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1. Introduction

High-Level Policy Sessions

At the WSIS Forum 2018, moderated High-Level Policy Sessions of the High-level Track (HLT) took place on the 20 and 21 of March. During these sessions, moderated Policy Sessions with high-ranking officials of the WSIS Stakeholder community, representing the Government, Private Sector, Civil Society, Academia and International Organizations were held.

2. WSIS Forum 2018: Chairman



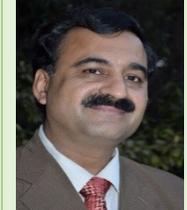
H.E Eng. Majed Sultan Al Mesmar
Deputy Director General
Telecommunication Sector, Telecommunications
Regulatory Authority (TRA)
United Arab Emirates

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

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

Session No.	Photo	Name	Title	Organization	Type of Stakeholder
One WSIS Action Lines and the 2030 Agenda		Mr. Anthony Giannoumis	Assistant Professor of Universal Design of Information and Communication Technology	Oslo and Akershus University College of Applied Sciences	Academia
Two Bridging Digital Divides		Ms. Renata Avila	Technology and Human Rights Lawyer	Web Foundation	Technical Community
Three Bridging Digital Divides		Ms. Crystal Rugege	Director of Strategy and Operations	Carnegie Mellon University Africa	Academia

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<p>Four Enabling Environment</p>		<p>Mr. Deepak Maheshwari</p>	<p>Head of Government Affairs – India, South Asia and Southeast Asia</p>	<p>Symantec</p>	<p>Private Sector</p>
<p>Five WSIS Action Lines and the 2030 Agenda / Financing for development and role of ICT</p>		<p>Dr. Michael Nelson</p>	<p>Public Policy</p>	<p>Cloudflare</p>	<p>Private Sector</p>
<p>Six Bridging Digital Divides</p>		<p>Dr. Anuradha Rao</p>	<p>Professor, Department of Communications & New Media</p>	<p>National University of Singapore</p>	<p>Academia</p>
<p>Seven Building confidence and security in the use of ICTs</p>		<p>Mr. Pavan Duggal</p>	<p>Founder and Chairman</p>	<p>International Commission on Cyber Security Law</p>	<p>Civil Society</p>

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<p>Eight Inclusiveness – access to information and knowledge for all</p>		<p>Ms. Moira S. Patterson</p>	<p>Global Affairs Program Director</p>	<p>IEEE Standards Association</p>	<p>Technical Community</p>
<p>Nine ICT applications and services</p>		<p>Mr. Pierre Mirlesse,</p>	<p>Vice President Public Sector, Healthcare and Pharma</p>	<p>Hewlett Packard Enterprise, EMEA</p>	<p>Private Sector</p>
<p>Ten Inclusiveness – access to information and knowledge for all</p>		<p>Ms. Cristina Valdés Argüelles</p>	<p>Public Relations Director</p>	<p>Geneva International Model of United Nations</p>	<p>Civil Society</p>
<p>Eleven ICT applications and services</p>		<p>Ms. Moira de Roche</p>	<p>IFIP IP3 Chairman, Global Industry Council Director</p>	<p>IFIP</p>	<p>Technical Community</p>
<p>Twelve Gender mainstreaming</p>		<p>Ms. Ayanna T. Samuels</p>	<p>Aerospace Engineer & International Development Professional specializing in ICTs for Socio-Economic Development, Technology</p>	<p>She Leads It</p>	<p>Civil Society</p>



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			Policy and Gender-Equality. Consultant		
Thirteen Digital Economy and Trade		Ms. Natalia Vicente	Head of Public Affairs	ESOA	Civil Society
Fourteen Knowledge societies, capacity building and e-learning / Media		Mr. Alfredo M. Ronchi	Secretary General	EC MEDICI Framework of Cooperation	Technical Community



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Official Opening Segment: Opening Ceremony



The Opening Ceremony set the priorities of the WSIS Forum 2018, 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 Sustainable Development Goals (SDGs). In this way, the WSIS Forum 2018 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 2018 therefore served 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, served as the mechanism to map, analyse and coordinate the implementation of WSIS Action Lines, and more specifically, ICTs as enablers and accelerators of the SDGs.

The ceremony began with opening statements from the host, co-organizers, partners and representatives of stakeholders engaged in the WSIS Process. This WSIS Forum was special as it marks 15 years since the first phase of summit that was held in Geneva. It was a for a celebration of the framework established by the Geneva Plan of Action still forms the foundation of a just and equal information society for all.



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As part of the celebration, a high-level dialogue was held during the Opening Segment, with the participation of high level representatives from countries and organizations involved in the WSIS Process in 2003 and later in developing the process.

The Opening Ceremony concluded with the announcement of the winners and the prize ceremony for the contest of the [WSIS Prizes 2018](#).

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 builds 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/2018/Pages/Agenda/Session/256#intro>



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United Nations

Mr. Antonio Guterres

UN Secretary General (Video message)

Ladies and Gentlemen,

In today's digital world, Internet access is imperative.

"Connecting the unconnected" is crucial to achieving the 2030 Agenda for Sustainable Development.

It is essential for sharing information, bringing people in from the margins and giving people a voice.

The international community has committed to ensuring universal and affordable Internet access in least developed countries by 2020.

I thank the World Summit on the Information Society Forum for promoting an inclusive process to meet this goal.

Please accept my best wishes for a successful gathering.

Thank you.



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United Nations

Ms. Amina Mohammed
UN Deputy Secretary-General

Ladies and gentlemen,

It is a pleasure to be with you to discuss the critical topic of how Information Communication Technologies can support the achievement of the Sustainable Development Goals.

The digital revolution is taking place at a breakneck speed.

Rapid advances in technology are having a profound impact on every aspect of our lives and societies – in our governments, workplaces, schools or social life; how we do business and how we interact as communities and individuals.

But, as fast as these advances are occurring, they are not taking place fast enough in many areas.

All people need to benefit. No one should be left behind.

Connecting the unconnected is crucial to achieving the SDGs.

Used responsibly and intelligently, ICTs are the key to unlocking an inclusive, resilient and sustainable future for everyone, everywhere.

This Forum is the central venue for the global community to reflect on the developments, implications and opportunities of ICTs and to act collectively to bring the benefits to all.

I commend the efforts made by stakeholders -- governments, civil society organizations, academia, business, the United Nations system and others -- to align the WSIS process and the 2030 Agenda.

The WSIS-SDGs matrix, developed by UN agencies, is a valuable tool that shows the clear links between ICTs and the SDGs.

Ladies and gentlemen,

All around the world, the power of ICTs and digital technology is being adopted and adapted to better deliver progress to individuals and communities in need.

Countries are using ICTs to leapfrog traditional development models in their efforts to achieve the SDGs and provide humanitarian assistance.

However, the digital divide -- including the gender digital divide -- remains a significant challenge that we need to acknowledge and bridge.



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We must bring the whole world online so everyone can benefit from ICTs.

And we must put people, not profit, first.

The 2030 Agenda requires new partnerships – and new types of partnerships -- at all levels and among all actors.

I am pleased to see that EQUALS -- the global partnership for gender equality in the digital age -- continues to grow and gain traction.

We must ensure this continues to be supported and advanced.

ICTs have unprecedented potential for delivering equitable and inclusive growth, protecting the environment and improving the well-being of people around the world.

They can provide an opportunity for the full participation of women, youth and other marginalized and vulnerable communities in all decision-making processes.

But, for it to truly be a game-changer, technology has to be both accessible and affordable.

Achieving this will require, among other things, much greater levels of information sharing and collaboration across different types of entities and a comprehensive approach that looks at issues of ICT access, skills, leadership and research.

And of course, we must stress that the information shared is reliable.

We must increasingly guard against all efforts to distort the truth and to sow misinformation.

Ladies and gentlemen,

Your contributions at this Forum will provide inputs to the High-Level Political Forum on Sustainable Development in New York in July.

I look forward to the results of your deliberations and to strengthening and expanding our partnerships.

Let us continue working together to harness the potential of ICTs for sustainable development in a world where every individual has a voice and is able to live life of dignity and opportunity on a healthy planet.

Thank you.



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ITU

Mr. Houlin Zhao
Secretary-General

Good morning, everybody. And welcome to the World Summit on the Information Society Forum 2018! This year marks the 15th anniversary of the first phase of WSIS — 15 years of cooperation between all WSIS stakeholders to make information and communication technology a critical driver of global development.

Thanks to all of you, this forum has become the leading ICT for development event in the world. We keep adding new partners and youth representation keeps growing. In all, you are more than 2,500 to have come to Geneva this year from over 150 countries to explore how we can leverage the power of ICT together to achieve the Sustainable Development Goals.

As UN Secretary-General António Guterres just said in his video address, ‘Connecting the unconnected’ is crucial to achieving the 2030 Agenda for Sustainable Development. Let’s build on this momentum. The WSIS Forum is our common platform to foster partnerships, showcase innovation, and exchange best practices in the field of ICT through the implementation of the WSIS Action Lines.

Much progress has been achieved in ICT developments in recent years. As a result, ICT is now recognized across the UN system as a key platform for development, and as a powerful tool for helping us to achieve every single one of the SDGs. Over the next four days, we will learn more about these achievements and the opportunities they create. But we will also address the challenges we face, especially when it comes to bridging the digital divide.

This issue will be central to our debates at PP-18, our first Plenipotentiary Conference since the adoption of the SDGs. And I hope to see many of you in October in Dubai! I am pleased that the Chairman of this year’s WSIS Forum, His Excellency Majed Sultan Al Mesmar, is also the Chairman-Designate of PP-18. In this way, it will ensure the best coordination between the Forum and PP-18.



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And I would like to take this opportunity to thank the United Arab Emirates, platinum partner of the WSIS Forum 2018, as well as Saudi Arabia, our gold partner. As you all know, the Forum relies entirely on voluntary contributions. We have put all our partners up on the screen, and I am grateful to each and every one of them for their generous support. Year after year, you contribute towards strengthening the outcomes of the WSIS Forum. Thank you!

I would also like to express my sincere thanks to our co-organizers — UNESCO, UNCTAD, and UNDP. And I am pleased to see especially Mrs. Amina Mohammed, Deputy Secretary General of the United Nations and many heads and deputies of the entire UN family and all the other WSIS stakeholders sit side-by-side here today. It is a testament to our shared commitment to the future implementation of WSIS, a significant contribution to the upcoming UN High-Level Political Forum and PP-18, and a guiding star as we continue to align the WSIS process with the SDGs.

I wish you all a successful WSIS Forum 2018, and I look forward to hearing of your progress over the course of this week.

Thank you.



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United Arab Emirates (Platinum Partner)



H.E Eng. Majed Sultan Al Mesmar
Deputy Director General
Telecommunication Sector, Telecommunications Regulatory Authority (TRA)

Your Excellency Amina Mohammed, UN Deputy Secretary-General
Your Excellency Houlin Zhao, ITU Secretary-General,
Your Excellences representatives of UN organizations

Your Excellency Dr. Abdulaziz Bin Salem Al-Ruwais, Governor, CITC, Saudi Arabia

Excellences Heads of delegations

Ladies and Gentlemen,

I am pleased and honored to address you today at the opening segment of the WSIS Forum 2018, and I want to thank ITU Secretary-General and thank you all for trusting me to Chair WSIS forum 2018.

It has been 15 Years since the implementation of the Geneva Plan of Action, where we witnessed together the real implementation of the WSIS Action lines on the ground and we have seen many national, regional and international initiatives, highlighting the importance of the WSIS process and the impactful role of ICTs in achieving the Sustainable Development Goals.

The WSIS forum served as a leading global forum for discussing the role of ICTs as a means of implementation of the Sustainable Development Goals and targets, and it provided a key platform for all stakeholders to discuss, share and learn about the ICT for SDGs, taking into account that all stakeholders have an important role to play in information and knowledge societies and every stakeholder must benefit from this process.

I take this opportunity to congratulate the ITU for coordinating this process smoothly and aligning the WSIS Process with 2030 Agenda for Sustainable Development. I want also to thank the other UN Agencies for their engagement and active role in this process, and I invite you all to start the dialog on the Next phase of WSIS beyond 2025.



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Ladies and Gentlemen

The WSIS Forum provides us with an opportunity for information exchange, knowledge creation and sharing of best practices, while identifying emerging trends and fostering partnerships. It has become THE place to showcase Innovative technologies and solutions linked to the new ICT technologies such as IoT, AI, 5G, and Smart applications and services.

I am pleased to see the Increase in participation of the youth women and private sector, and this year WSIS Forum Agenda is very rich in content and I congratulate each one of you for contributing towards building the agenda during the open consultation process.

I welcome my team of 14 High-level Track Facilitators, representing different stakeholder types and wish them all the best and success in capturing the outcomes.

I look forward for an active involvement from all of you towards a successful Forum 2018.



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UNCTAD
Ms. Isabelle Durant
Deputy Secretary-General

The ultimate outcome of the technological revolution is uncertain, but it is up to us, policymakers at national and international levels, the private sector and civil society to ensure that the new digital world generates development for all and that it leaves no one behind.

I am convinced that e-commerce and the digital economy create major opportunities. Potential benefits for developing-country companies range from greater efficiency to gains from increased variety of choice and greater predictability for all players, as well as lower costs and prices. It also has the power to encourage women entrepreneurs.

E-commerce has the potential to be a real booster for millions of young people in Africa or in Latin America, for example. The beauty of digitalization is that it can connect local businesses with markets. It can also connect populations with services, which would definitely help people in isolated areas where services are still too often a luxury.

However, these gains are not automatic. Digitalization also raises challenges and may, if adequate measures are not put in place, increase the divide between developed and developing countries. Current gaps in connectivity and e-commerce readiness, between and within countries, imply that benefits are not equally distributed. There is also a lack of the robust infrastructure in developing countries needed to enable entrepreneurs to develop their e-business without being dependent on the giants of the digital age.

We have become more interconnected than ever. That is a fact. The world as we know it is becoming one. It is our common responsibility, at this turning point in time, to make sure it is indeed one, not only on paper, so that no country, no populations miss the digital train.

We need more action to help businesses in developing countries build their capacity and take advantage of the new infrastructure and technologies, so that they can produce and sell more online. However, infrastructure alone is not enough. Unless people have affordable access to these technologies, have the skills to use the productively and trust them more, connectivity will have limited impact.

UNCTAD recognizes the increasing divide and marginalization that come with this rapidly evolving sector, and understand that unless adequate steps are taken, the divide will only get wider. Member States continuously request UNCTAD to increase its work on these issues and assist developing countries in this regard.



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Through collaboration with Member States, in 2016 we were able to launch the eTrade for all Initiative, with 28 partners and the aim of improving the ability of developing countries, particularly the least developed ones, to harness and benefit from e-commerce. Member States also decided to create the Intergovernmental Group of Experts on E-commerce and the Digital Economy, increasing discussion on the development dimensions, challenges and opportunities of e-commerce.

Events such as the ongoing World Summit on the Information Society Forum 2018 encourage discussions worldwide and help find solutions that will contribute to the betterment and benefit of developing countries. The same goes for UNCTAD's E-Commerce Week, from 16 to 20 April, which offers a space for different stakeholders to discuss key challenges and opportunities arising from digital platforms, and to develop concrete actions to draw the maximum benefits of e-commerce for developing countries.



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UNESCO

Mr. Getachew Engida
Deputy Director-General

Excellencies,

Ladies and Gentlemen,

On behalf of UNESCO's Director-General Mrs. Audrey Azoulay, I am pleased to greet you and to welcome you as one of the co-organizers of this year's WSIS Forum.

It is widely recognized that its theme, leveraging ICTs to Build Information and Knowledge Societies for Achieving the Sustainable Development Goals, is at the heart of UNESCO's mandate and endeavour.

UNESCO is the UN Agency with a mandate to uphold freedom of expression and promote “the free flow of ideas by word and image.”

