital y ofrecer a todos los ciudadanos las mismas oportunidades de acceso a las herramientas tecnológicas.

· La Reforma de Telecomunicaciones impulsada por el Presidente Enrique Peña Nieto tiene como principal objetivo garantizar a los mexicanos el derecho fundamental de acceso a las Tecnologías de la Información y la Comunicación (TIC) y a los servicios de telecomunicaciones.

· En razón de ello, la Reforma ordenó la implementación de políticas públicas que permitan incrementar la infraestructura de telecomunicaciones, ampliar la cobertura de servicios, mejorar su calidad y reducir sus precios a fin de propiciar el acceso equitativo a los beneficios de las TIC.

· Para alcanzar estos objetivos, la Reforma recompuso el sector mexicano de las telecomunicaciones y esto ha estimulado la inversión y la competencia con reducciones significativas en los precios de los servicios para los usuarios finales. Entre otros resultados, tenemos que:

 Entre 2012 y 2016 el número de usuarios de internet en el país creció de 41 a más de 65 millones.

 En 2016, cerca de 56 millones de personas reportaron acceder a Internet a través de un teléfono inteligente, lo que representa casi el 85% del total de usuarios de Internet.

· Con el fin de mantener estas tendencias positivas, el Gobierno de la República, a través de la Secretaría de Comunicaciones y Transportes (SCT) ha dado cumplimiento a los más importantes proyectos de desarrollo de telecomunicaciones ordenados por la Reforma.

· En enero de este año, la SCT firmó el contrato para la construcción de una Red Compartida mayorista que ofrecerá cobertura de servicios de telecomunicaciones de última generación, con mayor calidad y menores precios, a más de 100 millones de habitantes en todo el país, y llegará a regiones que hoy no cuentan con tales

servicios. La Red Compartida alcanzará una cobertura poblacional de al menos 92.2% hacia 2024, cuando opere en su totalidad.

· El desarrollo, administración y operación de esta Red es responsabilidad del Consorcio Altán que integra a inversionistas privados nacionales e internacionales que han confiado en México para desarrollar nuevos modelos de negocios que permitirán a millones de mexicanos mejorar su educación, mantener contacto permanente con familiares y amigos, comercializar productos más allá de nuestras fronteras, informarse oportunamente e integrarse plenamente a la comunidad digital global.

· Además de la Red Compartida, el Gobierno mexicano ha lanzado el Proyecto de Infraestructura Pasiva que permitirá a los operadores aprovechar los bienes del Estado para incrementar la cobertura de sus redes en beneficio de un mayor número de usuarios. Este Proyecto, que integra el trabajo conjunto de otras dependencias de gobierno y de la industria, considera diferentes iniciativas como el arrendamiento de inmuebles federales para extender la cobertura de las redes; la simplificación y agilización de trámites para instalar infraestructura en estados y municipios; y el aprovechamiento de derechos de vía, como carreteras y vías del tren, así como de postes, torres y ductos de la red eléctrica para ampliar el tendido de fibra óptica en todo el país.

· Congruente con las líneas de acción y los objetivos de Desarrollo Sostenible establecidos por esta Cumbre, el gobierno mexicano ha implementado otras acciones para cerrar la brecha digital, como la contratación de conectividad gratuita a Internet en más de 100 mil sitios y espacios públicos en todo el país, como escuelas, hospitales, bibliotecas, centros comunitarios, parques y plazas, contando algunos de ellos con conectividad satelital brindada por el Sistema Satelital Mexicano MEXSAT.

· En un claro esfuerzo por cerrar la brecha digital a partir del desarrollo de las habilidades digitales entre toda la población, sin importar edad, nivel de ingreso, género o grado de estudios, la SCT desarrolla el proyecto Puntos México Conectado, una red de centros de inclusión digital que ya funciona en todos los estados de la República Mexicana y que hoy fue reconocido por esta cumbre con el Premio WSIS. Hoy esta red atiende a más de 400 mil usuarios y ofrece cursos a más de 250 mil alumnos.

· Desde su primer día, la administración del Presidente Enrique Peña Nieto fijó como una de sus más altas prioridades aprovechar las herramientas tecnológicas para impulsar el desarrollo económico del país y proporcionar a todos los mexicanos las mismas oportunidades de mejorar su calidad de vida haciendo uso intensivo de esas herramientas.

· Estas acciones ayudarán a concretar la visión de un país más próspero, competitivo y equitativo en el que nadie quede excluido de los grandes beneficios que ahora brindan las Tecnologías de la Información y la Comunicación."

Japan

H.E. Mr. Shigeki Suzuki, Vice Minister for Policy Coordination, Ministry of Internal Affairs and Communications

What is the best way to address "bridging digital divides" in a way that allows us to achieve SDGs?

・Asian Development Bank report says that Developing Asia needs an investment of 2.3 trillion US dollars in telecommunications for 15 years from 2016 to 2030, to maintain its growth momentum.

・To secure this huge investment, investment from the private sector is the essential.

・The role of the Government is to show the national ICT infrastructure development goal and plan, and to disseminate it to related stakeholders, make policy and regulations to encourage investment and competition, and build an environment that enables private sectors to invest actively.

・Especially in the case of ICT infrastructure in non-profitable areas, low population density areas, it is necessary to use some public assistance and appropriate technologies to those areas, in a technology-neutral approach, such as fixed wireless, satellites and mobile network. TV white space frequency, multi-hop wireless technology.

<Various initiatives tailored to each country>

・In Japan, under free competition, telecom carriers and cable broadcasters develop network

infrastructure.

・In non-profitable for low population density areas, the government or local municipality assists private sectors, or build infrastructure by local government itself.

・At the same time, we developed a specially equipped unit known as MDRU (Movable and Deployable ICT Resource Unit), which can quickly restore telecommunications capabilities in disaster-affected areas. Even in normal times, it is very useful in rural area.

- Experimental implementation of using TV white space frequency in collaboration with Indonesia and the Philippines.
- Proving test of multi-hop wireless technology in collaboration with Cambodia.
- Pilot project in Nepal to provide wireless Internet access to schools and medical clinics in mountainous regions.

When we address "bridging digital divides", what should we consider for sustainable growth of the Digital Economy and Society?

・For sustainable growth, we need to consider the long time perspective as well as geographical perspective of a covered area.

・From a long-term perspective, it is important we find the way to reduce Life Cycle Cost over 10 to 20 years, not only focusing on initial cost.

・Based on this long-term point of view, we Japan propose the concept named "Quality Infrastructure Investment".

・This concept includes not only developing ICT infrastructure, but also appropriate training and support for the operation and maintenance for local people, capacity building, and technological transfer. These activities can create new employment opportunities in developing countries.

・The important thing is to consider every required item for sustainable growth, as an all-inclusive package including financing mechanisms.

Russian Federation

H.E. Mr. Rashid Ismailov, Deputy Minister, Ministry of Telecom and Mass Communications of the Russian Federation

Your Excellencies!
Dear colleagues and guests!

The December 2015 WSIS ones more highlighted that the digital divide in terms of gender, geographical and age criteria, and also based on income and for persons with special needs still has significant level, including both in countries and between countries.

Bridging the digital divide is closely related to sustainable development goals concerning infrastructure development, improvement of education and healthcare, capacity building, keeping and developing cultural heritage in all its country, religious and language diversity, and also concerning ICT use to eliminate poverty, combat the negative impact of climate change and assist in emergency situations.

57% of world population have no Internet access and cannot use huge economic and social benefits, which could be provided. The ITU initiative “Connect 2020” aimed at bridging this divide. Its goals and objectives are directly associated with the broadband development and implementation of one of SDG targets: 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.

Nowadays Russia undergoes a technological revolution: almost 70% of the population uses Internet, 40 million of citizens are registered on the Unified Portal for State and Municipal Services, a half of population use smartphones.

Information technologies are provided through establishment of corresponding infrastructure, creation of digital content and preparedness of users, and this undoubtedly facilitates creation of conditions for improving education, medical service, social protection of population on a basis of development and use of information technologies that help real reduction of digital divide.

Our strategic goals in terms of ICTs coincide with the sustainable development targets set by the UN, and Russia is quite successful in implementing its own plan to increase the availability of broadband services. At the same time, we should consider huge territory of our country, its geographic and climatic conditions. Despite this, Russian mobile access to broadband services is one of the cheapest in the world. In small settlements with a population of 250 residents and more, subscribers pay only $0.7 per month for the access to the Internet at 10 Mbit/s. This well represents affordability of services in Russia compared to other countries of the world.

Russian Ministry of Communications set ambitious goals: to achieve the availability of broadband services up to 97% for the whole country's population and to reach 70% of citizens using mechanism of obtaining state and municipal e-services, by 2018.

"Digital Economy in the Russian Federation" programme has been just finalized providing measures to establish legal, technical, organizational and financial conditions needed for the development of digital economy in the Russian Federation that would help efficiency of all sectors of the national economy with the assistance of ICTs, and establish at least 10 national champion companies being high-tech enterprises developing "end-to-end" technologies and managing digital platforms that operate in the global market and form a system of startups, research teams and industry-oriented companies around themselves.

We see establishing a favourable investment climate, reducing administrative barriers, encouraging small and medium-sized businesses, development of existing broadband Internet infrastructure and e-trade as the key issues of the digital economy development.

We are confident that implementation of the "Digital economy in the Russian Federation" Programme would allow establishing favourable environment for the development of the knowledge society, raising awareness of the population about new ICT opportunities, improving system of ICT skills education and update, thereby reducing risks when only a part of the population have access to up-to-date technologies, can use them and benefit from them. We believe that education, updating skills and advertising of new "information-driven" lifestyle, that involve larger segments of the population in the ICTs, aimed to play a major role in the development of the knowledge society.

Changes in the field of ICTs have a direct impact on the improvement of living standards of our citizens as well as on better quality of the services delivered by the State. We now see how the world changes around us and how borders disappear with the help of ICTs.

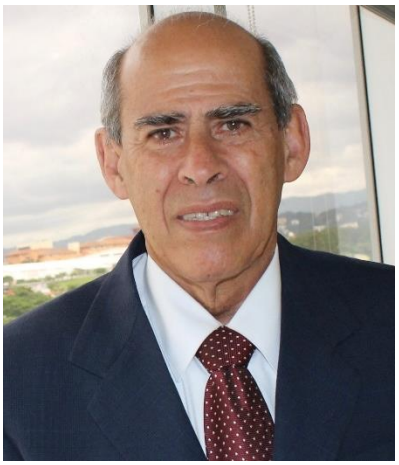
Development of ICTs, similar to the introduction of any other new technology, could not on itself level the opportunities for the populations of the developed and developing countries and in some cases even exacerbates the divide. We believe that crucial elements for bridging the digital divide should be international cooperation at the global and regional levels, increased investments and expanded relevant financing.

Russia is actively involved in the activity of UN system organizations, first and foremost of the ITU and UNESCO in the framework of the WSIS process and the 2030 Agenda for Sustainable Development. We have developed and are developing collaborative programmes with CIS and BRICS countries and in the frameworks of bilateral and multilateral relations aimed at bridging the digital divide in the interests of the national community as a whole. Only working together, we can resolve this challenge and ensure the implementation of the Sustainable Development Goals.

I wish all participants success, and new constructive decisions and ideas!

Thank you for your attention.

World Summit on the Information Society



Costa Rica

Mr. Jaime Herrera, Member of the Board, Superintendencia de Telecomunicaciones (SUTEL)

ESTRATEGIA PARA EL CIERRE DE LA BRECHA DIGITAL EN COSTA RICA

OBJETIVO

Mostrar la estrategia que se sigue en Costa Rica, para cerrar la brecha digital en los territorios rurales, de difícil acceso o territorios indígenas, con poblaciones marginadas y/o de bajos ingresos.

CONTENIDO

1- Entorno del mercado de telecomunicaciones de Costa Rica

2- SUTEL – órgano regulador

3- Funciones de SUTEL

4- Estrategia de cierre de la brecha digital

5- Cinco programas integrados

6- ¿Qué sigue?

ENTORNO DEL MERCADO DE TELECOMUNICACIONES DE COSTA RICA

Como en todo país, hay diferentes participantes en el mercado de las telecomunicaciones de Costa Rica. Los principales son:

1- MICITT: Ministerio de Ciencia, Tecnología y Telecomunicaciones. Es el rector de las telecomunicaciones del Gobierno de Costa Rica. El deseo del Gobierno en cómo desarrollar el sector en el país queda plasmado en el PLAN NACIONAL DE DESARROLLO DE LAS TELECOMUNICACIONES (PNDT).

2- SUTEL, organismo independiente que tiene las funciones de regular el desarrollo del mercado de las telecomunicaciones en Costa Rica

3- OPERADORES PRESTADORES DE LOS SERVICIOS: Son las entidades encargadas de proveer los servicios de telecomunicaciones en un mercado en libre competencia, regulado por la SUTEL. Los más conocidos son Kolbi (ICE), Movistar, Claro, Tuyo Móvil, Full Móvil, pero existen más de 150 operadores con licencia para brindar sus servicios

4- USUARIOS, clientes de los operadores y fin último de SUTEL ya que su principal objetivo es proteger y beneficiar a los usuarios, para el desarrollo armonioso, accesible y de calidad al menor precio posible.

SUTEL – Órgano Regulador

Una institución anexa a la ARESEP, que es la Autoridad Reguladora de los Servicios

Públicos de Costa Rica. SUTEL es la autoridad reguladora del Sector de Telecomunicaciones, totalmente independiente de todos los operadores y proveedores de servicios.

La ley general de telecomunicaciones le ha otorgado a la SUTEL las siguientes funciones

1. Velar por los mayores beneficios para el usuario final de los servicios de telecomunicaciones

2. Asegurar una eficiente y eficaz administración del espectro radiológico

3. Asegurar los principios de universalidad y solidaridad en los servicios de telecomunicaciones

4. Promover la competencia en los mercados de telecomunicaciones

5. Fijar las tarifas para los servicios de telecomunicaciones

FONATEL – FONDO NACIONAL DE TELECOMUNICACIONES

Dentro de la estrategia de desarrollo de las telecomunicaciones de Costa Rica, la ley estableció el mencionado FONATEL, Fondo Nacional de Telecomunicaciones y le encargo a la SUTEL como órgano independiente, la administración de este fondo y la ejecución de los proyectos destinados al cierre de la brecha digital, evitando tener dos Costa Ricas, la conectada y la no-conectada.

La ley establece que el fondo se alimenta monetariamente de las concesiones del espectro radioeléctrico, de un impuesto especial del 1,5% del ingreso total de cada operador, y de las donaciones y transferencias que le puedan hacer.

Como objetivos del fondo están:

1- Promover el acceso a los servicios de telecomunicaciones a tiempo, eficientemente y de manera asequible para:

PREMIO

UIT

-Para los habitantes de zonas remotas (áreas donde la provisión del servicio no es rentable).

-Personas que no pueden pagar por los servicios.

-Individuos en condiciones vulnerables (población indígena, niños y adultos mayores, entre otros.

-Instituciones públicas (MEP, CCSS, CENCINAI y CECIS)

2- Reducir la brecha digital y asegurar las mismas oportunidades a toda la población de Costa Rica.

3- Promover la conectividad, el desarrollo de la infraestructura y la disponibilidad de terminales y servicios de banda ancha.

Cinco programas están siendo ejecutados por SUTEL.

CINCO PROGRAMAS EN EJECUCIÓN:

PROGRAMA No. 1: COMUNIDADES CONECTADAS

Consiste en la construcción de la infraestructura necesaria para proveer servicios de internet y telefonía en las zonas alejadas, donde los operadores comerciales no llegan pues no es negocio para ellos. El fondo provee una subvención para que se construya la infraestructura necesaria y se den las facilidades a escuelas, colegios, sitios públicos importantes como los centros de salud EBAIS, los CECIS que dan acceso a internet al público, los CENCINAI y Centros de Salud. Los operadores dan el servicio al público en general cobrando los servicios. Cuando el proyecto crece y se hace autosuficiente comercialmente, el fondo les quita la subvención.

Actualmente hay 34 proyectos ejecutados, varios de ellos ya sin subvención, con una población de más de un millón de beneficiados y una inversión que asciende a 150 millones de dólares de los Estados Unidos.

PROGRAMA No. 2: HOGARES CONECTADOS

Este programa está dirigido a los hogares de bajos recursos que no pueden pagar los servicios de internet ni adquirir los equipos terminales, ubicados en todo el país por lo que no va dirigido a zonas geográficas. Las familias no las escoge la SUTEL sino que son las de los quintiles más bajos que se ubican en la base de datos del IMAS (Instituto Mixto de Ayuda Social) del Gobierno Central.

Con este programa se les suministra a estas familias de escasos recursos, internet fijo, computadoras y contenidos digitales subvencionados. Hay 140.000 familias beneficiadas con una inversión de 128 millones de dólares de los Estados Unidos.

ESTE PROGRAMA HA SIDO PREMIDADO POR LA UIT.

PROGRAMA No. 3: CENTROS PÚBLICOS CONECTADOS.

Hay muchas escuelas de educación primaria y/o secundaria o centros públicos como los ya citados, que a pesar de que se les dé la conectividad de internet, no tienen las computadoras, impresoras y otros equipos terminales.

Este programa les provee las computadoras para las escuelas públicas de primaria y secundaria, a los CECIS, CENCINAIs, y Centros de Salud. Tiene una inversión de 20 millones de dólares de los Estados Unidos.

PROGRAMA No. 4: ESPACIOS PÚBLICOS CONECTADOS:

Se pretende tener una red de espacios públicos conectados con acceso a internet gratis. El programa busca cubrir espacios públicos donde hay aglomeración de personas, como los parques, las estaciones de ferrocarriles y buses de transporte público, plazas, bibliotecas públicas y otros.

Se espera tener 240 puntos de conexión en 177 comunidades beneficiadas, en su primera etapa, con una inversión de 20 millones de dólares de los Estados Unidos.

PROGRAMA No. 5: RED DE BANDA ANCHA SOLIDARIA

Esta sería una red de banda ancha solidaria que atravesaría todo el país y daría conectividad a todos los puntos de los cuatros programas antes mencionados, en todas las zonas rurales.

El programa actualmente está en formulación y diseño, lo cual se hará durante el año 2017, para iniciar las licitaciones, adjudicaciones y construcción a partir del año 2018.

¿QUÉ SIGUE?

Como puede verse, los cinco programas son complementarios unos con los otros y con gran efectividad están ayudando a cerrar la brecha digital en Costa Rica.

A pesar de que FONATEL tiene comprometido casi todo su capital para los próximos años, el fondo crece todos los años. Este año en particular el país subaste una serie de frecuencias, y el producto de la subasta, por ley va íntegramente al fondo. Además, todos los años se recibe el 1,5% de las entradas brutas de todos los operadores licenciados para brindar sus servicios en el país.

Por tanto, y para cumplir con las obligaciones que le da la ley, se requieren nuevos proyectos, y para diseñar nuevos proyectos, se requieren nuevas ideas.

Nuestra participación en esta Cumbre Mundial de la Sociedad de la Información tiene como uno de sus objetivos el intercambio de experiencias para encontrar esas nuevas ideas aplicables en nuestro país

MUCHAS GRACIAS A LA UIT POR INVITARNOS Y DARNOS ESTA OPORTUNIDAD

Ing. Jaime Herrera

Miembro del Consejo de SUTEL.

Pakistan

Dr. Syed Ismail Shah, Chairman, Pakistan Telecommunication Authority (PTA)

We are living in an era where technology has enabled unique possibilities for inclusive human development and empowerment across board. There can be no doubt that we are experiencing a sweeping revolution marked by rapidly expanding technologies and the convergence of new technologies. The dynamically evolving Information and Communication Technologies (ICTs) hold crucial importance globally as one of the key sectors in terms of powering economies, driving efficiencies and enablement across all other sectors.

The Government of Pakistan fully realizes the potential of Information Communication Technologies (ICTs) to spur socio-economic growth and considers it one of the key enablers to achieve efficiency, transparency, good governance and empowerment of the people; and over the past four years has redoubled its efforts for bridging the digital divide by focusing on the whole value chain including expansion of broadband connectivity and access infrastructure, fuelling demand for ICT services, investing in digital skill and literacy particularly for women and girls, addressing affordability of services across the board and supporting innovation and entrepreneurship potential of our youth. Taking into account the transformational role of ICTs across all sectors of socio-economic development, accelerated digitization and next generation connectivity are at the heart of our agenda for ultimate achievement of a holistic knowledge based economy.

Recognizing the potential of digital technologies as catalyst of change and enablement Pakistan has relentlessly pursued policies during the past four years for digital and financial inclusion of all particularly the most disadvantaged segments of our population. Taking into account the transformational role of ICTs across all sectors of socio-economic development, accelerated digitization and next generation connectivity are at the heart of our agenda for ultimate achievement of a holistic knowledge based economy. Government of Pakistan over the past four years has redoubled its efforts for bridging the digital divide by focusing on the whole value chain including expansion of broadband connectivity and access infrastructure, fuelling demand for ICT services, investing in digital skill and literacy particularly for women and girls, addressing affordability of services across the board and supporting innovation and entrepreneurship potential of our youth.

We believe that the success of any Government initiative is based on public private partnership. In this regard, the role of private sector becomes critically important. Fortunately, the private sector of Pakistan

has remained proactive and receptive to Government's policies and projects, thereby contributing towards the success of the ICT sector of Pakistan. As a result of our policies both the IT and Telecom sectors are thriving. With a telecoms sector size of more than 4.6 Billion USD and IT turnover of approximately USD 3.1 billion, new job opportunities are being created as businesses utilize modern ICT technologies such as e-commerce, e-banking, e-health, e-education, and businesses related to IT applications. Where on one hand three rounds of transparent and globally acclaimed next generation frequency spectrum auctions have generated around 2 Billion USD for the Exchequer they have also resulted in growth of broadband users to 42 Million from a mere 3.5 million in 2014. This is a testament to the immense confidence that our telecom industry has shown in our initiatives. We are well set to achieve the target of providing broadband connectivity to every unconnected village of 100 people by 2018. This has been achieved through a unique public private partnership model implemented through transparent use of USF subsidies for which government has pumped in nearly 500 Million USD till date. Fiber optic backbone is also being expanded to cover all population centers of 20,000 population.

In order to provide opportunities to young entrepreneurs and talented youth of Pakistan and equip local Pakistani IT industry with infrastructure, mentorship and all allied facilities, National Incubation Centers (NICs) has been established in Islamabad with four such centers coming up in all provincial capitals and decision for award in this respect has been taken by the R&D Board. Within a year, we also expect to be bringing up three specialty incubators-accelerators in areas like FinTech, IoT and Robotics.

To bridge the gender digital divide and to remove the disparities in opportunities for our immensely talented but previously disadvantaged segment of our population, our "ICTs for Girls" program is aimed at spurring the socio economic uplift of Girls through Digital Learning and employability enhancing digital skill development. As part of this program, 150 Digital Labs are being established throughout Pakistan at the Women Empowerment Centers. The Second wave of this program connecting 245 girls' schools is being launched to train over 110,000 girls per year in coding and cloud computing skills. On the Human resource side while we are ranked at no. 4 in freelancing today, Pakistan looks at further consolidating as one of the leading ICT freelancing nations. A national level digital skills training program for freelancers is being rolled out in which 1 million youth will be trained. This will be done through collaboration with hundreds of educational institutes across the country.

First state-of-the art Technology Park over 45 acres is already initiated in Islamabad and two more in Lahore and Karachi are underway. While our flagship telecom Policy 2015 which was product of immense stakeholder deliberation has been acknowledged globally and has led to "Global Leadership Award" at the World's largest Telecoms Forum the GSM World Congress. we are hope full that the "Digital Pakistan Policy" which is in the final stages of approval will further open avenues for not only the growth of the sector but also inclusive development of socio-economic opportunity and the ultimate achievement of the targets set under the Sustainable Development Goals of the UN.

World Summit on the Information Society

Due to all the tangible Policy and development initiatives Pakistan of today is in a unique position to play its due role as a strong connectivity, transit and digital enablement link in the region. Strengthening knowledge, research, and academic networks, as well as the development of high tech industrial clusters to generate and share knowledge and innovation, which is a part of our overall integrated ICT Vision and Strategy will not on help spawn a whole range of opportunity for our nation and citizens it will also build much-needed economic diversification across the region.

Portugal

Ms. Fátima Barros, Chairperson of the Board, ICP - Autoridade Nacional de Comunicações (ANACOM)

Portugal is a successful case study regarding Next-Generation Access networks, as it ranks in 1st position in FTTP coverage and in the 5th position in Next Generation Access Networks in Europe[6].

This was made possible through a set of regulatory and legislative measures focussing on eliminating barriers to the rollout of infrastructure for telecommunications, therefore effectively reducing investment costs in broadband networks. In fact, the regulatory authority – ANACOM - put in place the following initiatives:

- imposing asymmetric access to ducts and poles of the incumbent operator;
- elimination of barriers to the rollout of the infrastructures for telecommunications in buildings and concentrations of buildings, allowing consumers to easily churn their service provider.

[6] Source: European Commission, Broadband coverage in Europe, 2016

Furthermore, the Government also imposed compulsory access to ducts and poles owned by other utilities — electricity and gas companies, water and waste companies, highway operators and railway operators as well as municipalities in the country.

In addition, in order to bridge the digital divide in rural and less dense areas where there is no commercial attractiveness, there were initiatives of public-private investments in open access dark fibre networks to ensure that population in these areas could have access to very high speed networks.

The dynamics of competition in the domestic market were also very important. This was a driver for significant investment in broadband networks, generating effective competition at the infrastructure level. Currently more than 35% of households can choose services from at least three fixed network operators.

In spite of these policies and extraordinary NGN coverage, there is a significant digital divide in our society and territory. Specific digital literacy initiatives are being put forward targeting social and age groups with low or no digital competences, as well as capacity building to increase the safe usage of the Internet and improving accessibility and usability. The overall goal is to lower to 23% the percentage of individuals that have never used the Internet, and to 35% the percentage of individuals with low or no digital expertise by 2020.

Trust in ICT utilization is also a key factor to bridge the digital divide. Personal data, privacy and security features must be built-in in any device and service. This requires active, collaborative participation from all stakeholders. Hence, political coordination is the umbrella under which all other activities can develop. The ITU will remain a key organization in this field and Portugal is fully committed to work in partnership with the ITU and other UN agencies on the global effort to bridge the digital divide.

Internet Society (ISOC)

Ms. Constance Bommelaer, Senior Director of Global Internet Policy

"Support your local heroes"

The WSIS +10 Review made explicit the link between the WSIS process and the 2030 Agenda. A link that highlights the unprecedented ability for information technology to support human progress, and to reduce the world's geographic and social barriers. A link that clearly demonstrates that connectivity enables socio-economic development.

The Sustainable Development Agenda and the Sustainable Development Goals focus on change and action. They recognize multi-stakeholder solutions. At the Internet Society - we strongly believe that **everyone** has a role to play in the implementation of these objectives. For example, the ITU through its membership and mandate has a leading role to play in examining key barriers to connectivity and together from local to global levels to find the solutions to overcome them. With partners - we can amplify change.

But change will not happen if we look to the past. We must look forward. We must take risks. To achieve the Sustainable Develop Goals and connect the next billion business as usual won't work.

We know that the answer is that we need to do things differently, and to take our lessons from the core ingredients: A bottom-up approach and collaborative exchanges that have allowed the Internet to flourish in so many parts of the world.

None of us here this week, whether we are from government, the private sector, or from an NGO, can ever achieve our ambitions to support sustainable development if we try to do it alone. We can only do this through collective efforts, and **by supporting more local connectivity solutions and** access to information, markets, healthcare, and opportunities. We must recognize that the success of the Internet is inherently linked to **building the capacity** of those it connects. And, without connectivity, communities are disconnected.

We need to connect unserved and under-served communities.

Part of change we need to see is to make it possible for people to connect themselves through local solutions. Solutions like Community Networks, where anyone, anywhere - regardless of background - can connect as long as they have the right tools and support. Regular people - local champions - local heroes - who do not think twice about what they are doing. Let's be inspired by these everyday heroes. People

dedicate themselves to local connectivity. And, they work from within communities to build connectivity. They are part of a bigger connectivity puzzle, and they are a compliment to other efforts under way to connect people.

So where do we start? What can we do to promote local connectivity solutions - to support community networks?

The answer lies in partnerships. Support your local heroes who are developing these local connectivity solutions. Understand their needs. Because they need your support and they are part of your solution to connect more of your citizens, to enable social and economic growth and to enable opportunities.

For example:

- I**f you are a regulator, consider** Community Networks as a legitimate alternative form of local connectivity. Recognize them as a sustainable means to connect people "from the village out". Where local people build, develop, and manage a community network, where many traditional networks do not reach. And, where sustainable development is strong as the community network has been developed By, For, and, With the Community.

- **If you are a policy maker,** consider ways that existing or new funding programs can support Community Networks, and make sure that they are recognized as a solution to your ambitions to develop an information society with more digitally literate citizens and future innovators - who can support economic and social progress. They are a partner for your development ambitions.

- **If you are from the operator community**, consider partnering with local community networks. See them as a complimentary means to empower the unconnected to connect, and consider what you can do to support their development through equipment donations, training opportunities, or through back-haul provision to reach the global Internet.

All of us need to take inspiration from these everyday heroes who are building connectivity by, for, and with local communities, because development, innovation and solutions are always local.

