



HIGH-LEVEL TRACK OUTCOMES AND EXECUTIVE BRIEF



Coordinated by:



Organized by:



WSIS Forum 2017: High-Level Track Outcomes and Executive Brief

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.

WSIS Forum 2017: Chairman



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






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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

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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	<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - 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

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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



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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>



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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
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

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- 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 sectors 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.



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- 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.



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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

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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.

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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.



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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

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- 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:



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- **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.



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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 Ofori-Adarkwa, Chief Executive Officer (Ghana)
7. **European Language Technology Company "Tilde"** – Dr. Andrejs Vasiljevs, 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 be achieved in order to provide access and the necessary local content in order to all of them to thrive.

Fresh Priorities:



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- Local content and language are vital to spur economic and social development
- In order to successfully 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 having 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.



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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

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- 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

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- 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

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- 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.



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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
8. **ChunriChoupaal** – The Code To Change – Ms. Iffat Gill, Founder & CEO (Netherlands (Kingdom of the))

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

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- 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



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- 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. Djibouti 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



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- 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



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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. **Timor-Leste (Democratic Republic of)** – H.E. Mr. Gastão de Sousa, Minister, Ministry of Public Works, Transport and Communications (MOPTC)
5. **Uganda** – H.E. Mr. Frank Tumwebaze Kagyigyi, Minister, Ministry of ICT and National Guidance
6. **Sierra Leone** – H.E. Mr. Mohamed Bangura, Minister, Ministry of Information and Communications
7. **Viet Nam (Socialist Republic of)** – H.E. Mr. Phan Tam, Deputy Minister, Ministry of Information and Communications (MIC)
8. **Mexico** – Mrs. Adriana Sofia Labardini Inzunza, Commissioner, Instituto Federal de Telecomunicaciones (IFETEL)
9. **Moldova** – Mr. Grigore Varanita, Director, National Regulatory Agency for Electronic Communications and Information Technology (ANRCETI)
10. **Arab & African Union for Digital Media** – Ms. Azza Awad Elkreem, Head of Organization (Sudan)
11. **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



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- 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

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- 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

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- 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.



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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. **Gabon** – H.E. Mr. Alain-Claude Bilie-By-Nze, Ministre d'Etat, Ministre de l'Economie Numérique, de la Communication, de la Culture et des Arts
4. **Azerbaijan (Republic of)** – H.E. Mr. Elmir Velizadeh, Deputy Minister, Ministry of Communications and High Technologies of the Republic of Azerbaijan
5. **Iran** – H.E. Mr. Nasrollah Jahangard, ICT Vice Minister and Chairman of ITO, Information Technology Organization of Iran (ITO)
6. **Bangladesh** – H.E. Mr. Mohammad Shafiul Alam, Cabinet Secretary
7. **Liberia** – Ms. Angelique E. Weeks, Chairperson, Liberia Telecommunications Authority (LTA)
8. **Clean Development Group (CDG)** – Mr. Scott Phipps, President and CEO (Canada)
9. **Nokia** – Mr. Marc Vancoppenolle, Global Head of Nok

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

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- 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



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Case Examples

- Bangladesh – 200,000 saplings were planted and rivers were cleaned up with the help of mobilisation on Facebook
- Bangladesh – Moti – a e-filing 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



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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. **United Arab Emirates** – H.E. Mr. Hamad Al Mansoori, Director General, Telecommunications Regulatory Authority (TRA)
6. **Paraguay (Republic of)** – Eng. Mirian Teresita Palacios Ferreira, President, Comisión Nacional de Telecomunicaciones (CONATEL)
7. **Brazil** – Mr. Igor Vilas Boas de Freitas, Commissioner, National Telecommunications Agency - Anatel
8. **Hypergreen Environmental Consultancy** – Mr. Hussaini Omale, Chief Executive Officer (Nigeria)
9. **ASIET** – Mr. Pablo Bello Arellano, Secretary General (Spain)
10. **Microsoft** – Dr Carolyn Nguyen, Director, Technology Policy, Microsoft

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).

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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.

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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.



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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.