UNESCO works to create inclusive knowledge societies and empower local communities by increasing access to and preservation and sharing of information and knowledge in all of UNESCO's domains of action.

ICTs play a crucial role in this work.

With 4 billion Internet users and 7.5 billion mobile phone users, the Internet and the digital revolution is impacting all spheres of public and private life, including crucial issues related to access to information and knowledge. As the ICT revolution is changing lives and livelihood, it has also been recognized as an important tool to accelerate the pace of achieving SDGs.

The last decade has witnessed technological development at a scale and speed unprecedented in the history of humankind.

However, equitable access for populations to seize these opportunities, as well as issues related to safety, privacy and ethics, and radicalization in cyberspace pose serious challenges; this year's WSIS forum will address these challenges, propose solutions, and mobilize multi-stakeholder cooperation to ensure that



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the Internet and ICTs contribute to meeting the sustainable development goals.

Our vision of universal Knowledge Societies relies upon a free and open use of new technologies that can foster capabilities to access as well as contribute to global knowledge pools. Access to information and knowledge now carries a much wider connotation and includes access to internet, access to other digital technologies, and the ability to create an enabling environment to seek and receive knowledge online.

It also includes strategies to produce digital content and innovative technologies that can enhance skills, particularly of youth and women. UNESCO will be hosting several sessions on these and other aspects in order to further mobilize multi-stakeholder partnerships and synergies.

Excellencies,

Ladies and Gentlemen,

As the facilitator for six action lines of the WSIS implementation process, UNESCO is working through its internet universality framework to support the Internet as rights-based, open, accessible and multi-stakeholder driven, also known as R.O.A.M principles.

To provide Member States and other stakeholders an internationally-recognized tool to assess Internet policies towards enhancing democracy and building knowledge societies engaged in sustainable development, UNESCO has moved forward to develop Internet Universality Indicators along these principles.

UNESCO's product contain above 200 options for indicators, developed under five categories covering Human Rights, Openness, Accessibility, Multi-stakeholder participation and Crosscutting issues, including indicators concerned with gender and the needs of children and young people, sustainable development, trust and security, as well as legal and ethical aspects of the Internet.

UNESCO will be presenting the draft Internet Universality indicators at this WSIS Forum and I invite you all to attend this High Level Session on Wednesday, 215 March, from 13:30-15:00 in room 1 of the CIGG.



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Excellencies

Ladies and Gentlemen,

In taking this combined WSIS-SDG operational framework forward, UNESCO's position is clear — universal access to information and knowledge and freedom of expression are the foundations for inclusive and sustainable development. In empowering every woman and man, they are, fundamentally, forces for dialogue, mutual understanding, and lasting peace.

Citizens also need to have the critical thinking, literacy and digital skills required to access, analyze and use the information in different ways, offline and online.

All of this calls for proactive policies and strong partnerships at all levels.

In this regard, UNESCO calls on governments and partners present today at this Forum to leverage the power of Information and Communication Technologies to help achieve the sustainable development goals and promote the “free flow of ideas by word and image”.

It is also my pleasure to announce that UNESCO is jointly organizing 2019 WSIS hackathon under the theme 'hacking solutions for lifelong learning and livelihoods'.

We look forward to working with ITU and all stakeholders to facilitate young developers in creating solutions for achieving SDGs.

I take this opportunity to thank everyone in this room for your continued cooperation with UNESCO for consolidating inclusive knowledge societies and sustainable development and for making the world a better place for the future generations.

Thank you!



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WTO

Mr. Yi Xiaozhun Deputy Director-General

Good morning to my fellow agency heads, Ministers, esteemed officials, ladies and gentlemen. We welcome this opportunity to join your diverse communities of governments, organizations and stakeholders of the civil society that care deeply about the Information Society that is our common reality today. WSIS exists because we believe the information society can be a force for human progress toward meeting the most essential sustainable development goals, if we work together to ensure its fairness and utility in service to all.

As an agency of economic policy, for the WTO, seeking economic growth, reducing poverty, supporting innovation and expanding the infrastructures are among the SDGs that we hold dearly. Along with our UN partners, WTO has played a role in reducing prices and spreading access to essential communications such as Internet and mobile telephones and in facilitating trade and investment. Of course, our overall objective is that our efforts can lead toward economic prosperity, a prosperity that can and should be inclusive. At the same time, we see that more can and should be accomplished.

Like other agencies with which we collaborate, we are examining financial inclusion for the unbanked, working toward an enabling framework for electronic commerce, and launching efforts to promote trade that can be environmentally friendly . . . to name a few examples. We hold out hope that our collective work can help -- small economies, least developed countries and micro, small and medium enterprises -- to flourish and participate more actively in global economic activity.

I wish all of you well for the week ahead of rewarding activities. I trust that you will take advantage of the opportunity for dialog that is not only stimulating, but that can bear fruit for all segments of our society.



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UNITAR

Mr. Nikhil Seth, Executive Director

Let me start by thanking and congratulating ITU Secretary-General Houlin Zhao and our partners across the UN system on the successful and strong alignment of the WSIS Forum with the 2030 Agenda for Sustainable Development. With only 12 years to go, the

WSIS Forum 2018 provides a key opportunity to discuss how we can accelerate progress towards achieving the 17 goals and 169 targets globally by 2030. I must also express my appreciation for the background documentation including the global repository of good practices prepared by ITU.

The 2030 Agenda is a roadmap towards achieving sustainable and inclusive development for all, and like the other milestone agreements that were adopted by UN Member States in 2015 including the Paris Climate Change Agreement, it frames our aspirations for more equal, peaceful and just societies everywhere, and societies which end poverty in all forms and economies which grow along sustainable pathways. It is an ambitious plan for the world which will be achieved, in no small measure, by the implementation of the WSIS agenda.

Information and communication technologies are key enablers for sustainable development, bringing new opportunities and solutions to global challenges, providing the means to reach more people, including those most remote, with the greatest impact. I had a ringside seat in the development of the 2030 Agenda and the SDGs, and was struck at the political importance given to ICTs, and by the fact that most goals and targets will be achieved with stronger ICT application.

New ICT technologies and the growth of the digital sector offer opportunities to simultaneously make our societies economically more productive, socially inclusive and environmentally sustainable. Knowledge societies, connected in new, fast and dynamic ways through the digital space will be empowered like never before.

In the spirit of the 2030 Agenda, internet and digital technologies, if well managed, will provide the means to reach the furthest first and leave no one behind. Technologies can be true democratisers, connecting



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The furthest and most remote, facilitating trade, stimulating entrepreneurship, and accelerating development and promoting gender equality.

Whilst realizing this, we must also be sensitive in our policy making and leadership, to ensure that we strive towards inclusivity in the access to information and knowledge for all, bridging the digital divide. Today, billions of people across the world are connected to the internet. As we speak, some of you in this room are tweeting and posting and it may be easy to forget that access to the worldwide net is not universal, and if not well managed can exacerbate inequalities, disparities and unequal opportunities. And there are billions who are not connected.

In 2017, 48% of individuals worldwide could access the internet. Whilst 81% of individuals in the developed world had access to the internet, only 41% of individuals in developing countries and 17% of individuals in the LDCs had access. These figures show that there is an urgent need to address the digital divide. Technology is never impact neutral and rapid advances and unequal access widens income inequalities within and among countries. As we progress towards a hyper connected world we should not forget those who have nothing – inadequate food, no housing, no electricity and whose reality is squalor, disease and undernourishment.

ICT development over the last two decades has been powered by the public and private sector. The predominant energy in the public sector has been in the defence / military space driven by the geo-strategic perceptions of large powerful states. In the private sector it has been a few big companies driven by profits and growth. This is good because many of the technology developments and connectivity advances have positive spin offs for the upliftment of the poorest and most marginalised. But the time has also come, if we are to realise the SDGs, for large investments, along the action lines, primarily driven by the creation of the information society we want. Technology development cannot be motivated only by the drive for military advantage or growth / profits in the business sector.

Security must also be at the forefront of our thinking, ensuring that we have the correct policies, structures and partnerships in place, to tackle emerging issues such as artificial intelligence, data privacy, data misuse, intellectual property protection, job security and automatization.

Governance in these areas must address risks and threats, whilst not interrupting or stifling the environment of innovation, engagement and partnership which is so vital for so much of our progress towards the SDGs. This will be a crucial time for governments, the UN and the private sector to work jointly and build partnerships which ensure that the world of tomorrow is built on principles of rights, security, fairness and inclusivity, and does not jeopardize the creativity of actors, including private



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business, youth and civil society, to together build the Future We Want.

The World Summit on the Information Society (WSIS) Forum is our common platform for multistakeholder dialogue, knowledge generation, and the sharing of best practices towards common action on delivering ICTs for development. The WSIS forum provides opportunity to foster partnerships across multiple sectors, including different stakeholders from governments, private sector, civil society, technical community, academia and international organisations, to leverage information and communication technologies to achieve sustainable development.

At UNITAR we are committed to ensuring that the UN is a level playing field, by striving to ensure that our training harnesses the latest modern technologies, with the widest scope of accessibility, to reach the remote communities who are the most in need. We recognise how important the internet has become in disseminating knowledge, providing training opportunities and in changing peoples' mindsets and we are committed to working with the ITU, the private sector and other key partners to widen access to the internet; the world's greatest library.

We design and deliver innovative training to address the needs of individuals, organizations and institutions. We facilitate knowledge and experience-sharing through networked and innovative processes and conduct research on innovative learning strategies, approaches and methodologies including the use of ICTs for learning. We also advise and support governments, UN and other partners with technology-based knowledge-related services. We train over 20,000 participants online every year, through over 130 e-Learning courses. e-Learning allows us to reach audiences and affect the lives of so many more people than we would otherwise be able to reach and is therefore a vital pillar of UNITAR's work and functions.

The potential of ICTs in the world of human capacity building and learning is truly stupendous. We have been collaborating with Geneva University and Tsinghua University, and our activities are oriented to enhance the use of ICTs in the service of the poor and the SDGs. The potential of mobile telephony which now has the greatest penetration ever, in crowd sourcing social problems and solutions has been put to practical use by UNOSAT, one of UNITAR's flagship programmes.

I will close here. UNITAR looks forward to engaging in the Forum and presenting how UNITAR may support in furthering the promotion of ICTs for sustainable and inclusive development



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World Bank Group

Mr. Mahmoud Mohieldin Senior Vice President

Secretary General Houlin Zhao, Excellencies, Distinguished Ministers, and guests, on behalf of the World Bank Group, I am honored to participate in this year's World Summit on the Information Society Forum to discuss how to leverage ICT for achieving the Sustainable Development Goals (or SDGs).

Disruptive technology has the potential to dramatically accelerate progress towards the achievement of the SDGs. It will also help the World Bank Group achieve its twin goals of ending extreme poverty and boosting shared prosperity by 2030.

Some recent technological changes have brought transformational benefits to the poor:

For example, in Kenya, after the introduction of the M-Pesa digital payment system, the cost of sending remittances from workers in urban areas to their families in the countryside dropped by up to 90 percent.

In India, the Aadhar digital identification system has already reached more than 1 billion people, enabling many of the poor to access services more easily, and saving the government billions each year by reducing corruption and waste.

Estonia is perhaps closest to becoming a digital society as citizens can access more than 3,000 public and private services, using nothing more than their mobile phones.

And in China, Alibaba's e-commerce platform has created more than 8 million "netpreneuers" (net entrepreneurs), of which 62 percent are small-scale entrepreneurs, one-third are women, and one percent are people with disabilities.

Our recent World Development Report, entitled Digital Dividends, documents many more examples where digital technologies have promoted inclusion, efficiency, and innovation.



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However, automation is disrupting labor markets, and will displace a significant number of jobs over the next few decades. And let's not forget that 3.6 billion people still have no internet access at all.

At the World Bank Group, we are developing a corporate approach to disruptive technology. We are engaging people and governments, development partners, and the private sector to do four things.

First, we are expanding digital connectivity, with a focus on scaling up affordable access to broadband for all—including for women, persons with disabilities, disadvantaged communities, and people living in remote and rural areas.

Second, we are developing digital platforms and solutions that can improve public service delivery.

Third, the World Bank Group is strengthening the analog foundations of the digital revolution. Countries need to invest in people for stronger human capital and skills to match the demands of this new economy. They need better business climates with pro-competitive regulations so technology can take root fast. And they need good governance and robust institutions that promote accountability and uphold the necessary legal frameworks.

Regarding human capital, the World Bank Group is already investing in skills and capacity building in sciences, technology, engineering, computer sciences, and entrepreneurship in the several digital projects we are financing globally, in partnership with leading high-tech companies, academic institutes and regional centers of excellence. These activities can help equip youth with the needed skills to find jobs or to create their own enterprises.

Fourth, we are providing financing for the construction or upgrade of ICT infrastructure. Through our approach called Maximizing Finance for Development, we support countries efforts to raise more domestic revenues and attract more private financing and solutions -- to complement and leverage both public funds and official development assistance.

While we realize the great potential of new technologies like blockchain and crypto-assets, there are voices warning of the risks associated with the so-called cryptocurrencies, including fraud, money laundering, environmental effects, and the financing of terrorism. These observers have also suggested the need for policy and regulatory changes to ensure the integrity of financial systems in this new area.



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If we can mitigate these risks, then distributed ledgers could be used to address persistent challenges in the financial sector, and to change the roles of financial sector stakeholders. If properly deployed and regulated, it potentially can have a transformative impact on various sectors like manufacturing, government financial management systems, and clean energy.

Leveraging technology for the public good requires global cooperation and partnerships to amplify its benefits, and to identify the risks and mitigate them. Ten years after the financial crisis, we have learned that preventing and dealing with risks early on is less costly in financial and human terms than doing it too late.

Disruptive technology is pushing development institutions to step out of their comfort zones, and to seek innovative partnerships. Just two weeks ago World Bank Group President Kim announced in Barcelona a partnership with GSMA and mobile network operators around the globe to harness big data from the “Internet of Things” -- to help end extreme poverty and to unlock new drivers of economic growth.

The disruptions and changes in ICT can be transformative. Through global cooperation and partnerships – putting SDG 17 into action -- we can and must ensure that the benefits and risks are shared more equitably, and that ICT is used as a catalyst to achieve the 2030 Development Agenda.

Thank you.



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UNCSTD

Mr. Peter Major Vice- Chair

Excellency, Majed Sultan Al Mesmar, Chairman of the WSIS Forum, Honorable Ministers, Excellencies, Colleagues, Ladies and Gentlemen!

On behalf of the United Nations Commission on Science and Technology for Development it is an honor for me to greet the participants of the WSIS Forum 2018.

Let me take the opportunity to express my appreciation to the co-organizers of the Forum, to the ITU, UNESCO, UNCTAD and UNDP all specialized agencies of the UN, the regional organizations and all stakeholders, last but not least to the sponsors who contributed to the holding of this event.

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

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

- The Commission reviews and assesses progress at the international and regional levels in the implementation of WSIS action lines;
- It shares best and effective practices and lessons learned and identifies obstacles and constraints encountered;
- It promotes dialogue and fosters partnerships, in coordination with other appropriate UN funds, programmes and specialized agencies, to contribute to the attainment of the Summit objectives and the implementation of its



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outcomes and to use information and communication technologies for development and the achievement of internationally agreed development goals, with the participation of Governments, the private sector, civil society, the UN and other international organizations in accordance with their different roles and responsibilities

- The CSTD through its Secretariat prepares the report of UN Secretary General on “Progress made in the implementation of and the follow-up to the World Summit on the Information Society (WSIS) outcomes at the regional and international levels” based on input from UN specialized agencies, regional organizations and IGF Secretariat.

The Commission, in addition to its inter-sessional panel, meets annually for a period of one week to discuss among others two selected topics related to science and technology with focus on the implementation of the SDGs. The main topics for the 21st session of the CSTD this May will be

1. The role of science, technology and innovation to increase substantially the share of renewable energy by 2030
2. Building digital competencies to benefit from existing and emerging technologies, with special focus on gender and youth dimensions

The outcome of the discussions will be forwarded to the UN GA and ECOSOC, and transmitted as a contribution to the High Level Political Forum of the UN.