SESSION SIX: Knowledge Societies, Capacity Building and e-Learning

High-Level Track Facilitator (HLTF): Ms Jessica Dheere, CO-Founder and CO-Director, Social Media Exchange (SMEX)

High Level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator ITU** – Dr. Cosmas Zavazava, Chief of Department, Projects & Knowledge Management, Telecommunication Development Bureau
3. **Djibouti** – H.E. Mr. Abdi Youssouf Sougueh, Minister, Ministry of Communications, Posts & Telecommunications
4. **Kenya** – Mr. Samuel Itemere, Principal Secretary, Broadcasting & Telecommunications, Ministry of Information, Communication and Technology
5. **India** - Mr. Sanjay Kumar Rakesh, Joint Secretary, Ministry of Electronics & Information Technology
6. **Association of Scientists, Developers and Faculties** – Dr. Kokula Krishna Hari Kunasekaran, International Secretary (India (Republic of))
7. **Wiley Rein LLP** - Mr. Richard Beaird, Consultant

Introduction

- Building strong knowledge societies depends on multiple factors, including physical infrastructure, development of applications that enable use of that infrastructure, and development of skill sets to be able to use the applications and produce digital dividends
- E-learning is part of a broader knowledge ecosystem and touches on other sectors, such as e-health, agriculture
- Regulatory frameworks are changing to embrace e-learning to promote both traditional and digital literacy
- Modes of learning have changed

- The environment for e-learning have common characteristics, such as needing to maintain a free flow of information; that e-learning processes should stimulate openness, and transparency; to emphasize private public sector cooperation; to develop entrepreneurial skills/apprentice programs; the use of e-learning as a tool in overcoming gender digital divide.

Vision/Fresh Priorities

- To build a knowledge society we need to make it free from fear of change and work with people to understand their issues, to impact their lives
- Build networks of networks, such as among universities
- Building knowledge societies should incorporate a global (rather than solely national) perspectives and void promoting "volatile individualism" that leads to silos of knowledge/action that are digitally connected but physically or socially separated

Opportunities/Partnerships

- Emerging technologies, such as Big Data, Internet of Things, Artificial Intelligence are new platforms that can be leveraged to embrace capacity building and e-learning and so some attention can be paid to developing the skill sets to leverage these technologies
- Mass-adopted technologies like mobiles have helped expand numero-literacy and English literacy even among rural, less literate populations, so targeting digital literacy for capacity building also helps overcome traditional literacy handicaps
- Develop and provide continuous learning opportunities for those responsible for building others' digital capacity
- Partnerships among governments, academia, public and private sector are essential to build knowledge societies, including new e-learning opportunities
- Partnerships with universities are among the most well-known; they are key producers of learning content
- Joint ventures by multiple countries can promote cooperation/partnership, for example, on the SDGs

Key challenges

- Lack of physical infrastructure in some places

- Increasingly lack of traditional or digital literacy and necessary digital skill sets among women, rural, poor, elderly, people even where physical infrastructure exists, meaning that they are not able to convert ICT resources to yield digital dividends
- Fear of using digital technologies
- Lack of digital capacity among those responsible for educating others (teachers, trainers, municipal officers, etc.)
- Developing new, high-quality e-learning content is costly in terms of time and money

Case Examples

- ITU launched a project on using ICTs to combat Ebola in West Africa to educate people to learn about how the health sector copes with such epidemics. The project embraced Big Data to trace core data records. Can use similar approaches for agriculture, environment.
- ITU Academy as an online learning platform with knowledge on radiocommunication, the standardization bureau, and the development sector that trains thousands of people a year, in partnerships with more than 150 universities and just launched a master's degree in management communication management as well as setting up 32 centers of excellence across the globe.
- A large-scale program in India proposes to train 600 million people in the next three years on digital literacy.
- India provides online education through online courses called MOOCs (massively open online courses) to which anybody can go, learn, and earn a degree.
- The Association of Scientists, Developers and Faculties in India is creating a knowledge platform for patents, research publications, etc., in an effort to build a “think-tank society” and address some challenges presented by language diversity.
- To bridge the digital divide, Djibouti, has developed in 2013 a strategy that integrates ICTs and restructures the framework to make it feasible in the midterm to meet the need to bridge the digital divide. Djbouti Digital aims to make our country an ICT center within the region, building on the country’s geo strategy and the submarine cables that go across the country.

Road Ahead

- Must optimize learning processes based on information made available by new technology--Internet search, libraries, flipped classrooms that spend more time on discussion and debate than

on rote memorization or recitation, encourage critical investigation and evaluation of information--including within schools

- Emphasize best practices for building knowledge societies based on aggregated experiences that can be shared in diverse environments and economies
- Smart Cities or whole variety of smart environments can be thought of as centers of excellence and/or incubators, where innovation is encouraged and new ideas to help the society as a whole can be generated; and they should be connected to each other to learn from each other's experiences

Association of Scientists, Developers and Faculties
Dr. Kokula Krishna Hari Kunasekaran, International Secretary

Your Excellencies, Honourable Ministers, The Secretary General of UN, The Secretary-General of the ITU, Distinguished delegates, Ladies and Gentleman. In a wider capacity as the Secretary General of The ASDF International, I am highly privileged to address at this event and to have an opportunity to bring ASDF inline to achieve the United Nations Sustainable Development Goals.

The Association of Scientists, Developers and Faculties (ASDF) is doing a massive job in creating a strong community of knowledge growth by providing the International platform for various Professional associations between Countries across the world. With a strong network of associates in almost 90+ countries, ASDF is growing everyday with seer leadership by enhancing the international cooperation between national and international organizations, universities, research bodies and individuals in all aspects of Research and Development.

Making a place holder with the advanced ICT had been as an important task for The Association of Scientists, Developers and Faculties in the past few years of its inception. The establishment has now grown into the well sustained organization with perfect internationalization is the victory achieved.

In this wide intellectual platform, I would like to extend my invitation to foster the socio-economic growth by all the Governmental Organizations and be as a part of ASDF. As a part of this upcoming strategy ASDF stands committed by making contribution in building the relationship between the equal valued bodies creating the framework and a strong expertise in measuring the progress along the WSIS action lines. The digital economy is a powerful catalyst for innovation, growth and social prosperity. The libraries have shrunk into a 3-kilogram book. It can serve our shared vision to promote more sustainable and inclusive growth focused on well-being and equality of opportunities, where people are empowered with education, skills and values, and enjoy trust and confidence.

The knowledge building is the important task and need for the hour. The cost of use of energy in the end user level is increasing widely creating a new metabolic activity. In the present trend, the information pandemic can be a vital threat, but educating the society about handling the data could be the righteous way.

The concept of virtualisation has now taken the floor and automation is being performed instead of relying on the human mechanisms. Thus, it has leaded to the digitally connected cars, provenance,

personalization of the content attributions, constant attention, increased flexibility of learning pattern, premiumisation and polarisation of the opportunity.

These days the individualism is growing worse than cancer which in turn is increases the volatility of their growth scope. This is widening the gap between the haves and have nots. They don't share or transfer the knowledge. The uncertainty is expanding in all the possible means, and the key answer for this would be allowing the open access or providing the eLearning. The capacity building programs could cost the Governments a lot, but having the open access in the education system and advanced learning could be much better and convincingly cheaper than the conventional programs.

Mr Chairman,

In the outset of providing space for the other speakers, I would like to reiterate that we at The Association of Scientists, Developers and Faculties (ASDF) take this opportunity to thank all the Member States and Stake Holders for their efforts towards finalisation of the Outcome Document to be adopted by this high-level discussion of WSIS 2017 and recommit for future participation from ASDF into this WSIS.

I Thank you, Mr Chairman!

SESSION SEVEN: Bridging Digital Divides

High-Level Track Facilitator (HLTF): Dr. Habib Kammoun, Chairperson of the IEEE Tunisia Section & leader in the REGIM-Lab. (Research Groups in Intelligent Machines), University of Sfax

High Level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator ITU** – Mr. Reinhard Scholl, Deputy Director, Telecommunication Standardization Bureau
3. **Iran (Islamic Republic of)** – H.E. Mr. Mahmoud Vaezi, Minister, Ministry of Information & Communication Technology
4. **Uganda** – H.E. Mr. Frank Tumwebaze Kagyigyi, Minister, Ministry of ICT and National Guidance
5. **Viet Nam** (Socialist Republic of) – H.E. Mr. Phan Tam, Deputy Minister, Ministry of Information and Communications (MIC)
6. **Mexico** – Mrs. Adriana Sofía Labardini Inzunza, Commissioner, Instituto Federal de Telecomunicaciones (IFETEL)
7. **Moldova** – Mr. Grigore Varanita, Director, National Regulatory Agency for Electronic Communications and Information Technology (ANRCETI)
8. **50 More Ventures** – Mrs. Maya Plentz Fagundes, Executive Director (Switzerland)

Introduction

- Speakers presented their efforts to bridge the digital divide and their future plan.
- It was clear that digital divide remains a critical issue due to problems of infrastructure, affordability, skills, awareness and relevant content. These problems should be addressed rapidly in order to avoid the grow of digital divide.
- Clear unequal access to broadband opportunities between big cities and rural areas
- Bridging the digital divide is more challenging in the broadband era and especially when we are moving towards the digital economy

Vision

Through introducing useful services in addition to providing broadband connectivity, and empower residents by providing them everywhere with a wide range of application and information methods.

Fresh Priorities

The priorities identified in the session included:
- Policy interventions should be designed and deployed, especially in rural areas
- Increase the investment in ICT and open data projects
- Improve the Internet infrastructure in rural areas
- Improve skills and work on capacity building in rural communities to address the digital divide.

Emerging trends

The emerging trends identified in the session included:
- Identification of recent innovations to help bridge the digital divide in certain countries
- Facilitate and encourage international cooperation in all matters related to the ICT
- Right of access to data and information, since the digital economy requires data collection and data generation everywhere

Opportunities

Opportunities that were identified in the session include:
- Diversify and improve the quality of services
- Establish data analytics everywhere and data service availability everywhere

Key Challenges

The key challenges to deal with the digital divide included:
- Investing in and building the infrastructure, reducing costs
- Develop services for rural communities, giving them the necessary digital skills to use the Internet in a useful manner
- Develop solid and secure high-speed and nationwide broadband
- Tackling barriers to competition
- Needs of mobile affordable smartphones
- Creating tools that empower consumers to compare prices, plans, and services
- Lack of experience with the private and the local authorities

Link with the WSIS Action Lines and Sustainable Development Goals (SDGs)

There are clear links to the WSIS Action Lines and the SDGs through this panel, especially building communities and building out broadband infrastructure.

Case Examples

Examples were identified in the session are:

- Iran provides broadband services to close to 28,000 villages and FTX connections to residential and business customers in metropolitan areas. Iran also created more than 100,000 ICT related jobs by actively supporting startups, R&D projects, and innovation by way of providing grants and low interest loans
- Uganda has invested close to $100 million to put in place the national backbone infrastructure that connects all government installations both in the urban and rural areas. Uganda also established the universal service fund and equipped all laboratories and secondary schools
- Vitenam fosters the broadband deployment through encouraging investment framework and creates environment favourable for innovation and for entrepreneurship
- Mexico has dropped the prices of mobile services over 40% in three years, which has increased traffic and increased the number of subscriptions. Mexico also put in place an innovative open access called the wholesale shared network that covers 92.2% of the population
- Moldova set targets of at least 60% of households connected with high-speed access technologies over 30 megabits
- 50 More Ventures worked with startups in developing area. They engaged and educated young women to become active creators of content and of uses of technology

Road ahead

The panel identified:

- Need to promote partnerships
- Need to develop new technologies, new applications, and new services
- Need to support local ICT innovators and companies by putting up universal hubs, and linking them with other mentors, and the multinational companies of this world
- The broadband must be used as a powerful tool for online learning and for lifelong learning
- The government has to have new economic resources through the system which equips its people with lifelong learning capabilities and the ability to innovate for themselves in the fast moving digital world

Even though there are challenges, there is a very positive vision for the future and that by working together to achieve the Sustainable Development Goals.

Thank you very much.

Iran
H.E. Mr. Mahmoud Vaezi, Minister, Ministry of Information & Communication Technology

In the Name of God, Most Compassionate, Most Merciful

Mr. Chairman

Honorable Ministers

Excellencies

Distinguished Delegates

Ladies and Gentlemen,

Let me begin by thanking the ITU Secretary General Mr. Houlin Zhao, and all other officials and individuals for their dedication in implementing WSIS goals and objectives. Let me also share with you some information on the progress we have made in our efforts to reap the benefits of introducing ICTs in the daily life of each citizen in Iran. Our policy has been to improve the quality of services, to diversify services and at the same time make them more affordable by promoting competition, partnership with the private sector and attracting foreign investment, to expand the reach to the remote and rural areas, to facilitate and actively support innovations, and to embrace advanced technologies to improve efficiencies in all aspects. All of the above are embodied in our National Information Network, which is being implemented to provide ubiquitous and affordable broadband services to residents.

I am happy to inform you by implementing the above policies, we now provide broadband services to close to 56,000 villages, the number fixed lines is more than 48 million, the number of active mobile subscribers is in excess of 85 million. The number of broadband users is close to 44 million, where 34 million use 3G and 4G mobile broadband. The utilized international capacity of data services now exceeds 1 Tera-bits-per-second and the domestic backbone IP capacity is close to 7 Tera-bits-per-second. In

addition, we have established 7 IXP nodes across the country. Recently, we started to provide fiber-to-the-home connections to residential and business customers in metropolitan areas and will accelerate such efforts in future. Besides, we are moving fast on narrowing the digital gap by utilizing USO funds to expand ICT networks and services to less affluent and remote areas. In doing so, our aim is to introduce useful services in addition to providing broadband connectivity so as to empower residents by providing them with a wide range of applications and informational material. In addition, last year we created more than 100,000 new ICT related jobs by actively supporting startups, R&D and innovations by way of providing grants and low-interest loans. In the past three years, the ICT market size in Iran increased three folds, and we expect to achieve similar expansion in the next five years.

Mr. Chairman, Honorable Ministers,

Our policy is to embrace, facilitate and encourage international cooperation in all matters related to ICTs. We have actively participated in different international conferences, study group meetings, and other fora; and contributed to such meetings in a positive and constructive manner. We shall continue to do so in future, as we firmly believe that only by joining hands, we will be able to make this world a better place not only for us, but for generations to come.

Let me finish by emphasizing on the importance of joint projects with partners from abroad in developing new technologies, new applications, and new services. This is an important pillar of our policy and will promote such activities by giving priorities in our future transactions to those who respond positively to this call. There are many Iranian ICT-related companies that are ready to cooperate at international level in all fields.

Excellencies, Distinguished Delegates,

This gathering is an excellent opportunity to network with other stakeholders, to exchange views, and to benefit from each other's experiences. I welcome your views on our way forward, and thank you for your attention.

Uganda

H.E. Mr. Frank Tumwebaze Kagyigyi, Minister, Ministry of ICT and National Guidance

The Secretary General of the ITU, Mr. Houlin Zhao,
Mr. Chairman,
Your Excellences Honorable Ministers,
Distinguished delegates,
Ladies and Gentlemen

It gives me great pleasure to participate in the World Summit on the Information Society **(**WSIS 2017) forum and present this Policy Statement to you distinguished delegates. On behalf of the Government and People of Uganda, I congratulate the International Telecommunications Union and its partners for organizing this very important forum. This forum is particularly important for the world as it enables stakeholders discuss and identify ways in which the Sustainable Development Goals (SDGs) and targets can be achieved through leveraging on ICTs.

Mr. Chairman, the Government of Uganda has placed ICTs as one of the key drivers for the country's growth and development because it realizes the immense benefits and opportunities that ICTs create for the economy and its citizens. ICTs therefore form an integral part of the Country's development agenda.

Ladies and Gentlemen, through partnership with the private sector, Uganda has made great strides in extending ICT services all over the country. As of 2016, the country had achieved 100% area coverage for radio broadcasting services while voice telephony stood at 85% at sub county level. With regard to usage, penetration of voice telephony and internet stands at 63.4% and 51.9% respectively, largely driven by the mobile revolution.

Distinguished delegates, Uganda aims at having 100% access and usage of ICTs in the medium term. We however, like any emerging economy, continue to grapple with gaps in critical areas like; ICT infrastructure; ICT skills and relevant content among others. It is for this reason that we value such high level fora like WSIS that provide an opportunity to all stakeholders to dialogue, share experiences and identify new ways to address the challenges that we are experiencing back home with regard to promoting usage and access to ICTs.

Ladies and Gentlemen, in implementing Action line C2, that focuses on ICT Infrastructure, the Government of Uganda is extending the National Backbone Infrastructure to cover all districts in the Country including

major institutions like local government offices, health centers and educational institutions. This government infrastructure is being put in place to augment the already existing private sector infrastructure networks. We have also ensured that we have in place a favorable policy and regulatory framework to further encourage private sector investment in ICT infrastructure. We are also encouraging the private sector to adopt innovative ways of deployment of infrastructure to achieve efficient use of resources. This has already borne fruit with the emergence of operators exclusively providing infrastructure as a service to other operators.

Distinguished delegates, Uganda has a young population with over 70% below the age of 35 years. We recognize that in order for them to realize the full benefits of ICTs, there is need to create awareness and build capacity of these young citizens. As such, we have integrated ICTs in our education system though embracing the use of ICTs in the delivery of the education curriculum. This is in line with addressing SDG 4, which calls for ensuring inclusive and equitable quality education for all and ensuring lifelong learning opportunities for all. The government has established the requisite infrastructure in secondary schools, teacher training institutions and universities. To date, over 90% of the public secondary schools, teacher training institutions and universities have ICT laboratories equipped with the necessary content. This program also includes a teacher re-tooling program where school teachers are equipped with the necessary skills to impart ICT skills and knowledge to their students. We are working with the private sector, civil society organizations and development partners to ensure that the ICT in Education program is rolled out to all schools and hence achieve better appreciation of ICTs.

Ladies and gentlemen, in order to further promote the uptake of ICT services, the Government of Uganda is emphasizing the creation of an innovation driven ICT sector. Several initiatives are underway that aim at promoting and supporting the development of local ICT systems and solutions. We have further embarked on promoting the development of relevant local content to facilitate integration of ICTs in the social and economic sectors of Uganda. We believe this will encourage local users to embrace ICTs. We welcome the participation of various partners from the private sector, civil society and development agencies in achieving this objective.

Ladies and Gentlemen, we continue to explore other opportunities that will enable us realize our vision of achieving universal access and usage of ICTs. To further address access gaps, the government has embarked on leveraging existing infrastructure like post offices to enable access to e-services, including e-government services. The traditional post offices are being upgraded with internet connectivity to enable them accommodate one-stop Centres where the citizens can access all the available e-government services. In addition, we are encouraging the private sector to adopt other models of infrastructure deployment and sharing, especially in the underserved and unserved areas as means of reducing the cost of network roll outs. Similarly, we have further adopted coordinated planning and deployment of ICT

infrastructure with other complimentary services like roads as well as utilities like water and electricity in unserved areas.

Mr Chairman, Your Excellences, Distinguished Delegates, Ladies and Gentlemen, as I conclude, it gives me great pleasure to inform you that Uganda has made great strides in advancing the WSIS Action lines. The Government of Uganda reiterates its Commitment towards furthering the implementation of WSIS Action lines using a multi-stakeholder and multi-dimensional approach. We commit to further ensuring that our policy and regulatory frameworks address emerging technological and industry trends so as to ensure that we bridge the digital divide. I thank the ITU for organizing this forum and the Government of Switzerland for hosting us. I look forward to interacting with other distinguished delegates and drawing lessons, sharing best practices and identifying emerging trends on various topical issues that we shall be discussing during this forum.

For God and My Country,

Hon. Frank Kagyigyi Tumwebaze

Mexico
Mrs. Adriana Sofía Labardini Inzunza, Commissioner, Instituto Federal de Telecomunicaciones (IFETEL)

Uno de los principales obstáculos que existen para lograr el acceso e inclusión de los no conectados al ecosistema digital, es el del despliegue efectivo de la infraestructura como las redes de banda ancha, ¿Cuáles considera que son las mejores medidas y prácticas que los Estados deben implementar para fomentar y promover el despliegue de infraestructura y redes de banda ancha necesarias para cerrar la brecha digital?

- **Disponibilidad de espectro**

Actualmente existen 404 MHz asignados para IMT en México, en las bandas de 800 MHz, 850 MHz, 700 MHz, 1.9 GHz y AWS. La disponibilidad de espectro ha ido en aumento desde 2016 (314 MHz), tomando en cuenta que el Instituto Federal de Telecomunicaciones (IFT) está actualmente planeando la próxima licitación de 130 MHz en la banda de 2.5 GHz. Con esta planificación, el IFT tiene contemplado tener para 2018 un total de 594 MHz de espectro IMT en el mercado.

- **Mercado secundario de espectro**

El Instituto Federal de Telecomunicaciones ha publicado las directrices generales para el arrendamiento y subarrendamiento de las bandas de frecuencia, de acuerdo con la Ley de Telecomunicaciones de 2014. Estas directrices generales estipulan que las concesionarias pueden alquilar bandas de frecuencias para uso comercial o privado, con autorización previa del IFT. A este fin, debe tenerse en cuenta lo siguiente:

I. Que el arrendatario cuente con concesión única del mismo uso o que la haya solicitado al Instituto;
II. Que el arrendatario se constituya en obligado solidario del concesionario, respecto de las obligaciones derivadas de la concesión de la banda de frecuencia arrendada;
III. Que no se afecte la continuidad en la prestación del servicio, y
IV. Que no se generen fenómenos de concentración, acaparamiento o propiedad cruzada.

- **Espectro de uso libre**

En México existen diversas bandas de frecuencia identificadas para uso libre. Las más comunes son:

- **900 MHz** (902 – 928 MHz)
- Frecuencias para servicios de *Digital Enhanced Cordless Telecommunications* ***(DECT)*** (1920 – 1930 MHz)
- **Wi-Fi** (2400 – 2483.5 MHz)
- **Wi-Fi** en la banda de 5 GHz (5.15 – 5.25 GHz, 5.25 – 5.35 GHz, 5.47 – 5.6 GHz, 5.65 – 5.725 GHz, 5.725 – 5.85 GHz)

Además, en mayo de este año, el Instituto Federal de Telecomunicaciones identificó la banda de 60 GHz (57 - 64 GHz) como espectro libre, principalmente para satisfacer dos tipos principales de equipos que sirven a diferentes mercados: 1) sistemas punto a punto de corto alcance para proporcionar enlaces de backhaul de banda ancha o extender el alcance de las redes de fibra óptica; y 2) redes de área personal inalámbricas en interiores (WPAN) para dispositivos diseñados para compartir señales de datos HD sin comprimir, dispositivos de entretenimiento, televisión de alta definición, computadoras portátiles, teléfonos inteligentes y tabletas. Además, esta banda se utiliza para el transporte inteligente, sensores de perturbación de campo fijo y sensores de seguridad.

- **Compartición de infraestructura**

La ley Federal de Telecomunicaciones y Radiodifusión (LFTyR) determina una obligación específica para el Agente Económico Preponderante (AEP) en Telecomunicaciones en lo que respecta a la compartición de su infraestructura pasiva: "el AEP permitirá a los concesionarios de redes públicas de telecomunicaciones acceder y compartir su infraestructura pasiva en condiciones no discriminatorias."

El 11 de junio de 2013 se publicó en el Diario Oficial de la Federación el Decreto por el que se reforman y adicionan diversas disposiciones de los artículos 6o., 7o., 27, 28, 73, 78, 94 y 105 de la Constitución Política de los Estados Unidos Mexicanos, en materia de telecomunicaciones, en cuyo artículo décimo sexto transitorio se establece que el Estado, a través del Ejecutivo Federal, en coordinación con el Instituto Federal de Telecomunicaciones, garantizará la instalación de una red pública compartida de telecomunicaciones que impulse el acceso efectivo de la población a la comunicación de banda ancha y a los servicios de telecomunicaciones.

Para tal fin, la red compartida de telecomunicaciones contemplará, entre otros, el aprovechamiento de al menos 90 MHz del espectro liberado por la transición a la Televisión Digital Terrestre (banda 700 MHz) y de los recursos de la red troncal de fibra óptica de la Comisión Federal de Electricidad.

Además, la Red Compartida está destinada exclusivamente a comercializar capacidad, infraestructura o servicios de telecomunicaciones al mayoreo a otros concesionarios o comercializadoras. Para ello, el concesionario de la Red Compartida deberá comercializar de manera desagregada e independiente todos los Servicios Mayoristas de Telecomunicaciones.

- **Red Troncal: Fibra óptica robusta y extensa**

El artículo Décimo Quinto Transitorio del Decreto de Reforma Constitucional en materia de Telecomunicaciones menciona que la Comisión Federal de Electricidad cederá totalmente a Telecomunicaciones de México su concesión para instalar, operar y explotar una red pública de telecomunicaciones y le transferirá todos los recursos y equipos necesarios para la operación y explotación de dicha concesión, con excepción de la fibra óptica, derechos de vía, torres, postería, edificios e instalaciones que quedarán a cargo de la Comisión Federal de Electricidad, garantizando a Telecomunicaciones de México el acceso efectivo y compartido a dicha infraestructura para su aprovechamiento eficiente, a fin de lograr el adecuado ejercicio de sus funciones y el cumplimiento de sus objetivos. Telecomunicaciones de México tendrá atribuciones y recursos para promover el **acceso a servicios de banda ancha, planear, diseñar y ejecutar la construcción y el crecimiento de una robusta red troncal de telecomunicaciones de cobertura nacional**, así como la comunicación vía satélite y la prestación del servicio de telégrafos.

Lo anterior contribuirá al desarrollo del país para el acceso a la banda ancha e internet con el acceso a redes de alta capacidad y de transporte. Esta red troncal además permitirá transportar el creciente tráfico de datos generado por los servicios convergentes.

- Incentivos fiscales para el despliegue de fibra óptica (no solo para el AEP)

- Accesos a derechos de vía

- **Reducción de los derechos anuales por uso de espectro en México**

Actualmente los derechos anuales por uso de espectro en México son muy altos, comparados con otros países. Por tal motivo, el IFT a través de la Unidad de Espectro Radioeléctrico (UER) está planeado realizar para este año un estudio de los cobros por uso, aprovechamiento y explotación del espectro radioeléctrico establecidos en la Ley Federal de Derechos , en particular de las bandas identificadas IMT, en el cual se prevé analizar el nivel de los montos de derechos por banda considerando los estándares internacionales, así como sus efectos sobre la asignación eficiente del espectro radioeléctrico y la adecuada competencia en el sector.

Asimismo, se prevé incluir en dicho estudio un análisis sobre la conveniencia económica y regulatoria de establecer tratamientos diferenciados en los cobros de derechos que promuevan e incentiven la cobertura en lugares donde no se cuenta con los servicios y las necesidades sociales o de seguridad de la población que así lo requieran.

- **Puntos de intercambio de tráfico de Internet (IXP) locales**

Los puntos de intercambio de tráfico son ubicaciones físicas donde diversas redes se pueden conectar en un punto común para intercambiar tráfico de Internet. Intercambiar tráfico en un IXP presenta un número de beneficios que pueden contribuir a un Internet de mayor calidad, más asequible, estable, veloz y confiable. Debido a lo anterior, un IXP puede coadyuvar a facilitar el desarrollo de un ecosistema de Internet local inclusivo y sustentable.

Entre los beneficios previstos debido a la existencia de un IXP es posible enumerar los siguientes:

a) Reducción de costos operacionales asociados al intercambio de tráfico nacional de Internet entre las redes conectadas al IXP.
b) Reducción de latencia (y consecuentemente, mejor calidad) al mantener local el intercambio de tráfico nacional.
c) Mejor control y más autonomía de los recursos de la red al interconectarse en un punto centralizado.
d) Fomento a la competencia al eliminar barreras a la entrada de nuevos proveedores de servicios de Internet.
e) Disminución de la dependencia a IXP extranjeros así como mayor seguridad en la información al evitar el intercambio de tráfico local en el extranjero.
f) Fomento a la creación de infraestructura de red local, la cual es un componente importante en la creación de contenido digital local.

- **Facilitar el despliegue de redes de uso social para servir comunidades no atendidas**

Las Ley Federal de Telecomunicaciones y Radiodifusión (LFTyR) contempla el otorgamiento de concesiones de uso social con base en disponibilidad, méritos del proyecto y beneficios hacia la población. Este tipo de concesiones se otorgan de manera directa y sin pago de derechos anuales, excepto para el servicio de radiodifusión.

Al respecto, en junio de 2016 el IFT otorgó la primera concesión de uso social indígena para servicios de telecomunicaciones, para telefonía móvil GSM en la banda de frecuencias de 800MHz. Con esta

concesión se habilitará a su titular a prestar servicios de telecomunicaciones para la promoción, desarrollo y preservación de sus lenguas, su cultura, sus conocimientos, promoviendo sus tradiciones, normas internas y bajo principios que respeten la igualdad de género, permitan la integración de mujeres indígenas en la participación de los objetivos para los cuales fue solicitadas las concesiones y demás elementos que constituyen las culturas e identidades indígenas.

Con estas concesiones se prevé beneficiar a comunidades pertenecientes a los Pueblos Mixe, Mixteco y Zapoteco con asentamientos en 48 Municipios del Estado de Chiapas, 29 Municipios del Estado de Guerrero, 164 Municipios del Estado de Oaxaca, 61 Municipios del Estado de Puebla y 54 Municipios del Estado de Veracruz.

- **Los Gobiernos deben abrir sitios públicos para instalar infraestructura y un programa de cobertura social en carreteras y otras vías generales de comunicación**

Actualmente existen en México diversas zonas aisladas y de difícil acceso que aún no cuentan con servicios de telecomunicaciones. Además, existen carreteras principales y secundarias en la que la cobertura es intermitente o simplemente no existe. Por tal motivo, es indispensable encontrar la mejor alternativa que permita cubrir esta deficiencia de servicios de telecomunicaciones. Para ello, es necesario encontrar los incentivos para que los operadores de telecomunicaciones incrementen su cobertura en aquellas zonas en las que no les es rentable. El despliegue de infraestructura de fibra óptica, los derechos de vía, la identificación de más bandas de uso libre y la compartición de infraestructura permitirán reducir esta brecha digital.