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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. **Armenia** - H.E. Mr. Vahan Martirosyan, Minister, Ministry of Transport, Communication and Information Technologies
4. **Portugal** – H.E. Mr. Guilherme W. d'Oliveira Martins, Secretary of State of Infrastructure, Ministry of Planning and Infrastructure
5. **Singapore (Republic of)** – Mr. Leong Keng Thai, Deputy Chief Executive, Infocomm Media Development Authority of Singapore (IMDA)
6. **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
7. **World Economic Forum** – Mr. Fadi Chehadé, Senior Advisor (Switzerland)
8. **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.



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Opportunities/Partnerships

- Opportunities for governments to share experiences and successes with each other in general especially on how policies 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 of work to support the growth 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.



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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. Victor Lagunes, Chief Information Officer, Office of the President
6. **International Federation for Information Processing** – Prof. Mike Hinchey, President (Austria)
7. **Asia-Pacific Telecommunity (APT)** – Ms. Areewan Haorangi, 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. Paul Nicholas, Senior Director Global Security Strategy and Diplomacy (United States)

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

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- 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
- Reassuring 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



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- 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.



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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. Samuel Abrijani Pangerapan, Deputy Minister, Ministry of Communication and Information Technology
4. **MEDICI Framework of Cooperation** – Prof. Alfredo M. Ronchi, Secretary General (Italy)
5. **Subah Infosolutions** – Mr. Birendra Sasmal, Chief Executive (Ghana)
6. **World Summit Award** – Mrs. Nora Wolloch, Manager (Austria)
7. **CYBERLAW ASIA** – Mr. Pavan Duggal, President (India (Republic of)) (Digital, Economy and Trade)
8. **Bluefield State College** – Prof. Saul Njie, Visiting Professor (United States of America) (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

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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)



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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 Enterprises)
- 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.



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SESSION THIRTEEN: Gender Mainstreaming

High-Level Track Facilitator (HLTF): Ms. Shuchita Thapar, Project Manager Cybersecurity Team, National Law University, Delhi

High Level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator ITU** – Ms. Doreen Bogdan-Martin, Strategic Planning and Membership Department
3. **Royal Academy of Science International Trust (RASIT)** – HRH Princess Dr. Nisreen El-Hashemite, Executive Director (United States)
4. **UN Secretary-General's High-Level Panel on Women's Economic Empowerment** – Ms. Verona Collantes-Lebale, Deputy Chief, Secretariat
5. **International Trademark Association (INTA)** – Ms. Tish Berard, President-elect
6. **Bangladesh Institute of ICT in Development** – Mr. Shahid Akbar, Chief Executive Officer (Bangladesh (People's Republic of))
7. **Health and Environment Program (HEP)** – Dr. Madeleine Scherb, President (Switzerland)
8. **Women and Information Society NGO** – Mrs. Narine Abazian, President (Armenia (Republic of))
9. **eWorldwide Group** - Ms. Salma Abbasi, Chairperson and CEO
10. **Ernst & Young Germany** - Dr. Beate Degen, Partner

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

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- 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

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- 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.



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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



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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
5. **Information and Communication Technology Association of Zimbabwe** – Mr. Hasha Seine Maringe, CEO/President (Zimbabwe)

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



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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.



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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.



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Policy Statements



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25TH Century Technology Limited
Dr. Kwaku Ofori-Adarkwa, Chief Executive Officer

Theme: 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?

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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



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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.



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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.



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Women and Information Society NGO Mrs. Narine Abazian, President

Theme: Gender Mainstreaming

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

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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.



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Bangladesh

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

Theme: WSIS Action Lines and the 2030 agenda

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?

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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.



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Moldova (Republic of)
Mr Grigore Varanita, Director, National Regulatory Agency for Electronic Communications and Information Technology (ANRCETI)

Theme: Bridging Digital Divides

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.

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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



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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.



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ARTICLE 19

Ms. Mehwish Ansari, Digital Programme Assistant

Theme: Inclusiveness – Access to Information and Knowledge for All

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.



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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.¹ 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.² 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.³ Anonymity through tools such as the Tor browser allows individuals to disseminate and access any and all information without fear of

¹ 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.