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

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

The WSIS resolution drafted during the 20th session of the Commission and endorsed by ECOSOC in July 2017 “*Recognizes* the value and principle of multi-stakeholder cooperation and engagement that have characterized the World Summit process since its inception and that are clearly recognized in the 2030 Agenda, and notes that many activities that support the objectives of the World Summit and the Sustainable Development Goals are being implemented by Governments, international organizations, the private sector, civil society, academic and technical communities and multi-stakeholder partnerships in their respective roles and responsibilities”

Ladies and Gentlemen!



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At this point I want to mention the Working groups of the CSTD requested by relevant resolutions of the UN GA. The Working Group on Improvements to the Internet Governance Forum (WGIGF), a multi-stakeholder working group – in its final report produced 45 recommendations, approved by ECOSOC and noted by the UN GA in its WSIS+10 outcome document. I am pleased to note that the majority of the recommendations have been implemented.

The work of the Working Group on Enhanced Cooperation, a multi-stakeholder working group (WGEC) was recognized by ECOSOC and the UN GA, and UN GA final document on WSIS+10 requested the Chair of the CSTD continue the work by constituting a new working group.

The CSTD WGEC 2.0, a multi-stakeholder group of experts held four meetings, with valuable contributions, discussions and draft recommendations, but did not come to a consensual agreement on a report with recommendations. This outcome indicates the difficulty of the task, and reflects the complexity political situation. The discussions contributed to better understanding of the issues and different positions and serve as basis for further deliberations.

The WSIS+10 outcome document reaffirms the tasks of the CSTD related to its mandate on WSIS and calls for “the continuation of annual reports on the implementation of outcomes of the World Summit on the Information Society, through the Commission on Science and Technology for Development, to the Economic and Social Council, taking into account the follow-up and review of the 2030 Agenda for Sustainable Development, and in this regard invite the high-level political forum on sustainable development to consider the annual reports of the Commission on Science and Technology for Development. We encourage the members of the United Nations Group on the Information Society to contribute to the reports.”

Ladies and Gentlemen,

I hope to have given you some insight into the work of the Commission in general and related to WSIS in particular. This year the WSIS Forum once again showcases good practices and successes of the multi-stakeholder cooperation. The valuable information related projects, the discussions and recommendations will be reported to the CSTD for consideration during its upcoming annual meeting and will be taken into account in the drafting the ECOSOC resolution on “Assessment of the progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society”. Let me reiterate my appreciation to the co-organizers and take the opportunity to wish you a very successful WSIS Forum.

Thank you for your attention



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The Conference of NGOs (CoNGO)

Mr. Cyril Ritchie
First Vice President

Excellencies, Distinguished Delegates, Ladies and Gentlemen,
Sisters and Brothers of Civil Society:

The Conference of NGOs in Consultative Relationship with the United Nations, known for short as the Conference of UN NGOs, and even shorter as CoNGO, is this year marking its 70th Anniversary. 70 years of close cooperation with the United Nations System, constantly sharing UN goals and values, often bringing a critical voice to the table, and always striving to ensure that the largest range of civil society voices is heard in UN deliberations.

The successive WSIS Forums have been among the most welcoming and constructive of UN mechanisms in incorporating civil society concerns, and we thank the organizing partners for understanding that competent and responsible civil society input enhances coherent and implementable governmental output.

In working with the United Nations System worldwide, CoNGO relies heavily on its structure of what we call Substantive Committees - more than 40 such Committees deal month by month, sometimes day by day, with the substantive issues that constitute the UN's agenda: indeed I should say agendas.

CoNGO's most recently created Substantive Committee is on the subject of Intergenerational Solidarity, and we recognize that the Information Society in its widest connotation offers unlimited opportunities for intergenerational solidarity. I need hardly recall that NGOs over the centuries, and increasingly so today, have had the hallmark of being immensely diverse and extraordinarily innovative. Many have been intergenerational from their origins, without even knowing that the word would one day exist!

Nothing could be more timely than that an intergenerational construct be incorporated into the WSIS Forum as it makes its essential contribution to advancing the Sustainable Development Goals, for the SDGs provide a rallying point and a Call to Action to the entire world - rich and poor, business and civil society, women and men, national and local governments, employers and workers, economists and



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environmentalists, academics and trainee teachers, and of course the young and old and all in between.

This week's WSIS Forum and all the SDGs give us the opportunity to see beyond our operational and structural silos, beyond dim and bureaucratic horizons, and beyond age clivages.

There are of course obstacles to our unfettered pursuit of imaginative intergenerational cooperation for implementing the SDGs. One obstacle is money. The United Nations itself is chronically underfunded by those same governments who expect it to be the beacon and even the motor for implementation of the SDGs, not to mention its central role in maintaining world peace and the rule of law. At the same time, NGOs are under constant pressure to find core funds to underpin their very existence, so that they may develop their vital advocacy and operational programmes. We must hope that more foundations and socially-responsible corporate bodies will step up to the plate to financially strengthen the myriad of responsible intergenerational NGOs., notably those in this room and elsewhere working to expand the benefits of the Information Society to unreached populations and communities.

Let us use this WSIS Forum to augment the Information Society contribution to the implementation of the SDGs by more intense involvement of children, youth, the actively employed, early retirees, late retirees, and indeed of all women and men of good will and responsibility. CoNGO pledges its structures towards not only "The World We Want", but "The World We Need".

Cyril Ritchie
CoNGO First Vice President
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High-level Strategic Dialogue - Multistakeholder Partnership for WSIS Implementation

Webcast: <https://www.itu.int/net4/wsis/forum/2018/RP/Webcast/256#intro>



- **Chairman** - H.E Eng. **Majed Sultan Al Mesmar**, Deputy Director General, Telecommunication Sector, Telecommunications Regulatory Authority (TRA), United Arab Emirates
- **Mr. Malcolm Johnson**, Deputy Secretary-General, ITU (Moderator)
- **UNECE** - Ms. Olga Algayerova, Executive Secretary
- **UN-ESCWA** - Mr. Mohamed Ali Alhakim, Under-Secretary-General and Executive Secretary
- **Rwanda** - H.E. Mr. Jean de Dieu Rurangirwa, Minister, Ministry of Information Technology and Communications (MiTEC)
- **Japan** — H.E. Mr. Masahiko Tominaga, Vice-Minister for Policy Coordination (International Affairs), Ministry of Internal Affairs and Communications
- **Oman**- Mr. Dr. Salim Al Ruzaiqi, CEO, Information Technology Authority
- **Poland** — Mr. Marcin Cichy, President, Office for Electronic Communications
- **Switzerland** – Mr. Thomas Schneider, Ambassador and Director of International Affairs, Swiss Federal Office of Communication (OFCOM)
- **IEEE** - Ms. Karen Bartleson, Past President and CEO
- **ICANN**- Mr. Tarek Kamel, Senior Advisor to the President and CEO for Government and IGO Engagement
- **ISOC**- Ms. Constance Bommelaer, Senior Director of Global Internet Policy



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Executive Secretary of the United Nations Economic Commission for Europe (UNECE)

Ms. Olga Algayerova
United Nations Under-Secretary-General

Excellencies, distinguished delegates,
It is a great pleasure to join you at the WSIS Forum 2018.

The world, our world, is facing significant challenges: the damaging prospects of climate change; the continued threat to social cohesion created by unemployment and income disparities; unrelenting environmental pressures...

It is a time of unmet needs and disruption. But it is also a time of promise.

Innovation, in all areas, is rapidly opening new possibilities. And this concerns not only technological discoveries. New forms of organization of production and business models are emerging. The delivery of services by the public sector is also being transformed. Data analysis is offering us fresh insights on how to drive these changes.

ICTs, in many different ways, are often at the heart of these innovations.

We need to match the widening of our technological possibilities with the policy ambition, with the vision that would ensure that this potential is harnessed for the common good.

The 2030 Agenda offers a blueprint for transformation where all efforts can converge; a framework that contributes to the coherence of multiple initiatives and opens spaces for new policy actions. The alignment between the WSIS Action Lines and the Sustainable Development Goals will strengthen the contribution that ICTs can make to the implementation of the 2030 Agenda.

Tackling many of the problems we collectively face will require interventions at the city level. Even in regions that are already highly urbanized, like the UNECE region, the share of the population living in cities will continue to increase. Transforming our cities – fighting pollution, introducing new forms of mobility, reducing resource use, and avoiding social exclusion...- is essential to deliver on the 2030 Agenda. These are challenges that relate to the SDGs at the core of UNECE activities.



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ICTs can greatly improve the way in which cities are managed, increasing efficiency and facilitating new forms of public participation. UNECE and ITU have been collaborating together and with other organizations in fostering smart sustainable cities, an area of activity that will contribute to the achievement not only of SDG 11 but to many others. A major focus of these efforts is encouraging public-private collaboration and facilitating partnerships to develop smart sustainable city projects and promote innovation.

ICTs are of particular significance to address a critical issue that hampers efforts for collective action in many areas: coordination. This emerges, for example, in an area where UNECE is significantly involved, Intelligent Transport Systems and transport innovation, including connected and automated vehicles.

Developing the sustainable transport systems of the future requires extensive coordination efforts, which are facilitated by the use of ICT tools. But our ability to use these tools depends also on our success in building strong partnerships for collaboration.

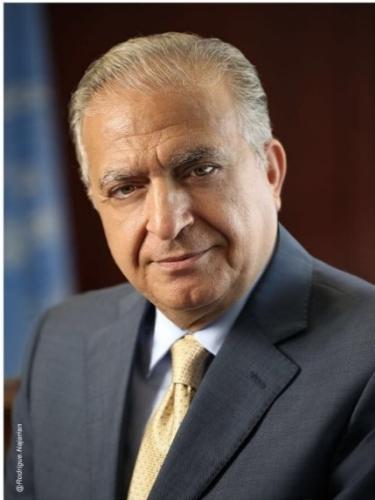
Before concluding, I would like to underline a critical aspect of ICTs: their ability to empower individuals by facilitating access to knowledge and eliminating barriers across gender and social divisions. We need to ensure that our actions contribute to enhance the role of ICTs to deliver on the promise of the 2030 Agenda of leaving no one behind.

Let me wish you a productive and enjoyable WSIS Forum 2018.

Thank you.



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UN-ESCWA

Mr. Mohamed Ali Alhakim **Under-Secretary-General and Executive Secretary**

The Under-Secretary General of the United Nations and Executive Secretary of the Economic and Social Commission for Western Asia (ESCWA), Dr. Mohamed Ali Alhakim, delivered a statement at official opening of the WSIS Forum 2018, Geneva, Tuesday 20 March 2018. In his statement, Mr. Alhakim has highlighted the central role of ESCWA as a regional commission in supporting the 18 member states in the Arab region, which are diverse in terms of technology and some of which have advanced significantly their information society efforts; for example, two countries in the Arab region, namely Saudi Arabia and United Arab Emirates, are well advanced in terms of utilizing technologies, modernizing cities as well as the educational system and other systems. In addition, Egypt has done a tremendous effort with ICT technologies and have well-advanced in the Arab region.

On the other hand, the multitude of conflicts from which the region is suffering was pointed to, especially in Yemen, Syria and Libya, together with the low internet speeds and limited development in technologies at the time that the developments in the rest of the world are reaching the 5G technology where many countries are trying to experiment with the 10 gig speeds in terms of technologies.

The Arab region, he added, requires a lot of assistance to be at par with the rest of the world, stressing the important role of ESCWA in partnership with key organizations, such as the ITU, and while working together towards an enabling environment within which the private sectors can thrive and educational systems can develop, and the youth segment of the society can utilize and acquire advancing technology.

The focus areas of work of ESCWA as a regional commission were highlighted in the statement, including digital transformation and green technology, both of which are essential to development in the Arab region. With many countries in the Arab region undertaking digital transformation, for example, Lebanon has just recently launched its digital transformation programme, which goes beyond eGovernment and hand-in-hand with sustainable development in general.



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Emphasis was put on the importance of collaborative work with ITU and other U.N. regional organizations to advance efforts on digital economy, employment and innovation. ESCWA plans to address the concept of technology, innovation and development in relation to youth and employment within the upcoming 2018 ESCWA ministerial session, planned for June 2018.

Quote of the Executive Secretary, from his written statement: "***Digital technologies are growing fast in the Arab region, contributing to development processes in all sectors and improving quality of life. The WSIS process can help these advancements and accelerate progress.***"



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Japan

H.E. Mr. Masahiko Tominaga
Vice-Minister for Policy Coordination (International Affairs)
Ministry of Internal Affairs and Communications

Q1. As for this year's WSIS forum theme, "Leveraging ICTs to build Information and Knowledge Societies for achieving the SDGs", what is our key priority?

Q2. To accomplish that priority, how do you collaborate with multi-stakeholders?

Excellencies, distinguished guests, ladies and gentleman. I am honored and pleased to attend 2018 WSIS Forum.

I would like to celebrate 15 years of Implementation of Geneva Plan of Action, and express my sincere appreciation to the ITU Secretary-General, distinguished representatives of international organizations, WSIS Secretariat and all stakeholders.

As for this year's WSIS forum theme, I think there are 2 key priorities. The first is to ensure access to ICT for all people everywhere. Half the people on the globe are still offline, so bridging digital divides is still the most crucial and urgent issue. In order not to leave anyone behind from the growth led by ICT, we first need to provide everyone with access even if the access speed is not high.

All stakeholders have the responsibility to consider how to achieve this through exchanging knowledge and experience, and collaborating together. In parallel, considering the rapidly evolving digitization, it is also important to create the sustainable ICT infrastructure development plan which can accommodate large amounts of data traffic for the coming digital transformation era.



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Japan promotes the public-private initiative named “Quality Infrastructure Investment“, and contributes to bridging digital divides through the development of ICT infrastructure. From a long-term perspective, the key is how to reduce Life Cycle Cost considering operation and maintenance cost, not only focusing on cheap initial cost. This initiative also includes capacity building and skill transfer for operation and maintenance. In addition, we should make fair and transparent policy and legal frameworks that encourage competition and investment. These activities can enable affordable access for everyone.

The second priority is to promote and protect the free flow of information. I believe the free flow of information is essential to maximize the benefit of ICT and digitization, and to make everyone use the resources of the cyberspace to the full extent. Considering the cross-border nature of ICT, it is absolutely necessary to enable the utilization of ICT in various fields beyond boundaries, and to promote it in an internationally harmonized manner. The more harmonized, the more benefits of digitization increase, and as a consequence, digital transformation will be accelerated, and Information and Knowledge Societies will be developed.

In order to effectively accomplish these 2 priorities, collaboration with stakeholders is indispensable.

In Japan, when we develop policies on ICT, we always establish a dialogue with the inclusion of multi-stakeholders, where we exchange knowledges, consider societal and economic implications, and recognize each respective role and responsibility. I believe it is highly important to involve related stakeholders from the early stages of planning, design or policy making.

Furthermore, partnership among stakeholders should be fostered not only at national level, but also regional and international level.

We, the government of Japan, will continue to put forth our best possible efforts, together with ITU and all stakeholders.

Thanks you for your attention.



Oman

Mr. Dr. Salim Al Ruzaiqi
CEO
Information Technology Authority

1) Oman has been active in the WSIS process for many years. Please give us some examples of your achievements at the national level.

- The most significant impact of Al Shifa system is through the Mother and Child module.
- ITA established the Woman Community Knowledge Centers or WCKC, the centers are equipped with computers, and other modern peripherals as well as internet services which allow access to the internet and different educational programmes.
- More than 50,000 women have been trained.
- By being IT literate, these women can now leverage on the eServices provided by the various government agencies for health, education, social and economic issues they face every day.
- Today, Omani women perform a vital role in society. Oman has felt the impact of women's efforts in the work force, while maintaining their social role as mothers and housewives. They are preparing future generations and instilling in them Omani values and traditions, while managing family resources
- We have women as Ministers, ambassadors and members of Parliament.