Pregunta 2

Cuando se habla de brecha digital, sabemos que la tarea no culmina con el despliegue de la infraestructura, sino que también es vital generar las capacidades necesarias que permitan que las personas usen y aprovechen las tecnologías de información y comunicación de manera benéfica. En este punto, ¿cuáles son las mejores prácticas y políticas para fomentar la creación de capacidades entre los usuarios y a su vez protegerlos para incrementar la inclusión de los mismos en el ecosistema digital?

Para fomentar el acceso a las TIC y a los servicios de telecomunicaciones, tenemos que trabajar para abatir una de las brechas más complejas que es el acceso.

Para fomentar el acceso, debemos tener usuarios informados para empoderarlos y acercarlos a los servicios de Telecomunicaciones y TIC's, para lograr este objetivo en el IFT creamos desde 2014 la Coordinación General de Política del Usuario, un área al interior del instituto con el objetivo específico de diseñar, acompañar e incidir en regulación y políticas públicas para defender los derechos de los usuarios de los servicios de telecomunicaciones, a la par de difundir información relevante para usuarios de estos servicios.

A lo largo de estos últimos 3 años, a través el IFT ha diseñado mejores prácticas y políticas para fomentar la creación de capacidades entre los usuarios y a su vez protegerlos para incrementar la inclusión de los mismos en el ecosistema digital a través de:

Publicar trimestralmente preferencias, índices de satisfacción, encuestas, recomendaciones y estudios, con la finalidad de que el usuario cuente con información suficiente para la toma de decisiones.

Promover el acceso a las personas con discapacidad a servicios de telecomunicaciones en igualdad de condiciones con los demás usuarios. Y como prueba de esto ha sido la emisión de los Lineamientos de Accesibilidad a los Servicios de Telecomunicaciones para Usuarios con Discapacidad. Lineamientos que recibieron un premio Champion este año y que son los primeros en su tipo en Latinoamérica, toda vez que regulan de forma integral el acceso a los servicios de telecomunicaciones a usuarios con discapacidad.

Esto a la par de crear algunas herramientas, como es el caso del Comparador de Servicios de Telecomunicaciones, una herramienta que el año pasado ganó también un premio Champion de WSIS 2016 y que permite a los usuarios comparar tarifas y planes de prepago y pospago de los distintos servicios que ofrecen los proveedores de telefonía fija, móvil, TV de Paga (que ofrecen servicios single. doble y triple play).

De igual forma se creó Soy Usuario, una herramienta de pre conciliación, donde los usuarios pueden presentar sus inconformidades y quejas, las cuales son acompañadas por el IFT para que sean enviadas y atendidas a la brevedad por los proveedores de los servicios.

El IFT también ha implementado en los últimos años una robusta estrategia de información para empoderar a los usuarios de los servicios de telecomunicaciones. Esto se ha hecho a través de infografías y guías paso a paso que tiene el objetivo de orientar a los usuarios en proceso como la portabilidad y entre otros.

También es importante destacar que la página Institucional del IFT es completamente accesible y es la primera en su tipo dentro del gobierno mexicano con un nivel de accesibilidad AA de la W3C, además de incluir una declaración de accesibilidad en este aspecto y con planes de llegar a AAA.

Otra de las buenas prácticas implementadas por el IFT es el Catálogo de Dispositivos Móviles Accesibles (En colaboración con Mobile Manufacturer Forum), donde los usuarios con discapacidad podrán encontrar las características específicas con las que cada equipo podría ayudar a usuarios con discapacidad, así como un catálogo de apps accesibles para mejorar la navegación en internet y uso de TICs por parte de personas con alguna discapacidad.

Finalmente el IFT ha implementado una importante estrategia de capacitación a usuarios a través de una plataforma digital con contenido multimedia, cápsulas y video interactivos, además de webinars denominada Me Informo. Esta plataforma fue diseñada como el objetivo de ser un mecanismo de información, comunicación y de educación que permita a los usuarios tomar decisiones informadas. Con Me Informo los usuarios podrán conocer más acerca de sus derechos relacionados con los servicios de telecomunicaciones, así como tips y consejos útiles en la toma de decisiones de contratación, acceso y uso.

También considero que es necesario generar contenidos en español y lenguas originarias para abatir esta brecha digital, además de que el currículo educativo de los niños esté relacionado a las TICs y aprendan utilizando estas herramientas, como puede ser el caso de programar.

Asimismo, es importante que los gobiernos utilicen cada vez más las TIC e implementen el uso de Big Data para la toma de decisiones. .

Finalmente, considero importante generar confianza en uso de redes a través de:

- Ciberseguridad
- Enforcement derechos ARCO
- Anti Spam
- Impulso para la creación de programas transnacionales de telemedicina y educación en línea
- Implementar una política asertividad de accesibilidad (Soy Usuario).
- Información comparativa
- Colaboración Institucional vs malas prácticas
- Información comparativa.

Moldova

Mr. Grigore Varanita, Director, National Regulatory Agency for Electronic Communications and Information Technology

Distinguished Excellences, Ladies and Gentlemen,

We are witnessing important changes that are happening in the ICT world, with the advance of Internet of things. These changes are going to determine ways of how people will produce, consume, interact, communicate, do business or just organize their lives.

Our Government believes that high speed fixed and mobile broadband networks are the core infrastructure for a new economy and society that we tend to be. Due to appreciable investing initiatives made by operators, we have obtained good high-speed broadband footprint in cities, with as much as 90% of the subscribers having a high-speed capable access. But the spread of the high-speed broadband networks is uneven throughout our country. The Republic of Moldova has a predominantly rural population and investing in rural areas is not as attractive as in urban areas.

Thus, thinking on developing a modern country, it is obvious that currently leading fixed optical and 4G networks must be further developed to reduce the technological gaps. Also, we must especially keep in mind that the next mobile radio generation with higher bandwidth, 5G, is expected to appear soon and it is going to play a tremendously important role.

As the practice shows, developing broadband networks to cover all citizens and regions is a very challenging task to implement. For example, it is widely recognized that civil engineering works can account for up to 80% of the cost of deploying high-speed networks. Thus, our Government has considered that reducing the need for such works would make broadband roll-out cheaper and would produce more incentives to investing operators.

I would like to mention that, after the Republic of Moldova signed the association Agreement with the European Union, the country took over the regulatory model of the European Union. One of the important European Union's achievements is the Directive on measures to reduce the cost of deploying high-speed electronic communications networks (2014/61/EU), which aims at facilitating and incentivizing the roll-out of high-speed electronic communications networks.

The Republic of Moldova has adopted a national law on access to properties and shared use of the infrastructure associated with public electronic communications networks, which tends to adjust the national framework to that existing in the European Union.

According to the above mentioned law, some important changes to national legislative framework have been made:

a) The national electronic communications operators have been granted the right of access to public and private properties, including physical infrastructures, in order to deploy their network elements.

b) The public and private entities have been imposed the obligation to negotiate and offer access to their properties and physical infrastructures at the operators' reasonable requests. Still, some limitations on this obligation apply.

c) The conditions of such access must be objective, non-discriminatory and at cost oriented prices.

d) Minimum technical requirements for the newly built multi-dwelling buildings, hotels, offices etc. were set so, that these must be equipped with high-speed access infrastructure and multiple operator access is possible.

e) Efficient coordination of civil works by making information on such planned works available.

f) Faster, simpler and more transparent permit-granting procedure.

This must ensure that where suitable infrastructure exists, operators can choose to reduce capital expenditures on civil works, potentially spending more on network infrastructure and enabling more rapid network development.

The National Regulatory Agency for Electronic Communications and Information Technology (ANRCETI) is the national electronic communications regulator of the Republic of Moldova and, according to the above mentioned law, it was invested with several important tasks to perform in order to help operators to reduce their costs of high-speed network deployment.

First of all, ANRCETI became a body that can address disputes between electronic communications operators and public or private entities, which hold properties or physical infrastructure potentially suitable for electronic communications network roll-out.

Secondly, it is an authority responsible for enabling an info center on existing network and physical infrastructures, on public properties with open access for electronic communications operators and conditions applicable to such access, on existing plans and initiatives of major civil works. For the fulfillment of this task, ANRCETI must develop an open database on conditions to access established by public entities and develop a digital inventory on existing network infrastructures.

ANRCETI has already developed a set of normative acts in order implement the above-mentioned law:

a) the standard Contract for access to public or private property for the construction (installation), maintenance, removal, replacement, transfer or retrofitting of existing public electronic communications networks and infrastructure elements;
b) the Methodology on the tariffs for the right of access to public properties and/or shared use of physical infrastructure. This Methodology has been approved by the Government.
c) the Guidelines on access to properties, to help operators better understand the provision of the law and allow them to effectively apply for access.

I must say that measures I mentioned above are seen as capable to remove the bottlenecks and reduce the inefficiencies, thereby reducing the costs of rolling out high speed broadband infrastructure in the Republic of Moldova and creating synergies among different industries.

For us, the need for such developments is very challenging and charming at same time. Also, it is likely that similar changes will be performed in many other countries, if not such are not yet under way. Thus, let me express my high appreciation of the World Summit on Information Society 2017 and thank for the opportunity to share our experience on this important matter.

I thank you for your kind attention.

SESSION EIGHT: Applications and Services

High-Level Track Facilitator (HLTF): Ms Gayatri Khandhadai, Project Coordinator, Association for Progressive Communications (APC)

High Level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator ITU** – Mr. Yushi Torigoe, Deputy to the Director, Telecommunication Development Bureau
3. **Azerbaijan (Republic of)** – H.E. Mr. Elmir Velizadeh, Deputy Minister, Ministry of Communications and High Technologies of the Republic of Azerbaijan
4. **Iran** – H.E. Mr. Nasrollah Jahangard, ICT Vice Minister and Chairman of ITO, Information Technology Organization of Iran (ITO)
5. **Bangladesh** – H.E. Mr. Mohammad Shafiul Alam, Cabinet Secretary
6. **Liberia** – Ms. Angelique E. Weeks, Chairperson, Liberia Telecommunications Authority (LTA)
7. **Clean Development Group (CDG)** – Mr. Scott Phipps, President and CEO (Canada)
8. **Nokia** – Mr. Marc Vancoppenolle, Global Head of Government Relations

Special announcement on a new cooperation agreement between ITU and MIC Japan:

H.E. Mr. Shigeki Suzuki, Vice Minister for Policy Coordination, Ministry of Internal Affairs and Communications of Japan and Mr. Brahima Sanou, Director, Telecommunication Development Bureau, ITU

Introduction

- ICT Applications and services are what makes the internet real and experiential.
- Improving ICT applications and services is a situation of egg and chicken, because better services will automatically lead to more demand for better infrastructure and vice versa

Vision

- ICT applications have the potential to solve many of our existential problems and social issues
- Each user make use of different kinds of applications services during the daily activities
- A holistic approach needs to be adopted to improve ICT applications to reach people with different needs

Fresh Priorities

- addressing emerging challenges relating to environment
- ensuring that ecommerce reaches all and benefits all through applications and services

Emerging trends

- People using online tools and services for payments- integration of people in the rural area into the broader market
- Use of ICT applications and services for governance
- Use of ICT applications to tackle disaster and health emergency situations

Opportunities

- Lack of access to connectivity is closely linked to poverty and hence the digital divide cannot be treated in a silo but has to be linked to anti-poverty and education programmes to improve digital literacy.
- In remote areas with low population densities where there is no business case for the private sector, the government needs to step in and ensure the development of infrastructure and connectivity through Public/Private partnerships that are open access.

Key Challenges

- The most significant challenge to ICT services is access and the fact that many remain unconnected
- Second is cyber security, unless there is trust between states and the people that they are safe and that their information is safe it will be hard to promote ICT applications
  Privacy of users being compromised
- Ideologies interfering with the development of a free internet

Case Examples

- Bangladesh – 200,000 saplings were planted and rivers were cleaned up with the help of mobilisation on Facebook
- Bangladesh – Moti – a efiling system for government services which has considerably reduced costs and improved efficiency
- IRAN – emoney services for transfer of money

Road ahead

- Governments should rely, develop and use ICT applications and services for delivery to citizens
- For ICT services to improve we need trust and cyber security and for that states must cooperate with each other
- While we promote ICT applications we must guarantee the safety of personal information and privacy
- Sharing of information and infrastructure as well as data

Iran

H.E. Mr. Nasrollah Jahangard, ICT Vice Minister and Chairman of ITO, Information Technology Organization of Iran (ITO)

Question:

Mr. Vice Minister from Iran, could you give the ICT situation in Iran and the steps that you have being taken in your country regarding to e-services; as well as some of your opinions about investment in that sector in Iran?

Answer:

بسم الله الرحمن الرحيم

Excellencies, Ladies and Gentleman, it is my pleasure to be here and attend in the WSIS Forum, the prestigious conference; and I want to take this opportunities to thank the ITU Secretary General and his colleagues and especially madam chair, for hosting this valuable conference.

In this contemporary world it is worth of consideration that WSIS exists as a platform for sustainable development. I think this development have to be a balanced one to fill the digital divide and at same time remain loyal to a synergic knowledge sharing. In this regards ICTs, as enabler factor play a critical role in socio-economic roadmaps of all countries. In this regard it is necessary that the WSIS Action Lines and the SDGs meet each others in a way to foster developing programs.

In Iran, after releasing the final declaration of WSIS, from 2005 we try to consider its Action Lines and recommendations in our national plans. We have done many projects according to all aspects of Action Lines during Iran national development plans; more than 100 cases among them have been summarized in the national report released for this forum.

The formation of the Iranian National Broadband Network has been started in new government from 3 years before, and now we are in the stage of emerging e-government procedure in national level as an embracing opportunity for all potential partners.

Iran has also big potential for e-strategies market. For your information during past three years we have raised our market from about $6 billon up to near $17 billon. And we're expected for next five-year plan, it would be triple again in next five coming years and it means potential of Iranian market for ICTs and their services that will be about $50 billon and it is a very big signal to the investors and players in the world and also inside the country.

Right now all over the country we have a full digital network among the cities, and also in about 28000 villages; and we have planned to reach to 36000 villages all over the country to have the digital access.

For the next plan we are in the stage of bringing FTTH to all homes and buildings in the country. We have started this program in this year and also started to join with some international companies to bring budget for this program.

Regarding the 3G and 4G, we have been preparing services in more than 1000 cities inside the country and actually we have hundred percent penetration.

In the other hand the population of the country is very young, i.e. near to 50% of the habitants are less than 30 years old and it means the society and country have very hungry situation regarding ICTs and e-services and we are ready to full cooperation and joint working in international level.

Thank you very much.

Bangladesh

H.E. Mr. Mohammed Shafiul Alam, Cabinet Secretary, Cabinet Division, Government of Bangladesh

How is Bangladesh's model of civil servants using social media as a problem-solution tool so unique?

The Bangladesh Civil Service is harnessing the power of social media to discover creative ways to attain effective citizen engagement in the process of improving public service delivery. For instance, a sub-district created history by having 300,000 saplings planted on a single day by locals under a social media based campaign. Again, 40,000 locals brought together by a DC office Facebook page volunteered to do a clean-up drive of a 3.2km long canal that is the lifeblood of an entire district.

Facebook is now being used as a peer-support platform to encourage the spread of ideas and interaction among experienced senior civil servants and junior officers with innovative ideas and ambition. More than 15,000 civil servants are regularly discussing issues around improving public services in 1 central Facebook page named 'Public Service Innovation Bangladesh' – that is accessible only to civil servants.

With direct monitoring from the Cabinet Division, the Bangladesh Civil Service is institutionalizing and managing the practice of citizen-centric innovation by breaking down hierarchical barriers across all ministries, departments and agencies. The local government were the early adopters of social media as all 64 districts opened up their own DC Office Facebook pages. Convinced by the success and acceptance, more than 5,000 government offices have opened up their own citizen facing Facebook pages through which over 2 million citizens have been engaged through where citizens can ask for help or post complaints 24/7.

How do you think your "less paper office" initiative will enable better service delivery?

Prime Minister's Office and Cabinet Division have combined their strengths to come up with a robust electronic file management and archiving system called Nothi that has provided for quick decision making and service delivery from government offices. Since the roll-out of the system, more than 3000 offices from sub-division level to ministry have installed this system thus improving transparency and citizens' convenience.

Citizens can now do electronic/virtual communication with the government offices sitting at home allowing them to lodge their demand/requirement and track them real time online which was literally

impossible in the traditional paper-based filing system. This saves the citizens a huge amount of money and time required previously to obtain a service from government offices.

An office or its relevant section could process only 5-10 files a day in traditional filing system, but now with Nothi this number moved up to around 30-35 files. More than 21,000 users who are already registered in the system can save their valuable work hours since they can now deliver triple the services that previously they couldn't carry out in the traditional filing method.

To improve coverage and sustainability of the initiative, the government has already facilitated capacity development of its civil servants on the use of the e-filing system in their offices so that they can easily embrace it. This initiative is part of an e-government strategy focusing on applications aimed at innovation, promoting transparency and effectiveness in public administration and in strengthening relations with citizens.

Liberia
Ms. Angelique G. Eupheme Weeks, Chairperson, Liberia Telecommunications Authority

ICT in Disaster Management
A Policy Reflection on the Use of ICT in the Ebola Crisis in Liberia

1.0 Abstract

Mankind has often faced disasters, not as a consequence of its wishes or actions, but due to outbreaks of diseases, floods and other forms of tragedy. The Ebola Virus Disease (EVD/Ebola) that hit Guinea, Liberia and Sierra Leone in 2014 and claimed over 11,000 lives, infected over 30,000 people and collapsed the economies of the affected countries was one of such disasters. [7] While mitigating the tragedy involved different solutions, ICTs played a critical role. In addition to connecting responders, health workers and other stakeholders, it enabled the sharing of data that provided critical inputs in managing the disaster. Amidst these positive interventions, data security, individual privacy and

[7] McDonald, Sean M. (2015), Ebola: A Big Data Disaster – Privacy, Property, and the Law of Disaster Experimentation

other ethical concerns have been raised regarding the extent to which access to personal information available on various ICT platforms is permissible in disaster management. While acknowledging the validity of these concerns, there are compelling reasons that the general good of the society is better served in the careful use of available ICT tools in disaster management. Therefore, the challenge for policy makers and other stakeholders is to find acceptable ways to address these concerns.

2.0 Introduction

In early 2014, the West African countries of Guinea, Liberia and Sierra Leone experienced the largest outbreak of Ebola in history. This disease wiped out many households, left communities devastated, society traumatized and economies deflated. It tortured the affected nations, leaving about 30,000 persons infected and also killed over 11,000 persons. It posed severe danger to the survivability of people across those nations. It took less than 14 days to kill its victims and had less than 15 percent survival rate. As a sickness, it had no boundaries, unleashing a heavy death toll even on health workers, usually presumed to be safe. After 19 months of its gruesome reign in a region with poor medical infrastructure and low human capital in the health sector, the disease had succeeded in shutting down the health sector across the sub region.

The effort to overcome the Ebola Virus Disease came too slowly. National health authorities in the affected countries initially took the outbreak for granted. Their attitude could have been a result of lack of the necessary capacity or a lack of insight regarding public health safety. These factors arguably contributed to the inability of stakeholders to prevent a tragedy that was preventable. Other factors such as the late involvement of specialized global health bodies on outbreaks such as Ebola, and the subsequent involvement of other responders in an uncoordinated way initially, all contributed to the high impact of the tragedy.[8]

The first contribution of this policy paper is to demonstrate how the use of ICT was effective in mitigating the Ebola tragedy across the affected nations. Second, it will show the common forms of ICT platforms that were adopted along with the strategies applied to make them effective. It will then assess the

[8] Liberia President Ellen Johnson Sirleaf's Letter to the World (Delivered Via the BBC World Service). See, http://www.guardian.co.tt/news/2014-10-17/liberian-president-sirleafs-letter-world-calls-ebola-aid; downloaded 5 June 2017.

challenges that were encountered while using ICT to manage the Ebola tragedy. It will also illustrate how a failure in one sector can impact many other sectors in human society. It will then present its findings, which confirms the perceived vulnerabilities of health systems across the region and showcase how gaps in ICT services, which is sometimes the consequence of lack of infrastructure, can have a direct impact on wellbeing. It will conclude by making recommendations that essentially consider the lessons learnt in putting in place systems to prevent such tragedies from ever taking place again.

3.0 Essence of ICT in disaster management

ICTs have various functionalities. From innovation to entertainment and employment, it is also a tool that supports the security of an individual, a group or a whole nation. When people are in a disaster situation, ICT can be applied as a part of the solution to meet their security needs. This is how crucial ICT is in managing disaster. During the Ebola outbreak in Liberia, ICT was effective in helping the responding community to gather and analyze data while at the same time, it became a platform that safeguarded people from getting in harm's way. ICT is therefore essential in managing disasters, as has been seen in Liberia, and in other countries that have experienced national disasters.

A. Rationale

The scale of a national disaster usually makes it a complex problem. National disasters do not only affect persons in terms of their physical security, they can also affect community safety, national economies, the environment and the culture of a people. Ebola began like a simple problem for a household. It subsequently grew bigger, affecting individuals, the people's way of life, the environment and the national economy. The security risk associated with Ebola, proves that every society is interconnected, given the threat it posed to international security systems. While other interventions such as logistics, medical supplies, health workers and the military, among others, in part contributed to the solution; each depended on Information Communication Technologies for optimization. Using ICT in the fight against Ebola was therefore not one of choice but an issue of compelling necessity. The rationale of applying ICT in the fight against Ebola was to ensure an efficient sharing of resources, timely dissemination of information and reliable collecting and analysis of data for evidence-based decision making.

The fight against Ebola could not have been successful in the absence of real-time data about critical aspects of the response regarding where EVD transmissions were occurring, case notifications, geographic spread of the EVD, health service availability and infection control options.

ICTs were used to highlight areas of risks, vulnerabilities and potentially affected populations, by producing geographically-referenced analysis. ICTs were also required to ensure better coordination of response efforts and avoid the duplication of efforts and resources and data fragmentation.

B. Some ICT platforms and services

Mobile network platforms of the three Mobile Network Operators (MNOs) in Liberia provided a vital set of tools to access hard-to-reach populations of infected individuals and affected households; and provided them with life-saving information, financial support, and monitoring of vital epidemiologic surveillance information. ICTs were therefore used to map and geo-locate EVD outbreaks as well as to collect and share data in near real-time. The ICT tools used by the response community included tools for point-of-care diagnostics, case management, logistics management, community mobilization, payment and financial support distribution, and data analytics solutions for Ebola responders and affected communities. mHero, a suite of open-source mobile phone-based communication systems, was used for contacting, informing, surveying, and polling facility-based and community health workers on information, such as training materials, Ebola lab test results, and equipment/supplies. Similarly, the District Health Information System 2 (DHIS2), a web-based open-source district health information system was adopted by the Ministry of Health and Social Welfare (MOHSW) as the government's repository for all aggregate health data. Visualization features that were helpful included dashboards, GIS, charts, and pivot tables.[9] While these ICT platforms were adopted in Liberia, similar tools were also applied in countries that experienced Ebola cases as well.

4.0 The absence of ICT platform and services in disaster management as a challenge

ICT can become a tool of convenience or a platform of necessity depending on its functionality. Prior to the Ebola outbreak in Liberia, access to ICT was optional. When the need to have access to real time information regarding the spread of the virus became evident, ICTs then became a necessity in the context of individual and group security. Every country, particularly so in sub Saharan Africa needs to develop its IT infrastructure, content and service for the good of the society. The absence of the requisite IT infrastructure can create the impression that ICT services and tools are for elites; and this is not the case. One of the factors that made the Ebola virus last longer was in part due to the absence of the ICT Platforms

[9] USAID Technical Brief (November 2014): Use of Technology in the Ebola Response in West Africa

and services in other parts of the country. *No one can effectively manage a disaster without making use of ICT platforms.*

5.0 Findings of the impact of ICT in managing the Ebola disaster

There were critics who believed that the use of ICTs in the fight against Ebola compromised data security and privacy and did not conform to some ethical guidelines.[10] Others raised concerns regarding the inability of authorities in the affected countries to swiftly put in measures to prevent the tragedy. They suggested that specialized international bodies should have intervened earlier to mitigate the gap. A lot more critiques on what ought to have happened, but did not happen still abound! What has not changed is that the EVD epidemic had a devastating socio-economic impact on the affected countries. The World Bank estimated that the equivalent of US$3.3 billion in gross domestic product (GDP) of the three countries was lost due to the outbreak.[11] The graphic details show lower investment, substantial loss in private sector growth and declining agricultural production, leading to concerns about food security during the period.

Associated with the loss was over 3.6 billion US Dollars that USAID estimated the international community had donated to provide personnel, technical expertise, and resources to the EVD response and the establishment of emergency operations centers in Guinea, Liberia, and Sierra Leone. This huge sum of money was not invested to enhance development – it was rather spent to contain a health crisis! To prevent this kind of tragedy, government and development partners will need to invest in social and physical infrastructures and the parallel agencies to man those infrastructures.

6.0 Conclusion

Most disasters that take place with a terrible consequence could be mitigated, or possibly prevented. The Ebola outbreak across Liberia, Guinea and Sierra Leone is one of those tragedies that became a near global disaster. In contending with disaster, the use of ICTs to ensure an efficient sharing of resources, timely dissemination of information and reliable collection and analysis of data for evidence-based decision making in managing the disaster, has provoked a new wave of concerns. Data security, individual privacy

[10] McDonald, Sean M. (2015), Ebola: A Big Data Disaster – Privacy, Property, and the Law of Disaster Experimentation

[11] USAID Technical Brief (November 2014): Use of Technology in the Ebola Response in West Africa

and other ethical concerns have been raised regarding the extent to which access to personal information available on various ICT platforms is permissible in disaster management.

While acknowledging the validity of these concerns, there are compelling reasons that the general good of society is better served in the careful use of available ICT tools in disaster management. Therefore, the challenge remains for policy makers and other relevant stakeholders to find acceptable ways to address concerns, such as the use of algorithmic data anonymization to remove privacy related information. The Government of Liberia remains mindful of citizens' rights but would take measures as provided under its laws to protect the collective safety of the State. Big Data initiatives such as the CDR analysis project undertaken by ITU in Sierra Leone, Guinea and Liberia, would complement our policy in keeping the society safe.

Thank you for listening.

Nokia
Mr. Marc Vancoppenolle, Global Head of Government Relations

The emergence and accelerated adoption of digital technologies is leading to a social and economic transformation as well as to positive impacts on inclusion, education and wellbeing. As such, policy makers all over the world are grappling with common questions on how to optimally guide the path to digitalization.

While connectivity remains the foundation for digitalization, no longer can we focus solely on the policies and regulations that enable connectivity. Rather we need to think more broadly and work with those responsible for policy in areas like transportation, agriculture, health, education, and more to ensure that barriers are removed and incentives accelerated for the use-cases to flourish. Policy and regulatory environments in each of those sectors, sometimes written over a generation ago, must be assessed and revised to enable the benefits of digitalization to come to life as more people and things get connected.

To support governments on the road to digitalization, the Broadband Commission Working Group on Digitalization Scorecard, chaired by Nokia, issued a report on June 5th 2017 with following recommendations:

- Governments should create a mechanism for cooperation across existing institutions. An adequately resourced and empowered (collegial) body dedicated to driving digitalization should greatly contribute to accelerating the progress of digitalization. Such a body, given its horizontal role across sectors, should have an easy access to appropriate departments responsible for sector specific initiatives and a clear mandate to consult with all relevant stakeholders to create an inclusive strategy.

- Responsible data sharing should be enabled by adequate policy frameworks to enable big data and analytics that will help optimize business processes and be better stewards of scarce resources.

- Governmental funding may kick-start the digitalization progress. An initial public funding for digitalization projects can act as seed money and further mobilize private sector investments. Moreover, governmental funding could steer the development of innovations into areas with most societal benefits.

- National strategies provide clarity of vision on digitalization's critical elements – beyond National Broadband Strategies, also National Digital Economy Strategies, National Cyber-security Strategies, and National Smart Cities policies, are important for a country to advance critical elements of digitalization.

- Education and awareness raising are critical to effectively implement digitalization policies. Sector-specific campaigns will more effectively help raise awareness about opportunities brought by digitalization, as well as encourage greater acceptance of digital solutions among stakeholders.

Regardless whether a country is of high, middle or low income, there is no room for complacency. Some countries are more mature in their approach to digitalization, and have already done well to establish policies and regulations for digitalization. Yet even there, continued action is required to encourage digitalization initiatives to thrive and scale. For those countries lower on the adoption curve, focus on more constructive policy and regulatory frameworks and appropriate governmental interventions presents an opportunity to unleash digitalization at a faster pace, and leapfrog.

SESSION NINE: Enabling Environment

High-Level Track Facilitator (HLTF): Mr. André Lucas Fernandes, (Youth Representative) / Lawyer and researcher on Law and Technology at the Federal University of Pernambuco, ISOC's Youth SIG

High Level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator ITU** - Mr. Kemal Huseinovic, Chief, Department of Infrastructure, Enabling Environment and E-Applications (IEE)
3. **Congo (Republic of the)** – S.E. M. Léon Juste Ibombo, Minister, Ministère des Postes et des Télécommunications
4. **Sudan** – H.E. Mr. Ibrahim Ahmed Mohamed Osman, State Minister of Communications and Information Technology
5. **Paraguay (Republic of)** – Eng. Mirian Teresita Palacios Ferreira, President, Comisión Nacional de Telecomunicaciones (CONATEL) (Represented by Nicolas Evers, Advisor, CONATEL)
6. **ASIET** – Mr. Pablo Bello Arellano, Secretary General (Spain)
7. **Microsoft** – Dr Carolyn Nguyen, Director, Technology Policy, Microsoft
8.

INTRODUCTION

The enabling environment is a complex and interdisciplinary theme. It requires joint effort and real appreciation of the multistakeholder technique, as has been occurring in several national and international initiatives.