² Office of the Special Rapporteur for Freedom of Expression, Inter-American Commission on Human Rights, *Freedom of Expression and the Internet*, 2013, p. 6.

³ 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.



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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.⁴

⁴ Human Rights Council, *Resolution on the promotion, protection and enjoyment of human rights on the Internet*, 2016, p. 2.



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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.

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

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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.



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ASIET

Mr. Pablo Bello Arellano, Secretary General

Theme: Enabling Environment

ASIET would like to thank the ITU for 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, and 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 to 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 have 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.

A harmonious development is paramount, telecommunications networks are essential to the 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.

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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:



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- 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.

ABOUT ASIET: The Interamerican Association of telecommunications Companies (ASIET) was born in 1982 with the name of AHCiET and it is comprised of public and private companies from the telecommunications sector operating in the countries of the American continent. We work for the development of telecommunications and the Information Society in our region through



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the public- private dialogue promoting the growth of the industry and favoring the exchange of knowledge and best practices, ensuring for the common interests of our partners and the industry.



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Association of Scientists, Developers and Faculties Dr. Kokula Krishna Hari Kunasekaran, International Secretary

Theme: Knowledge Societies, Capacity Building and e-Learning

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,



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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 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!

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Portugal

Ms Fátima Barros, Chairperson of the Board, ICP - Autoridade Nacional de Comunicações (ANACOM)

Theme: Bridging Digital Divides

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 Europe⁵.

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.

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

⁵ Source: European Commission, Broadband coverage in Europe, 2016



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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.



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Congo (Republic of the)

S.E. M. Léon Juste Ibombo, Minister, Ministère des Postes et des Télécommunications

Theme: Enabling Environment

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



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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** ».



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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 kilomètre, 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!



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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

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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 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 connaît 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,



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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'atterrissage 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



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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



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Paraguay (Republic of)

Eng. Mirian Teresita Palacios Ferreira, President, Comisión Nacional de Telecomunicaciones (CONATEL)

Theme: Enabling Environment

Señor moderador, apreciados miembros de la Unión y múltiples partes interesadas

Damas y caballeros

Interrumpidamente 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.



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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 comisarías 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.



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Earth Aid
Mr. Syed Tarek, Founder

Theme: ICT Applications and Services, Digital, Economy and Trade, Climate Change

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.

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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.



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FAO

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

Theme: WSIS Action Lines and the 2030 Agenda

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 we 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



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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.

Liberia

Ms. Angelique G. Eupheme Weeks, Chairperson, Liberia Telecommunications Authority

Theme: ICT Applications and Services

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.⁶ 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 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.

⁶ McDonald, Sean M. (2015), Ebola: A Big Data Disaster – Privacy, Property, and the Law of Disaster Experimentation



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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.⁷

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 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

⁷ 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.



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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



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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.⁸ 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 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.⁹ 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

⁸ USAID Technical Brief (November 2014): Use of Technology in the Ebola Response in West Africa

⁹ McDonald, Sean M. (2015), Ebola: A Big Data Disaster – Privacy, Property, and the Law of Disaster Experimentation



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countries was lost due to the outbreak.¹⁰ 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 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.

¹⁰ USAID Technical Brief (November 2014): Use of Technology in the Ebola Response in West Africa

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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, 3^e épouse de l'empereur romain Auguste au 1^{er} 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 (15^{es}) 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 (19^{es}), 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 21^{ème} 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



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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.



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Nokia

Mr. Marc Vancoppenolle, Global Head of Nokia Government Relations

Theme: ICT Applications and Services

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.



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- 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.



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Sri Lanka (Democratic Socialist Republic of)

Mr. Kingsley Fernando, Director General, Telecommunications Regulatory Commission of Sri Lanka

Theme: Inclusiveness – access to information and knowledge for all

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.



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Japan

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

Theme: Bridging Digital Divides

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.

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- 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



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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.



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International Network of Women Engineers & Scientists Dr. Yvette Ramos

Theme: WSIS Action Lines and the 2030 Agenda

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!



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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



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