2) You have talked about Civil Service employees, and community programs for empowering women. Do ITA has any initiatives in training the girls/ youth SMEs to create jobs for them?

- More than half of the Omani population are women, ITA has made sure not to leave them behind and to reach them wherever they are.



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- Oman/ ITA has paid special attention to the issues that arise with regard to women's entrepreneurship and how incubators can be designed to address the specific needs and support environment called for by women entrepreneurs.
- About 800 Omani girls received specialized IT training in various strategic fields to meet immediate needs and future critical ICTs in order to promote the growth of the local ICT sector both in the public and private sector.
- We also have our Landmark programs which are unique in the region (The SAS Programme)
- 'SAS' is an Arabic concept that refers to any solid foundation, which designed to provide the foundation for creating a new and vibrant ICT industry, thereby fostering an entrepreneurial spirit in the ICT sector in Oman.
- 52 companies have been incubated (30% are Omani women). These companies provided products and services in the following areas; system integration, web/software development, graphic design 2D/3D, GIS, film making shooting/Graphic, Mobile applications, social media, website development and management.
- The SAS VR Center is a state-of-the-art center established as regional hub providing the infrastructure required for the development of virtual reality projects and multimedia contents to the local as well as the regional markets.
- Apart from training and entrepreneurship, the SAS VR center also aimed at developing an Arabic Digital Content in the field of multimedia and virtual reality, as well as motivating young Omanis to go in for entrepreneurship and establish Omani businesses in the field of multimedia and virtual reality, and also to support the research projects and promote the national academic institutions in the field of virtual reality.
- Since its inception in June 2012, a total of 550 Omanis youth have been trained and attained professional qualifications in digital media and virtual reality technologies. More than 80% of these youth are Omani women. In fact, Omani women top all the 5 batches of the Entrepreneurship training programme.



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Switzerland

Mr. Thomas Schneider
Ambassador and Director of International Affairs
Swiss Federal Office of Communication (OFCOM)

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

[Question 1 - What is the role of multistakeholder partnership for WSIS implementation on national level?]

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

National governments need to know what citizens and businesses need. They need to listen to everybody - including minorities and vulnerable groups. They need to find a balance between all different interest and needs, so that – also on national level – no one is left behind.

To succeed in the digital arena it is crucial for all stakeholders to work closely together.

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

Enhancing cooperation between all stakeholders is not a new idea, but it is still not sufficiently done and often not with the right attitude. We need a new culture, a new spirit of cooperation and sharing among all stakeholders – starting from the national and then moving up to the international level.

We need to understand and show by example on the national level that it is a win-win for all stakeholders, including ministries and government agencies, to cooperate and support each other in their work. Furthermore, Governments need to earn the trust of all stakeholders and their willingness to cooperate through being accountable to them. But we also need to build capacities of businesses and citizens that they do understand that it is also in their interest that they act responsibly and accountably to society as well.



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In 2016, Switzerland adopted its strategy called „Digital Switzerland“. This strategy is continuously being developed in a dialogue with representatives from the economy, civil society, the technical and academic community – and media as well.

To that end, a national dialogue was launched and, in 2017, a national conference was held to discuss opportunities of digitalization and to identify how the strategy can be improved.

[Question 2 - What is important on international level?]

A constructive, respectful and responsible cooperation among all stakeholders is in our view crucial if we want to successfully benefit of the digital opportunities. Multistakeholder cooperation, however, does NOT mean that we all have the same roles and responsibilities. But we are equal that we have to share the overall responsibility for developing our digital societies.

In order to find out what our respective roles are, and in order to also mutually agree on and accept our respective roles, we need to sit together and openly discuss digital policies. This includes all opportunities and challenges, and takes into account all special needs. We can then identify each other's roles and responsibilities, foster awareness of the needs of various stakeholders, and identify new partnerships and solutions.

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

This is why, in 2014, the Swiss government launched the Geneva Internet Platform – operated by DiploFoundation. We hope that GIP can continue making a meaningful contribution to capacity building in the field of digital policy, and invite all interested parties from all stakeholder groups to actively take part and make good use of it.

And of course, Switzerland supports the relevant fora for multistakeholder dialogue as they offer a venue to identify and discuss decisive and emerging policy issues related to the digitization of our societies and economies, and to reflect critically on existing digital governance processes, and contribute to the shaping of future processes. From its early days, Switzerland has been supporting the WSIS Forum as a partner for specific activities – as we are doing again this year.

Switzerland also attaches great importance to the UN Internet Governance and other IGF-based structures like the European Dialogue on Internet Governance. We think that the IGF with its bottom-up and inclusive structure, where the agenda is set by the participants, has a unique role and potential in the global mass of IG conferences as through this bottom-up nature, it serves as a catalyst that brings up new issues as well as new solutions. So we were very happy to have hosted the IGF 2017 last December here in Geneva at the Palais des Nations.



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And we are looking forward to participating in the IGF consultations that are taking place here in Geneva today and the coming days.

Discussions at the IGF showed that, as the Internet and digital technologies continue to evolve, better-coordinated digital governance systems are needed to maximize the opportunities offered by these technologies, and to address the challenges they bring.

How such systems could or should look like, and what they should focus on, however, remains an issue to be further discussed.

Ladies and Gentlemen,

Let me conclude by thanking the ITU, UNESCO, UNDP and UNCTAD as well as the action line facilitates and co-facilitators who have contributed to the implementation of the objectives of the World Summit on the Information Society.

Finally, on behalf of the Swiss federal authorities as well as the canton and the city of Geneva, I am pleased to invite you to a reception to be held tonight at the premises of the CIGG.

Thank you for your attention.



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IEEE

Ms. Karen Bartleson
Past President and CEO

Secretary General, Honorable Ministers, Distinguished Guests, Ladies and Gentlemen, I am honored to be here today, and I am pleased to deliver this statement on behalf of IEEE as a Specific Activity Partner of the 2018 WSIS Forum.

IEEE shares the vision of an inclusive and development-oriented information society, centered around individuals, as outlined by the United Nations through the World Summit on the Information Society. Information and Communication Technologies – ICTs – will play a critical role in sustainable

development of the human race and our planet. IEEE is the world's largest technical professional organization, representing over 420,000 members worldwide from over 190 countries. As an international body, IEEE has a vital role for impactful technology development and standardization. Our members continue to shape ICTs for current and future generations. Grounded in the principles of openness, transparency, and inclusiveness, we work in collaboration with stakeholders around the globe to advance technology for the benefit of humanity.

The entire global technology ecosystem is confronting a significant challenge in terms of ethics in design, including Artificial Intelligence and Autonomous Systems or AI/AS. The ongoing development of powerful technologies and disruptive innovations in autonomous and intelligent systems demands a keener focus on social responsibility and accountability from the global technology community.

As the use and impact of AI/AS become pervasive, there is a need to establish societal and policy guidelines in order for such systems to serve humanity's values and ethical principles. To contribute in a positive manner, stakeholder communities need to participate in an open and honest debate around sets of values, institutions, symbols, and representations. This will allow for an elevated level of trust between people and technology that is needed for AI/AS to be truly beneficial to our daily lives.

AI and AS have been recognized as key enablers for achieving the goals of humanitarian relief, human rights, and the SDGs. This recognition provides the opportunity to demonstrate the positive and supportive role that these technologies can play in these critical areas. The narrative of autonomous systems for the common good is beginning to present itself in various settings. Key elements framing this common-good discussion relate to the need for it to be human-centered and include the need for accountability in order to ensure that all outcomes are fair and inclusive.



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The scaling and use of AI/AS represent a genuine opportunity to provide individuals and communities with greater autonomy and choice. AI/AS will potentially disrupt all manner of economic, social, and political relationships and interaction, particularly for the labor market and availability of jobs. These disruptions will provide a historical opportunity to re-establish these relationships so that they are reflective of updated and sustainable notions of autonomy and choice.

Currently, many debates surrounding AI/AS are taking place within advanced countries among individuals benefiting from adequate finances and above average living conditions. It is imperative that all people throughout the world - regardless of their socio-economic status - are considered in the development and application of AI/AS to avoid the risk of bias, excessive imbalances, and general non-acceptance of these technologies. In the absence of that comprehensive environment, AI/AS policy issues will be addressed piecemeal by different jurisdictions and in different sectors. In that context of distributed policy making, disjoint and possibly conflicting policies and initiatives are the likely result, reducing potential, positive impact. However, some measure of policy harmony can still be achieved if there is a common framing or policy generation process that can be shared across jurisdictions and/or sectors.

As a person who believes in the power of technology to benefit humanity, I find the widespread deployment of AI/AS to be a very compelling vision. I think most of you in this room do, too. But I think we can also agree that it's a challenging vision, as well. The potential benefits for quality of life are breathtaking; the ethical questions to be solved, however, are daunting:

- Who determines when and how AI/AS can be used?
- Who monitors AI/AS development and expansion?
- Who ensures compliance with safety standards?
- Who takes responsibility when AI/AS malfunctions?
- What safeguards are in place to protect the massive amount of data and personal information needed to power AI/AS?

Such questions at the outset of AI/AS proliferation around the globe illustrate the pressing need for deep conversation and open, balanced collaboration among diverse stakeholders ... the AI/AS experts who understand the technologies ... the policy makers who devise the regulatory environment ... the public who have varying levels of interaction and acceptance of AI/AS. If we are to realize the best version of the world's AI/AS vision, it is imperative that we comprehensively address the ethical challenges today. Ethics must be a non-negotiable part of our composition as engineers and scientists. Ethics in design must be ingrained within us as a guiding principle.



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In furtherance of the AI/AS vision, IEEE created the IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems. This initiative brings together an international group of experts to pursue the goal of safe and beneficial AI/AS in an open and collaborative manner. The initiative recently published the second version of a document titled: *Ethically Aligned Design: A Vision for Prioritizing Human Well-being with Autonomous and Intelligent Systems*. It is the most comprehensive, crowd-sourced global treatise regarding the ethics of autonomous and intelligent systems available today. In addition, the initiative has led to more than ten standards projects in various stages of development to address the current and future impacts of AI/AS.

IEEE is committed to working with all stakeholders seeking to leverage Information and Communication Technologies to implement the WSIS vision. In the past, here at the WSIS Forum, IEEE stated that achieving the SDGs is not an easy task but one that everyone in this room is willing to accept. We believe that in collaboration with others, we have helped make advances toward this grand achievement by utilizing our collective skills, expertise, and experience.

We look forward to continued collaboration with all of you.

Thank you.



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ICANN

Mr. Tarek Kamel
Senior Advisor to the President,
CEO for Government and IGO Engagement

1. Could you explain the benefits you see in ICANN being a Partner with the ITU for the WSIS Forum?

- Good morning to all and let me start by thanking the ITU for inviting me to say a few words for ICANN this morning; we truly value our partnership not least for the WSIS Forum. Thank you, Mr Chairman, for your kindness and I would like to recognize Mr. Malcolm Johnson, the Deputy SG of the ITU and a good friend of ICANN;
- ICANN has been a partner with the ITU for the WSIS Forum for the last 5 years and it is a pleasure for me to be able to represent ICANN at this important annual event;
- Engagement in the WSIS Forum is important for ICANN to understand developments in the field of ICTs for development, and also to have opportunity to explain to a sophisticated audience what we do and where we might contribute; not least in contributing to the UN 2030 Sustainable Development agenda;
- We also welcome opportunity of taking part in sessions such as this and also hosting workshops on issues relevant to ICANN but also the wider ICT and Internet Community;

2. As a multistakeholder organisation do you think ICANN brings any unique insight to the table in terms of using ICTS to help implement the WSIS Action Lines and the Sustainable Development Goals (SDGs)?

- ICANN is essentially a technical organization that coordinates important elements of the Domain System; essentially allowing all Internet users to connect with one another;
- We do not “run” the Internet – in any sense – but do contribute – with our technical partners such as ISOC and the Regional Internet Registries to the maintenance of an open, singular and secure Domain Name System;
- While ICANN is essentially a technical workshop we do contribute to the developmental agenda, in providing a single and operable DNS and also in the provision of International Domain Names (IDNs) which are top level domains (whether based on country codes or generic names) in non-



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Latin scripts;

- There are over 100 of these International Domain names now in Chinese, Indian, Cyrillic and Arabic scripts; all fostering local content and thus enhancing connectivity; this being where the link with the implementation of the UN SDGs comes in;
- There is clearly more to do increase connectivity globally and therefore it is really important we work together in multistakeholder settings; like the WSIS Forum to foster the further development that is required.



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High-Level Strategic Dialogue – ICTs Advancing the Implementation of SDGs Celebrating 15 Years of Geneva Plan of Implementation

Webcast: <https://www.itu.int/net4/wsis/forum/2018/RP/Webcast/256#intro>



1. **Chairman H.E Eng. Majed Sultan Al Mesmar**, Deputy Director General, Telecommunication Sector, Telecommunications Regulatory Authority (TRA), United Arab Emirates
2. **Mr. Brahim Sanou**, Director, Telecommunication Development Bureau, ITU (Moderator)
3. **Ghana** – H.E. Mrs. Ursula Owusu-Ekuful, Minister, Ministry of Communications
4. **Brazil**– H.E. Mr. Andre Borges, Secretary of Telecommunications, Ministry of Science, Technology, Innovation and Communication
5. **India** – Ms. Aruna Sundararajan, Secretary (Telecom), Vice-Minister, Ministry of Communications
6. **Mexico** – Ms. Yolanda Martinez Mancilla, Chief of National Digital Strategy, Government of Mexico - Office of the Presidency
7. **H.E. Amb. Janis Karklins**, President of WSIS 2005 Preparatory Committee for the Tunis Phase
8. **Prof. Vladimir Minkin**, Chairman of the Multistakeholder Preparatory Process, WSIS +10 High-Level Event 2014, Geneva
9. **Mr. Marc Furrer**, Former Director of the Swiss Federal Office of Communications (OFCOM)
10. **Mr. Ridha Guellouz**, International Expert in ICT strategies, President - Tunisian ICT Association – ATTIC Tunisia
11. **UNDP**- Ms. Maria Luisa Silva, Director, UNDP Representation Office in Geneva
12. **International Chamber of Commerce** -Ms. Elizabeth Thomas-Raynaud, Senior Policy Executive



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Ghana

H.E. Mrs. Ursula Owusu-Ekuful
Minister
Ministry of Communications

Thank you for the opportunity to be part of the 2018 WSIS forum and to contribute to the High-level Strategic Dialogue. Ghana commenced the implementation of its ICT for Accelerated Development Policy in 2004 and still implementing aspects of it. The country has benefited immensely from the implementation of the World Summit on the Information Society (WSIS) through stakeholder engagements and learnt from best practices.

Currently the country is implementing a new phase of its ICT development with the digitization of its social systems: e-government, National Digital Property Addressing System etc. The country is also sustaining its inclusion in the information society.

In going forward, robust ICT infrastructure must be in place to achieve sustainable results.

Ghana is also engaging the private sector to participate in the provision of ICT facilities.

WSIS has become a learning experience for the country and through engagement in such fora, it is able to put its universal access funds to varying use.

With continued collaboration, the country will be the go-to place for everything ICT in the West Africa sub-region.

Thank you.



Brazil

H.E. Mr. Andre Borges
Secretary of Telecommunications
Ministry of Science, Technology, Innovation and Communication

The Brazilian strategy to progress with the implementation of the SDGs, evidently, involves several actions.