The evolution of the strategies should take into account not only the digital divide and national regulation (law sphere) issues, but also the social dimensions, the local contexts and the capacity building processes for the self representation (gender divide, human rights, real access to the infrastructure).

VISION

There is a consensus on the catalytic capacity of ICTs and the potential to strengthen all sectors of society, with the need to reduce barriers and bring together the efforts of the various stakeholders.

The countries are taking various initiatives to act in the last mile; creating innovative and effective access solutions.

There is also a consensus on the challenge of building bridges and contextual projects to empower the future content and knowledge producers, not only in developing countries, but in developed countries too and how they relate to issues such as big data and cyber security.

The changes of the information society happen in an accelerated way compared to the regulation process. It is not the case to make a confrontation of paradigms, but to rethink the form of regulation and construction of regulation.

FRESH PRIORITIES

The coordinated collaboration of the various agencies of the United Nations with data crossing treatment for focused actions, in the attempt of an effectively enabled environment.

The need to reflect on the full presence of the Internet of Things in cities of the developed and developing world, affecting regulatory processes and also the absence of regulation - a joint effort by the public and private sectors is necessary to build a clear action panorama .

The connection of the last mile by different types of devices and not just by the heavy infrastructure is a reality that should be considered.
The phenomenon of the Internet of Things can provoke a widening of the digital divide between countries and between groups inside the countries.

The question of digital divide needs to be treated as urgency and not just as a another issue in forums and policies.

EMERGING TRENDS

The need for capacity building programs “included” in a training process that takes into account their reality, context and a critical point of view.

The TICs as catalysts of a new economic model post-exhaustion of the dynamics of commodities - changing the market standard of a “consumer internet” for a “production internet”.

Creation of projects that guarantee not only the infrastructure in the last mile, or the best connection in the localities, but the accessibility of people and devices in a general sense.

The notion that the environment is an interconnected ecosystem whose production of action and politics passes through the multistakeholder arena.

The issue of cybersecurity appears as a base element for the construction of the enabling environment process.

OPPORTUNITIES/LINK WITH THE SDGs

ICTs act directly and synchronously on all issues listed in Agenda for 2030, which means that all Sustainable Development GOALS (SDGs) are present in the discussion.

The projects executed in each country can be coordinated in joint initiatives that learn from their similarities and differences – using tools offered by the same stakeholders (like ITU tracker).

It is therefore necessary to act locally, thinking globally and taking into account that each SDG only addresses one aspect of a system that requires simultaneous and complex action - as in the example of the gender issue, quoted in the session and forum several times.

The flow of information at the global level allows the creation of jobs, qualified debates and economy growth in the process of synthesizing more efficient regulations for the environment.

KEY CHALLENGES

Ending the different aspects of digital divide is the biggest challenge put for everyone today.

Ensure not only infrastructure, but legislation capable of strengthening economic processes and dynamizing the activities of individuals.

Strengthen the multistakeholder debate as the primary form of policy building at all levels regarding Internet scale.

Structuring action plans so that an enabled environment is an environment where subjects not only consume information but produce knowledge - they are, therefore, individuals.

CASE EXAMPLES

Mr. Ibombo, from Congo explained that they launched a Governmental program for free Internet and have made available public bus lines so that young people can connect to the internet in hotspots, for free. It is a measure for democratization.

Mr. Nicolas, from Paraguay, explained that they have defined a number of conditions to strengthen cellular telephony. They are using the 1700 to 2100 band for 4G, aiming the granting of licenses. So that it is possible to draw upon the advantages of fourth generation. They have a number of mobile telecenters with the structure necessary for training for children, young people and broadly speaking this all citizens over the next years.

Ms. Carolyn Nguyen, from Microsoft, explained that they had a project in Kenya, which its main purpose is to go out to the remote areas where there is no electricity and the project was developed, in partnership with the government and a local system operator. They began to think about the communities and the challenge of the first step and maintenance of a digital ecosystem. They also empower, by Internet, libraries and schools around the world with the local people.

ROAD AHEAD

The structuring and strengthening of all multistakeholder experiences around the world in policy-making appears as a focal point.

The need to create effective regulatory models in which the public and private sectors take into account the effective connection of unconnected, simple and effective legislation *pari passu* with factual data.

Apply the data produced by ITU and several other organizations in a coordinated way with the aim of producing multifocal and accessible static data to all stakeholders.

Congo (Republic of the)
S.E. M. Léon Juste Ibombo, Minister, Ministère des Postes et des Télécommunications

Monsieur le Président,
Monsieur le Secrétaire Général de l'Union Internationale des Télécommunications,
Excellences Mesdames et Messieurs ;

En prenant la parole devant cette auguste assemblée, je voudrais tout d'abord m'acquitter d'un devoir, celui de remercier au nom du Gouvernement de la République du Congo, Monsieur le Secrétaire Général de l'Union Internationale des Télécommunications, pour son invitation à participer au Forum 2017 du Sommet mondial sur la Société de l'information, (SMSI) en sigle.

Monsieur le Président,

Conscient du rôle essentiel des technologies de l'information et de la communication pour l'avenir de l'humanité, le monde est engagé depuis plus d'une quinzaine d'années, dans la mise en œuvre de programmes de développement durable fondés sur un principe fondamental établi lors du premier SMSI à Genève en **2003**, à savoir "**la Société de l'Information doit être fondée sur la possibilité donnée aux individus, aux communautés et aux peuples de créer, d'obtenir, d'utiliser et de partager l'information et le savoir, en favorisant leur développement durable, en améliorant leur qualité de vie ainsi qu'en respectant pleinement les droits de l'Homme** ".

Fort de ce principe et du plan d'actions du SMSI, le président de la République du Congo, **Son Excellence Denis SASSOU NGUESSO** a intégré en **2004,** les Technologies de l'Information et de la Communication comme élément catalyseur de sa stratégie de réduction de la Pauvreté dans le Document intérimaire de Stratégie de Réduction de la Pauvreté, avec comme objectif stratégique : **« assurer la couverture nationale en matière de communication et des TIC afin de garantir un accès universel aux services de la téléphonie et à l'Internet d'une part, et d'accélérer l'introduction du Congo dans la société de l'information d'autre part** ».

C'est ainsi qu'à l'échéance **2015** précédemment fixée pour l'atteinte des objectifs de développement pour le millénaire dernier, le Congo s'est arrimé à la société de l'information grâce à la mise en œuvre de projets gouvernementaux structurants financés sur fonds propres ou avec l'aide des partenaires tant bilatéraux que multilatéraux; projets réalisés suivant deux axes stratégiques fondamentaux, à savoir :

- Premier axe stratégique : La mise en place d'un nouveau cadre juridique et institutionnel adapté aux objectifs de l'édification d'une société de l'information. La réalisation de cet axe a donné le gage d'une bonne gouvernance du secteur qui a attiré des investisseurs, notamment en téléphonie mobile, qui d'une part ont créé plusieurs emplois et ont permis de doper la croissance dans le secteur et d'autre part ont rendu disponible partout sur toute l'étendue du territoire national plusieurs services de communications électroniques innovants, notamment ceux de la technologie 4G lancée en **janvier 2017**.

- Deuxième axe stratégique : Le développement d'une infrastructure nationale des TIC, ouverte à la sous-région et au monde, dont la mise en œuvre a notamment permis :

  - le maillage du territoire national en infrastructures de base de télécommunications à très haut débit, à travers l'installation d'un backbone national en fibres optiques duquel sont déployées des bretelles optiques vers l'intérieur du pays ;

  - la connexion du Congo au réseau mondial de câbles sous-marins à fibres optiques ;

  - l'interconnexion sous-régionale par liens optiques avec le réseau des télécommunications du Gabon. L'opération se poursuit actuellement avec le Cameroun et la République Centrafricaine.

Dans le cadre de ce programme de développement d'infrastructures de base au Congo, il sied de signaler qu'en matière de connectivité Internet, le Congo a construit en **2013**, le premier point d'échange Internet CGIX ; ce qui lui a valu d'être choisi par l'Union Africaine pour abriter le nœud Internet sous régional d'Afrique centrale.

Monsieur le Président,

Concernant la réalisation des 17 objectifs de développement durable fixés par les Nations Unies à l'horizon **2030**, et qui constitue le thème central du présent forum, au Congo, la contribution du secteur des technologies de l'information et de la communication y est projetée à travers la mise en œuvre de la nouvelle vision politique sous-tendant l'action gouvernementale en la matière, à savoir « **Arrimer le Congo au développement de l'économie numérique** ».

Ainsi, après avoir construit le socle d'une économie numérique dont l'éclosion véritable est tributaire du développement des multiples usages et services à valeur ajoutée qu'offrent les TIC et accessibles à tous, l'enjeu pour le Gouvernement de la République du Congo est de parfaire et de consolider l'ancrage du

pays dans la société de l'information par le développement de vastes projets TIC structurants susceptibles d'infuser aussi bien le tissu administratif qu'économique du Congo.

A cet égard, plusieurs chantiers contenus dans le programme gouvernemental, dénommé **la Marche vers le Développement**, sont actuellement en cours de réalisation dans le cadre de divers partenariats, notamment :

- la création du cadre juridique et institutionnel de la société congolaise d'information ;
- le déploiement du dernier kilomètres, autrement dit, "last mile" en fibre optique, afin de faire bénéficier de l'accès au très haut débit aux ménages et aux entreprises ;
- l'installation d'un Datacenter, prélude à de l'Intranet gouvernemental ;
- la création d'un incubateur et d'un technopole.

Monsieur le Président,

En vous transmettant les chaleureuses salutations du Gouvernement de la République du Congo qui suit avec grand intérêt le déroulement de nos travaux, permettez-moi de réaffirmer la détermination de mon pays à promouvoir et développer davantage les technologies de l'information et de la communication au service du développement durable conformément aux dispositions de la Résolution 70/125 de l'Assemblée Générale des Nations Unies.

Monsieur le Président,
Excellences Mesdames et Messieurs,

Avant de clore mon propos, je me fais le devoir de rendre un hommage solennel, au nom du Gouvernement de la République du Congo, aux organisateurs de ce forum et à l'UIT qui ne cessent d'avoir un regard bienveillant en direction de l'Afrique.

Je vous remercie!

Sudan

H.E. Mr. Ibrahim Ahmed Mohamed Osman, State Minster, Ministry of Communications and Information Technology

بسم الله الرحمن الرحيم

السيد / الامين العام للإتحاد الدولى للإتصالات – Houlin Zhao

السيد / رئيس المؤتمر السيد/وزير الشباب والإتصالات وتكنولوجيا المعلومات بدولة رواندا , H.E.Mr.Jean Philbert Nsengimana

السادة الوزراء و رؤساء الوفود

السادة منظمات المجتمع المدنى والقطاع الخاص والاكاديمين و الخبراء والمختصين

السيدات والسادة بمقامتكم الرفيعة السامية

السلام عليكم ورحمة الله

يسعدني بهذه المناسبة أن أتوجه بخالص الشكر إلى الإتحاد الدولي للإتصالات ولجنة إعداد المنتدى العالمي لمجتمع المعرفة ، ولمنظمات المجتمع المدني والقطاع الخاص، على ما بذلوه من جهود قيمة فى تحضير هذا المنتدى ، كما أتوجه بالشكر والتقدير لكل المشاركين ، و أثمن الجهود السابقة التى أرست لمجتمع المعرفة تحت قيادة الإتحاد الدولى للإتصالات

السادة والسيدات،

إننا اليوم أكثر قناعة بأهمية بناء مجتمع المعرفة ، في صياغة مستقبل أفضل للبشرية جمعاء، كما أننا اليوم أشد إدراكا لحاجة المجتمع الدولي إلى علاقات تعاون وتكامل بين مختلف مكوناته لتقليص الفوارق بين الشعوب وتحقيق التنمية المستدامة ، وتجسير الفجوة الرقمية بين البلدان والشعوب ، ومن هنا يطيب لى أن أعلن عن إلتزام السودان بمبادىء وأهداف التنمية المستدامة وبكل نتائج القمم السابقة لمجتمع المعرفة .

السيدات والسادة الضيوف الكرام،

على الرغم من التحديات التي واجهت السودان بسبب الحصار الإقتصادى والتكنولوجى ، إلا أن قطاع الإتصالات وتكنولوجيا المعلومات قد حقق نجاحات مميزة خلال الفترة السابقة ، وأرجو أن تسمحوا لى أن استعرض بعضا مما تحقق فى القطاع :

ففى مجال البنية التحتية فقد بلغ طول الإلياف الضوئية أكثر من (31 الف كلم مربع) بنسبة تغطية بلغت 85% من المساحات المأهولة ونسبة 64% من مساحة السودان الكليةحوالي 2 مليون كلم2 وبهذه البنية التحتية يمكننا ربط القارة الأفريقية، وبلغ مشتركى الهاتف السيار (27.919.731) مليون ، وتجاوز مستخدمى الانترنت (17.000.000) مليون وفى مجال الربط الشبكى فقد زادت المؤسسات التى تم ربطها عبر الشبكة القومية لتصل لأكثر من الفى مؤسسة حكومة وتعليمية وصحية عبر الألياف الضوئية .

وفى إطار التشريعات والسياسات والإستراتيجيات والحوكمة فقد تم إعداد إطار عام للحكومة الإلكترونية واصدار السياسات الوطنية للمعلومات والإتصالات والبريد ، واصدار عدد من التشريعات المعلوماتية وتحديثها

وفى مجال الخدمات الإلكترونية والنظم والتطبيقات فقد تم إطلاق النسخة الثانية المطورة من بوابة السودان الإلكترونية ، وتطبيق نظام للسداد الالكترونى فى كل انحاء البلاد عبر نظام موحد ،

بالاضافة الى العديد من التطبيقات والنظم المتخصصة فى مجالات التعليم والصحة وغيرها ، عبر البوابة ومنصات الهاتف الجوال .وقد فاق عدد المواطنين المسجلين بالسجل المدنى اكثر من ثلاثين مليونا,ووضع الإستراتيجية الوطنية لأمن المعلومات .

وهذا جزء مختصر من الانجازات التى تحققت والتى لايسع المجال لسردها ونؤكد بأننا سنمضي قدما نحو تحقيق المزيد من المكاسب والإنجازات، و يحفزنا فى ذلك النتائج الإيجابية التى تحققت واثرت على أداء الخدمات ورضا المواطن وعلى الاداء الاقتصادى ، مما حفز الدولة باعتماد برنامج الحكومة الإلكترونية والتحول الرقمى واحدا من أربعة عناصر تمثل عماد برنامج الإصلاح في السودان.

الحضور الكريم

إننا فى السودان بقدر ما نحرص على بناء مجتمع للمعلومات يكفل للمواطن حقه في الوصول للمعلومات والحصول على الخدمات ، ويضمن إنسياب المعلومات وتداول المعرفة بدون حواجز أو قيود، بقدر ما نرى ضرورة ضبط معايير أخلاقية عالمية تكون بمثابة الجدار الواقي لمجتمعاتنا من الإستخدمات السالبة لوسائل الإتصال الحديثة، وعلى مستقبل الأجيال القادمة ، لذا فلا بد من رؤية موحدة شاملة تراعى خصوصية الدول والشعوب نلتزم بها جميعا ، حفظا على حقوق الإنسان وقيمه ومثله ، وعلى حقوق الدول وأمنها .

الحضور الكريم :

إن من أبرز التحديات التى تواجه الجميع تحدى امن المعلومات Cyber Security ، فلقد أصبحت الهجمات الإلكترونية تهدد مختلف المجالات ، وأصبح الفضاء الإلكترونى مجالا مفتوحا أمام الأعمال الإرهابية وأعمال القرصنة الإلكترونية ، ومن هذا المنطلق يصبح الحرص على حماية الأنظمة والشبكات وتأمين سلامتها مسؤولية أخلاقية جماعية تشترك في تحملها المجموعة الدولية بأسرها، من أجل المحافظة

على المكتسبات التى تحققت ، وهنا لابد من تضافر الجهود وتكامل الأدوار الدولية فى مكافحة أعمال القرصنة

السادة والسيدات،

إن أملنا كبير في أن يكون هذاالمنتدى السنوى، محطة حاسمة فى بلورة الحلول للموضوعات المطروحة والتوصل إلى نتائج على مستوى التحديات

وفى الختام آمل أن تتوج أعمال المنتدى بنتائج تستجيب لتطلعات شعوبنا، وآمالها فى التنمية والرفاه والأمن والإستقرار

والسلام عليكم ورحمة الله .

Paraguay (Republic of)
Ms. Mirian Teresita Palacios Ferreira, President, Comisión Nacional de Telecomunicaciones (CONATEL)

Señor moderador, apreciados miembros de la Unión y múltiples partes interesadas

Damas y caballeros

Ininterrumpidamente y sin descanso desde la invención de la rueda hasta lo más reciente del Internet de las cosas o del Internet de Todo; los dispositivos que se fueron creando nos han brindado el poder de llegar más lejos, más profundo, más en el detalle y con más precisión en la tarea de mejorar nuestras condiciones de vida y alcanzar y superar la cobertura de las necesidades básicas de estos tiempos.

El Paraguay reconoce todos los esfuerzos en las investigaciones, las invenciones y las oportunidades que este nuevo escenario de la comunicaciones abre para cada individuo sin distinción de pensamientos o condiciones sociales incluso de discapacidades y por eso desea participar de ello en el sentido de que todos los habitantes del territorio del cual es responsable soberanamente tengan todas y cada una de las oportunidades disponibles para su aprovechamiento.

En la Unión somos estados miembros que han sabido llevar sus problemas hacia las soluciones por medio del dialogo, el esfuerzo sin descanso de comprender el punto de vista de los demás miembros y sus genuinos intereses, por dichas razones el Paraguay ha avanzado en su participación más activa en los diversos foros y reuniones que la Unión ha propiciado, siempre en la defensa de sus intereses como País en situación de desventaja con relación a los que tienen costas sobre las aguas internacionales del mundo y con los espacios que hemos ganado y nos han permitido participar, presentamos nuestra posición y de acuerdo a nuestro entender la posición de un gran número de estados miembros con nuestra situación, algunos de estos países han podido superar en su totalidad todos los obstáculos, así como han podido construir confianza y consenso para la superación de todo tipo de barreras, sin embargo hay otros estados miembros que aún siguen bregando por mejores momentos y tiempos de reconocimiento de estas necesidades.

No podemos dejar de entender e incluso de admirar a países que en su situación de alta complejidad de intereses globales, realizan el esfuerzo sin cansancio de comprender y tratar de adecuar sus acciones a fin de ayudar en la medida de sus posibilidades a países como el Paraguay.

Deseamos informar a la comunidad internacional que hace dos años la CONATEL, con la ayuda de la Unión Internacional de Telecomunicaciones, elaboró el Plan Nacional de Telecomunicaciones 2020, enmarcado en las directivas del Gobierno Nacional contenidas en el Plan Nacional de Desarrollo Paraguay 2030.

El Plan Nacional de Telecomunicaciones contempla objetivos ambiciosos para que las telecomunicaciones constituyan un factor de soporte e impulso a la educación, a la salud, a la economía y a la seguridad en nuestro país. El Plan refleja la determinación de un Gobierno que desarrolla su labor, por y para la gente.

El conjunto de iniciativas vinculadas con el Plan Nacional de Telecomunicaciones tienen la marca del Gobierno Nacional denominada “Paraguay Digital”.

La determinación del Gobierno Nacional de maximizar los beneficios para la gente se trasladó en la definición de las condiciones establecidas en el Pliego de Bases y Condiciones de la Licitación para el otorgamiento de licencias del Servicio de Telefonía Móvil Celular y de Acceso a Internet y Transmisión de Datos utilizando la banda de frecuencias 1700-2100 MHz facilitando el acceso a las telecomunicaciones de 4ta. Generación.

Si bien el objetivo primario del otorgamiento de las licencias ha sido que la población pueda aprovechar los beneficios de la cuarta generación de comunicaciones móviles, lo cual ya lo viene haciendo. No obstante, es pertinente destacar que fueron impuestas obligaciones regulatorias de compromiso social.

66 telecentros fijos instalados en instituciones educativas y 6 telecentros móviles que recorrerán el país. Los telecentros cuentan con instructores para desarrollar programas de capacitación y formación a niños, jóvenes y a la ciudadanía en general, por un periodo de 4 años.

9.900 paquetes subsidiados destinados no solo a los estudiantes de institutos de formación docente, sino también a estudiantes de universidades nacionales.

1152 computadoras con acceso a internet de alta velocidad, destinados a escuelas y colegios, a centros de salud y hospitales, y a comisarias del país.

Tenemos mucho aún por hacer y también que aprender de los demás miembros de la Unión sin distinción del grado de desarrollo porque todos tenemos algo que aportar, razón por la cual debemos seguir participando activamente en todos los foros posibles.

El Paraguay desea expresar su interés en continuar apoyando las gestiones de la Unión en todas sus áreas técnicas e institucionales y también de seguir aportando su participación como estado miembro en el Consejo de la UIT llevando siempre la voz desde su condición de país en desarrollo sin litoral marítimo.

Gracias.

World Summit on the Information Society

ASIET

Mr. Pablo Bello Arellano, Secretary General

ASIET would like to thanks to the ITU this opportunity to share their views on this important issue.

Speaking on behalf of Latin-American telecom operators, ASIET (Interamerican Association of telecom enterprises) believes that an enabling environment is **essential** to reach the social and economic advantages of the Internet, and consequently, of the Information Society and for the achievement of the Sustainable Development Goals (SDG).

At the end of 2016, 3.2 billion people were using the Internet, representing 47% of the world´s population. Internet access is a catalyst for economic and social welfare, give access to the remaining 53% is a need to complete the revolutionary potential of the Internet.

Innovation, building and developing ICTs and infrastructure are crucial, but it requires that the necessary legal, policy and regulatory frameworks and approaches that are in place at national levels be revised in order be adapted to the new scenario and so continue promoting investment in ICTs and infrastructure, fostering entrepreneurship and innovation.

An Enabling Environment requires a flexible and light touch regulation for emerging and innovative technologies and business models, that means to apply the **same rules** for all the players in the Digital Ecosystem value chain.

The new actors like OTTs has changed radically the value chain in the Digital Ecosystem, they are practically in any link of the chain except in providing connectivity, OTTs and Telcos are important actors, they need one the other in order to improve the Digital Ecosystem. It is necessary to achieve a balance in their responsibilities on the infrastructure capacity.

An harmonious development is paramount, telecommunications networks are essential to Internet, the innovation is produced both in the networks as over the network, a **Level Playing Field** policy in order to avoid asymmetries and to preserve the **sustainability** of the Digital Ecosystem is a need that could not be ignored.

However, this is not possible without a regulatory environment and public policies which encourage new privacy investments in infrastructures.

A regulatory **light touch** approach progressing to an ex-post model should be applied, encouraging competition and enabling the entrance of new players in the ICT ecosystem, while permitting the promotion of innovative business models.

To achieve the full power of the Internet and ICTs, **the connectivity** is a paramount key. The connectivity will occur over networks and with technologies funded primarily by private industry investments and for long time the established communication services are based on global and universal connectivity (interoperability) through numbering and open standards, however, these doesn´t occur with Internet-based proprietary applications and services (e.g. VoIP, Messaging) which are increasingly **substituting** such established communication services, but **interoperability** is rare. Policy makers and regulators should promote interoperability between communication and messaging services to foster competition and improve consumer experience.

In order to foster private sector resources and attracting both foreign and domestic investment to achieve an Enabling Environment administrations have to consider among others these key policy issues:

- A technology neutral laws and regulation (same services same rules)
- A regulatory framework which promotes competition and fosters entrepreneurship;
- Transparency;
- Effective measures to combat corruption;
- Rule of law;
- An stable legal system;
- A digital literacy and ICT education

And in the other side, an Enabling Environment has to be founded on **security**, in this sense international cooperation between governments and stakeholders is essential to protect consumers and businesses. Governments should be more transparent about national security measures and must respect human rights and the rule of law.

Administrations must:

- Improve the legal framework and cooperation between states to eliminate loopholes that cyber criminals can use due to the global nature of the Internet;
- Develop cyber-security standards and homologation processes that must be met by personal devices vendors in order to trade their products.
- Intensify its efforts for “security by design”, especially for personal devices and in social networks, to secure customer experience;

- Enhance ways of collaboration to define and update standards and best practices that allows maintaining a secure cyber space;
- Agree on the adoption of a single cyber-security standard to establish an appropriate security and privacy baseline.

As was underlined in the outcomes of the ten-year review of the implementation of World Summit on the Information Society (WSIS) by United Nations General Assembly (UNGA) in December 2015, the **multistakeholder model** has demonstrated be very successful. When governments work together with other stakeholders significant progress can be made in raising capacity, knowledge, and understanding of the issues.

Therefore, we believe in strengthening the multi-stakeholder dialogue on Internet public policies, in a transparent way and based on mutual trust, putting at the centre of the debate the closure of the digital divide. This requires to understand the technological and economic dynamics of the Digital Ecosystem and put the focus on the "unconnected" rather than the ones already connected.

This collective and cooperative approach is essential for furthering the progress and ensuring the on-going stability and continuity of an inclusive, people-centred Internet that can foster ICTs for knowledgeable societies and sustainable development.

SESSION TEN: Digital Economy and Trade

High-Level Track Facilitator (HLTF): Ms. Dominique Lazanski, Public Policy Director, GSM Association

High Level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator** - Mr. Torbjörn Fredriksson, UNCTAD
3. **Portugal** – H.E. Mr. Guilherme W. d'Oliveira Martins, Secretary of State of Infrastructure, Ministry of Planning and Infrastructure
4. **Singapore (Republic of)** – Mr. Leong Keng Thai, Deputy Chief Executive, Infocomm Media Development Authority of Singapore (IMDA)
5. **United Kingdom of Great Britain and Northern Ireland** – H.E. Mr. Julian Braithwaite, UK Ambassador and Permanent Representative to the United Nations and Other International Organisations in Geneva
6. **World Economic Forum** – Mr. Fadi Chehadé, Senior Advisor (Switzerland)
7. **Intervale** – Dr. Yury G. Grin, Deputy Director General (Russian Federation)

Introduction

- There are a number of challenges to enabling the digital economy.
- Different countries are at different points in their development, but all countries and regions will need involvement of all stakeholders to enable a digital economy.

Vision/Fresh Priorities

- Create an enabling environment for both innovation and investment.
- Focus on skills and capacity building not just in schools, but at all levels of education and training.
- Create opportunities for developing and ensuring trust through data privacy, data protection and cybersecurity.

Opportunities/Partnerships

- Opportunities for governments to share experiences and successes with each other in general especially on how polices to enable a digital economy can help the digital economy to grow.
- Institutions in Geneva – both multilateral and non-governmental – have a role to play in terms of convening all stakeholders and especially governments to share experiences and discuss issues.
- Partnerships are key to developing the digital economy further.
- Data is the new currency and this presents both opportunities and challenges both, but it is a reality as it is borderless.

Key challenges

- How to grow the digital economy and enable trade?
- Investment and infrastructure development for connectivity still issues.
- How to enable trust especially with respect to data privacy and cybersecurity?
- How to avoid duplication is work to support the grow of the digital economy and digital trade?

Case Examples

- Portugal – development of digital competence for all ages of education
- Singapore – supports research and experimentation with 5G while waiving spectrum fees
- UK – Girls First and She Means Business to encourage digital skills development for girls and women
- WEF – In China, will convene insurance companies and manufacturers of IoT devices to agree to standards and a way forward
- Intervale – Focus Group on Digital Financial Services brought together all stakeholders to discuss issues in this area

Road Ahead

Overall, there are a number of opportunities to learn from governments and all stakeholders. Key issues continue to be how to ensure trust, privacy and data protection while enabling innovation, education and growth. A lot has been done, but as emerging technologies and 5G roll out there is a need to ensure that countries that are at varying degrees of development in their own digital economies take advantage of all opportunities.

Portugal

H.E. Mr. Guilherme W. d'Oliveira Martins, Secretary of State of Infrastructure, Ministry of Planning and Infrastructure

There is a broad consensus among economists that broadband infrastructure, and in particular high capacity networks, contributes significantly to economic growth and investment attraction. And Portugal acknowledges the growing dependence of such e-infrastructure, which includes network capacity and the capacity to store data.

On this basis, Portugal has been taking consistent policies to develop our ICT infrastructure.

The National Regulatory Authority, ANACOM has put in place a number of initiatives that have definitely helped to create a momentum.

In terms of spectrum policies, the analogue switch-off. The digital switchover process, coordinated at a European Union level, proved to be fundamental for the release of spectrum resources necessary for the rollout of 4G networks. In the access layer, ANACOM implemented a number of measures to promote investments relating to the provision of access, under equal terms to all operators, to the network of ducts and remaining relevant facilities from all entities holding this type of underground infrastructure.

As a result, Portugal is definitely a successful case study in terms of network coverage. Regarding fixed broadband, Portugal has about 95% coverage in terms of Next-Generation Access (NGA) networks, which corresponds to the 5th place among European Union Members.

In addition to infrastructure, Portugal believes that Digital competence is another key factor to promote the digital economy.

Some indicators demonstrate that Portugal is progressing well in terms of digital competences, especially among younger generations. However, a digital divide between younger and older people remains. We are endeavouring to bridge that divide, while at the same time we are committed to promote ICT teaching to our students.

For this reason, the Portuguese Government just announced the programme "Gen10s Portugal" which aims to provide 80% of our population with digital competences by 2030. The programme also endeavours to deliver training opportunities in coding for 5000 students and 500 teachers.

Having the infrastructure in place and strong digital competences, Portugal envisages having an economy based on knowledge and an entrepreneurial community that is already fastly growing.

We also believe that it is possible to position Portugal as a hub for worldwide start-ups as there are many reasons to settle operations in our country: A financing system in place, a competitive fiscal setting for start-ups, an attractive lifestyle and quality of life to entrepreneurs and a country with an open-minded mentality.