In the infrastructure dimension, much has already been done, but there is still a long way to universalize it. The main actions that our government are pushing are:

- Connect 30,000 public schools, urban and rural, with high-speed broadband access, in terrestrial or satellite networks, within the framework of the Connected Education Program.
- Enable the use of resources, from various sources, for the construction of data transport networks and broadband access.
- Prioritize the definition of new commitments, to be established in radiofrequency bids, for the construction of mobile broadband access networks.
- Accelerate the deployment process of 4G networks using the 700 MHz radio frequency band, especially in municipalities that do not depend on the release of this band in the transition to digital TV.
- Encourage state governments to implement tax relief policies to spread the coverage of mobile networks, as some states have already done.
- Reformulate the legislation of the Telecommunications Universalization Fund (FUST) to enable its application in expanding broadband access and expanding its use, both in urban environments and in rural and remote areas.
- Expand the engagement of research and development centers in the multilateral forums for defining the international standards and radio frequency bands to be established for the fifth generation of mobile telephony (5G).



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- Promote the implementation of networks (including connectivity, processing and storage) to integrate research, education, health and safety institutions with high-speed networks, stimulating scientific and technological exchange and, at the same time, benefiting the society in general situated in remote regions.
- Make long-term investments and articulation between infrastructure initiatives for data communication (eg. national critical infrastructure), computing (eg. high performance computing or high performance computing - HPC) and data storage to meet the needs of cyberinfrastructure services for large science and technology projects, in cooperation with highly demanding ICT companies, supporting PD & I projects in this sector.



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India

Ms. Aruna Sundararajan
Secretary (Telecom), Vice-Minister
Ministry of Communications

ICTs have been recognized as one of the most important tools for attaining the SDGs. In order to realize the vision of inclusive growth, the Government of India has launched a holistic programme viz. 'Digital India' that envisages financial inclusion as well as social inclusion through universal penetration of ICT infrastructure and services throughout the vast and highly diversified geographical stretch of the country.

One of the most important initiatives is the Bharatnet project that envisages providing broadband access to 250 thousand clusters of villages through optical fibre connectivity by March 2019. Government of India is providing 100% funding for creation of this huge infrastructure that would be shared by all the service providers on non-discriminatory basis. Efforts are being directed to extend Mobile coverage to all the unconnected villages in the country including remote islands, hilly, and forest areas by laying submarine cables from islands to mainland and deploying solar energy based solutions in remote and sensitive areas. Another enabling tool of e-governance being emphasized in India is the JAM Trinity, i.e., combination of Jan-Dhan bank accounts, Aadhaar, and Mobile. Jan-Dhan involves banking the unbanked. Aadhaar is a unique digital identity being allotted to each and every citizen of India helping in targeted dissemination of subsidies thereby eliminating the leakages. In combination with these two, by universal provision of mobile broadband access, the ultimate goal of social, financial, and digital inclusion may be simultaneously achieved.

Policies regarding transparent spectrum allocation procedure, optimum spectrum utilization, ease of doing business, flexible Right of Way (RoW) rules, etc. have been effectively implemented. The success of these policy measures is reflected by the fact that broadband connections in India have increased from less than 15 million in July 2012 to nearly 325 million in September 2017 and it is further increasing. To enable the people to reap the benefits of e-governance and m-governance, India launched a massive programme intending to provide IT training to 60 million rural citizens by 2019. Summarily, India is adopting a holistic approach towards creating an enabling ecosystem in the country for social, financial and digital inclusion thereby contributing to the world efforts for attaining SDGs.



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Various policy initiatives taken by the Government of India in telecom sector have largely been successful. In future, role of 5G technology is going to be critical for inclusive growth and SDGs, e.g., key sectors for attaining SDGs such as e-health, e-education, disaster management, and agriculture are likely to leverage the benefits of 5G technology. With a view to incorporate global technological disruptions into futuristic policy endeavours, several initiatives are being taken for preparing the ecosystem for embracing 5G technology. Some of these initiatives are formation of a 5G High level Forum with involvement of all stakeholders for transition towards 5G implementation, inter-ministerial discussions for identifying potential use cases of 5G technology, establishment of 5G Test Beds in collaboration with industry and academia, a special 13 digit numbering scheme for IoT & M2M, establishment of Centre of Excellence for IoT, etc.

A forward-looking New Telecom Policy 2018 (NTP18) is being formulated which focuses on entire ecosystem development for growth of Telecom sector in India. In tune with the global technological developments, Indian policy initiatives for future are concentrating on Artificial Intelligence, Big Data, IoT, 5G, etc.

Some of the traditional challenges being faced in implementation of various policies are huge population living in highly diversified geographical, cultural, economic, and social conditions, vast and varied geographical stretch including large hilly terrains, desert areas, densely forested areas, small and remotely located islands. Making and implementing policies that cater to highly diversified needs of whole populace across geographical areas is really a big challenge.

One of the most critical challenges that are encountered with technological advancements is the safe and secure use of ICTs, especially for financial transactions. India is taking steps for ensuring security in use of ICTs.

Many of the challenges are universally applicable – Vulnerabilities in the current products, services and infrastructure: the whole range of cyber issues – Data breaches, phishing and vishing attacks, malware which steals credentials and data, challenge of attribution of perpetrator of attacks, attacks on infrastructure to deny availability thorough DDoS, security of mobile apps, etc.

Vulnerabilities of the supply chain for ICT infrastructure equipment is an area of concern. Global vendors should recognize that they require putting in extra efforts to assure governments of the security of their products and provide a means for governments and user organizations to verify and validate the security of ICT products.



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India has come out with a Cyber Security Policy 2013. Respective sector regulators like the banking regulator (RBI), the stock market regulator (SEBI) and the insurance regulator (IRDA) have come out with detailed guidelines on Cyber security practices to be followed. India has mandated two level authentications for financial transactions. A sectoral Fin-CERT is in the pipeline. For information sharing in Banking and Telecom, Information Sharing and Analysis Centres have been created (ISAC).

There are sectoral data protection provisions for protection of customer data through regulation or license conditions. For example, the telecom sector service licenses provide for protection of customer data with penalties for breach. A program called information Security Education and Awareness (ISEA) is being run addressing schools, colleges and officials. A national task force on Artificial Intelligence has been constituted to kick start the use of AI for India's economic transformation. AI will play a crucial role in fraud and threat detection and mitigation and is expected to enhance trust.

Further, Block-Chain and Distributed Ledger Technologies have the potential to secure data and transactions and improve trust in banks and their operations. Looking ahead, we need to secure the mobile device, the mobile applications that the customer downloads, address concerns of data security and privacy in the cloud and build human and institutional capacity to fight cybercrime.

India has been closely associated with WSIS process for long. India has been taking numerous steps in line with WSIS agenda. Simultaneously, India has been associated with all other ITU forums for furthering the efforts towards attaining SDGs. Recently, India hosted and successfully organized ITU event on Financial Inclusion Global Initiative (FIGI) in India which deliberated various concerns pertaining to Digital Financial Services. India looks forward to hosting and organizing many more such programmes in India.

Also, India wants to have many more regional initiatives in close association with ITU which will benefit many people across the regions. India is in the process of partnering with various developed nations for executing various capacity building programs through and best practice sharing through its Centers of Excellence NTIPRIT/ ALTTC etc. on latest generational technologies. As part of regional initiatives, India would also like to implement various projects in collaboration with countries in Africa, South Asia, and South-East Asia for extending the benefits of these latest Generational technologies.



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India is willing to extend all the support to other developing nations, through future proposed action plans, jointly with ITU and other International Organizations, for achieving SDGs and moving towards next generational technologies. India offers to share the low cost technologies for rural areas, developed by C-DoT for backhaul development for these 5th Generational technologies and the latest OneM2M C-DoT Common Service Platform (CCSP) for smart city solutions as part of development of holistic solutions for all-inclusive socio-economic development. India is willing to do Technology Transfer through UN Technology Bank with the help of ITU and its associate organizations.

Further, India contemplates working with ITU and other International standard setting Organizations like ETSI etc, to develop a framework for secured use of ICTs and next generational technologies for building confidence and trust in these future networks taking into consideration contemporary developments.

India offers to share her vision and experiences and is also willing to learn from global best practices and policy initiatives. It is India's firm belief that with this collaborative approach we will soon realize the dream of global smart society and finally achieve the Sustainable Development Goals through safe and secured use of these next generational technologies.



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Prof. Vladimir Minkin
Chairman of the Multistakeholder Preparatory Process
WSIS +10 High-Level Event 2014, Geneva

Вопрос анализа выполнения решений ВВУИО обсуждался в заинтересованных организациях ООН и здесь, на Форуме ВВУИО начиная с 11 года. На основе этих обсуждений МСЭ инициировал предложение о проведении мероприятия высокого уровня ВВУИО+10 в 2014 году, которое было поддержано всеми организациями системы ООН, вовлеченными в процесс ВВУИО и принявшими активное участие в подготовительном процессе.

Многосторонняя подготовительная платформа МПП ВВУИО + 10 была создана в июне 2013 года как всеобъемлющий консультационный процесс, открытый для всех заинтересованных сторон ВВУИО, задачей которого была разработка согласованных проектов итоговых документов мероприятия ВВУИО+10

При этом МПП придерживалась 7-и согласованных принципов, сосредоточившись на направлениях деятельности ВВУИО и разработке концепции на основе Женевского Плана действий на новое десятилетие.

Мандат МПП не затрагивал вопросы Тунисского этапа в части интернета.

Секретариат МПП при координирующей роли МСЭ включал в себя все содействующие организации по направлениям действий ВВУИО. Он оказывал помощь во всех встречах МПП, предоставляя справочные отчеты, резюме соответствующих направлений деятельности и рекомендации экспертов для содействия обсуждению в ходе совещаний.

Действия МПП также тесно координировались с секретариатом КНТР.

В результате работы удалось путем консенсуса, с равноправным учетом мнений всех заинтересованных сторон, в открытом переговорном процессе согласовать постатейно два итоговых документа:

- Заявление о выполнении решений ВВУИО, включая обзор выполнения направлений деятельности, индикацию проблем, возникших в ходе их выполнения, и новые появившиеся проблемы.
- Концепцию ВВУИО на период после 2015 г., включая приоритетные области, подлежащие рассмотрению при реализации этой концепции, и дальнейшее совершенствование направлений деятельности в период после 2015 г.



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Они содержат комплекс обновленных приоритетов для каждого направления деятельности, направленных на дальнейшее развитие глобальной экосистемы ИКТ, с учетом влияния ИКТ на социальное, экономическое и экологическое развитие и сокращение цифрового разрыва.

Особо отмечена необходимость защищать и укреплять права человека, как в онлайн-среде, так и в офлайн-среде, расширять доступ к ИКТ для всех, наращивать потенциал, сохраняя культурное наследие в цифровую эпоху, а также содействовать развитию цифровой экономики.

Документы были приняты консенсусом на Мероприятии высокого уровня, организованного МСЭ, ЮНЕСКО, ЮНДП и ПРООН в июне 2014 года, здесь, в этом зале в рамках расширенного Форума ВВУИО.

Они также были одобрены Полномочной конференцией МСЭ 2014 года и послужили одним из опорных компонентов итогового документа совещания высокого уровня ГА ООН по ВВУИО в декабре 2015 г.

Отмечая 15-летие Женевского Плана действий, в рамках подготовки к общему анализу 20-летнего периода выполнения решений ВВУИО в 2025 году, представляется целесообразным учесть опыт и преимущества многосторонней подготовительной платформы в процессе подготовки в части Женевского этапа ВВУИО.

Пока нет оснований утверждать, что мы уже построили информационное общество и перейдем к обществам знаний к 2025 году, поскольку, например, до сих пор около 4 миллиардов жителей Земли еще не подключены к Интернету.

Направления деятельности ВВУИО продолжают оставаться актуальными, тесно перекликаясь с Целями устойчивого развития, как это видно из Матрицы ВВУИО&ЦУР.

Повестка дня нашего Форума подтверждает ведущую роль ИКТ в реализации ЦУР, цифровой трансформации в рамках развития цифровой экономики, важность и актуальность, особенно для развивающихся стран, каждого из направлений деятельности ВВУИО.

Примером дальнейшего расширения 10 задач, поставленных Женевой в 2003 г., может служить Повестка дня МСЭ «Соединим к 2020 г.», а также семь целей Комиссии ООН по широкополосной связи на период до 2025 г., принятые недавно в Давосе.

Возможно, уже на данном Форуме, следует задуматься, когда и в каком формате следует начать подготовку к подведению итогов выполнения решений ВВУИО к 2025 году, уделяя особое внимание анализу реализации каждого направления деятельности ВВУИО.



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Mr. Ridha Guellouz
International Expert in ICT strategies, President
Tunisian ICT Association – ATTIC Tunisia

L'histoire du Sommet Mondial sur la Société de l'Information (SMSI) a commencé par l'adoption, par la conférence des Plénipotentiaires de l'UIT, de la résolution 73, sur une proposition que j'ai eu l'honneur de présenter au nom de mon pays, la Tunisie.

Le Sommet Mondial sur la Société de l'Information est ensuite devenu un sommet onusien sur décision de l'Assemblée Générale des Nations Unies.

L'objectif de ce sommet est essentiellement de débattre des moyens à mettre en œuvre pour réduire la fracture numérique et ses effets et de la transformer en une opportunité digitale.

Les discussions préliminaires ont permis de constater que cette fracture numérique est essentiellement une fracture économique dont les effets sont sensibles aussi bien entre les pays qu'au sein d'un même pays, d'une même ville, d'un même quartier ou d'une même famille.

La particularité du Sommet Mondial sur la Société de l'Information est son caractère inclusif, tel qu'identifié lors du séminaire de Coppet, organisé par la Suisse en 1999, répondant à une aspiration de la communauté internationale, deux années avant la déclaration du millénaire.

Dans la mise en œuvre des résultats des deux phases du Sommet Mondial sur la Société de l'Information (Genève 2003 et Tunis 2005), la concordance avec les objectifs de développement du millénaire (MDGs) a été une ligne directrice essentielle jusqu'en 2015

C'est dans la continuité de cette ligne directrice que la communauté internationale se doit désormais de poursuivre la mise en œuvre des onze lignes d'action du Sommet Mondial sur la Société de l'Information en cohérence avec les objectifs de développement durable (SDGs), pour une évaluation en 2025 et aux horizons 2030.

Cette cohérence des objectifs du Sommet Mondial sur la Société de l'Information avec les préoccupations de la communauté internationale en matière de développement laisse entendre que le processus du Sommet Mondial sur la Société de l'Information est un perpétuel recommencement dont le Forum du Sommet Mondial sur la Société de l'Information (Forum WSIS) peut valablement assurer le suivi.



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UNDP

Ms. Maria Luisa Silva
Director
UNDP Representation Office in Geneva

I am honored to join the WSIS community. As one of WSIS co-organizers, UNDP is delighted to share some perspectives.

WSIS has been catalytic.

The efforts launched 13 years ago in Geneva and Tunis to build Knowledge and Information Societies generated a wide multi-stakeholder conversation that mobilized global action.

It came at the right time for the development community.

When the Millennium Development Goals were adopted in 2000 under the able leadership of the then UN SG, Mr. Kofi Annan, the role of ICT for development was barely understood.

The contribution has been phenomenal.

We have witnessed how mobile phones, for instance, profoundly changed the daily lives of billions of poor people. For example, UNDP takes pride of having paid Ebola response workers correctly and on time during the peak of the crises thanks to digitalized payments using mobile phones.

So, WSIS helped the development community to introduce the concept of ICTs and connectivity from policy setting to programming and financing. Some countries significantly advanced in using ICT for human wellbeing.

We also hoped that WSIS enhanced understanding among the ICT community of their significant potential as partners in development.

Much has been achieved and much more remains to be done. The future action should be based on the learnings from these 13 years:

1. the development community maximises the benefits of the unprecedented potential in problem-solving and fast delivery of goods and services that ICT present, for the purposes of achieving sustainable development; and,
2. the ICT community uses context driven development approaches for real progress, as technology alone will not do.



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The conclusion is that we need an ever closer partnership in the years to come.

We are convinced that the judicious use of technology will be a key accelerator and enabler for all of the 17 SDGs, not only for those with explicit references to Information and Communication Technology.