Singapore

Mr. Leong Keng Thai, Deputy Chief Executive, Infocomm Media Development Authority

"Growing the Digital Economy"

Mr Chairman
Mr Secretary-General
Honorable Ministers
Excellencies
Ladies and Gentlemen,

Singapore would like to first express our utmost appreciation to the International Telecommunication Union (ITU) and the various United Nations agencies for their efforts in bringing together the different stakeholders for the World Summit on Information Society Forum 2017. With today's rapid pace of digitalisation, it has become ever more crucial for governments and the various stakeholders to work together to ensure that the most appropriate policies are put in place to enable everyone to reap the benefits of the Digital Economy.

Digitalisation is one of the most seismic changes of our time. If harnessed well, the Digital Economy promises many exciting opportunities for the bold and enterprising, from small merchants providing their products and services to the world through e-commerce platforms, freelancers contributing their skills to crowdsourced projects, to vibrant start-ups aiming to be the next Google or Baidu.

<u>Success in Digital Economy as a key pillar of Singapore's Smart Nation Vision</u>

The Digital Economy has seen tremendous growth over the last few years and is affecting countries regardless of their state of development. In Singapore, we believe that our ability to succeed in the Digital Economy is integral to our Smart Nation Vision. We have always looked at Information and Communications Technology or ICT as a key driver of growth given our limited resources. To harness the full spectrum of benefits from the Digital Economy, we have to ensure that technology brings about sustainable and inclusive growth – where every business, worker and citizen can be transformed, empowered and connected by technology.

To sustain the growth of the Digital Economy, Singapore believes that governments must and can co-create the digital future with their businesses, people and community. This can be achieved through

open and progressive regulatory frameworks and future-ready connectivity infrastructure that spurs new services, supports positive disruptions and enables new business models. While governments take into account incumbents who have to operate within existing regulatory guidelines, flexibility must be provided to allow new players with disruptive technologies and business models to flourish.

Regulatory sandboxing is one such initiative where Singapore hopes to spur innovative policy-making. The Monetary Authority of Singapore (MAS) has launched a regulatory sandbox for financial institutions and FinTech players. The aim is to provide a conducive space where certain regulatory requirements are relaxed so that firms have some leeway to test out their innovations. Currently, PolicyPal, a Singapore-based insurance startup, have come on board to test their product through a partnership with insurance providers.

Further, a key enabler of Singapore's digital vision is pervasive connectivity delivered through ICT infrastructure that is fast, reliable, and secure. As early as 2006, Singapore invested in a national fibre network, which offers one of the world's fastest broadband speeds at affordable prices. Today, a 1Gbps broadband plan cost as low as US$28 per month while a 10Gbps plan cost just over US$130.

The Infocomm Media Development Authority (IMDA) also recently kick-started industry consultations to seek feedback and ideas on spectrum requirements of 5G late May this year. We hope to get industry's views on 5G spectrum requirements and regulatory provisions, and on how policies can move in tandem with technology and address the industry's needs. IMDA will also waive frequency fees for 5G trials to lower the regulatory barrier and to encourage industry trials in 5G technology.

We have also invested in a pervasive public wifi - *Wireless@SG* - that offers free and fast Internet access in public locations all over the island. Last month, IMDA has enhanced *Wireless@SG* to enable automatic login for non-SIM devices such as tablets and laptops. With this enhancement, users can connect to *Wireless@SG* more conveniently, without having to key in your username and password.

To reshape itself for the future, Singapore has developed the Committee for Future Economy Report outlining several strategies spanning across the areas of building deep digital capabilities and skills, innovation and the transformation of sectors.

As Small and Medium Enterprises (SMEs) make up more than 90% of our economy, we are seeking to help our SMEs to use technology to leapfrog, digitalise and thrive in the digital age. We are developing industry transformation maps (ITMs) for 23 sectors to address issues within each industry and deepen partnerships between Government, firms, industries, trade associations and chambers. Through this, we hope to provide stronger support for innovation and internationalisation for our companies.

World Summit on the Information Society

Having new and re-designed jobs is also a desired outcome from the ITMs. Human capital is our key asset. In Singapore, the question we face beyond the availability of jobs, is the kind of jobs and whether these can meet the aspirations of our people. As such, as we strive towards being a Digital Economy, we also encourage our people to acquire ICT expertise and skills through the TechSkills Accelerator initiative, designed to develop a skilled ICT workforce and enhance employability outcomes by supporting individuals in training and job placement facilitation.

In the months to come, we will also be launching a Skills Framework for ICT professionals. So far, about 80 ICT skills have been identified by the industry and we envision that the Skills Framework can be used by hirers to develop career maps and articulate job requirements, by individuals to guide their development to stay relevant and by training providers to devise ICT courses.

Harmony and Inclusivity in a Digital Society

The second pillar that makes up a Smart Nation is a Digital Society. We believe that no one should get left behind as we move into a Digital Economy. Hence, equipping our people with the ability and agility to adapt, learn and prepare for a digital world is a continuous effort, even from young. Our Digital Maker Programme, for instance, provides entry-level codable microcontrollers known as the micro:bit to inspire both students and adults to explore the possibilities of digital making. Through initiatives such as this, we aim to nurture a new generation of digital natives, empowering them to be creators and makers with tech and media, so as to cultivate real-world problem solving, encourage digital creativity and innovation.

At the same time, we must also not forget the needy and less fortunate. To empower them, Singapore has introduced various digital inclusion programmes for low-income, needy families, persons with disabilities as well as the elderly. For example, the Home Access Programme provides affordable broadband bundle package to low-income households. As for our seniors, we have the Silver Infocomm Initiative, that is meant to promote IT awareness and literacy so that seniors can be actively engaged in the digital age.

Above all, we believe that our people, businesses and organisations must have the fundamental mindset that technology can make a big difference to us, and we have the right people at every level – leaders, managers, promoters and people who may not be in professions related to ICT, but with sufficient appreciation of technology in order to harness its benefits. At the fundamental level, it is the ethos of the society, we need to be forward looking, prepared to change and be able to have open conversations about the challenges we face and how to solve them.

Digital Government

The last pillar in our stride towards a Smart Nation is a truly Digital Government. Even for a small city state like Singapore, we have found that it takes effort to have industry sectors and regulators come together to synergise policies and initiatives with the same national agenda.

We have also undergone changes to the way we work, from restructuring and the formation of new agencies, to internal reorganisations to better meet the challenges of the digital economy and to guide the development of our Smart Nation. For example, the Infocomm Development Agency had merged with the Media Development Agency to form the Infocomm Media Development Agency on 1 October 2016 so as to enable Singapore to seize the new opportunities in the converged infocomm media landscape.

To enable the Singapore Government to be more integrated and responsive in our strategy and processes for Smart Nation and Digital Government, Singapore has also formed the Smart Nation and Digital Government Group (SNDDG), comprising the Smart Nation and Digital Government Office (SNDGO) and GovTech recently. These organisations come under the Prime Minister's Office to ensure that there is a whole-of-government strategy and implementation of a Digital Government.

All these changes are necessary and reflective of the need for governments to be agile, in order to react and respond quickly to changes in the operating environment.

Trust and security in the Digital Economy

Trust is an important bedrock upon which a successful Digital Economy functions. Data has become the lifeblood of the Digital Economy. Increasingly, governments are using data to provide public services more efficiently and effectively, while businesses are collecting and analysing data to better understand customer behaviour, create personalised value propositions and improve operations. While consumers appear to be the biggest beneficiary, there are mounting concerns about the misuse of digital data. Establishing public trust is therefore essential. This means upholding high standards of data protection. As the Digital Economy expands, we must also enhance cybersecurity, so that cyber-attacks do not undermine trust in the Digital Economy. Cyber security is an overarching consideration that will have an impact on the success of our digitalisation efforts. The IMDA, working with the Cyber Security Agency (CSA) has embarked on various initiatives to strengthen and uplift our cyber security posture and readiness to better prepare ourselves to meet the evolving cyber threat landscape.

The other challenge is how to facilitate the beneficial use of data but at the same time ensure adequate protection against its misuse, especially personal and sensitive data. There is a need for frameworks to protect personal data and intellectual property. In turn, this will facilitate the building of greater trust and confidence which is vital to the greater sharing and use of data. Singapore's Personal

Data Protection Act (PDPA) requires a comparable standard of protection for personal data that moves outside of Singapore. At the same time, it also sets out various avenues for an organisation to legitimately transfer personal data overseas.

Conclusion

For us to reap the full economic benefits of the Digital Economy, we need to work together to tackle the challenges that digitalisation brings and WSIS Forum is well-placed to ensure that such discussions and sharing of best practices in the implementation of WSIS outcomes continue. Singapore does not have all the answers, but we hope that by sharing with you our experience, we can harness the immense growth potential of the digital economy to achieve sustainable development for all.

SESSION ELEVEN: Building Confidence and Security in the Use of ICTs

High-Level Track Facilitator (HLTF): Ms Brenda Aynsley, Chairman IP3 ACS Fellow and Honorary Life Member, CP, International Federation for Information Processing (IFIP)

High Level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator ITU** – Mr. Reinhard Scholl, Deputy Director, Telecommunication Standardization Bureau
3. **Ukraine** – Mr. Leonid Yevdochenko, Chairman, State Service of Special Communications and Information Protection of Ukraine
4. **India** – Ms. Aruna Sundararajan, Secretary, Ministry of Electronics & Information Technology
5. **Mexico** – Mr. Eber Betanzos Torres, Viceminister of Public Administration
6. **International Federation for Information Processing** – Prof. Mike Hinchey, President (Austria) (Represented by Dr. Yuko Murayama, Vice President)
7. **Asia-Pacific Telecommunity (APT)** – Ms. Areewan Haorangsi, Secretary General (Thailand)
8. **Association for Proper Internet Governance** – Dr. Richard Hill, President (Switzerland)
9. **Systemics-PAB** – Ms. Anna Szóstak, Deputy CEO and Commercial Proxy (Poland)
10. **Microsoft** – Mr. Jan Neutze, Director of Cybersecurity Policy, Microsoft EMEA

Introduction

- Cybersecurity is becoming central to technology use and economic growth
- Confidence in the use of ICTs by business and community will be the limit or enabler to that growth
- More needs to be done to improve trust in both the technology and amongst the human actors. Trust is actually multi-disciplinary concept which includes not only our security but safety, reliability, and the usability.

Vision/Fresh Priorities

- Information security awareness becoming manifest

- Trusted threat intelligence sharing and collaboration are the best tools to fight cyber security
- Cybersecurity 'Geneva Convention'
- ICT professionals independently certified as to qualification, currency and ethical commitment to act in the public interest

Opportunities/Partnerships

- Governments as customers, governments as regulators
- Governments as defensive/offensive instruments in cyber attack
- Industry collectives working in the public interest to increase trust and grow business/the economy
- Cooperating international organisations in the regulation, standards and professional spaces can facilitate cross border issue identification and solutions

Key challenges

- Overcoming the degradation in trust that emerges with each cyberattack
- As a consumer you have no way of evaluating the security of the providers of the services you are using
- Reasssuring cybersecurity is present, at every and each level – creation, maintenance and use of ICTs
- Continuous nature of building confidence and trust requires ongoing commitment to resourcing and enforcement. It never stops!
- Digital literacy is a prime motivator, the more you know the better you can protect yourself and contribute to the growth of the economy

Case Examples

- Uber or amazon holds your credit card detail, how safe is that?
- Wannacry ransomware came from government hacker toolkit
- Your phone is tracking your every move, on or off
- 3rd party independent certification authorities for professional practitioners

- Cross border trust in ICT infrastructure eg Ukraine collaboration with the EU
- Large scale projects of eGovernment, e-declaration system for official assets and public e-procurement system in nation states. Demonstrate the key elements of cooperation between state and Civil Society in the fight against corruption. Together with the adoption of best practices in electronic identification and electronic trust services.

Road Ahead

- A call on Governments to do more, to agree on a set of binding norms of nation state behaviour in cyberspace
- Governments to legislate for data breach reporting to assist consumers understanding risk and reward
- Develop a reference model for personal data protection guidelines
- Governments and Civil Society to really understand the contribution to each economy of the use of ICTs in terms of money, health, education, well-being and safety.

Ukraine

Mr. Leonid Yevdochenko, Chairman, State Service of Special Communications and Information Protection of Ukraine

Excellencies,

Distinguished delegates,

Ladies and Gentlemen,

It is a great pleasure and honour for me to be here today as an active participant to the WSIS Forum. I would like to thank Forum organizers for their tireless commitment, active assistance and generosity in hosting.

The important outcomes of the WSIS and WSIS+10 are supplemented annually with new ideas and decisions, which demonstrate the determination of all countries, including Ukraine, to contribute to further progress of the information society and maximize the benefits of ICT innovation for the prosperity of economies and states.

On behalf of the Government of Ukraine let me also express gratitude for the international support to Ukraine in pursuance of building the digital environment of confidence and security, bridging the digital divide, reaching the highest point of technological development of information and knowledge society.

I would also like to take this opportunity to brief you on key strategies for the information society development in Ukraine as well as cyber security challenges countered by Ukraine in hybrid war.

Distinguished colleagues,

Enabling the successful development of our State and demonstrating compliance with the international obligations assumed by Ukraine, representing overall results of involvement into the EU integration processes and evolution of secure information space, Ukraine is gradually implementing a package of reforms, restoring the economy and financial stability, overcoming corruption. Conclusion of the Association Agreement between the European Union and Ukraine, establishment of a free-trade zone and also introduction of visa-free regime with the EU are extremely important success criteria the way towards the United Europe.

Nowadays necessary large-scale projects for providing e-government platform are being implemented in Ukraine; thereby Ukraine's position in the ranking EGDI has been already increased by 25 points. Recently

launched e-Declaration system for officials' assets and public e-procurement system are the key segments of the cooperation between the State and the civil society in the fight against corruption.

Following the call of WSIS to develop appropriate national strategies and enforce the policy of ICT distribution, Ukraine gives special priority to the implementation of the best practices in electronic identification and electronic trust services, which are the basis for e-governance, e-medicine, e-commerce and other e-services, cross-border cooperation and improvement in the common level of network and information systems security. Development of digital technology, e-communications and e-services, building trust and security in the use of ICT, ensuring cyber security, confidentiality, privacy and personal data protection, enforcement of human rights guaranteed by advanced information society, all these strategic priorities are the basic concepts and essentials of the Digital agenda for Ukraine 2020, draft of which is being completed by joint efforts of the IT sector, the public and the State.

Ladies and Gentlemen,

Russia's violation of the international law, illegal annexation of Crimea, destabilisation of eastern Ukraine – these are only the visible spectrums of hybrid warfare against Ukraine. This war is the point of highest intensity in a wider Russia's conflict with the EU and the USA in which information space has become a major field of combat. Use of IT technologies for cyber-attacks, psychological pressure and information influence through propaganda and misinformation, became known as "fog of war", have been already experienced by some countries. Ukraine is currently withstanding threats of hybrid warfare, probably performing its historic mission to become a barrier to Russia on its way, to protect civilization from aggression and expansion of hybrid provocative technologies of the Russian Federation to the West.

Cyber security is an integral part of the national security of Ukraine. Ukraine actively adopts the best cyber defence practices, works together with such partners as the EU, the USA and NATO for strengthening international cooperation in this area, and also interacts with competent institutions around the world on protection from cyber threats. Ukraine develops a national cyber security system, following the UN statement on Internet access and adhering to the European principles of a public private partnership to provide open, free and safe cyberspace.

We believe that productive cooperation among all stakeholders of cyber security is the foundation and driving force for global cyber culture spread and development as well as for building trust and security in the information society. Professional engagement, interaction and persistent cooperation will bring the world closer to the era of global free and safe information and knowledge society.

I wish all participants success, new ideas and constructive solutions!

Thank you for your attention.

World Summit on the Information Society

Mexico
Mr. Eber Betanzos Torres, Viceminister of Public Administration

There is no doubt that the use of ICTs has revolutionized the way States interact with its citizens. Everyday, the use of digital tools and applications provides new ways of collaboration, but this new interactions have to be appropriately guarded to correctly foster the participation of the population. Therefore, the feasibility of having the correct cybersecurity measures is a priority for the Mexican Government in the current administration.

To this menas, on February 2016 the Federal Government published the Administrative Manual of General Application in the areas of Information and Communications, and Information Security. This handbook provides the legal framework to give the adequate protection to the ICT strategic assets. This includes the protection from DOS attacks, the correct management of physical access to servers and other critical locations. This effort for the preservation of important data from both government and citizens is a top priority for Mexico.

We also pay special attention to the use of new technologies to provide a secure environment to Mexican users. An example of this innovation is the organization of a vertical of the Blockchain technology at Campus Party in Guadalajara, where the objective is to foster government cooperation with stakeholders (private and academic sectors) to generate new ideas and applications for government services using the Blockchain protocol.

Interoperability is also needed to provide an integral approach of government to the users and to portray a sense of unity through all agencies and institutions. The current program, InteroperaMX has already enabled interoperability between 478 services using electronic signature, and has established trust sources to several federal institutions. All of this infrastructure to protect our national one stop shop, gob.mx that to this day has more than 5,900 services from over 299 different government institutions and receiving more than 1 million visits per day.

Mexico recognizes the importance of ensuring the protection of personal data from all of the citizens and has a deep commitment to keep advancing the adoption of digital services.

Asia-Pacific Telecommunity (APT)
Ms. Areewan Haorangsi, Secretary General

Information and Communication Technology (ICT) has transformed modern lifestyles. It has provided us with real-time communications, borderless and almost unlimited access to information and a wide range of innovative services. ICT has become an integral tool and facilitator for social and economic development. The full potential of ICT can only be realized through a broadband digital economy that will stimulate sustainable economic growth and prosperity. Such an economy should be characterized by policy and regulatory regimes that support innovation, improve confidence and provide security for industry and people and establish a system that promotes investment in digital economy.

However, the successful implementation of the digital economy will firstly require the confidence of its stakeholders. The users, suppliers, investors and the governments need to have confidence in the use of ICT in our daily business and social interactions, and for the enhancement of livelihood without fear. We need to ensure that the ICT involved in digital economy is safe and secure to use. While providing broadband connectivity for all is an important aspect to provide ICT services, it is equally important to ensure that the use of ICTs is safe and secure to deliver the desired services.

It is prerequisite for the development of digital economy to enhance confidence and security in the networks. Guarding people from cyber-attack, hacking and spam mail, protection of personal information and privacy should be priorities in building the digital infrastructure. Further, in order to achieve benefit from digital economy, governments should be aware of needs to ensure legal environment for facilitating implementation of digital economy and preventing cyber-crimes over on ICT services. Additionally, appropriate protection should be ensured for intellectual property rights. Further, data sovereignty and protection of individual data has become an important concern in the context of digital economy.

Since the issues of confidence and security in the use of ICTs, most of which are interconnected by the Internet transcending geographical borders, this requires to be dealt with at the regional and international level. Cooperation among countries in the region and in the global context is necessary.

From WSIS 2003, APT has taken the building trust and security as one of its important issues. APT had organized Ministerial meetings every 4 – 5 years to provide high-level policy guidelines on the development of telecommunication/ICT and its critical role in enabling creative economy and socio-

economic development. Ministers had addressed this issue as an urgent and key priority issue in order to achieve sustainable development using ICT.

In 2009, in the Bali Statement of the Asia-Pacific Ministers on Strengthening Regional Collaboration towards a Broadband Economy in the Asia-Pacific, Ministers identified objectives that were crucial for a successful broadband economy in Asia-Pacific region. One of these objectives was: "to provide a secure, safe and sustainable environment through ICT initiatives". Later in 2014, in Brunei Darussalam Statement adopted by the ICT Ministers from Asia-Pacific, "Trust and confidence in ICT" is one of the 6 key priority areas.

The current Strategic Plan of the APT for the period of 2015-2017 specifies that the safe and secure use of ICT devices and applications has been an area of significant importance and identifies a work item on "cyber-security" with associated strategic actions for the implementation. These strategic actions of the APT include:

- Assist members to collaborate to build and strengthen trust and confidence in the use of ICT so that the people can use ICT for their progress and prosperity without any concern;
- Encourage cooperation among governments and the private sector to address safety and cybersecurity;
- Assist members to develop cyber-legislation;
- Support Computer Emergency Response Team/Computer Security Incident Response Team (CERT/CSIRT) activities through close coordination and technical assistance in various forms, including developing relevant guidelines and recommendations;
- Assist Members in setting up CERT/CSIRT in countries which have no such institutions;
- Encourage increased exchanges and cooperation in anti-spam field by taking corresponding initiatives at the regional and national level;
- Encourage governments and other stakeholders to proactively take initiatives to increase the users' awareness and capacity in online privacy protection;
- Enhance reliability and confidence in the use of ICT applications by helping Members to develop guidelines for the secure flow of information;

To convert the policy and plan into implementation, APT has several work programmes to serve its members.

Apart from having preparatory meetings to coordinate and facilitate regional position and views on major ICT issues for the world conferences, APT also organizes meetings to discuss ICT policy and regulatory issues, ICT development, etc. as well as capacity building programmes for APT members.

World Summit on the Information Society

From 2010, APT has been organizing APT Cybersecurity Forum (CSF) annually in order to provide platform for its stakeholders to discuss exclusively the issues of confidence and safe use of ICTs. We invited experts from other organizations to share knowledge and experience to tackle the issues of cyber incidences. The forum also includes the practical drill in such incidence. Participants from APT member countries also shared information on practical experiences, knowledge, and expertise on cyber security including public awareness. Last year, the CSF-7 focused on this emerging trend with the theme "Emerging Trend: IoT, Big Data and Security".

Further, the issues of confidence and safety features of ICTs have been addressed in APT Policy and Regulatory Forum (PRF) organized at the regional and sub-regional level.

In addition, APT had started a Joint Research on Personal Data Protection with KISA (*Korea* Internet & Security Agency) in 2016. We think that the research is necessary to understand the current situation of, and to promote cooperation on personal data protection among APT members. Last year the research was for collecting information on laws on personal data protection from 10 member countries. This year, we are going to expand to cover all 38 member countries. We expect to develop a reference model for personal data protection guideline for APT member countries.

I believe other regional organizations are also having similar initiatives and activities in these aspects. We now know the wide spread roles of the regional organizations like APT, Arab Group, ATU, CEPT, CITEL and RCC in developing regional interest and proposals in the major ITU conferences like PP, WRC, WCIT, WTSA and WTDC. The collaborative approach taken by these regional organizations has facilitated the work of those conferences to a great extent.

In that context, I believe that the combined efforts and initiatives by these regional organizations together ITU will accelerate the work of implementation ITU's Global Cybersecurity Agenda. I believe the regional issues will be well understood and taken by the regional organizations and all will work together under the umbrella of ITU without duplicating the efforts. With collaborative efforts, a safe and secure ICT will be the key facilitator for achieving the 2030 Agenda for Sustainable Development.

Thank you for your attention.

Association for Proper Internet Governance
Dr. Richard Hill, President

Security experts have long recognized that lack of ICT security creates a negative externality.[12] For example, if an electronic commerce service is hacked and credit card information is disclosed, the users of the service users will have to change their credit cards. This is a cost both for the user and for the credit card company. But that cost is not visible to the electronic commerce service. Consequently, the electronic commerce service does not have an incentive to invest in greater security measures.[13] Another, very concrete, example is provided by a software manufacturer's decision to stop correcting security problems in old versions of its software, with the consequence that a large number of computers were affected.[14] The cost of the attack was borne by the end-users, not by the software manufacturer.

As the Global Internet Report 2016 of the Internet Society puts the matter[15]:

> There is a market failure that governs investment in cybersecurity. First, data breaches have externalities; costs that are not accounted for by organisations. Second, even where investments are made, as a result of asymmetric information, it is difficult for organizations to convey the resulting level of cybersecurity to the rest of the ecosystem. As a result, the incentive to invest in cybersecurity is limited; organisations do not bear all the cost of failing to invest, and cannot fully benefit from having invested.

There can be little doubt that many organizations are not taking sufficient measures to protect the security of their computer systems, see for example the May 2017 attack[16] that affected a large number of users and many hospitals.

[12] https://www.schneier.com/blog/archives/2007/01/information_sec_1.html ; a comprehensive discussion is given in pages 103-107 of the Global Internet Report 2016 of the Internet Society, see in particular the examples on p. 101. The Report is available at: https://www.internetsociety.org/globalinternetreport/2016/
[13] See also pp. vii and 66 of GCIG.
[14] https://en.wikipedia.org/wiki/WannaCry_cyber_attack
[15] See p. 18 of the cited Global Internet Report 2016.
[16] https://en.wikipedia.org/wiki/WannaCry_cyber_attack

As the European Union Agency for Network and Information Security (ENISA) puts the matter[17]: "Today we are seeing a **market failure for cybersecurity and privacy**: trusted solutions are more costly for suppliers and buyers are reluctant to pay a premium for security and privacy" (emphasis in original).

As noted below, the externalities arising from lack of security are exacerbated by the Internet of Things (IoT)[18]. As a well known security expert puts the matter[19]: "Security engineers are working on technologies that can mitigate much of this risk, but many solutions won't be deployed without government involvement. This is not something that the market can solve. ... the interests of the companies often don't match the interests of the people. ... Governments need to play a larger role: setting standards, policing compliance, and implementing solutions across companies and networks."

Recent research shows that a perceived lack of security is reducing consumer propensity to use the Internet for certain activities.[20]

Some national authorities are taking some measures.[21] In particular, the President of the USA issued an Executive Order[22] on 11 May 2017 that states:

> [certain high officials will lead] an open and transparent process to identify and promote action by appropriate stakeholders to improve the resilience of the internet [sic] and communications ecosystem and to encourage collaboration with the goal of dramatically reducing threats perpetrated by automated and distributed attacks (e.g., botnets).
>
> ...

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[17] Preamble of https://www.enisa.europa.eu/publications/enisa-position-papers-and-opinions/infineon-nxp-st-enisa-position-on-cybersecurity

[18] See p. 107 of the cited Global Internet Report 2016.

[19] https://www.schneier.com/blog/archives/2016/07/real-world_secu.html

[20] https://www.cigionline.org/internet-survey

[21] For example, for cybersecurity for motor vehicles, see: http://www.nhtsa.gov/About-NHTSA/Press-Releases/nhtsa_cybersecurity_best_practices_10242016 . For a general approach see Directive (EU) 2016/1148 of the European Parliament and of the Council of 6 July 2016 concerning measures for a high common level of security of network and information systems across the Union, at: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2016.194.01.0001.01.ENG&toc=OJ:L:2016:194:TOC

[22] Presidential Executive Order on Strengthening the Cybersecurity of Federal Networks and Critical Infrastructure, available at: https://www.whitehouse.gov/the-press-office/2017/05/11/presidential-executive-order-strengthening-cybersecurity-federal

> As a highly connected nation, the United States is especially dependent on a globally secure and resilient internet [sic] and must work with allies and other partners toward maintaining the policy set forth in this section.

ENISA is recommending[23] the development of "So called **baseline requirements** for IoT security and privacy that cover the essentials for trust, e.g. rules for authentication / authorization, should set **mandatory reference levels for trusted IoT solutions**." And it is recommending that the European Commission encourage "**the development of mandatory staged requirements for security and privacy in the IoT, including some minimal requirements.**" (Emphases in original)

Despite those national or regional initiatives, at present, there does not appear to be adequate consideration of these issues at either the national (in many countries) or international levels.

We recommend to invite IETF, ISOC, ITU, UNCITRAL, and UNCTAD to study the issue of externalities arising from lack of security, which has technical, economic, and legal aspects. In particular, UNCITRAL should be mandated to develop a model law on the matter.

Further, as stated by the President of a leading software company (Microsoft)[24]:

> The time has come to call on the world's governments to come together, affirm international cybersecurity norms that have emerged in recent years, adopt new and binding rules and get to work implementing them.
>
> In short, the time has come for governments to adopt a Digital Geneva Convention to protect civilians on the internet.
>
> …
>
> … governments around the world should pursue a broader multilateral agreement that affirms recent cybersecurity norms as global rules. Just as the world's governments came together in 1949 to adopt the Fourth Geneva Convention to protect civilians in times of war, we need a Digital

[23] Sections 2.1 and 2.3 of https://www.enisa.europa.eu/publications/enisa-position-papers-and-opinions/infineon-nxp-st-enisa-position-on-cybersecurity

[24] https://blogs.microsoft.com/on-the-issues/2017/02/14/need-digital-geneva-convention/#sm.00017arazqit2faipqq2lyngzmxx4

Geneva Convention that will commit governments to implement the norms that have been developed to protect civilians on the internet in times of peace.

Such a convention should commit governments to avoiding cyber-attacks that target the private sector or critical infrastructure or the use of hacking to steal intellectual property. Similarly, it should require that governments assist private sector efforts to detect, contain, respond to and recover from these events, and should mandate that governments report vulnerabilities to vendors rather than stockpile, sell or exploit them.

In addition, a Digital Geneva Convention needs to create an independent organization that spans the public and private sectors. Specifically, the world needs an independent organization that can investigate and share publicly the evidence that attributes nation-state attacks to specific countries.

While there is no perfect analogy, the world needs an organization that can address cyber threats in a manner like the role played by the International Atomic Energy Agency in the field of nuclear non-proliferation. This organization should consist of technical experts from across governments, the private sector, academia and civil society with the capability to examine specific attacks and share the evidence showing that a given attack was by a specific nation-state. Only then will nation-states know that if they violate the rules, the world will learn about it.

In a press conference on 11 May 2017[25], the official presenting the cited US Executive Order[26] stated:

> ... I think the [security] trend is going in the wrong direction in cyberspace, and it's time to stop that trend ... . We've seen increasing attacks from allies, adversaries, primarily nation states but also non-nation state actors, and sitting by and doing nothing is no longer an option.
>
> ...
>
> ... [several] nation states are motivated to use cyber capacity and cyber tools to attack our people and our governments and their data. And that's something that we can no longer abide. We

[25] https://www.whitehouse.gov/the-press-office/2017/05/11/press-briefing-principal-deputy-press-secretary-sarah-sanders-and

[26] Presidential Executive Order on Strengthening the Cybersecurity of Federal Networks and Critical Infrastructure, available at: https://www.whitehouse.gov/the-press-office/2017/05/11/presidential-executive-order-strengthening-cybersecurity-federal

> need to establish the rules of the road for proper behavior on the Internet, but we also then need to deter those who don't want to abide by those rules.