For example, ICT will help to promote peace, justice and strong institutions (SDG 16). This can happen in at least 3 distinct ways:

1. Digital technologies are promoting access to public information and improving transparency of public institutions. The results are helping the public sector become more efficient and effective. So, achieving SDG 16 is crucial for all aspects of the 2030 Agenda.
2. One of its targets (9) calls for the provision of legal identities for all, including birth registration.

Proper and secure identification is a pre-condition for people to be citizens. Only then can they exercise their political rights, such as the right to vote, or benefit from public services, such as health care, education, welfare and financial services. Yet, some 1.1 billion people, nearly one in six individuals globally, usually the poorest and more marginalised members of society, are not registered citizens. Electronic identity (eID) schemes offer the potential to overcome existing barriers to citizen registration, such as physical infrastructure, illiteracy and corruption.

3. Through their role as users and as regulators of ICT, governments must ensure that the application of new technologies adhere to the rule of law.

They also must ensure that disruptions due to technology innovation do not undermine relations between citizens and the state by infringing on privacy and human rights.

But we also need to be frank about the challenges, which may have a disproportionate impact across countries, industries and workers.

This includes:

- the “digital divide”, affecting particularly LDCs, where internet penetration is only 15.6%;
- new dependencies on developed world technological expertise, and vulnerabilities, such as hacking as a result of Internet connectivity;
- reinforce the gender gap, with African women having particular low levels of access;
- and cybersecurity will be an increasing concern.



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The UN will play an important role in addressing such dangers by working with its partners in government, the private sector and civil society.

In cooperation with UN sister agencies and the whole WSIS community, UNDP aims to contribute to this effort through national SDG platforms providing integrated support that: assist policy-makers in developing necessary frameworks and strategies; address online and offline barriers to progress; and, ensure the digital dividends are shared. WSIS has a major role to play in contributing to achieve the SDG. A first step could be by identifying how WSIS can contribute to the UNDS integrated support to national SDG implementation (we call it MAPS).

We count on your leadership to drive the investments in technological innovation as well as the more integrated delivery of expertise, resources and partnerships so crucial to succeed.



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International Chamber of Commerce

Ms. Elizabeth Thomas-Raynaud Senior Policy Executive

Good morning,

It is a pleasure to join you today to share perspective from the private sector in this opening plenary.

The International Chamber of Commerce – ICC – is the world’s largest and most representative business organization with members from all sizes as well as all sectors and regions. ICC was

created before the UN itself by business leaders – known as Merchants of Peace – because they pursued peace and prosperity through trade and investment. This goal is increasingly challenged by some but as relevant today as ever.

For almost 100 years ICC has served as the voice of global business across many international organizations and multi-stakeholder fora. Recognizing the value of its role and necessity of partnership with the private sector in pursuing the global agenda, the UN General Assembly granted ICC official Observer status just over a year ago.

Business takes its role in advancing the global agenda very seriously and we are here, in New York at UN HQ and around the globe working with governments and stakeholder communities to inform and partner for better policy and outcomes to serve our shared interests in sustainable economic and social development.

ICC was the business focal point for during the WSIS process started here in Geneva 15 years ago. ICC through its Business Action to Support the Information Society (ICC BASIS) initiative helps business stay engaged in the action lines follow-up.

The WSIS Forum provides a valuable inflection point each year for us to come together and take stock of the progress. It is part of how we collectively work towards an open and inclusive information society, as envisioned in the Geneva Plan of Action and pursued through the Action lines. We appreciate hearing highlights from the efforts made across the many UN agencies involved as well as the work of governments, business and other stakeholders to benchmark progress and incentivize further action.

Information communication technology is now widely recognized as a critical enabler of the SDGs, equipping populations with tools to relieve poverty, access education, provide healthcare and reduce CO2 emissions, just to name a few.

Recently I was asked to be a judge for a Global Mobile award recognizing initiatives leveraging mobile technology for sustainable development. The winner of this award was exemplary of how an innovative technology application can have a sustainable and positive impact on the most critical and basic of human



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needs. I raise it here for us to consider as the kind of solutions and thinking we need to encourage and facilitate collectively. eWATERpay uses mobile technology, Internet of Things (IoT) and Near field communication (NFC) to deliver financial sustainability for water supply operators. It replaced the inefficient and unreliable and sometimes wasteful water provision system used in villages with a system that leveraged mobile payments so villagers can pay for and access water use on demand – at the same time supplying the means for investments that could ensure continuity, reliability and sustainability. This example illustrates that development is not sequential: water, energy and poverty reduction are needs that can be addressed with the right investment policies to support solutions leveraging technology to address these issues.

What is the road we need to take to get where we are going in the most inclusive and sustainable way? So we can enable every person on the planet to put their local knowledge, talent and ambition to productive use, to both contribute and achieve more for their collective well-being.

Enable sustainable investment. For business to provide sustainable investment to realize our common goals a holistic policy framework is required.

Private sector has been an important actor in deploying Internet related infrastructure, innovating and delivering a wide range of ICT applications and services. On these investments local and global digital ecosystems have flourished – developing demand and supply sides of national economies.

Sustainable private sector investment will continue to be an important factor in pursuing further economic and social development. Aligning public policies that promote rather than deter investment in infrastructure, and technologies to enable new applications and services is paramount.

Experts from ICC's Commission on the Digital Economy produced recommendations in a paper entitled "ICT, Policy and Sustainable Economic Development". The paper outlines the enabling environment and offers cases to explain how it works in practice. Briefly this enabling policy environment balances considerations in four dimensions:

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



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considerations that are required to achieve sustainable economic development.

Effective policymaking requires careful assessment of broader potential consequences, either on investment or development. By engaging participation from all relevant stakeholders, governments can generate policies that are timely, scalable, and innovation enabling.

To conclude, I would like to recap

- ICC is a partner with a long history of supporting trade to advance peace – we have much experience and value in our network to invest in pursuing the global goals and we are committed to partnering both officially at the UN as an Observer as well as informally with all stakeholders to advance them.
- Cooperation is vital to enable changes that are impactful, economically sustainable, and relevant to communities around the world. No stakeholder can get there alone.
- A holistic policy framework is a priority for us to work on together to attract the level of investment necessary for the achievement of our shared goals of sustainable development and inclusive economic growth.

I look forward to discussing further throughout the Forum and I wish you all a very productive week. Thank you.



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High level Policy Sessions

Session One: WSIS Action Lines in 2030 Agenda

Webcast: <https://www.itu.int/net4/wsis/forum/2018/RP/Webcast/260#intro>



High level Track Facilitator: Mr. George Anthony Giannoumis, Oslo and Akershus University College of Applied Sciences, Norway

High level speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator ITU** – Ms. Doreen Bogdan-Martin, Strategic Planning and Membership Department
3. **Georgia** – H.E. Mr. Giorgi Cherkezishvili, Deputy Minister, Ministry of Economy and Sustainable Development of Georgia
4. **Portugal**- Ms. Paula Meira Lourenço, Member of the Board, Autoridade Nacional de Comunicações (ANACOM)
5. **Sweden**- Mr. Dan Sjöblom, Director General, Swedish Post and Telecom Authority
6. **Internet Governance Lab/Institute on Disability and Public Policy**- Dr. Derrick Coghurn, Director



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1. Introduction

National governments, industry, civil society and academic institutions across the globe have engaged with the 2030 agenda. This is essential as half the world still experience barriers using or accessing the Internet. The high-level meeting in 2015, which reviewed the WSIS Action Lines, found that access to ICTs must be regarded as an indicator for development in and of itself. Last year's report from the High-Level Political Forum each of the members of the UN chief executive board provided demonstrable evidence around the use of ICTs to achieve their respective missions and the Sustainable Development Goals (SDG). The time is now to accelerate progress, use the force behind ICTs and the support of the WSIS agenda to achieve the SDGs. The first WSIS 2018 policy session will look into what different countries are doing both nationally and globally to reach the SDG goals, what trends are currently rising and where efforts are being made.

2. Vision

One of the most important mechanisms for reaching the SDGs is to provide internet access for everyone both nationally and globally. Digital inclusion is important, as any attempt to use ICTs to achieve the SDGs must not create new or expand existing digital divides that produce inequality and social exclusion. The policy is clear, the use of ICTs to achieve the SDGs should reduce and eliminate existing digital divides and support efforts towards achieving equality and social inclusion. By increasing capacity using ICTs national governments can influence the mechanisms for achieving the SDGs.

3. Fresh Priorities

While infrastructure issues, such as access to the Internet, dominated the discussions around priority areas, several delegates emphasized the need to ensure that ICTs promote equality and an inclusive society. The implementation of internet and high-speed broadband solutions such as fiber optics is a high priority. Making sure that everyone can access and use ICTs equally is important, and there are several initiatives ongoing that are facilitating progress in this area. Examples include road shows, institutional email-services which are being adopted in Portugal, mobile learning week with UNESCO, and in Sweden, educating younger generations through school programs, developing programs specifically targeting the elderly, and creating smart applications that empower persons with disabilities to participate in society on an equal basis with others.

4. Emerging trends

The primary trend that the panelists highlighted focused on employing big data analytics as a mechanism for achieving the SDGs. Using big data analytics in text mining to monitor and evaluate the WSIS Action Lines using data produced in documentation, captioning and policies emerged as a key trend. This gives the UN and WSIS the opportunity to identify which topics and interest areas are addressed by WSIS.



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The information produced in the form of data analytics can provide clear indications about which topics are addressed at WSIS so the UN can continue to build towards achieving the SDGs.

5. Opportunities

The principal opportunity on which the panelists focused was the use of big data analytics to accelerate progress towards the SDGs. Big data can provide governments, industry, civil society and academia with new insights about the high-priority areas for achieving the SDGs, as the deadline to achieving the SDGs draws closer. National governments are taking these actions seriously and the panelists argued that the regions that are on pace to achieving the SDGs e.g., regarding internet coverage, must look outside their borders to contribute resources to other nations.

6. Key Challenges

Two key challenges emerged from the policy session. According to the Director General from Sweden, “It is challenging to ensure that all the players involved will provide the whole population [with high-speed Internet] between now and 2025. The panelists also highlighted the challenges associated with identifying and deploying the appropriate mechanisms for ensuring and promoting digital literacy.

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

SDG 4. Quality Education and SDG 5 Gender Equality, school programs for digital literacy covered action lines C1, 2, 3, 7 and 8. SDG 9. Industry, Innovation and Infrastructure, governmental programs providing support and incentives for startups covered action line C7.

8. Case Examples

The panelists provided four useful good practice case examples. First, EU sponsored an initiative called WiFi which provides funding for 120 million EUR, so that European citizens and permanent or temporary residents can access WiFi freely. Second, telecom regulators are cooperating with academic institutions to implement a capacity building project in Sub-Saharan Africa with the aim to strengthen cooperation and interaction among regulators. Third, in 2009 American University created the first fully online Master degree in disability and public policy with support from the Nippon Foundation. Fifteen fellowships including for persons with disabilities have been provided for students to finish their online Master degree. Fourth, the government of Georgia is experimenting with tools including financing goals and startup programs to support innovators in achieving the SDGs.



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9. Road ahead

The panelists highlighted two opportunities for continuing progress towards Agenda 2030. First, half of the world still does not have access to the using internet. Continuing to deploy internet in rural and remote areas and investing in upgrading existing internet infrastructure provides a useful opportunity for furthering efforts towards achieving the SDGs. Second, promoting inclusive education people across the diversity of the human experience can gain digital literacy skills and provides a useful opportunity to engaging communities in utilizing ICT and the Internet. In conclusion, there is still time to reach the SDGs, and with immediate international, intersectoral and interdisciplinary collaboration focused on building and maintaining local relationships and scaling local solutions through transnational communities, governments, industry, academia and civil society can accelerate efforts to make ICT available and usable for all.



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Georgia

H.E. Mr. Giorgi Cherkezishvili
Deputy Minister
Ministry of Economy and Sustainable Development of Georgia

1. How ICTs may ensure achievement of the UN SDGs?

Your Excellences,
Ladies and Gentlemen!

On behalf of the Ministry of Economy and Sustainable Development of Georgia, allow me to extend my sincere gratitude for the invitation to take part in the WSIS Forum 2018, which is a global multi-stakeholder platform for coordinating and facilitating the implementation of the WSIS Outcomes. It's a great pleasure and honor to be here.

Every year, this forum is a good opportunity to discuss tremendous role of ICTs to accelerate progress and reach Sustainable Development Goals by 2030 and to share the best practices between countries. WSIS Action Lines are strongly connected with the implementation of SDGs, and ICTs are, on the one hand, powerful means to extend economic opportunities to millions of people over the world and protect our planet overcome social gaps and ensure prosperity for everyone, and on the another hand enablers for growth and development.

To achieve the objectives and targets of UN SDGs, such as no poverty and zero hunger, decent work and economic growth, to develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all. The key character of ICTs is that they facilitate faster and more flexible communications and decision-making at a distance. ICTs make it possible to share information more widely and more rapidly, expanding the reach of markets across all components of economic production chains – from raw materials to final goods and services, from domestic commerce to international trade. Specially Small and Medium Enterprises (SMEs) are taking advantage of ICT-enabled capabilities and online platforms to enter new markets, manage their operations effectively, and communicate better with suppliers and customers.

Governments use ICTs to improve their ability to communicate with citizens and expand delivery of government services. ICTs have a critical role to play in the real-time management of essential infrastructures from the management of energy grids to transportation networks, from water systems to public safety. Also, ICTs support education in innovative ways and its role is crucial in different sectors, such as agriculture, health, energy, transport, etc.



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Accordingly, benefits of ICTs to eradicate poverty and promote sustainable development for achieving the SDGs are significant. Government of Georgia aspires to connect its target programs and projects with WSIS action lines to build information society, that are promoting Georgia's further political, economic, social and cultural development.

2. What is the responsibility of the government to support the development of the digital economy?

The digital economy and society have a great potential to boost economic growth, expand business opportunities, and improve the quality of life of citizens via better service delivery. This area is of vital importance for the social development and creation of new jobs in all fields of the economy, for the smallest and most traditional manufacturers, as well as for newly emerging hi-tech industries. The future digital economy promises tremendous change. For example, deployment of Artificial Intelligence, will transform economies in ways we are only beginning to imagine. The key to success in this fast-paced environment will be adaptability. Countries, businesses and even citizens must try and have the capacity to learn quickly in order to adapt to the challenges of the digital economy of the future. The digital economy will evolve substantially over the next ten years, fueled by innovations in ICT technologies.

Advances, such as the Internet of Things (IoT), Artificial Intelligence (AI), blockchain and cloud technologies bring significant input to global economy. There will be no sector of the economy, like hospitals, transportation companies, manufacturing firms, remained unconcerned by the advanced technologies. Moreover, at the end, only those achieve success, who adapt rapidly to the technological changes. Governments, businesses and society will need to quickly adapt to the new principles of economy and its policy challenges.

Without well-developed broadband infrastructure, it's impossible to support the development of e-governance and provision of electronic services, development of B2B, B2C, G2G, G2B and G2C services and creation of Information Society. Thus, Governments should support to develop telecommunication infrastructure and broadband technologies. One of the main priorities for the Governments must be bridging the digital divide between the rural and urban areas on the one hand, and on the another hand, between the regions worldwide. Herewith, I would like to mention that for the Government of Georgia, the development of Telecommunications and broadband technologies is one of the priorities and lots of efforts have been undertaken for its implementation.

At the same time, Governments, institutions and industry must prioritize ICT skills development and training to allow people to keep up with the pace of innovation and its impact on various jobs. We must prepare the workforce for the digital economy. Create an enabling environment for entrepreneurship and empower people to create their own globally competitive startups, ensure users from all around the world become creators rather than simply consumers.



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Remove barriers arising in frames of cross-border relations to ensure, that everyone has the equal opportunity to participate in and benefit from the global digital economy.