Following the WannaCrypt attack[27] in mid-May 2017, Microsoft reinforced its call for action, stating[28]:

> Finally, this attack provides yet another example of why the stockpiling of vulnerabilities by governments is such a problem. This is an emerging pattern in 2017. We have seen vulnerabilities stored by the CIA show up on WikiLeaks, and now this vulnerability stolen from the NSA has affected customers around the world. Repeatedly, exploits in the hands of governments have leaked into the public domain and caused widespread damage. An equivalent scenario with conventional weapons would be the U.S. military having some of its Tomahawk missiles stolen. And this most recent attack represents a completely unintended but disconcerting link between the two most serious forms of cybersecurity threats in the world today – nation-state action and organized criminal action.
>
> The governments of the world should treat this attack as a wake-up call. They need to take a different approach and adhere in cyberspace to the same rules applied to weapons in the physical world. We need governments to consider the damage to civilians that comes from hoarding these vulnerabilities and the use of these exploits. This is one reason we called in February for a new "Digital Geneva Convention" to govern these issues, including a new requirement for governments to report vulnerabilities to vendors, rather than stockpile, sell, or exploit them.

We recommend to invite the UN General Assembly to consider the appropriate ways and means to convene a treaty-making conference to develop and adopt a binding treaty on norms to protect civilians against cyber-attacks, in particular on the Internet, in times of peace, and to consider whether to develop a new treaty, or whether to invite the ITU to integrate such norms into its own instruments, for example the International Telecommunication Regulations.

[27] https://en.wikipedia.org/wiki/WannaCry_cyber_attack
[28] https://blogs.microsoft.com/on-the-issues/2017/05/14/need-urgent-collective-action-keep-people-safe-online-lessons-last-weeks-cyberattack/#sm.00017arazqit2faipqq2lyngzmxx4

Internet of Things (IoT)

In the current environment, it can be expected that networked devices (the so-called Internet of Things – IoT)[29] will transmit data to manufacturers and service providers with little or no restrictions on the use of the data.[30] The recipients of the data could then correlate the data and resell it, as is currently the case for data collected by so-called free services such as search engines. Further, national surveillance programs could acquire such data and use it to construct profiles of individuals.

Such uses of data that are collected automatically for a specific purpose could have wide-reaching and unforeseen consequences.[31]

Further, interconnected devices may make decisions affecting daily life,[32] and this may call for the development of a regulatory framework to protect the interests of citizens. In particular, the issue of product liability may require changes to existing legal regimes.[33]

Increasingly, the safety of IoT devices will be affected by their security.[34] Thus, the security risks[35] posed by interconnected devices may require government actions.[36] For example, there may be a need to

[29] A good overview of the technology, and the issues it raises, can be found at: http://www.internetsociety.org/doc/iot-overview ; a more detailed account is at: http://www.gao.gov/assets/690/684590.pdf

[30] See https://www.theguardian.com/technology/2015/jul/15/internet-of-things-mass-surveillance and the articles it references.

[31] See for example: http://www.itu.int/en/ITU-T/Workshops-and-Seminars/01072016/Documents/S1P3_Corinna_Schmitt_v3.pdf ; see also the "weaponization of everything", see p. 2 of GCIG.

[32] http://policyreview.info/articles/analysis/governance-things-challenge-regulation-law

[33] http://www.wablegal.com/european-commission-publishes-roadmap-future-proof-eu-product-liability-directive/

[34] http://www.cl.cam.ac.uk/~rja14/Papers/weis2017.pdf

[35] http://about.att.com/story/iot_cybersecurity_alliance.html ; see also http://www.businesswire.com/news/home/20170313005114/en/Tripwire-Study-96-Percent-Security-Professionals-Expect

[36] https://www.schneier.com/blog/archives/2016/07/real-world_secu.html and https://www.scribd.com/document/328854049/DDoS-Letter-to-Chairman-Wheeler#download and https://www.euractiv.com/section/innovation-industry/news/commission-plans-cybersecurity-rules-for-internet-connected-machines/ and http://www.dailydot.com/layer8/bruce-schneier-internet-of-things/ and

provide incentives to those who make interconnected devices to make them secure: such incentives might be penalties for failure to build-in adequate security[37]. In this context, it is worth considering past experience with various devices, including electrical devices: they all have to conform to legal standards, all countries enforce compliance with such standards. It is not legitimate to claim that security and safety requirement stifle technological innovation. It must be recalled that the primary goal of private companies is to maximize profits. The purpose of regulation is to prevent profit-maximization from resulting in the production of dangerous products. As IBM Resilient Chief Technology Officer Bruce Schneier puts the matter[38], cybersecurity risks associated with the IoT require governmental intervention, as "the market is not going to fix this because neither the buyer nor the seller cares".

Since IoT products will be interconnected, at least to some degree, chaos can ensue if the products are not sufficiently secure[39] (e.g. all medical systems fail to work). Thus it is important to ensure that the products are sufficiently secure for mass deployment.

This is not a theoretical consideration. Insufficiently insecure IoT devices have already been used to perpetrate massive denial of service attacks, and such attacks could be used to bring down critical infrastructures.[40] As one security manager put the matter[41]: "In a relatively short time we've taken a system built to resist destruction by nuclear weapons and made it vulnerable to toasters." A thorough study of the matter, which identifies gaps and contains recommendations for remedial actions, was published on 8 February 2017 by ENISA, see:

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https://www.enisa.europa.eu/publications/enisa-position-papers-and-opinions/infineon-nxp-st-enisa-position-on-cybersecurity

[37] http://www.wablegal.com/european-commission-publishes-roadmap-future-proof-eu-product-liability-directive/

[38] https://digitalwatch.giplatform.org/updates/new-government-agencies-are-needed-deal-iot-security-regulations-says-ibm-resilient-cto and
http://searchsecurity.techtarget.com/news/450413107/Bruce-Schneier-Its-time-for-internet-of-things-regulation

[39] A particularly frightening scenario is presented at:
https://www.schneier.com/blog/archives/2016/11/self-propagatin.html

[40] See http://hothardware.com/news/latest-iot-ddos-attack-dwarfs-krebs-takedown-at-nearly-1-terabyte-per-second
http://hothardware.com/news/your-iot-device-could-be-part-of-a-ddos-botnet-how-to-shut-it-down
https://www.schneier.com/blog/archives/2016/09/someone_is_lear.html

[41] Jeff Jarmoc, head of security for global business service Salesforce, quoted in the excellent summary article at:
http://www.bbc.com/news/technology-37738823

https://www.enisa.europa.eu/publications/m2m-communications-threat-landscape

At present, there does not appear to be adequate consideration of this issue at the international level.

We recommend to invite ITU, UNCITRAL and UNESCO to study issues related to IoT (including security of IoT devices, use of data from IoT devices, decisions made by IoT devices, etc.), which include technical, legal, and ethical aspects (for a partial list of such aspects, see Recommendation ITU-T Y.3001: Future networks: Objectives and design goals[42]). The studies should take into account Recommendation ITU-T Y.3013: Socio-economic assessment of future networks by tussle analysis[43].

[42] https://www.itu.int/rec/T-REC-Y.3001-201105-I
[43] http://www.itu.int/rec/T-REC-Y.3013-201408-I/en

SESSION TWELVE: Applications and Services, Digital, Economy and Trade, Climate Change

High-Level Track Facilitator (HLTF): Mr. Shernon Osepa, Regional Affairs Manager for Latin America & The Caribbean Bureau, Internet Society (ISOC)

High Level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator:** Dr Cosmas Zavazava, Chief of Department, Projects & Knowledge Management, BDT, ITU
3. **Indonesia** - H.E. Mr. Semuel Abrijani Pangerapan, Deputy Minister, Ministry of Communication and Information Technology
4. **Mexico** – Ms. Yolanda, Martinez Mancilla, Chief of the Digital Government Unit, Ministry of Public Administration
5. **MEDICI Framework of Cooperation** – Prof. Alfredo M. Ronchi, Secretary General (Italy)
6. **Subah Infosolutions** – Mr. Birendra Sasmal, Chief Executive (Ghana)
7. **World Summit Award** – Mrs. Nora Wolloch, Manager (Austria)
8. **CYBERLAW ASIA** – Mr. Pavan Duggal, President (India (Republic of)) (Digital, Economy and Trade)
9. **Research ICT Africa/ University of Cape Town** – Prof. Alison Gillwald, Executive Director, Professor (South Africa (Republic of)) (Enabling Environment)
10. **Earth Aid** – Mr. Syed Tarek, Founder (United Kingdom of Great Britain and Northern Ireland) (Climate Change)

Introduction

- ICTs applications form the basis for (economic and social) development
- If used in smart ways successful businesses(trade) can be conducted through ICTs,
- But, there are risks involved as well, that's the reason online users should be aware of these risks
- It's not enough just to be aware of these risks but concrete measures should be undertaken to ensure that assets (both material and intellectual) are secured
- We only have one planet, while focusing on technological development, measures should be taken to preserve this one natural and scarce resource called: the world

Vision/Fresh Priorities

- More people need to be connected to the Internet and to take full advantages of ICTs
- Globally seen, still 57 percent of the population is not connected
- The telecommunications infrastructures (wired, wireless, satellite) should be protected to ensure reliable communications
- Business and research skills should be taught in order for new entrepreneurs to be formed especially in developing countries
- Technological developments (IoT) should be used to protect the world regarding climate change and to detect possible disasters beforehand
- Continues education is necessary to equip citizens to cope with today's world challenges

Opportunities/Partnerships

- Emerging technologies (with special focus on IoT) can be used to transform all sectors, especially in developing countries;
- IoT can be used to detect natural disasters beforehand in regions that are vulnerable;
- Focus must be on how to develop new businesses and to generate income;
- We need to move away from the consumers' mentality and to think as entrepreneurs;
- Local content development should be promoted;
- Education focusing on reducing of illiteracy should be promoted;
- Awareness regarding climate change and its consequences for the future of the world should be raised;
- All stakeholders such as Governments, Private sector, Academia, Civil society all should work together to address challenges of mutual interests;
- Global cybersecurity strategies should be explored to avoid national governments drafting national laws, that can harm fundamental human rights.

Key challenges

- Investment in ICTs infrastructures
- Cybersecurity
- Trust in the Internet to conduct e-commerce
- Development of local content
- Protection of the planet (climate change)

Case Examples

- Indonesia,
    - Infrastructure development;
    - Data and privacy protection laws;
    - several access projects in rural areas;
    - cybersecurity initiatives;
    - reduction of illiteracy;
    - Digital Economy through SMEs (Small Medium Enterprices)

- Mexico, focusing on a state of the art telecommunications network, which should become the base for all kinds of economic and social developments

Road Ahead

- Education and awareness on all the topics (Business, Digital, Economy and Trade, Climate Change) are necessary.

Indonesia

H.E. Mr. Semuel Abrijani Pangerapan, Deputy Minister, Ministry of Communication and Information Technology

How does the progress on the development of digital transformation in Indonesia?

Thank you for the question Mr. Osepa.

Good morning, ladies, and gentleman.

Let me answer your question by giving you bit background about Indonesia. We are the largest archipelago country, consist about 17,000 islands. We are 4th largest in population, it is about 258 million people. We have rapid growing Internet users. Our Internet penetration rate now is 52% or 132,7 million Internet users; Indonesia is 5th largest Internet users. With the population we have, soon we are going to be the 4th largest Internet users in the world, passing Brazil.

In that context, to support the growth of Indonesia's digital economy, the Government of Indonesia focuses on implementing several programs, such as infrastructure and digital literacy.

Having only 52% Internet penetration users, we understand that there is still 48% of our population need to be served with Internet connection. For that fact, last year we just signed project we called Palapa Ring Project. It is basically backbone infrastructure project that will connect 540 cities and districts throughout Indonesia. This project will be finished by 2019.

Beside backbone project, we also have universal service obligation program that builds 5000 new BTS in rural area. This Project will be finished in 2020.

We realize infrastructure is playing important role, therefore, as the global trend of e-Commerce and ICT industry grows each year, the development of digital transformation in Indonesia has been expected to become the backbone of our social economic development.

Other program is digital literacy, and let me put in this way that we have been engaging strong collaboration with national ICT multistakeholder in various program of cooperation for digital literacy. For example, we have Internet Sehat (Internet Wellness), the program that educates students and teachers to use the Internet in a smart, creative, and safely manner. Internet Sehat is one of the WSIS Prize 2017

winners.

We also initiate the 1000 technopreneurs program with a view to develop young netizen as our future prominent players in the digital economy in creating useful startup applications for social and business cause.

We also have program for our Small Medium Enterprises (SMEs) to accelerating digital transformation namely SME's Go Online and targeted there will be 8 Million SME's go online by the year of 2019. Also, we have been promoting online solution in strengthening the work and market access of our farmers and fishermen and targeted there will be 1 Million farmers and fishermen go online by the year of 2019.

And I'm sure as everyone knows, internet is definitely the core infrastructure allowing the digital transformation to happen. That's why the ICT applications and services have played an important part in developing Indonesia's economy, and we have been focusing on transforming various national sectors through the means of digitalization, namely: public services, transportation, financial and banking as well as democracy and politic sphere.

The other issue to support the digital economy is about cyber security, this year the Government has issued the President Decree to establish the State Crypto and Cyber Agency, and tasked to be national focal point on the issue of cyber security to strengthen security aspect of digital transformation.

Finally, in response to the development, and according to the economic vision of our President, Indonesia will become the largest Digital Economy in Southeast Asia, and target expected business valuation of 130 billion US dollar by the year of 2020.

What are the policies of the Government for a successful digital transformation towards the development of Indonesia's digital economy?

To strengthening the development of Indonesia's digital economy, we has issued some policies to support successful digital transformation. First, we `released the 14th Economic Policy Package as well as promoting a wider and more efficient electronic trade and business to achieve our goals and targets related to digital economy.

This Policy Package, which also recognized as our National e-Commerce Roadmap, is a collaborative work of line ministries and related stakeholders. There are several aspects covered in this roadmap such as: access to funding, tax incentive, consumer protection, education and human resources development,

logistic, communication infrastructure, and also cyber security.

Based on our experience on the use of ICT, mobile technology application and financial technology holds significant role in pursuing inclusive digital financial inclusion within the corridor of digital economy 2020.

The second policy is about to protect data privacy, we also believe that consumer data protection plays important role to solidify security and trust in this era of big data. Currently, the government has been engaging with various stakeholders in the drafting our National Privacy Law and we targeted for being listed under the National Legislative Program next year.

While we waiting for the process, the MCIT has issued the Ministerial Decree on the Personal Data Protection in Electronic Systems.

The third policy is the development branchless banking which is promoted by Indonesia's Financial Service Authority, which enables the availability of fundamental banking services (such as saving, money transfer, billing payment, and soft loan) for micro businesses across the region in Indonesia.

Regarding to this policies, we have also been implementing 'Laku Pandai' as a program in utilizing ICT in the banking service and/or any other financial services, in cooperation with branchless banking agents. Currently, there are no less than 300.000 branchless banking agents in Indonesia. And, hopefully by the year of 2020, Indonesia expects to increase the number of branchless banking agents to 1 Million agents.

Finally, we hope through this program, people of Indonesian can get easily to have bank account by using the digital services, to encourage economic growth and equitable development among regions in Indonesia, especially between villages and cities.

Ladies and Gentlemen,

Indonesia sees that global vision for an inclusive progress in digital economy requires strong foundation at the national level.

Therefore, in order to open door of opportunities for the societies to improve their economy, we need inclusive, transparent and accountable Internet governance that can be one of the pillars for market creation.

And rather than protectionist, international multistakeholder communities shall support each other to

develop its digital economy, especially in assisting other countries in their efforts.

Finally, Indonesia would play its leadership in narrowing the gap between the haves and the have-nots in the context of ICT towards Sustainable Development Goals 2030.

All in all, Indonesia still have a lot of obstacles to overcome in order to help to utilize ICT to generate income. We are trying our best to keep educating our people and we hope we could resolve those problems in the near future.

Thank you

Mexico

Ms. Yolanda, Martinez Mancilla, Chief of the Digital Government Unit, Ministry of Public Administration

ICTs have come to be regarded as an important enabler of all the Sustainable Development Goals established by the United Nations General Assembly on September 25, 2015. Specifically, when we talk about ICT applications and services, especially from the government, it's important to have in mind that every time we digitalize a service and use Internet to deliver it, we're democratizing the access to not just information and services, but to their rights. This is especially true in a country like Mexico, and the Latin American region in general, which is characterized by inequality.

To harness the ICTs potential and correctly fill inequality gaps, it is important for States to have a very strong Digital Identity Policy Tool with a digital signature standard to provide the necessary certainty that citizens need to enter fully into the Information and Knowledge Society.
A very strong legal framework to support it is also necessary to guarantee people are safe online.

The process of digitization should also be fully participative, starting with the services that are the most demanded by the citizens. For example, in Mexico, in 2012 only one service could be done online in terms of health. Now, 8 out of 10 services in the health sector can be made through the Internet. This is very important advancement if you take into account that in a country with 122 million people you have the opportunity to make 94 million transactions online that previously had to be done in physical spaces.

Another important project for the current administration is the One Stop Shop. Through a Presidential Decree on February 2015, the One Stop Shop was created to provide a whole of government approach to digital services. This national portal required working with all the government agencies in the standardization of their procedures to provide to this day more than 5,900 services from over 299 different government institutions and receiving more than 1 million visits per day.

This an example of the compromise of the Mexican government to the advancement of the SDG's through the use of ICTs. It is of the utmost importance to develop smart governments that efficiently use the data available to make better decisions and develop a more proactive bureaucratic system that meets the needs of its citizens.

MEDICI Framework of Cooperation
Prof. Alfredo M. Ronchi, Secretary General

The WSIS Forum is the key forum for discussing the role of ICTs as a means of implementation of the Sustainable Development Goals, is there any relevant ICT sector not yet adequately taken into account?

If we consider ICTs as powerful means to implement SDGs we must include and adequately take into account ICTs applied to safety and security in a broad sense, they are relevant part of SDGs as outlined many times both within the UNGA Overall WSIS Review and the UNDP 2030 Agenda for Sustainable Development SDGs.

A number of SDGs are tightly connected or rely on safety and security: SDG 2, SDG3, SDG6, SGD6, SDG7, SDG8, SDG9, SDG11, SDG16, SDG17. Some of the specific fields are: food & water security, human security, safety, critical infrastructure resilience, drugs security and more.

Safety and security are integral part of human rights as well; we must provide all the efforts in order to guarantee such rights (as stated in art 3, 22, 25 - The Universal Declaration of Human Rights).

Nowadays the demand for "safety & security" in all its forms has increased, especially quantitatively and qualitatively, making clear the need for new approaches to enable the entire sector to ensure better results.

Looking from a different perspective: we outline the role of ICTs in risks assessment and management. They are playing key roles in a number of “risky” scenarios from health and children abuse to homeland security and law enforcement, crimes, trafficking (humans, drugs, weapons, artefacts, etc.) and even safety on working places and mobility.

Internet of things, machine learning, grids, network of sensors, remote sensing as well as near field communication and, why not, unmanned vehicles glued by networking are some of the building blocks of safety and security in different fields.

Of course technology it is not enough to solve problems, it is well known and demonstrated that a holistic, interdisciplinary approach and a culture of "safety & security" are the basis in order to obtain good results in this area.

How can WSIS better support these issues?

We hope that WSIS will act as a global reference point for all those working in these sectors and those who may take advantage from their outcomes.

We must promote an interdisciplinary approach and a “culture” of safety & security, they are the basis in order to obtain good results in this area; foster the exchange of experiences and best practices among countries and promote research thanks to the WSIS.

On the occasion of previous editions of the WSIS Forum (e.g. 2014, 2015, 2016) some eminent speakers underlined the key-role played by ICTs on the occasion of natural disasters and other critical events, they said that cyber technologies have fuelled the hope of people affected by the natural disaster. The availability of low price high performance devices and the proactive activity of clever developers have boosted the production of a number of smart solutions spread in different countries all-over the world. Due to the actual “silos” segmenting these sectors it is quite difficult to have a comprehensive vision on these resources and success stories, there is a need for a holistic approach and best practice sharing.

We suggest to establish in the WSIS framework a global observatory on ICTs for safety, security and disaster recovery and to extend the scope of action line C5 “Building Confidence and Security in the Use of ICTs” or create an additional action line devoted to ICTs for safety, security and disaster recovery;

In conclusion I would like to stress the positive effects due to the WSIS process and its outcomes, and suggest to include and to promote a wider range of “security” topics under the WSIS umbrella endorsing a holistic approach to the “Safety, Security, Disaster Recovery and Management” sector.

World Summit Award

Ms. Nora Wolloch, Manager

The World Summit Award is part of the WSIS initiative since the opening evening in Geneva since 2003. How has this initiative contributed to actionline C7 over the past 14 years and what are the plans until 2025?

Thank you!

The World Summit Award is unique in a number of ways.

Firstly, it was initiated even before the Action Lines where written, right here in Geneva at the first conference of the World Summit on the Information Society in December of 2003, initiated by by the Republic of Austria.

WSA´s objective was then and is today to focus on an aspect of WSIS which is often overlooked, if not ignored: the importance of content. WSA this implements action line 7 by demonstrating the richness and diversity of e-applications and digital content from around the world.

This makes WSA also unique. It is a civil society initiative and it operates in 178 UN member states and does so in a democratic global contest.

WSA invites every year all UN member states to reach out to their local networks and we receive nominations of the best digital application and interactive contents in the global contest.

Following the UN principle each country nomination has the same weight in the contest and WSA provides each year a unique overview how creative producers, start-ups and social entrepreneurs use ICT to tackle the SDGs and action line C7.

WSA works with and through a global network of volunteers, representing us locally currently in 178 UN member states.

The 8 WSA categories reflect the C7 eApplications directly and include business & commerce, government & participation, learning & education, health & well-being, environment & green energy, culture & tourism, smart settlements & urbanization and inclusion & empowerment.

WSA addresses the digital divide not in terms of access – but focusses on the content divide and the gender divide, the social divides, the knowledge divides. There are still many countries, with almost no quality local content in local language.

WSA focusses on content driven innovation in digital solutions and applications and highlights the importance of local content, developed locally for local communities.

We also make sure that we have in all steps in the WSA yearly process a balance in regions, professional background and gender and all that in a transparent and democratic manner.

In the past years WSA experienced that the most innovative solutions often were submitted from young social entrepreneurs and tech-startups. Therefore we also want to communicate their needs and support them with network, skills, visibility and credibility.

To provide them with a platform of knowledge transfer and social franchising WSA organizes international events and activities to connect them with mentors, jurors, speakers, experts, government leaders, academia and civil society.

They learn from each other, find new usecases for invented technology in other regions or start to cooperate to have an even stronger impact.

These young entrepreneurs demonstrate each day that ICTs are a powerful tool to implement the SDGs. But technology is only a tool – networks have to be built, sustainable business models created in a time where no one is ready to pay for content and multi-stakeholder partnerships developed.

On Monday we had a workshop with 4 of our recent winners here at the WSIS and featured their best-practice solutions. None of them asked for funding, but partnerships and networks to make sure that the right people use the resources they provide.

Technology without high quality content is useless and applications that don´t solve a real societal issue as well– so join WSA to make sure that we share best-practices and learn from each other and build a smart and inclusive knowledge society.

Research ICT Africa/ University of Cape Town
Prof. Alison Gillwald, Executive Director, Professor

The policy challenge in Africa is to address the paradox that as we increase ICT access and use so digital inequality is amplified. While the provision of access to the internet remains a key public policy issue —a necessary condition of digital participation in the economy and society — it is not a sufficient condition for digital equality. Connectivity alone does not reduce information inequality. Even where enabling environments conducive to investment have been created for the extension of networks, the limited demand-side data available in Africa illustrates how the socially and economically marginalised – particularly those at the intersections of class, gender, race or ethnicity – are unable to harness the Internet to enhance their social and economic wellbeing.

For these reasons addressing digital inequality can no longer be viewed as a supply-side, infrastructural issue alone. Supply-side assessments of the role and effects of internet reflected in the digital divide discourse and expressed in policy objectives of affordable access to communications are no longer sufficient. Measuring progress in terms of the economic value in growth indicators that mask inequality will also not create the conditions for sustainable development. The demand-side value of infrastructure development recognises the value generated by information infrastructure as inputs into a wide range of productive processes. The outputs not only produce economic value but public and social goods that benefit society. As we have shifted globally from public utility to private provisioning of communications infrastructure we have increasingly ignored these beneficial outputs in policy, focusing only on outputs with appropriable returns. We need to shift this consumptive lens to one that includes production, and from technological deterministic policy approaches to a rights-based understanding of the role of internet if critical resource management is to be transformative.

To redress digital inequality far more attention will need to be paid to demand stimulation measures. The limited demand-side data available on the continent shows that besides affordability, human development – particularly education and therefore income -are the primary determinants of access, intensity of use, and utility of internet. The development of relevant local content in local languages and applications, the enhancement of citizens' e-literacy are all important demand stimulants. But until fundamental inequalities off-line are addressed they will be replicated and indeed, amplified on-line.

Nor can public policy have a narrow sectoral focus any longer. Information and communication technologies (ICTs) cut across modern economies and societies. Policy formulation needs to deal with the internet as a general-purpose technology, a cross-sectoral issue, necessary for effective citizenry and economic engagement.

Although not explicit, these imperatives underlie the SDGs and inform the imperative of SDG9 ICT target of universal internet access by 2020. The problem is that to measure this at the global level we are forced to deal with the patchy, outdated, supply-side data that are unable to measure digital inequality in the predominantly prepaid mobile markets in developing countries. Further, from a policy point of view, the optimal points of policy intervention are context specific and to be effective need to be located

in the political economy of the country. The truth of the matter is that across the Global South we do not know where we stand now, nor can we ascertain if, and when, we will have progressed toward the goals and targets of the SDGs. What we do know with the high-level supply-side data available is that at the speed with which we are connecting people to the Internet today, we can never meet the 2020 target and the lag will continue to be from Global South, and Africa in particular.

This reality calls for innovative policy that understands the need for a new interplay between state and market with new access, service delivery, investments and risk models that leverage community know-how and low cost technology innovations. It will require even greater regulatory agility and insight to manage the tensions between the different policy objectives of competitive efficiency, innovation and consumer welfare, and the safeguarding of public and social value of the Internet.

To get Africa connected will require doing things differently from what we are doing now. We need to explore alternative policy and regulatory interventions that do not assume mature, competitive, effectively regulated markets operating within guaranteed human rights frameworks – though of course we may continue to aspire to these. Recognizing the constrained institutional endowments and resources generally that exist in African countries, we need to identify multiple strategies across the ICT ecosystem that will enable Africa to reach the critical mass and intensity of use needed for the network effects associated with broadband expansion.

What might these include? Consider just two possible game changers. Build the public statistics that are missing in most African countries to inform an evidence base for policy making. This cannot be based on narrow, unaudited administrative data, extracted under conditions of extreme information asymmetry from operators by regulators as in the past. In this increasing complex and dynamic environment, it requires leveraging all existing and anticipated data, particularly aggregated, anonymised big data for public policy and planning.

Starting with an open data framework, a governance framework for the management of complementary supply-, demand-side and big data in a transparent and accountable way that is available for individual, collective, public and private use – a traditional public good; non-rivalrous, non-exclusionary needs to be developed. This would unleash information flows and enable knowledge-building and innovation in many of our countries where national ICT statistics either do not exist – or are held secretly by national statistical offices, regulators and private companies. If governments recognise the high value of data and data analytics in the information age, they could better direct universal access obligations to provisioning of this data in usable formats by operators. This would be far better rather than adding to the cost of communications with secondary taxes that are historically poorly administered, and where expended have supported often extremely profitable companies by extending their businesses into so-called uneconomic areas. Funds, if they exist, though they should not necessarily be created for this purpose with their intractable inefficiencies, could also be better used to support low cost access solutions identified in the second area of intervention proposed – spectrum.

The critical resource for internet expansion in Africa in most jurisdictions is locked into technologically determined licenses – even when referred to as technologically neutral – or in ideologically constrained notions of state or national resources rather than public resources. In most of our countries, most of the spectrum is largely unused outside of the main metropolitan areas. In the sharing-economy of the internet era, we are already seeing voluntary infrastructure sharing by operators. G5 essentially

operates within a spectrum sharing environment with data off loads on to proprietorial and open public wi-fi. From a critical resources management perspective, this should be embraced by governments. Enabling secondary spectrum use would enable new dynamic spectrum sharing, which operates at a fraction of the cost of GSM network to be deployed on new business models in the largely unused spectrum in rural areas, which could instantly provide low cost, high quality bandwidth there.

Accepting that large numbers of Africans will not be able to afford to be optimally online even if GSM broadband prices were cost-based, deploying spectrum to create and extend the Commons (unlicensed spectrum) would be a key enabler. Extending commercially available public wi-fi from elite urban areas, possibly through deploying poorly utilised universal service funds or other public resources to all public spaces, is a way of increasing the intensity of use in urban areas and enhancing network effects that would contribute to more inclusive digital development.

Earth Aid
Mr. Syed Tarek, Founder

Excellences, Distinguished WSIS delegates, colleagues, stakeholders, ladies and gentlemen, it is a great honour and pleasure to be a part of the WSIS Forum 2017.

On behalf of Earth Aid, I would like to thank the organiser (the ITU) and co-organisers (UNESCO, UNCTAD and UNDP) of the WSIS Forum 2017. WSIS continues to be a leading forum to bring together stakeholders and share the best practices around the globe. I also congratulate this year's WSIS Prize winners and also all the nominated projects. These are lenses through which we can see the progress we are making in ensuring our next generations have a better and brighter future.

In 2015, we witnessed the historic Paris Agreement, and within two years now 195 UNFCCC members have signed the agreement and out of them 148 have ratified it. The Paris Agreement was a monumental achievement, and it demonstrated the world cares about the growing concerns of climate change and its impact. On June 1, 2017, we have also come to know the US will be withdrawing from the agreement. With the withdrawal, the US will be joining three other UNFCCC member states Holy See, Nicaragua and Syria who are non-signatories of this agreement. To the non-signatories, on behalf of Earth Aid, I would like to forward that, the climate change is real, it is happening, and it is going to make a profound impact on our environment. We need to act on it before it is too late.

Earth Aid was primarily set up to collaborate in achieving UN-SDGs. Since its inauguration, we are running innovative projects to deal with climate change impact. We live in a world where 775 million adults are illiterate and another 152 million children will soon join with the existing illiterates because they aren't attending school. It is a monumental task to include them in developmental projects. At Earth Aid, we believe in bringing positive change to those. We are reaching out to those less literate population with our localised content and technology-enhanced training programmes.

From our field engagement in the developing region, various policy suggestions have emerged. These are:

1. Emphasis on the green energies and offer incentives to those who adapts those energies.
2. Work on improving infrastructures for power supply and connectivity in the rural areas.
3. Strengthening the ties between the top-down management and bottom-up management in ensuring there is clear, concise communication between both tiers.
4. Make provisions to include climate change as a topic of discussion at all levels of academic engagement. Considering there are many drop outs after primary schooling, there needs to be a greater coverage of climate change in the primary school curriculum. This coverage should also include teaching basic lifesaving skills.
5. These exist countries where 'Technology literacy' is not clearly defined within their national policies, which is a barrier to any technological intervention in those countries. Such countries should consult with the private and public sector, local NGOs and learned societies to define what 'Technology literacy' means for them.
6. Promote inclusive education in all sectors of the academic engagement.

The potential of ICTs for achieving sustainable development is endless. As I write, there are almost as many mobile phone subscriptions (6.8 billion) as there are people on this earth (seven billion) with a subscription rate of 90% in the poorer countries. Earth Aid wants to promote that, disbursing the knowledge of climate change should be an international priority. We admit, it is a mammoth undertaking, but it is achievable.

Let's work together and take advantage of the global information and knowledge society to lead innovations and innovative ideas to bring a positive change within our national boundaries and beyond.

Thank you for your trust in me, in Earth Aid.

SESSION THIRTEEN: Gender Mainstreaming

High-Level Track Facilitator (HLTF): Ms. Shuchita Thapar, Project Manager Cybersecurity Team, National Law University, Delhi

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High Level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator ITU** – Ms. Doreen Bogdan-Martin, Strategic Planning and Membership Department
3. **UN Secretary-General's High-Level Panel on Women's Economic Empowerment** – Ms. Verona Collantes-Lebale, Deputy Chief, Secretariat
4. **International Trademark Association (INTA)** – Ms. Tish Berard, President-elect
5. **Bangladesh Institute of ICT in Development** – Mr. Shahid Akbar, Chief Executive Officer (Bangladesh (People's Republic of))
6. **Health and Environment Program (HEP)** – Dr. Madeleine Scherb, President (Switzerland)
7. **eWorldwide Group** - Dr. Salma Abbasi, Chairperson and CEO
8. **Ernst & Young Germany** - Dr. Beate Degen, Partner
9. **Facebook** – Ms. Flavia Alves, Global Public Policy Manager

Introduction

- At the WSIS forum itself, there has been increased diversity – no more manels and 38% female participation. However, worldwide, the digital gender gap is still growing – especially in LDCs - and needs to be bridged immediately
- The problem is not unique to LDCs – mature markets too have major problems with equal pay for equal work and other issues

Vision

- Moving towards gender equity through increased education
- Major opportunities for information, training, awareness raising and investment in the ICT space
- Increased understanding of local challenges to promote gender mainstreaming at all levels
- Continued advocacy and communication aimed at the public sector, the private sector, and young women

Fresh Priorities

- Collection of gender disaggregated data and tracking policies, plans and budgets with gender targets – encouraging ongoing assessment/auditing of how women are progressing along the digital inclusion continuum, and how programs aimed at gender mainstreaming are functioning
- Addressing barriers to access, linked to affordability, security and lack of digital skills
- Enhancing co-operation across stakeholders
- Bridging the skill gap - training women and children in the use of digital technologies
- Enabling women's voices to shape digital and financial property products

Emerging trends

- 90% of new jobs are going to be in areas that are either related to digital technologies or involve the use of digital technologies – women can fill these jobs if the skill gap is bridged
- Efforts in place to institutionalise gender mainstreaming – such as the introduction of gender focal points, gender budgeting, gender sensitization training, prioritization of women's education

Opportunities

- Governments and international bodies are putting gender mainstreaming at the top of their agendas
- Involving men in women's rights movements
- Increasing skill training which is not necessarily linked to formal education
- Educating policymakers on gender issues
- Women have not always been treated as subjects of the law but remained within the private sphere – ICTs have the potential to change that and promote inclusion

Key Challenges

- The digital gender gap is rooted in complex economic, social and cultural aspects of society
- Challenges include poverty, unpaid work, barriers to education, security and others
- Specific challenges in the global south include child marriage and limited educational opportunities for women
- Limited recognition for women's work
- Tokenism and stereotypes in programs targeted towards women
- Resource gaps in funding programs relating to gender mainstreaming
- Women are still not sufficiently included in the process of policy creation
- The numbers are getting worse – in 2015 the WEF suggested we will reach gender parity in 117 years

Link with the WSIS Action Lines and Sustainable Development Goals (SDGs)

- Gender equality and women's empowerment is indispensable to achieving the SDGs – we will not achieve SDG 5 or any other SDG unless the digital gender gap is bridged
- Governments are urged to enhance the use of ICT to promote the empowerment of women and girls as part of SDG 5(b)(1)

Case Examples

- **ITU**

- Girls in ICT day – 166 countries this year, impacting 300,000 girls
- Women in standardization group
- EQUALS: Global partnership to bridge the digital gender gap with goals in three main tracks looking at access, skills and leadership

- **UNWOMEN**

- Innovation program aimed at building market awareness, and calling for industry wide action to grow the innovation market for women and girls – supports women innovators and calls for a gender responsive approach through the innovation cycle

- **International Trademark Association**

Promotes personal branding to allow women to progress well through their careers and utilizes women in powerful roles. Also focuses on outreach, career development and growth within the company.
Uses trademarks to promote the work of women entrepreneurs – exemplified by the GI mark for Moroccan Argan oil

- **India/Nigeria**

Women from untouchable families in Andhra Pradesh villages have created small businesses through the use of cell phones, gaining economic power and leveraging that into social power
12 Nigerian girls have become web designers, clothes designers, app designers and have been able to sit at the table in global conferences after training

- **Facebook**

Women in Business program training women entrepreneurs in 15 countries on how best to evolve their businesses online

Road ahead

- Promote personal branding for young women entrepreneurs and SMEs
- Include other (intersectional) marginalised communities in the fight for gender mainstreaming, including the disabled and the elderly
- Gender sensitization at the grassroots level, targeting both genders
- Increasing digitalisation combined with gender mainstreaming has the power to raise GDPs and make progress visible – but only when combined with skills training
- Increase mentoring and training for young women in careers to allow them to climb up career ladders
- Promote safety of women online as a priority through the use of technology

UN Secretary-General's High-Level Panel on Women's Economic Empowerment

Ms. Verona Collantes-Lebale, Deputy Chief, Secretariat

Introduction

Global leaders, in adopting the 2030 Agenda for Sustainable Development, recognized gender equality and women's and girls' human rights and their empowerment as fundamental for pursuing sustainable development trajectories. Along with the stand-alone SDG Goal 5 – *Achieve gender equality and empower all women and girls*, gender equality concerns are integrated throughout the other priority areas and goals of the 2030 Agenda, with clear targets and indicators, including in bridging the digital divide. Target 5.b calls on governments to "enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women."

The just- concluded G7 Leaders' Declaration Outcome Document explicitly recognized women's entrepreneurship as "a key driver of innovation, growth and jobs." The International Labour Organization this year stated that "women's ever increasing participation in the labour market has been the biggest engine of global growth and competitiveness." If women's employment were to match men's employment – we could increase GDP everywhere –by 5 per cent in the United States, 12 per cent in the United Arab Emirates and 34 per cent in Egypt.

These notwithstanding, gender inequality remains pervasive, most notably in terms of ICT connectivity and in the development of content. *Worldwide, some 2.3 billion women do not have any Internet access, and more than 1.7 billion do not own a mobile phone. Women entrepreneurs are also less likely than men to use online technology for their business.* The global gender digital divide has widened by 1.2 per cent since 2013, equivalent to a total gap of some 257 million more men online than women. This has an impact on the way in which goods and services are created, produced, distributed and accessed in the digital environment. Women are not adequately represented as stakeholders, co-creators, and beneficiaries of technology-based interventions and often lack access to technology, digital skills, and media and information literacy.

This gender digital divide does not exist in a vacuum. It is shaped by existing inequalities such as gender differences in ownership and control of assets, weak representation or gender imbalance in decision-making spheres. On the average, close to 80 per cent of positions in government are taken up by men, who

shape or implement laws or policies. Gender norms and stereotypes continue to disadvantage women and girls' access to and active participation in the use and development of ICT. With women and girls performing the bulk of unpaid care and domestic work -- on average, women spend 19 per cent of their time daily on unpaid care work, compared with 8 per cent for men, they work longer hours but without commensurate remuneration, and have less time for learning, including about technology and use of technology, or to engage in community or political activities.

There is a need for more data on the gender digital divide but we have enough evidence of the gender gap to urge us to act; there is political will and concrete actions that have demonstrated *results to promote gender equality and women's and girls' empowerment, including in the field of ICT.*

The WSIS mandate to address the gender digital divide

The 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 Information Society held in December 2015 drew attention to the gender digital divide with implications on women's access to and use of information and communications technologies in education, employment and other areas of economic and social development. It recognized that ending the gender digital divide and the achievement of SDG Goal 5 on gender equality and women's and girls' empowerment are mutually reinforcing efforts.

The Ministers and heads of delegation participating in the HL meeting ***committed to mainstreaming gender in the WSIS process including through a new emphasis on gender in the implementation and monitoring of the action lines and reaffirmed commitment to ensure women's full participation in decision-making processes related to information and communications technologies.*** *They called for immediate measures to achieve gender equality in Internet users by 2020, especially by significantly enhancing women's and girls' education and participation in ICTs as users, content creators, employees, entrepreneurs, innovators and leaders.*

Most recently, at the WSIS 2017 High-level Opening, all the High-level speakers underscored the importance of addressing the gender digital divide and called on all stakeholders to step up their efforts and put in place concrete actions to ensure that ICT engages, delivers and benefits girls and boys, women and men alike.

Actions addressing the gender digital divide

Beyond political commitments and statements, concrete steps are already being undertaken – by governments, UN system entities, private sector and civil society to ensure the mainstreaming of gender

in sustainable development plans broadly and/or put in place specific programmes to address the gender digital divide.

In an effort to strengthen institutional effectiveness to achieve gender equality and empower all women and girls, a number of Member States in their voluntary reporting to the High-level Political Forum reported prioritizing gender mainstreaming in SDG implementation through establishing gender equality as a cross-cutting priority in national sustainable development plans.

UN-Women, as a global champion for women and girls in the United Nations family, has identified innovation, and information & communication technologies (ICTs) as one of the key drivers of change underlying its new strategic framework (2018-2021). Through its **Innovation Programme**, UN Women puts emphasis on leveraging innovation and technology to address the barriers to gender equality and women's empowerment. Specifically, through digital platforms and technology, it builds market awareness, investment and industry wide action to grow the innovation market for women and girls; supports a gender-responsive approach throughout the innovation cycle; promotes women as innovators; and directly creates innovative solutions that meet the needs of women and girls.

Beyond addressing gender inequalities, it is crucial for women and **girls to be educated on, have access to and use ICT** because today, 90 per cent of jobs require some digital competencies. Access to and use of financial instruments/documents – credit card, bank statements, mortgage application and payments etc., will all require ICT systems. A lot remains to be done. Only 18 per cent of undergraduate computer science degree-holders and 26 per cent of computing jobs are held by women. Less than 25 per cent of the tech workforce is made up of women and even fewer are in senior management positions. This has resulted in a critical global talent shortage of 38 per cent. Gender stereotypes in the area of STEAM influence girls from an early age both within families and at school. Girls also tend to lack role models of influential women leading successful engineering careers.

UN Women introduces its **Virtual Skills School** as a response to new demands for ICT skills. The VSS incorporates in its curricula foundational skills, vocational training and 21st century IT skills. It aims to offer interactive and collaborative learning, interdisciplinary curricula, real-world projects, experience-based learning and gamification. It combines the expansive online platform with offline instruction, engagement, projects and assignments. Recognizing the economic constraints of many women and girls, the services will be provided free of charge. Through the programme, UN Women will link the VSS graduates to employers (UN Women partners) and educational institutions for jobs.

The Virtual Skills School relies on **partnerships**. UN Women is already working with the International Telecommunication Union (ITU) on a joint initiative called EQUALS that will deliver for women's access to

the internet, digital literacy and coding and leadership in technology-driven sectors. UN Women is also partnering with the G20's e-skills for girls initiative under the leadership of the Government of Germany.

UN Women is working with close partnership with the government of Rwanda and the World Food Programme to pilot the **Buy from Women Enterprise Platform**. This is a data-driven, enterprise platform that combines an open source end-to-end cloud-based, and mobile enabled supply chain system to connect women farmers to information, finance and markets.

Key findings and recommendations of the UNSG's High-level Panel on Women's Economic Empowerment on digital inclusion

The High-Level Panel (HLP) for Women's Economic Empowerment (WEE) was established by the UN Secretary General to bring together global leaders to accelerate action on jobs, incomes and economic opportunities for women. Specifically, the HLP was tasked with developing an action-oriented agenda in support of women's economic empowerment in the context of the 2030 Agenda for Sustainable Development. The initiative is supported by the United Nations Entity for Gender Equality and Women's Empowerment (UN Women) with funding from the United Kingdom Department for International Development (DFID).

With powerful and influential membership representing governments, the private sector, civil society and the global multilateral institutions, and co-chaired by President by H.E. Luis Guillermo Solis Rivera and Ms. Simona Scarpaleggia, CEO of IKEA Switzerland, the HLP produced two reports and accompanying toolkits.

In its **first report**, the Panel identified seven drivers of transformation. For each of these, the Panel highlighted concrete actions and interventions that have demonstrated impact in reducing gender gaps focusing on four areas of work – women in informal work, formal sector employees, agriculture, and women-owned enterprises.

The seven drivers are: 1) Tackling adverse norms and promoting positive role models; 2) Ensuring legal protection and reforming discriminatory laws and regulations; 3) Recognizing, reducing and redistributing unpaid work and care; **4) Building assets – Digital, financial and property**; 5) Changing business culture and practice; 6) Improving public sector practices in employment and procurement; 7) Strengthening visibility, collective voice and representation.

The **second report** identified the top priority recommendations under each of the seven drivers of change and for the broader enabling environment. **Toolkits** were also prepared to provide compendia of resources, case studies and good practices for each driver to facilitate implementation of the practical

recommendations in the second report. Each toolkit is accompanied by a working group paper with specific recommendations for transformational change.

Investments in quality, lifelong education and training of women and girls are essential for their success. **More young women need to be encouraged to work in science, technology, engineering and mathematics (STEM)**, and governments need to support women's full and equal participation in a digital economy that is already transforming the world. This can be done through economic policies and by reforming education policies and frameworks to challenge the harmful norm of women as inferior in STEM subjects and incentivize more women to pursue STEM careers.

The Panel underscored the **importance of ensuring that women and girls have access to assets, including digital assets** and recognized that governments, international organization, the private sector and civil society in partnership can accelerate current trends and innovations in digital technology and finance to expand women's economic opportunities.

As much as digital technologies have implications on improved sex-disaggregated data and gender analysis, effective decision-making relies on timely and high-quality data. The data revolution called for by the 2030 Agenda must have women and girls at its heart. There is also a **need for improved data and analysis** on issues of particular importance to women's economic empowerment, such as unpaid work, paid care work, informal work, part-time work and domestic work. Digital technologies, which are changing data collection and analysis capabilities faster than expected, can be—and already are being—leveraged.

In the first report which was a call to action, the Panel members led by example and made concrete commitments on the seven drivers.

In their second report, they laid out concrete recommendations on each of the seven drivers. On Driver 4 -- Building assets – Digital, financial and property, the Panel recommended the following:

1. *Ensure women's equal access to and control over productive resources, including land, labor and capital.*
2. *Encourage stakeholders of a country to assess how women are progressing along the digital inclusion continuum.*

   The working group on digital and financial inclusion of the HLP underscored that it was not enough to ensure that women have mobile phones. It was imperative to **think of digital inclusion as a continuum** through which women need to be able to **ACCESS** digital devices and financial instruments in an

AFFORDABLE manner and to be **AWARE** of their uses before they can **ADOPT** them. Any effort to strengthen digital inclusion must address all these aspects.

3. *Enable women's voice to shape digital, financial and property products, services and policies.*

   Ensuring sustainability and women's empowerment through these efforts also requires that women continue to contribute to and benefit from the growth of digital technologies and services **not only as users and customers** but also as operators and providers, policymakers, program designers, implementers and evaluators.

Progress on Panels' commitments:

A year after the commitments were made, the Panel members demonstrated leadership by delivering on their commitments. Some examples directly relevant to digital inclusion include:

- **Buy from Women Enterprise Platform**, a partnership of UN Women, the government of Rwanda and the World Food Programme. This is a data-driven, enterprise platform to connect women farmers to information, finance and markets. It maps farmers' land plots, generates yield forecasts and provides farmers with real-time reports of key performance indicators.
- **Launch of the MALAIKA campaign**, a partnership between UN Women and the Government of Tanzania and the Tanzania Women's Bank and other banks. With the partnership, loans and mobile phones are provided to low-income women to support financial and digital inclusion.
- **World Wide Web Foundation's campaign to close the gender digital divide.** Through the leadership of Ms. Nanjira Sambuli, deputy panel member, a women's rights online network was established to gather data on digital gender gap impacting on women's economic empowerment. With the data they have gathered and analyzed, they are disseminating their findings to governments and offering them some concrete recommendations in the form of roadmap on how to close the gender digital divide. They are also rolling out some training on digital technology for women, raising visibility through events at international conferences and intergovernmental meetings and conducting research.

Conclusion

We are aware of the problematique – there is a gender digital divide. There is also an acknowledgement of the imperative to address the gender digital divide. The mandates exist to mainstream gender and empower women and girls from WSIS review outcome document and the 2030 Agenda for Sustainable Development. Concrete actions are already underway. It is time to scale up and step up these actions, with partners from governments, UN entities, other international and regional organizations, the private

sector, leading technology companies, the civil society, to realize gender equality and empower women and girls in the field of ICT and to make digital technologies real assets for women's and girls' empowerment in all spheres of life.

International Trademark Association (INTA)
Ms. Tish Berard, President-elect

I am pleased to represent the International Trademark Association (INTA) as a High-Level Track speaker during the WSIS Forum 2017 in Geneva, Switzerland. INTA thanks the Secretary General, the Chair, this WSIS Forum organizers and participants for convening a diverse and meaningful dialog on the state of ICT's for development (ICT4D). Founded in 1878, INTA is the global association of trademark owners and professionals dedicated to supporting trademarks and related intellectual property to protect consumers and to promote fair and effective commerce. Trademarks signal the quality and good will of the goods and services they identify. INTA's goals include the promotion and protection of trademarks as a primary means for consumers to make informed choices for the products that they purchase and enable businesses to protect critical assets including their name and online reputation.

INTA's members represent more than 7,000 organizations from 190 countries and collectively contribute almost US $12 trillion / €8.8 trillion / ¥73 trillion to global GDP annually. For comparison, the 2015 annual GDP of the top three markets was $10.9 trillion (China), $16.2 trillion (European Union) and $17.9 trillion (United States). The Association's member organizations represent some 30,000 trademark professionals and include brand owners from major corporations as well as small- and medium-sized enterprises, law firms and nonprofits. There are also government agency members as well as individual professor and student members. INTA undertakes advocacy work throughout the world to advance trademarks and offers educational programs and informational and legal resources of global interest. As a leading voice of trademarks owners within the Internet Community, INTA is a founding member of the Intellectual Property Constituency of ICANN. Headquartered in New York City, INTA also has offices in Brussels, Santiago, Shanghai, Singapore and Washington D.C. and representatives in Geneva and New Delhi.

Trademark protection plays a critical role in the stable and reliable functioning of the domain name system, digital trade and e-commerce. In terms of the United Nation's Strategic Development Goals (SDGs), trademark law and policy relate to: SDG 8 (promote inclusive and sustainable growth, employment and decent work for all); SDG 9 (build resilient infrastructure, promote sustainable industrialization and foster innovation); and SDG 16 (promote just, peace and inclusive societies). Public and private means of securing and enforcing trademark rights allow businesses to protect their innovations and protect consumers from fraud and abuse.

Trademark protection at the start of a business venture promotes long term and sustainable growth for small and emerging businesses. Failure to protect critical assets may result in cybersquatting, counterfeiting and in an inability to enforce one' rights should a business fall prey to numerous unfair business practices.

Trademark assets and their associated good will become the basis for sustainability by enabling the business to license its products or services and to expand into complementing streams of commerce. This benefits the proprietor, the consumer and the community-at-large. A successful business and brand can reflect positively on the country of origin and its economy and employment prospects. Trademarks are what connects the business to its customers and to its country. Famous brands may immediately identify a country. If we look at marks like Sony, Ford, Lego, and Heineken, most of these businesses started with a small unknown trademark and an individual entrepreneur. Their trademarks have become famous and intertwined with the business, its products and brand presence and a source of national pride in the countries of origin.

Recently, INTA and Asociación Interamericana de la Propiedad Intelectual (ASIPI) collaborated on the study to determine the impact of trademark-intensive industries on the economies of Chile, Colombia, Mexico, Panama, and Peru Overall, the results of the study are positive. Across the five countries, trademark-intensive industries generated 8 to 26 percent of total employment; and 10 to 21 percent of GDP. This is equivalent to 18.5 million jobs and a value added per person of US $2,390 annually. These results underscore the huge potential for economic growth that can be unlocked by promoting trademarks within the business communities, and by further developing national trademark systems and trademark-intensive industries.

WSIS Forum 2017: High-Level Track Outcomes and Executive Brief

INTA is pleased to organize the WSIS Forum 2017 Workshop *Using ICT's to Support Development Opportunities by Building an Online Brand Presence for Small and Emerging Businesses.* The session focuses on business and nonprofit ventures that emphasizes women and youth opportunities. Economic empowerment is achieved through the development of powerful brands. Such brands identify the sources of businesses that rely on ICT's for dissemination and growth. Whether it's through a mobile application, text messaging, social media platform or technology training, the aim is to promote capacity building and infrastructure to create viable, inclusive and sustainable enterprises. Such programs enhance infrastructure by creating networks that enable the production and distribution of goods and services through ICTs. These sources are identified by their trademarks. By building a strong brand presence using ICTs, entrepreneurs can ensure that users know how and where to find them whether in a local village or an ocean away. Building protections around local resources sustains the value of the goods and services and helps businesses develop brick and mortar establishments and virtual networks that create jobs.

The backbone of brand development is trademark protection. Trademark protection is a system of local, national and international laws that allow entrepreneurs to protect their assets and combat fraud. The consumer has the right to know the source of the goods and services that they are purchasing or the charity to which they are donating. Trademarks are the legal means by which reliable sources are identified. The consumer can then return again and again for the same high quality experience. NGO's benefit from trademark protections in the same manner as for-profit business. Like a business, a charitable venture survives by the strength of its name and the quality of its output thus ensuring long term growth and sustainability. Therefore, it is imperative that ICT4D policies consider trademarks and consumer production as a part of regulatory regimes and educational programs that promote innovation, growth, fair trade and long term sustainability.

Thank you.

Bangladesh Institute of ICT in Development
Mr. Shahid Akbar, Chief Executive Officer

Gender equality is much complicated development agenda than many other challenges we are facing. The challenge has diverse aspects and exceptionally critical dependent on multiple factors, starting from policy issues to social norms & practices, education to religious aspects. So there is no short cut road to reach the destination of SDG 5.

Countries like Bangladesh achieved significantly in the gender equality domain through continuous efforts and commitment. Bangladesh also pursuing to achieve the goal set in SDG 5 by 2030. The SDG 5 specifically set indicators to measure the achievements under Gender Equality which need extensive efforts and collaboration among different stakeholders. The initial steps should be concentrating on education component and social behavior along with framing appropriate strategies.

The key tool of addressing the gender equality is to ensure & facilitate quality education to the girls and economic opportunities to the women in a sustainable manner. Proper education will build the right skill to build the capacity of the girls to take right decision about her life. The existing education system needs to be reviewed critically from the gender perspectives. Similarly, if the women can be employed, both as entrepreneur or job, economic empowerment is the most powerful element to influence the gender equality agenda.

Engaging men in gender equality is very important and can play critical role to take the issue at family level where still women are most commonly deprived as a decision maker. The *He for She* approach can ensure more inclusive and effective to address the social taboo of gender mainstreaming. So any initiative targeting gender mainstreaming needs consider active engagement and ownership of men to achieve the SDG 5.

Women First can be another strategic step of the government and other organizations may adopt in the national development agenda. Unless the gender issue is properly addressed, special measures can be introduced in service proposition and delivery women may get some additional advantage with basic standards fulfillment. Specially, in access to finance, business licensing and education, women can be patronized through alternate channels and priority desks in the regular service channels.

Most of the developing countries signed all major international guiding agreements on gender and also developed national women policies, but very few could make significant development of implementation of the recommendations and commitments. To make these gender policies more in to action oriented activities and properly reflected in to implementation, one major intervention needs to be adopted to follow up the progress and report regularly. At the same time, these policies need to be available among different stakeholders and capacity of the relevant authorities should be developed aligning with the policies.

Incentivizing gender responsive organizations and initiatives can also be an effective tool to promote enabling environment in gender domain.

Health and Environment Program (HEP)
Dr. Madeleine Scherb, President

Le droit romain vu et mis en rapport avec la société d'internet par une camerounaise

Ce sujet m'a appelé à voir comment la femme depuis l'époque romaine a été au centre d'une complexité dogmatique de droits et d'obligations. De la contiguïté antique d'une société de l'information basée sur la conception archaïque de la femme à une société moderne à l'ère d'internet, les étapes du changement du statut de la femme d'un millénaire à l'autre sont remarquables. La plupart de ces femmes étaient illettrées et ne communiquaient que verbis, par la parole. La femme n'est pas une personne libre à l'époque, elle n'a pas les pleins droits, elle n'est pas autonome donc pas sujet de droit, car restant sous l'autorité du pater familias (le père de famille), son mari, son frère ou son père. La coutume et les moeurs effaçaient toute règle générale et abstraite. La dot est un patrimoine versé au mari par sa belle-famille afin d'alléger les charges provenant de la femme et des enfants communs en droit romain. Bien que certaines femmes aient porté le titre d'impératrice comme Livie, 3è épouse de l'empereur romain Auguste au 1er siècle, il n'en demeure pas moins qu'elles étaient éloignées de la vie publique et des carrières politiques.

L'invention de l'imprimerie vers 1440 (15ès) va révolutionner notre ère, un nouveau média de communication va naître l'écriture, ce qui va marquer un grand tournant dans la diffusion de l'information. Dès 1830 (19ès), c'est l'apparition des techniques électriques (télégraphe) et électromagnétiques (radio, téléphone) qui favorisa l'accès à l'éducation et à la maîtrise de ces outils. La dimension sociale de la femme sera déterminante et préoccupante, elle devra sortir de la torpeur, de l'aliénation, bref elle devrait se sentir libre de ses choix, s'instruire et utiliser les outils de communication tout en gérant sa vie de famille.

Je fais cette analyse basée sur ma propre expérience tout en m'inspirant de la théorie romaniste du droit. Le droit romain est la source de la civilisation qui s'est étendue dans le monde en devenant le ius gentium (le droit des gens). La question de la femme reste cruciale, Les romains qui la réduisaient à une personne incapable (alieni iuris) sous la tutelle du pater familias prescrivant un ensemble de règles auxquelles la femme étaient soumises de par même sa nature de femme. Qu'on parle aujourd'hui de la promotion de la femme ou plutôt de l'échec de l'expérience romaine et l'émancipation de la femme en ce 21ème siècle ne serait pas indécent. Il est néanmoins observé que le droit romain s'applique encore dans certaines sociétés traditionnelles au Cameroun de tradition orale essentiellement.

Ma grand-mère me disait qu'il était une fois les Allemands vinrent au Cameroun et apprirent aux populations à parler allemand, puis vinrent les français qui leur apprirent le français. Ainsi commença l'émancipation, les femmes s'intéressent à d'autres professions autres que les tâches ménagères. A l'aune du 21'e siècle, c'est l'arrivée d'Internet au Cameroun plus précisément en 1997. La même année, je fonde en faisant mes études, la Health and Environment Program. Je concilie mes études et mon engagement humanitaire en me rendant dans plusieurs pays d'Afrique et européens où j'ai donné des conférences et fait de la recherche académique. Il s'agit du Kenya, de l'Afrique du Sud, du Lesotho, Botswana, Gabon, Sénégal, puis des pays européens: Autriche, Allemagne où j'ai eu mon diplôme doctoral et la Belgique. La HEP fête ses 20 ans cette année. Ma volonté et ma détermination m'ont porté à atteindre mon objectif, à savoir la défense des intérêts de ceux qui sont dans le besoin. Je n'ai pas hésité à travailler au-delà même de minuit pour donner de ma voix dans l'approche des parties prenantes de la société de l'information en vue de l'élaboration du plan d'action de Genève et de la tenue de la manifestation de haut niveau, le SMSI +10.