Governments and industries should take measures to raise online security and confidence of the users in internet and measures in the creation of usable tools and information to help users make informed decisions relating privacy, rights and security.

E-Commerce will continue to blossom and have a greater share of the global economy; Governments have to put more emphasis on infrastructure and technological facilities for transformation from an offline to an online economy. Countries with no well-developed ICTs, might experience lagging in terms of economic progress. Governments should welcome and support private sector and civil society's meaningful participation in domestic ICT policymaking for development of digital economy and society.



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Portugal

Ms. Paula Meira Lourenço

Member of the Board

Autoridade Nacional de Comunicações (ANACOM)

Internet access to all

We need to be connected, with no access barriers. Our economy needs it. Citizens need this. Having a free and simple Internet access in community life centers goes beyond our immediate interest as consumers.

At ANACOM, the Portuguese regulator for communications, we are totally committed with that objective of having ubiquitous access to Internet.

A plethora of instruments could be mentioned in this regard, but, for the moment, we would rather focus on our recent efforts on the implementation of the WiFi4EU initiative.

The WiFi4EU is a European Union initiative that aims to provide high-quality Internet access to residents and local visitors in main centres of local community life, such as parks, squares, libraries and public buildings.

European Union funding (around 120 million euros) is intended to cover the Wi-Fi system's equipment and installation costs and will be allocated directly by the European Commission to the beneficiaries (which, in the case of this first call, will be the municipal councils).

Between 6000 and 8000 municipalities are expected to be covered by 2020, as well as 40 to 50 million daily connections being established through these accesses under the WiFi4EU Initiative.

The basic idea is that any citizen or tourist irrespectively of being a European Citizen or not, can register one day in one country and, if you travel the day after to another country, you can continue to use WiFi4EU hotspots without any interruptions.

This kind of Internet access will work as a European Internet free access passport, making the experience of traveling or working within the EU much easier.

In the Portuguese case, the Government considered relevant to promote the initiative at national level, although the process is based on a direct relationship between the candidates and the European Commission.



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Therefore, ANACOM is responsible for promoting the WiFi4EU initiative at national level.

We, at ANACOM, are very satisfied with the success and participation of these information sessions, given the level of involvement not only from municipalities but also from the Internet access service providers.

We believe that this initiative comes with quite successful genetics, mainly because it is based on a very easy scheme that may be replicated in other regions, as long as you involve the relevant stakeholders in your region.

For that reason, we take this initiative as a best practice to share at this WSIS Forum so that participants from other regions of the world could also take this idea back home.

Protecting critical infrastructure

On a less positive note, we brought a message to the WSIS Forum concerning the need to protect electronic communication infrastructure in light of the climate changes we are already experiencing worldwide.

Last summer and autumn, Portugal was seriously affected by forest fires that damaged important electronic communication infrastructure assets.

As the infrastructure protection falls within the scope of WSIS Action Line 5, we share a number of initiatives that ANACOM is carrying out to protect such key infrastructure, especially now that summer is coming closer.

We note that we are using ITU work to help us in the recovery process, as ITU-T (ITU Telecommunication Standardization Sector) has developed a set of recommendations on the environment and on ICT, as well as on the protection of cables and other components of outdoor infrastructure, as a benchmark for the adoption of best practice.

ANACOM has established an on-going **action plan** to address this extremely difficult scenario and to protect critical infrastructure.

This Plan of Action can be framed in four major areas:

- **Conducting a site survey;**
- **Establishing contacts with suppliers and installers of communications cables and poles to acquire better knowledge of the offers existing in the market and of the options available to**



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operators in terms of technical anti-fire characteristics;

- **Meeting with electronic communications companies (and other companies to be identified) for the purpose of obtaining additional information;**
- **Meeting with entities external to the sector considered to have relevant information or to be carrying out relevant actions.**

The proposed measures seek to improve the security and integrity of electronic communications networks and services and the formulation, approval and establishment of a new legal and regulatory framework to govern the planning, construction, reconstruction, reconversion and installation of electronic communications infrastructure.

ANACOM will proceed with the described action plan and with the promotion of actions to strengthen coordination between the public and private entities involved, the promotion of infrastructure sharing and reduction of costs.

In conclusion, we note that in accordance with documents produced by the International Telecommunication Union (ITU), forest fires are among the most destructive natural disasters for electronic communications infrastructure, and as in the case of other extreme events (e.g. floods or landslides), their intensity and frequency is expected to increase as a result of climate change.

Therefore, all the measures described address in fact a major problem that is climate change and we must add our efforts to those combating its impact.

We thus support the efforts of the UN Secretary General, António Guterres, and the ITU to address this problem. We are also committed with the WSIS Action Lines as well as the Sustainable Development Goals that are related to the mitigation of Climate Change effects.



Sweden

Mr. Dan Sjöblom
Director General
Swedish Post and Telecom Authority

1. What can you say about the Swedish approach to 2030 Agenda?

It is the Government's ambition that Sweden will be a leader in implementing the 2030 Agenda – both at home and through contributing to its global implementation.

Sweden sees the 2030 Agenda and the global goals as coherent parts of the new global framework for sustainable development. A starting point for Sweden is that the implementation of the 2030 Agenda involves a process of successive transformation and further development of Sweden's societal model as a modern and sustainable welfare state, nationally and as part of the global system. This process must embrace everyone in Sweden, and no one is to be left behind.

Foundational to the work is a broad ownership for the 2030 Agenda among all actors in society, an ownership and a participation that develop and deepen over time. This shared commitment, built on knowledge and insight from the local to the national level, is a necessary foundation.

A linchpin of the Swedish societal model is a long tradition of cooperation and collaboration, both nationally and internationally. This is a much needed focus for the implementation of the 2030 Agenda.

Sweden's implementation of the 2030 Agenda is achieved – as it shall continue to be – through decisions and measures in daily operations and through existing steering processes. Ordinary operations in the public sector, and in society as a whole, are to be permeated by the integrated thinking and approach to sustainable development constituted by the 2030 Agenda.

Gender equality and the full enjoyment of human rights by all women and girls are a prerequisite for implementing the 2030 Agenda, in Sweden and throughout the world.



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Sweden has a favourable starting position for the implementation of the 2030 Agenda. The peaceful and democratic conditions that have long characterised the country and that encompass a developed culture of collaboration between the different societal actors are essential, politically, economically and socially.

An important reason why Sweden has a good starting position is that its economic development over time has been strong. This is rooted in a favourable business climate and a dynamic private sector with an international outlook and extensive trade relations.

The Government intends to design an overarching and national action plan for the implementation of the 2030 Agenda. In March 2016, a national delegation was appointed whose commission included drafting a proposal for an action plan. National indicators for all the targets in the 2030 Agenda and an integrated follow-up system are to be developed and adopted.

2. Could you give any practical examples (on 2030 Agenda) in Sweden, in particular from a regulator's perspective?

I will give you two concrete examples – one national and one international.

The **Swedish broadband strategy and the Swedish digitalisation strategy** are very ambitious strategies. In the broadband strategy targets are set on the build out of broadband. PTS has the task to make sure that those who do not receive broadband from a commercial offer can have at least a 10 Mb access to infrastructure. Digital inclusion is inherent in this strategy; no one should be left behind. The digitalisation strategy is focused on the digitalisation of the society, the public sector in particular, and how this development can be promoted but also how unwanted effects can be avoided. Also with digitalisation there is a potential problem with inclusion where the effects of not being included in the digital society are very severe.

PTS is a very global regulator with responsibilities in global organisations such as ITU, UPU and ICANN. In addition to this we have also many bilateral contacts with States and NRAs in different regions. PTS is together with Stockholm University running a **capacity building project** in Africa. The project is financed by the Swedish development agency SIDA and involves more than 10 sub-Saharan regulators. The main aims are to build capacity among regulators, strengthening regional cooperation and enhance regulatory interaction. Such interaction is extremely important given the global reach of telecom services and also the high complexity for regulators of the fast development of the industry.

Session Two: Bridging Digital Divides

Webcast: <https://www.itu.int/net4/wsis/forum/2018/RP/Webcast/261#intro>



High level Track Facilitator: Ms. Renata Avila, Web Foundation, Guatemala

High level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator UNESCO** –Mr. Boyan Radoykov, Chief of Section, Section for Universal Access and Preservation
3. **Afghanistan**– H.E. Mr. Shahzad Gul Aryobee, Minister, Ministry of Communications and Information Technologies
4. **Benin**– H.E. Mrs. Aurelie Adam-Soule Zoumarou, Ministre, Ministère de l'Economie Numérique et de la Communication
5. **Bhutan** - H.E. Mr. Dina Nath Dhungyel, Minister, Ministry of Information & Communications
6. **Russian Federation** – H.E. Mr. Rashid Ismailov, Deputy Minister, Ministry of Telecom and Mass Communication of the Russian Federation
7. **Internet Society (ISOC)**– Ms. Jane Coffin, Director, Development Strategy
8. **ESOA**– Mrs. Aarti Holla, Secretary General (Belgium)
9. **Global Open Data initiative for Agriculture and Nutrition**– Dr. Andre Laperriere, Executive Director
10. **WeRobotics**– Ms. Sonja Betschart, Co-Founder and Chief Entrepreneurship Officer (Switzerland)



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1. Introduction

There is a priority to address the digital divide but also to connect old practices with new practices, including economy, to the new digital economy. The governments, private sector and civil society are investing in a long term policy efforts.

2. Vision

Enable local efforts with sustainable access to an Internet that is safe. The youth, their skills and safety while using the Internet are also crucial for the panel.

3. Fresh Priorities

Connection of rural populations, the enabling environment for high-quality foreign investment in the least developed countries, and the importance of preparing the entire economy and not the new sectors only, to the challenges of digitization.

4. Emerging trends

More resources devoted to rural populations, for them to be connected but also empowered by connectivity, hardware and data. Data for development, combined with DIY robotics with an enabling regulatory frame could, for instance, bring opportunities to rural peasants.

5. Opportunities

There are a lot of opportunities in different technologies, for instance, 5G can be an excellent opportunity for governments to bridge the digital divide, drones for social good can empower local communities and enable a whole generation of local innovators and data for development, if genuinely open, can unlock a new generation of global innovators.

6. Key Challenges

Sustainability, investment, trust and empowerment of the newly connected citizens are among the challenges faced by different sectors. There is also not enough use or interest in open data and drones.

7. Link with the WSIS Action Lines and Sustainable Development Goals: SDG 9.

8. Case Examples

- Community networks are an affordable and empowering solution to reduce the digital divide with the community and make it sustainable.
- Benefits for good foreign investors and PPPs, as Bhutan did with its Technology park.
- Drones for good, delivering aid or solving local problems.

9. Road ahead

We need to put those disconnected first and consider their priorities, not to increase inequalities beyond digital. The efforts cannot be focused only on mobile and require collaboration across sectors: the government, academia, civil society, local communities and international organizations.



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Benin

H.E. Mrs. Aurelie Adam-Soule Zoumarou
Ministre
Ministère de l'Economie Numérique et de la Communication

Monsieur le Secrétaire Général de l'UIT,
Mesdames et Messieurs les Ministres,
Mesdames et Messieurs les,
Mesdames et Messieurs les Organismes,
Honorables Invités ...

Conscient de l'importance du Numérique pour un développement durable et inclusif du Bénin, le Gouvernement a fait l'option d'utiliser les Technologies de l'Information et de la Communication (TIC) comme catalyseur de dynamisme économique et de modernisation du Bénin pour l'accélération de la croissance et l'inclusion sociale d'ici l'an 2021, comme déclinée dans les ODD n° 4, 8 et 9.

Mesdames et Messieurs,

La vision du Gouvernement du Bénin est de " transformer le Bénin en la plateforme de services numériques de l'Afrique de l'Ouest pour l'accélération de la croissance et l'inclusion sociale à l'horizon 2021 ". L'une des conséquences majeures de cette vision est l'adoption, le 07 novembre 2016, de la Déclaration de Politique Sectorielle du secteur de l'économie numérique, dont les Objectifs Globaux sont :

- Le développement massif des infrastructures et la généralisation de l'accès au haut débit en vue d'atteindre un taux de couverture de 80 % ;
- L'assainissement et la dynamisation du secteur des Technologies de l'Information et de la Communication;
- L'enracinement des usages numériques au sein des entreprises, de l'administration publique et du secteur de l'éducation;
- Le développement et la modernisation des services postaux.

Mesdames et Messieurs,

De façon spécifique, il s'agit :

- ☑ d'atteindre un taux de pénétration internet global de 80 % des entreprises et des particuliers avec comme mode d'accès 40 % pour le fixe et 60 % pour le mobile ;
- ☑ de doubler la taille du marché des TIC et ainsi atteindre 580 milliards de francs CFA ;
- ☑ de créer 90 000 emplois nets dans le secteur des TIC ;



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- ☑ de contribuer, via la numérisation de l'économie, au développement des autres secteurs, en particulier :
- ☑ Le secteur du e-gouvernement: l'objectif est d'atteindre un EGDI (E-government development index de l'ONU) de 0,5 ;
- ☑ Le secteur de l'éducation: l'objectif est d'atteindre 100% d'établissements primaires, secondaires et supérieurs connectés à internet;
- ☑ Le secteur du e-commerce: l'objectif est d'atteindre un taux de bancarisation de 50 % ;

- ☑ D'entrer dans le top 100 du classement Networked Readiness Index (NRI) et être premier en Afrique de l'Ouest.

Pour atteindre de ces objectifs forts ambitieux plusieurs projets structurants sont déjà en cours d'exécution ou d'achèvement, notamment :

- le projet de développement des technologies et infrastructures de télécommunications qui vise le maillage de l'ensemble du territoire national en fibre optique, en vue de la fourniture de l'internet haut et très haut débit aux administrations publiques, aux entreprises et aux ménages. Ainsi, 2011 km de fibres optiques sont en cours de déploiement permettant le raccordement de 67 communes du Bénin aux câbles sous-marins SAT3 et ACE. Cette première phase du projet s'achèvera au cours du premier trimestre 2018 ;
- le projet d'Extension de la couverture en réseaux de téléphonie mobile des zones en déficit d'accès (Zones Blanches);
- le projet de la Télévision numérique terrestre (TNT) qui permettra à notre pays dans quelques mois d'offrir à toute la population la télévision numérique en mode terrestre principalement et pour les zones blanches en réception satellitaire ;
- la transformation numérique de notre administration à travers le programme de renforcement des structures de Gouvernance au Bénin permettra d'avoir une administration plus efficace et appréciée de la population. Ce projet permettra l'interconnexion des structures de l'Etat, la construction d'un data center national pour un stockage sécurisé des données de l'Etat et des autres acteurs, une optimisation des ressources de l'Etat et le renforcement de la célérité des procédures administratives ;
- etc.



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Mesdames et Messieurs,

Les résultats attendus de ces projets mis en oeuvre ne sauraient être palpables sans un cadre et un environnement juridique propice au développement et à l'émergence d'acteurs efficaces gages d'innovations, d'emplois durables et de croissances économiques. A ce titre, l'adoption depuis juin 2017 d'un Code du Numérique couvrant l'ensemble des aspects du secteur de l'économie numérique apporte une sécurité juridique forte aux entreprises béninoises, aux investisseurs et renforce l'attractivité numérique du Bénin. A travers ce code, diverses questions d'intérêts sont abordées et réglementées :

- ☒ les communications électroniques (gouvernance, régulation, concurrence, régimes applicables, service universel ou encore neutralité du net) ;
- ☒ les services numériques innovants (e-gouvernement, e-santé, e-éducation ou encore services financiers en ligne et mobiles) ;
- ☒ les outils électroniques (signature et certification électronique, preuve électronique, archivage ou encore horodatage) ;
- ☒ la protection des données à caractère personnel (traitement, régimes applicables, formalités et conditions préalables au traitement ou encore droit des personnes à l'égard de leurs données personnelles) ;
- ☒ le commerce électronique (publicité par voie électronique, conclusion de contrats électroniques, obligation d'information, droit de rétractation, responsabilité des prestataires de service ou encore protection des consommateurs) ;
- ☒ la cybersécurité et cybercriminalité (accès illégal et atteinte aux données et aux systèmes d'information, vol de données, piratage en ligne, mise/maintien en ligne de contenus abusifs, pédopornographie, escroqueries et délits connexes, infractions aux biens, identification des utilisateurs, responsabilité des fournisseurs de services en ligne ou encore cryptologie).