Si je suis compté parmi les femmes leaders de Suisse, c'est aussi à cause de mon inspiration des coutumiers médiévaux allemands encore influents à notre époque, des glossateurs de l'école de Bologne du XII e siècle et des principes de liberté et d'égalité vis-à vis de la femme. Bien qu'établie en Suisse de par mon mariage avec un suisse, je sais d'où je viens. Je viens du Cameroun, un pays de 23 millions d'habitants, un pays d'Afrique centrale, encore appelé l'Afrique en miniature, regorgeant d'hommes et de femmes oeuvrant pour le développement et offrant des opportunités favorables à l'information, l'éducation, la sensibilisation et l'investissement des nouvelles technologies de l'information.

World Summit on the Information Society

eWorldwide Group
Dr. Salma Abbasi, Chairperson and CEO

Your excellences, ladies and gentlemen, SVK, good morning and bonjour.

Let me begin by quickly thanking the ITU particularly, Jaroslaw and Gitanjali and the WSIS team for the excellent arrangements of WSIS and inviting me to share my thoughts again – Your efforts are sincerely appreciated by all.

The eWorldwide Group has been closely working with WSIS for over 12 years, collaborating with UN agencies, governments and civil societies working towards building a truly inclusive knowledge economy and digital society that supports innovation and sustainable development.

As an active participant for many years, I have seen tremendous value from the exchange of best practices and lessons learnt being shared at this global platform. There has also been a visible transformation in the WSIS process that has incorporated previous recommendations, particularly engaging youth and people with disabilities (PwD) squarely into the process. Furthermore, I would like to congratulate the ITU Secretary General and the World Global Telecom for highlighting the importance of the inclusion of people with disabilities (PwD) at the opening ceremony of WSIS 2017.

We have heard several governments share their progress of becoming Digital Nations and we have learnt about the unique approach that Bangladesh has adopted to not only to deliver citizen centric services but also to transform the attitude of its civil servants to have empathy towards its citizens.

Nevertheless, we are still struggling to overcome many challenges to ensure holistic inclusion of all into the digital space. Due to the multi-dimensional complexity of the various 'digital divides' that exist in society today, governments are struggling to overcome the challenges of inclusion of the urban and rural divide, and the ever broadening gender literacy divide, which continues to compound the digital literacy divide for not only women and girls but also people with disabilities and more importantly the growing aging population across the world.

If we are to succeed, a paradigm shift is urgently needed to support governments to breakaway from creating 'institutional ICT policies' in silos that are disconnected from the ground reality. The policies need to reflect the implementation challenges that prevent effective access, engagement and inclusion due to invisible societal barriers and power structures that are not acknowledged.

The ICT policies, including Broadband policies, USFO policies, regulations and legal frameworks etc. all need to be fully integrated, interlocked and aligned into our daily lives and more importantly developed

in collaboration with key Ministries such as; Education, Science and Technology, Agriculture, Health, Environment, Trade and Industry, Labor, Social Welfare and Youth and Women.

Until and unless all the key Ministries and stakeholders are brought to the table in such forums to work together to achieve the Sustainable Development Goals (SDGs), we stand a poor chance of success as they require innovative cross cutting strategies and partnerships to succeed.

Furthermore, it is imperative that Governments revise their National Human Resource Development (NHRD) plans, particularly examining the multi-dimensional demands from the entire eco-system of the digital economy and cybersecurity, that are not only digital skills. This will create the much-needed jobs for youth, women, people with disabilities (PwD) and the elderly across all levels, with various capabilities, intellects and abilities,

In addition, Governments also need to holistically take an active role to 'facilitate and incentivise' long term multi-sectorial collaborations with the private sector and civil society, and other stakeholders that are linked squarely with the populations at the grass roots. These types of partnerships will create localized demands from the grassroots that will reinforce the sustainability aspects, and subsequently transform lives by the inclusion of all.

Lastly, I feel that the ITU needs to take the leadership role to evolve the WSIS Forum to the next level, by creating space for more inter-ministerial and inter-disciplinary roundtable discussions with key stakeholders and multi-sector partners to constructively engage in creating holistic implementation frameworks for Nations to sustainably achieve the SDGs and 2030 vision.

Facebook
Ms. Flavia Alves, Global Public Policy Manager

(Proposed question 1) How does Facebook think about the SDGs, particularly SDG 5 on Gender Equality?

- As Mark Zuckerberg affirmed in 2015, when he joined Bono and other leaders in signing the Connectivity Declaration, we believe the internet plays a crucial role in helping people connect and thrive.
- Our mission is to give people the power to share, to make the world more open and connected.
- We believe that when we share information and connect with others, that's when we achieve extraordinary things.
- However, our recent report with the Economist "The Inclusive Internet Index: Bridging the digital divides," has found what we all feared: *The Gender gap on the Internet is growing.*
- Several other studies conducted these past years have also been showing a very slow progression on Internet gender inclusion:
    - As reported by the ITU in 2016, the internet user penetration rate for women globally was 12% lower than for men, up from an 11% gap in 2013.
    - The disparity is largest in developing countries, especially in Africa.
    - Our Economic Index study has just revealed that only 11.6% of women access the Internet in Africa, while 88% of them access the Internet in Europe.
    - According to ONE, an anti-poverty advocacy group, if current trends continue, 71% of female Africans will still be offline in 2020, compared with 48% of men.

(Proposed question 2) How is FB working to close the gap you talk about and advance gender equality and empowerment

Women's lower adoption rates result not just from a shortage of access but from a variety of social, economic, infrastructure and content-related factors. Facebook is focusing on bringing a more safe use to our tools to women, while also empowering women to use the Internet as a tool for economic growth and entrepreneurship.

1. Safety

- We take the issue of women's safety on our platform very seriously and are committed to helping women stay safe online.

- We've hosted several roundtables in Africa, Europe, Asia and Americas to meet people on the front lines who are working on women's issues to share our work, collect additional feedback and look for additional ways to ensure women feel safe online.
- We take a five point approach to safety at Facebook.
    - First, policies. We have policies that say what is and is not okay to share on Facebook - what we call our Community Standards. For instance, you cannot bully or harass someone under our policies.
    - Second, tools. We have developed tools that give people the power to control what they see and what others see about them on Facebook, and to report things to us.
    - Third, resources. At every point in the service, we offer access to the help and resources people might need to ensure their safety.
    - Fourth, partnerships. We recognize that we are not experts on all things, so we look to safety experts, academic researchers, NGOs, human rights activists, policymakers,… for their expertise and guidance. They help us as we develop policies, build tools and create safety resources and programs.
        - In the women's safety space we work closely with a range of NGOs globally and we have two leading orgs as part of our Safety Advisory Board -- the National Network to End Domestic Violence (U.S.), Center for Social Research (India).
    - Fifth, feedback. Perhaps most importantly, we rely on the feedback of the people using Facebook, our community.
- I have limited time here, so I can't go into details but I want to highlight a recent product launch as testimony to our commitment:
    - Last April, we announced new tools to help people when intimate images are shared on Facebook without their permission.
    - When this content, often referred to as "revenge porn," is reported to us, we can now prevent it from being shared on Facebook, Messenger and Instagram.
    - This is just one example of how we are addressing this issue and making the Internet a safer place for women.

2. Empowerment/#SheMeansBusiness

- Another way we are trying to tackle the issue is by our SMBs boosts programs, tailored to women, known as #SheMeansBusiness
- We launched #SheMeansBusiness in 2016, an idea that started in APAC (Singapore)
- SheMeansBusiness was created to inspire and empower women to start a business - it offers training, resources and a community for women entrepreneurs
- Why did we start SheMeansBusiness?

- Through our research, we know women want to become women entrepreneurs, 1 in 2 women in Singapore in fact.
- If these women were helped to start a business it would boost economic growth and create:
    - 178 K new jobs
    - 42K new businesses
- These women can have a huge and positive impact on the economy and in their communities.
- Facebook has a community of 1.86B people and 65M small businesses (40% of whom are led by women)
- We are in a position to help women overcome some of the barriers they face in starting a business - access to a community, support and advice — but most importantly provide the tools they need to get started easily.
- Since last year, #SMB has launched in 15 countries, trained more than 8,000 women entrepreneurs, reached more than 50,000 through our online efforts, and engaged with 40 NGOs globally.
- Through the SheMeansBusiness community we want to empower more women to start a business and create conversations and inspire more women to take that leap.

Women and Information Society NGO
Mrs. Narine Abazian, President

Excellencies,
Distinguished Delegates,

Colleagues and partners,

Ladies and Gentlemen,

I would like to thank the International Telecommunication Union and other UN organizations for holding the annual WSIS High Level Event.

It is a great honor for me to have an opportunity to express my thoughts for WSIS high level platform.

Since 2012 our organization "Women and Information Society" has been initiating the Celebration of Girls in ICT International Day in Armenia.

International Girls' in ICT Day is an initiative launched by ITU Members in Plenipotentiary Resolution 70 (Guadalajara, 2010) with the idea of creating a global environment that will empower and encourage girls and young women to consider careers in the field of information and communication technologies.

Under ITU's auspice Girls' Day is celebrated worldwide. **To date, over 240,000 girls and young women have taken part in more than 7,200 celebrations of International Girls in ICT Day in 160 countries worldwide.**

We propose "Girls in ICT" day to be set as an International UN Day. Why?

To expand our message to women and girls on this day, that we are building Information and knowledge Society. Women and girls have to become key actors in building Information and Knowledge Society.

Let me explain it:

In the industrial economy, strategy was executed in the top-down fashion. Those in the top figured out what needed to be done, and communicated it through the chain of command, to those at the bottom. People at the bottom didn't need to understand the strategy they just needed to do what they were told.

In Information and knowledge economy, this isn't true. You can't execute strategy in a knowledge-based society, unless those with the knowledge understand what the strategy is. Those at the top have to formulate the strategy, but then they have to educate the workforce – every person in the workforce – about what the strategy is.

Strategy must become everyone's job. Every woman and girl has to be understand what Information and Knowledge Society are and to benefit from it.

By creating a special observance, day the United Nations will promotes international awareness and action on these issues. UN other agencies with ITU will actively participate to supporting women and girls to be key actors in building Information and Knowledge Society.

In 2014 during WSIS+10, UN Women and several women's organizations across the world, as well our organization proposed an action line on gender. It was not supported by MPP participants. Every discouragement negatively influences on activities. You cannot always work with enthusiasm. We have noticed that even in 2016 and 2017, no high level speakers from UNWOMEN have participated in WSIS.

No accepting the fact that girls and women are underrepresented in building Information Society, we limit the opportunities of our society.

The pattern of under-representation of women in Information Society (IS) Development will continue if more steps are not taken to educate, support and encourage girls and women.

The "Women and Information Society" NGO has initiated several projects in Armenia directed to help underserved women, youth, especially girls to become innovators and leaders using ICT. The Sample projects are: Girls in ICT, Technovation, Digital Literacy for Women Entrepreneurs in Rural Areas of Armenia. One of the core steps towards girls and women's empowerment through technologies is to raise awareness on technology entrepreneurship education. The project is more important and valuable when technological entrepreneurship knowledge and skills and suggested solutions to a number of Sustainable Development Goals, concerning local communities acquired. In other words we have to use knowledge to solve community problem.

From this point of view WSIS-SDG Matrix is an excellent tool. WSIS-SDG Matrix linking WSIS Action Lines and Sustainable Development Goals (SDGs) was developed by all the UN system organizations at the WSIS Forum 2015. This is excellent instrument, which is more tangible for achievement SDG goals.

We propose to develop a similar mini matrix which will link WSIS Action Lines with only Gender issues of SDG and relevant targets, activities and finance. This way to highlight special attention to women and developing unified international instrument.

Everything possible to achieve in case of political will, desire and financial support.

SESSION FOURTEEN: Ethical Dimensions of Information and Knowledge Societies and Media

High-Level Track Facilitator (HLTF): Ms. Mehwish Abid Ansari, Programme Assistant at Digital Programme, ARTICLE 19

High Level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator UNESCO**
3. **Russian Federation –** Mr. Mikhail Rodionov, Deputy Director, Russian State Library
4. **University of Dhaka –** Prof. Khondkar Siddique-e Rabbani, Honorary Professor

Introduction

Session 14, on ICT applications and Ethical Dimensions of Knowledge and Information Societies and Media, brought together stakeholders from the public sector of the Russian Federation and from academia in Bangladesh. The session was more intimate than most, with just two panelists in conversation. However, the moderated discussion was followed by robust engagement from the audience, which fostered true dialogue among the panelists.

Vision

Though the projects presented by both panelists were different in scope and objective, both sought to address the development of a robust information society that draws knowledge and expertise from local contexts. Mr. Mikhail Rodionov, the Deputy Director of the Russian State Library, presented on the National Digital Library, which is an initiative that forms part of the Russian Federation's broader information society development strategy. This National Digital Library is designed to be a new platform that facilitates access to all available information in a digital form, enabling not only knowledge creation but also, in the long term, advanced knowledge extraction. Professor Khondkar Siddique-e Rabbani of the University of Dhaka continued the conversation by discussing the development and adoption of e-health technologies in Bangladesh. Caution should be paid to one-size-fits all approaches that underpin Global North-Global South technology adoption trends. Developing states such as Bangladesh experience specific

challenges that make technologies in developed states more difficult to adopt, such as infrastructure provision, the local availability of goods and resources, and proprietary exclusion.

Fresh Priorities

The projects presented by both panelists prioritized a more nuanced understanding of the information society: it is not simply a global monolith, but a collection of stakeholders that is fundamentally informed by local contexts, capacities, and expertise. As such, the aims of the projects each advocated for a shift in focus. Beyond providing a repository of information, the National Digital Library aims to develop Russia's intellectual potential, and to facilitate access to Russia's vast scientific and cultural heritage within its own borders and to the rest of the world. In the same way that this focus reflects a prioritization of capacity building, the University of Dhaka's work on e-health initiatives has resulted in a call for a research and development approach within developing states, so that technological leadership can grow from local experience. Both panelists prioritized the importance of cultivating and then capturing local knowledge development, which adds greater nuance to more the more mainstream priorities on the subject of access to information.

Emerging Trends and Opportunities

Both panelists also recognized the need to engage people in order to bring about change. Although governments can be powerful facilitators in the creation of national action plans that bring strategy and focus to building information societies and adopting ICT applications, change isn't necessarily a top-down phenomenon. People—whether in technical communities, academia, the private sector, or the general public—can drive innovation forward faster by bringing their expertise and capacity to the table first, so that the government agenda can follow their lead.

Key Challenges

Both panelists recognized regulatory challenges that face their respective projects. The National Digital Library in Russia seeks to move beyond the provision of material that is in the public domain; however, the legal landscape made it difficult at first to provide copyrighted material. The project has successfully worked to achieve legal reform in order to increase repositories of free resources for Russian citizens. However, the challenge remains to facilitate a larger reform of the copyright legal regime. In the context of e-health technological development, the post-colonial regulatory framework in Bangladesh favors the adoption of foreign technologies over fostering local innovation. As such, the current dynamic stifles the opportunity for more robust e-health initiatives championed by local developers that understand local need and context.

Link with the WSIS Action Lines and Sustainable Development Goals (SDGs)

The Following WSIS Action Lines were relevant to the discussion:

- C3. Access to Information and Knowledge
- C4. Capacity Building
- C6. Enabling Environment
- C7. ICT Applications: E-Health

The following SDGs were relevant to the discussion:

- 3: Good Health and Well-Being
- 9: Industry, Innovation, and Infrastructure
- 10: Reduced Inequalities

Case Examples

Over the course of the discussions, the case example of technological innovation in India was address in comparison to the dynamics within Bangladesh. Professor Siddique-e Rabbani recognized that the Indian regulatory environment fostered a strong leadership of science and technology. The government provided support to local entrepreneurs in addition to its engagement with IBM and other foreign technology companies. In this way, Indian companies were able to grow, learn from the knowledge transfer that was facilitated through the inclusion of foreign companies in the national market, and eventually became competitive in the global context. However, the lessons learned from India's example have not been replicated in other developing states, including Bangladesh. As such, government policies remain entrenched in the production of an environment that stifles the growth of local companies and solutions.

Road ahead

Both panelists noted that access and dissemination of information is not enough. In order to move forward, these endeavors must continue to address how we, as an information society, can leverage this accumulation of information to generate and extract new knowledge; at the same time, this information can be transferred to local innovators that can transform and adapt it to their own contexts.

Russian Federation

Mr. Mikhail Rodionov, Deputy Director, Russian State Library

What is the rationale for your project?

A few years back responding to challenges and tasks of Sustainable Development Russian leadership initiated Information Society Development Strategy. First Phase was completed last year and amongst tangible results were launching an e-government, creating online medicine platform and the National Digital Library. In May this year the new instalment of this Strategy was signed by our President. Building an information society was announced as one of Russia's key strategic priorities and the corner stone of the new digital economy.

Russia recognises that digital economy will mean new business models, new infrastructure including information communication technologies and of course new educational system. The strategy's primary focus is people as we strive to create a new platform allowing for free and convenient access to all available information in digital form and thus enable new knowledge generation. We need to create advanced knowledge extraction tools rather than just continue using digital resources including Internet as a fancy entertainment network.

The National Digital Library is an information system that will become a foundation for Russia's Information Knowledge Space. It must serve as the main means of collecting, storing and disseminating of the world's knowledge in Russian language as well as over 50 other languages of our country.

We recognised the need to provide access for our citizens to the most modern and verified knowledge including in National Digital Library not only public domain material but also copies of most up-to-date editions so we had to deal with copyright issues as well. Last year we changed our Library Law and Legal Copy Law introducing revolutionary Digital Legal Copy of all printed books and periodical press that is now being collected by our Russian National Library. We are also regularly including into the National Digital Library digital copies of at least 10% of all titles published in Russia annually.

Currently, over 95 per cent of the National Digital Library collection (over 4,3 million objects) is available freely online while everything including copyright material can be accessed in almost 10 per cent of Russia's 38 000 public libraries and our target is 100% by the year 2019.

What is the expected impact for the society?

The main goal of the Information Society Development Strategy, part of which is creating of the National Digital Library, is establishing a Knowledge Society in Russia.

We must ensure Russian people's right to access to objective, proven and safe information that will allow for unlocking human potential, improving intellectual capacity, provide for lifelong learning, obtaining new competencies and broadening one's horizon.

The National Digital Library will serve as a basis for the Information Knowledge Space that will be formed by way of fostering science, developing modern educational projects including online and distance learning as well as creating a digital system of semantically linked knowledge.

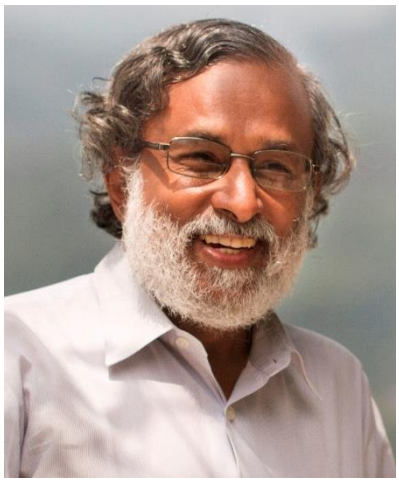
This online resource must also help us overcome consequences of information overload leading to clip mentality and inability to adequately apprehend messages bombarding us though mass media and social networks. This has already become a major threat as many recent world political events indicate.

Further advancements in the legal system are also inevitable – we will need to attend to our Museum and Archive Laws to allow for more objects to be freely included in the Russian Digital Library. This will help complete the Information Knowledge Space as the system of collecting, storing and providing access to our vast scientific and cultural heritage not only in Russia but also all over the world.

The Russian Digital Library is already serving as a test bed for the newest information and communication technologies. We aim to help create Russia's own semantic search technologies, ensure advancements in big data, artificial intelligence and cognitive research. Ultimately we want to see Russia emerging as one of the world's leaders in the areas that form the technological basis for the current innovation cycle of sustainable development.

Summarising I'd like to mention three main areas where we should see direct effect as a result:

- Development of Russia's intellectual potential through free online access to the most up-to-date scientific, cultural and educational resources
- Creating solid basis for Russia's digital economy contributing to creation of the Knowledge Society
- Improving Russian legal system including Copyright Law allowing for effective knowledge collecting and dissemination



University of Dhaka
Prof. Khondkar Siddique-e Rabbani, Honorary Professor

Should we educate and train scientists and engineers in each developing country in developing their own e-health technology and strategy, or should we try to promote existing ones developed elsewhere and only train local manpower for adapting them?

'Give a man a fish and you feed him for a day; teach a man to fish and you feed him for a lifetime'. Combine this ancient saying with my observation, 'ECG and X-Ray machines, vital for healthcare, were invented more than one hundred years back, still about 70% of global population living in rural areas of the Third World do not get benefits of these two innovations', and the answer will be apparent, particularly for the application of ICT in health, which is my topic of interest.

Because of various factors over the last few centuries a huge technology gap exists at present – between the rich industrially developed countries (IDC) and the low resource countries (LRC), often branded as the 'Third World'. The approach that has been the tradition in the recent times, particularly in healthcare, is to deliver readymade products from the IDCs to the LRCs, but the success has been minimal. Why? First, the technology disparity of the past led to a huge economic disparity, so for the LRCs the products from the IDCs are prohibitively expensive. Second, even if these are procured somehow through donation programmes or else, the devices fail in many cases much earlier than the projected lifetime because of unsuitable weather conditions, extreme abnormalities of electrical power, and lack of technical expertise for use, maintenance & repair. Use of special integrated circuits and breakable plastic parts make a strong dependency on the manufacturer for the supply of spares which often pose unsurmountable obstacles for LRCs. Besides, technical secrecy maintained by the manufacturers, particularly with increasing use of embedded software that remain 'unseen', has made it virtually impossible to repair these devices even if skilled manpower is available locally.

Against the above scenario, consider the change that has been brought to the world by 'unpatented' internet and open source operating systems and platforms like Android, where millions of innovators from different countries have already contributed to take the benefits of modern technology to a great majority of world's population. Therefore, if we want to take the benefit of ICT in e-health to the whole world, we need to take an open approach similar to the above, with the inclusion of integrated online diagnostic and therapeutic devices as appropriate. Therefore, we need technological capability to design, develop and implement appropriate devices and software in every country or region of the world.

Fortunately, people with the required scientific and engineering knowledge are available in almost all countries, what is needed is some re-orientation and hands-on training, preferably in a low resource country.

I propose establishing an international technology centre for e-health, both for R&D and hands on training, in one of the low resource countries where adequate background exists to give the required leadership. With myself at the helm in Bangladesh, we have developed a strong team for R&D in designing and developing ICT based devices (both hardware and software) through a continued effort for more than 35 years, and in e-health (telemedicine with integrated diagnostic devices) for about 6 years. The above includes a successful implementation of Telemedicine through a rural entrepreneurship model, for which we have been awarded here at WSIS-2017. Therefore, if I am given the responsibility to lead and initiate such an international venture, I will be ready to accept it provided necessary funds and logistic support are made available.

How important is it to regulate different e-health innovators and service providers – or should we give some minimal conditions together with broad guidelines and rely on individual judgements?

The state organs in the present day world are basically 'Governments' trying to 'govern' or regulate all activities of the people. This tendency to 'govern' or 'rule' is more overriding in the Low Resource Countries (LRC) most of which were colonies of other powerful countries in the past. The colonial administrations were clearly suppressive and were not meant to promote and develop local ingenuity, neither to enhance the quality of life of the local people. Even after many decades of becoming independent, these countries could not come out of the colonial regulatory and suppressive mind-set that they inherited; rather in some cases these have intensified because of various factors. This has seriously obstructed efforts by local innovators and entrepreneurs to manufacture and market indigenous technology based products and services, which could have solved problems of the local people enhancing the quality of life.

Looking from the other end, however, a question arises, how can one ensure that the products or services entering a market have the requisite quality? In most of the industrially developed countries (IDC) government regulatory bodies in general have a reasonable performance, but not so in the LRCs. Here, government regulatory bodies tend to become casual, often corrupt, allowing sub-standard products and services to get through easily, which is in effect harming people. We have to decide – what do we want? To uphold the 'regulatory system of a Government' irrespective of the results it produces, or to find realistic solutions that actually deliver the desired benefits to the people? I am proposing an alternative below based on a system of 'guidance' and a minimum of 'regulation', taking a cue from natural human behaviour and the development of human societies. In a human society a child is born free and is taught certain social norms as it grows up. On adulthood, if a charge is brought against a person of breaking any

of these norms, the social judiciary takes decisions through a thorough inquiry whether to acquit or imprison the person.

In the same light, for every conceivable e-health product and service, let the World Health Organisation produce a 'norm' or a 'minimum quality specification (MQS)', through a committee of relevant technology experts drawing from both IDCs and LRCs. MQS for an item would be technically explicit, giving the desired minimum of technical performance levels and safety features. This will act as the 'guidance' and should be ratified by every country and well circulated. Side by side, the 'minimum regulation' that the government in an LRC will put forward is that whoever wants to initiate an e-Health product or service 'has to identify oneself' through a name or a brand, and will automatically be understood to take responsibility that its products or services satisfy the relevant MQS. If any person or group has reasons to doubt the quality of products or services of a brand, the person or group may get these tested through any expert group. If the accusations are found valid by them, they can file a case to the judiciary. The judiciary will get the products or services tested thoroughly by other identified expert bodies such as universities, and will give a decision accordingly. If the offense is proved, the judiciary will decide whether to give warnings to improve the product or to stop production or to punish to the offender, depending on the severity of the offence. Thus individual freedom and judgement in manufacture and distribution of products & services are expected to bring forth a positive change in the scenario providing proper e-Health services to a people.

9. Concluding Session

Written Statements

Switzerland

Mr. Philipp Metzger, Director General, Federal Office of Communications (OFCOM), Federal Department of Environment, Transport, Energy and Communications (DETEC)

Chairman,

Mr. Secretary-General,

Ministers,

Excellencies,

Distinguished Delegates,

Ladies and Gentlemen,

As we all know, ICTs can play a crucial role in our lives and can greatly contribute to the implementation of the SDGs. They provide new solutions and, where appropriate infrastructure, skills, and services are available, they can be incredibly powerful, e.g. in transforming education, healthcare, or the way we do business. But to do so, we need to deploy special and relentless efforts.

In order to harness the ICTs' full potential, all stakeholders, across all sectors, we need to be aware of the vast opportunities created by ICTs and digitization – but also of their challenges, including structural change and transformation processes of societies and economies all over the world.

To meet the SDGs, it will be key to engage in constructive cooperation, improved exchange of information in relation to ongoing projects, and joint identification of relevant cross-sectoral issues and interfaces as well as strong partnerships between all stakeholders: governments, international organizations, the private sector, civil society, and the technical and academic communities.

This requires networking between all stakeholders, open minds and a respect of the values and needs of different stakeholder groups in order to enhance mutual comprehension and cross-sectoral, interdisciplinary cooperation between them.

Let us therefore work together to leverage networks and research, stimulate innovation, scale up current initiatives and design new solutions in an inclusive and participatory way. There is a need for new forms of connecting all stakeholders and providing them with real opportunities to exchange their experiences, best practices, and to discuss together the challenges at hand - both at the national and international level.

Enhancing cooperation at the national and international levels between governments and with all stakeholders is not a new idea, but it is still not sufficiently done and often not with the right attitude.

At the national level, there are a number of challenges to overcome:

We need to connect those people working on implementing the 2030 Agenda, which serves as a kind of a "global overall strategy", with those working on national digital strategies so that these and other strategies are aligned and work hand in hand.

Cooperation and exchange of information between different ministries and government agencies should be encouraged so that they are aware of each other's activities and take advantage of synergies and do not fall into competition for resources, attention and recognition;

There is a need to build trust between stakeholders and to take action against any prejudices.

Let us listen and respond to the needs of citizens and businesses. That includes also engaging with them as partners, taking their concerns fully into account and listening to their constructive criticism, because often businesses and civil society have experience that governments do not have.

Their trust and willingness to cooperate has to be earned by being accountable to them, but we also need to build capacities of businesses and citizens for them to understand that it is also in their interest to act responsibly and accountably to society as a whole.

The results of these efforts should be analyzed regularly with regard to its actual added value for each of the stakeholder groups and for the perspective of the persons directly concerned. A culture of transparent feedback on the successes and failures can provide a learning effect for our future work.

At the international level, there are a number of useful fora for multistakeholder dialogue and exchange of experience, like the annual WSIS Forum here in Geneva.

The WSIS Forum brings together engaged experts and decision-makers from all over the world and from all stakeholder groups. It offers a great opportunity to discuss decisive and emerging policy issues related to the digitization of our societies and economies, and to learn from experiences of other stakeholders.

Switzerland has been and will be continuing to support the WSIS Forum as a partner for specific activities – as we are doing again this year.

Excellencies,

Ladies and Gentelemen,

In addition to the WSIS Forum, we also attach great importance to the UN Internet Governance Forum. This year, Switzerland will be the host of the 12th annual IGF, which will take place from 18 to 21 December at the Palais des Nations in Geneva.

We believe that having both the WSIS Forum *and* the IGF 2017 here in Geneva provides a unique opportunity to break the silos and bring together experts and decision-makers from all sectors to discuss digital policy issues and their linkages to the SDGs.

On behalf of the Swiss authorities, I would like to invite you all and your colleagues to actively engage in the preparations of and participate in the IGF, fully benefiting from exchanges with key stakeholders from all over the world to shape the digital future.

To conclude, we would like to thank ITU, UNESCO, UNDP and UNCTAD, as well as all WSIS action line facilitators, but also all other IGOs and all private actors for their commitment to implement the WSIS outcomes and to link their activities to the SDGs.

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