Aussi, ayant comme ambition de faire de notre pays la plateforme numérique de l'Afrique de l'Ouest, le Gouvernement du Bénin a décidé la création d'une Cité Internationale de l'Innovation et du Savoir « Sèmè City » afin de promouvoir l'émergence en Afrique de centres d'excellence pour la recherche et l'innovation favorables à l'éclosion de Startup et de jeunes entrepreneurs.



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Mesdames et Messieurs,

Cependant, des efforts restent encore à faire pour rendre les e-services disponibles à tous les citoyens sans exclusion. Il faut mobiliser des ressources financières et techniques en vue d'atteindre nos objectifs. Nous profitons de cette occasion pour solliciter l'appui (financier, technique ou en renforcement de capacités des jeunes) des institutions des Nations Unies (UIT, UNESCO, CNUCED, etc.) pour nous accompagner à relever ces défis.

Enfin, je nourris l'espoir que les conclusions qui seront issues de ce forum permettront à nos pays de faire un saut qualitatif de progrès dans le secteur des TIC afin de contribuer au bien-être des populations pour un développement durable.

Pour finir, le Bénin tient à exprimer sa gratitude à toutes les personnes qui ont participé d'une manière ou d'une autre, à l'organisation du présent forum. Cette gratitude s'adresse notamment au Secrétaire Général de l'UIT, Son Excellence Houlin Zhao, aux responsables des institutions partenaires et aux différentes ONG qui nous accompagnent dans la lutte contre l'analphabétisme des temps modernes que constitue la non maîtrise du numérique.

- Vive la Coopération Internationale
- Vive l'UIT

Je vous remercie.



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Bhutan

H.E. Mr. Dina Nath Dhungyel
Minister
Ministry of Information & Communications

Question 1

Bhutan has opened its doors to Foreign Direct Investment in the IT Sector with the establishment of a Technology Park. What have been some of the Achievement and Lesson Learned?

Question 2

In terms of ICT Development Index, Bhutan has improved significantly since 2010. Recently (as of Nov 2017) Bhutan was ranked 117th among 193 countries. What were key initiatives undertaken by government of Bhutan in the field of ICT and how did it change the lives of Bhutanese people?

Moderator, my Minister colleagues, friends in the dias, and friends watching us. Good afternoon to you all. Today is a very special day, a special day that connotes to International Happiness Day. On this special day I would like to extend the greetings from His Majesty the Fourth Druk Gyalpo of Bhutan King Jigme Singye Wangchuck, who founded Gross National Happiness (GNH) concept sometimes in the year 1972. Since then Bhutan has been a pioneer in GNH and we have our development philosophy that revolves around the happiness of its people. We do not have a planning commission, instead we have a commission that relates to the National Happiness of the people and thus whole of the development philosophies are towards achieving that.

Now coming back to the above question that was presented by the moderator, yes the Royal Government of Bhutan has started its first IT Park known as Thimphu TechPark in the year 2012. Since then we have Foreign Direct Investors from the world, who have come to Bhutan and have started their business in the IT Park.

Now why we want the FDI to start their business in IT Park, it is mainly because it is an area where the Royal Government of Bhutan provides many subsidies (listed in the following), so that the investors from around the world can start their business within the premises of IT Park and do the International business:



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1. Support from the Ministry of Labour & Human Resources for training and recruitment of new employees in Bhutan.
2. A tax holiday of ten years to the IT/ITES businesses operating within the IT Park and exporting 80% of their products/services.
3. Import of capital goods forming direct inputs for the IT/ITES companies in the IT Park shall be exempted from customs duty and sales tax.
4. Subsidy for Internet connectivity so that the cost of Internet connection is maintained at about the same rates as those in India.
5. Availability of low cost stable green power at only 0.043 USD per unit.
6. IT/ITES businesses/companies shall be exempt from TDS (Tax deducted at source) for the duration of the Tax Holiday.
7. 100% foreign equity participation shall be permitted for the IT/ITES companies in the IT Park.
8. Export earnings in convertible currency by IT business/companies operating from the park shall be exempted from tax for the duration of Tax Holiday.

The operations of the IT Park began from May 2012 and today around 8 international and 5 domestic companies are smoothly operating with the total of 700 employees. I am proud to announce here that we even have a company that is Switzerland based known as Selise which is actively operating in IT Park in Bhutan. The IT Park project was initiated with the main objective to increase productive employment in Bhutan through promotion of enterprise development in the IT/ITES sector, to enhance IT skills, and to improve access to finance. Bhutan has a unique law of protecting its environment which is taken very seriously while making development plans.

Therefore Bhutan is seen as a ground for creating that conducive environment for all of you if you are thinking to invest in green technology. We are really concerned of our environment and if it is green technology and green investment, we welcome the investors. However, in doing so just like moderator pointed out, we in fact has been lucky enough to get this done without facing big challenges, but, of course, there were some obstacles that we had to overcome.

Now regarding the ICT development index, yes, it is true that Bhutan has improved significantly since 2010. As of November 2017 Bhutan ranked 117th among the 193 countries. The Royal Government of Bhutan (RGOB) recognizes the value that ICT can bring towards the achievement of Gross National Happiness (GNH). The RGOB has prioritized ICT with the vision of **“ICT enabled, knowledge society as a foundation for GNH”**. The Ministry of Information and Communications (MoIC), helms in the promotion of ICT in Bhutan and to use ICT for the Good Governance. In keeping with the vision, the ministry is mandated to provide basic ICT infrastructure,



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platform and environment for application development, facilitate quality telecom services and satellite service, offer enabling business environment for ICT sector and increase awareness and digital literacy across the country.

Some of the main Policies in place that has been the guiding principles for ICT developments are:

- ICT Roadmap
- Bhutan Telecommunications and Broadband Policy
- Bhutan e-Gov Policy
- Policy and Institutional Plan
- Information and Media Policy

The main objective of these Policies highlights the following:

- Universal access to safe and secure Government e-services;
- Provision of multi-channel and seamless citizen centric service delivery online;
- Inculcate the Single Entry, Multiple Use of data;
- Migration of Government Data Centre to avoid duplication of work, economy of scale, security, more optimal storage management and better performance/service level;
- Options of shifting e-Gov initiatives into the cloud platform and prepare for m-Governance.;
- Strengthen the ICT Industry to support e-Government.

One of the key initiative undertaken by the Government of Bhutan that largely impacted in reducing the rural-urban digital divide is the Government to Citizen (G2C) services, an endeavor to revamp public service delivery, using ICT to render effective and efficient services, especially to rural pockets. At present more than 100 government services and sub services are availed, simplifying the procedure and enhancing the public service delivery for the general citizen. Further to strengthen this public service delivery, the G2C services are made available as a mobile application services.

However to make this services online, connectivity was the basic requirement. So the followings are major activities undertaken during the start of 11th Five Year Plan and was achieved towards the end.

1. 18 Dzongkhags are connected with OPGW. Remaining two Dzongkhags and 201 Gewogs are connected with ADSS as of now.
2. 200 Gewogs and 12 Dungkag are connected with Intranet and Internet. 10 BHUs in Samdrup Jongkhar, 14 RNR centers in Wangduephodrang and a central school in Gasa connected with internet from the Gewog Centers.



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3. Connectivity to Health Facilities/Schools under USF: The Department initiated providing Internet connectivity to 44 schools and 29 health centers using USF. Contract to connect 22 schools and 18 health centers were given to Bhutan Telecom and to connect 22 schools and 11 health centers were given to Tashi InfoComm Ltd. Project to connect 44 schools and 29 health centers was completed on 20th June, 2017.
4. Community centers established in 200 Gewogs for online services.
5. Established internet connections in 198 CCs. A total of 414 Video Conferencing accounts for Ministries, Dzongkhags, Thromdes, and Gewogs has been created.
6. Established Internet Exchange Point in TTPL, Thimphu, Established DrukREN, Connected 9 Colleges including OVC, RUB to DrukREN, 10 Hospitals (Paro, Gedu, Phuentsholing, Punakha, Trongsa, Bumthang, Pemagatshel, Mongar, Kanglung, Samdrup Jongkhar) are connected to the DrukREN.
7. 91.35% internet penetration and 97.3% mobile penetration achieved as of September, 2017.

The major challenges faced is in achieving 100% connectivity primarily due to geographical landscape of the Country. It might be surprising to hear, but around 7 % of the population who are living in this difficult terrain of the country are still not connected. So the main target for me as an ICT Minister is to connect the last mile and therefore to be able to provide basic services for this 7% of the population who are mostly living as nomads. Even though the Royal Government of Bhutan has access to Universal Service Fund, it is still a challenge to connect this 7% of the population.

Madam Moderator and my Minister Colleagues, I look forward to further collaboration with WSIS in our combined effort to reach the services to our people.



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Russian Federation

H.E. Mr. Rashid Ismailov
Deputy Minister
Ministry of Telecom and Mass Communication of the Russian Federation

Ваши превосходительства!
Уважаемые коллеги и гости!

Темой нашего форума является «Использование ИКТ в создании обществ информации и знаний для достижения целей устойчивого развития».

Общепризнано, что ИКТ имеют решающее значение для обеспечения всех трех компонентов устойчивого развития: экономического, социального и экологического. Матрица ВВУИО/ЦУР наглядно демонстрирует тесную взаимосвязь направлений деятельности ВВУИО целей и задач устойчивого развития.

В эпоху 4-й промышленной революции дальнейшее развитие информационного общества и обществ знаний, тесно взаимосвязанное с осуществлением ЦУР, опирается на развитие и внедрение цифровой экономики. Цифровая экономика становится важной движущей силой глобального экономического роста и играет значительную роль в ускорении темпов экономического развития, повышении производительности существующих отраслей экономики, формировании новых рынков и достижении устойчивого роста.

Говоря сегодня о преодолении «цифрового разрыва» мы должны четко разделять базовые (физические/технические) возможности доступа населения к широкополосной связи, и регуляторные (политические) действия, создающие необходимую среду, как для развития инфраструктуры доступа, так и для развития цифровых услуг и информационных возможностей населения и бизнеса.

Внедрение широкополосных технологий является ключевым элементом обеспечения качественного, безопасного и доступного в ценовом отношении доступа к информации и знаниям, что было еще раз подчёркнуто на встрече Комиссии ООН по широкополосной связи в Давосе во время Всемирного экономического Форума в январе этого года.

Российская Федерация является активным участником этих глобальных процессов, и мы накопили значительный опыт в данной сфере.



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Мы добились впечатляющих показателей по уровню проникновения ШПД. На конец 2017 года Интернетом пользовалось 87 млн человек населения, уровень проникновения Интернета превышает 76,3%, что является одним из ключевых аспектов для успешного развития цифровой экономики. Аудитория мобильного Интернета увеличилась до 56% (67 млн человек), на начало 2018 года доступом в Интернет со смартфонов пользовались больше половины взрослого населения России — 51,5%. Россия занимает второе место в мире по ценовой доступности услуг на мобильную связь и мобильный Интернет, и десятое место в мире на фиксированный Интернет. Это стало возможным благодаря высокой степени конкуренции в телекоммуникационном секторе.

Кроме того, в России продолжает семимильными шагами развиваться электронное правительство. В 2017 году количество зарегистрированных пользователей единого портала государственных услуг увеличилось на 25 млн и составило 65 млн человек. Всего с 2012 года количество пользователей портала увеличилось почти в 20 раз. Портал госуслуг активно расширяется: в прошлом году появилось 207 новых федеральных услуг, и сейчас пользователям доступно 968 федеральных госуслуг. Всего в 2017 году через портал было оказано 1,3 млрд госуслуг, что в три раза больше, чем годом ранее.

Объем платежей, совершенных пользователями портала госуслуг, в 2017 году вырос почти в четыре раза и составил 30,3 млрд рублей. В 2016 году этот показатель равнялся 8,1 млрд рублей.

При этом немаловажным остается аспект размера нашей страны. Несмотря на оптимистичные показатели по покрытию 3G, проникновение LTE на уровне 70% и высокие позиции нашей страны в международных рейтингах развития ИКТ, нам еще очень многое предстоит сделать. Мы понимаем, что развитие инфраструктуры – это та база, на которой будет развиваться цифровая экономика. В России ведётся активная работа над стратегическими отраслевыми проектами. Более 200 тысяч километров волоконно-оптических линий связи будут проложены в России для подключения всех населённых пунктов с числом жителей от 250 до 500 человек. Уже подключено около 5,7 тысяч таких населённых пунктов и проложено почти 46 тысяч км волоконно-оптических линий связи.

Говоря о политических решениях, я хотел бы отметить, что они должны быть долгосрочного, стратегического характера с продуманными направлениями развития, давая ориентиры всем участникам процесса преодоления цифрового разрыва.

В качестве такого примера я хотел бы отметить программу «Цифровая экономика Российской Федерации», утвержденную в июле 2017 года. В качестве ключевых вопросов развития цифровой экономики мы видим вопросы создания благоприятного инвестиционного климата, снижения административных барьеров, поощрения малого и среднего бизнеса, развития существующей инфраструктуры широкополосного доступа в Интернет и электронной торговли.



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Реализация программы «Цифровая экономика Российской Федерации» позволит создать благоприятные условия для развития общества знаний, повысить осведомленность населения о новых возможностях; совершенствовать систему обучения и переобучения навыкам владения ИКТ, тем самым снизить риски, при которых только часть населения имеет доступ к современным технологиям, умеет их использовать и получает от этого преимущества. Считаем, что главную роль в развитии общества знаний призваны сыграть образование, переподготовка и реклама нового "информационного" образа жизни, позволяющие вовлекать все более широкие круги населения в мир ИКТ.

Таким образом, именно, принятые решения (утвержденные государственные программы) с четко поставленными требованиями, позволили государству совместно с операторами решать задачу охвата населения широкополосным доступом к информации и услугам и сделать связь финансово доступной для всех граждан нашей страны.

Хочу также особо подчеркнуть, что Интернет является базисным элементом цифровой экономики. Считаем, что для его успешного, надёжного и безопасного использования необходимы международные нормы и правила, регулирующие отношения в области Интернет-управления. Россия полагает, что такие нормы должны вырабатываться под эгидой институтов ООН.

В настоящее время отдельные аспекты регулирования разделены между различными организациями и их усилия в значительной степени не скоординированы, в то время как комплексность регулирования требует тесного международного сотрудничества при ведущей роли государств.

Все большее количество стран признает, что угрозы безопасности в сфере ИКТ вызывают риск подрыва коллективной способности использовать Интернет для наращивания экономического роста и развития во всем мире.

В цифровой среде, как и в других сферах, на государства возложена особая ответственность - обеспечивать безопасность, стабильность и экономические связи с другими странами.

Глобальная экосистема информационных технологий сегодня находится не в равновесном состоянии. Все ключевые решения, ключевые программы, как правило, приходят из одной страны. Это проблема не только для России, но и для всего мира. Мы против таких монополий, многие коллеги из разных стран солидарны с нами. Мы хотим равновесия. Одна рыночная ниша не должна контролироваться одной страной или одной компанией. Нельзя позволять, кому бы то ни было контролировать 100% рынка. Нужна справедливая конкуренция, нужны возможности для наших новых компаний, нужно дать им определенное место на глобальном рынке.

Россия предлагает объединить усилия по совместной подготовке универсальной конвенции ООН по безопасному функционированию и развитию сети Интернет, чтобы разработать международно-правовую основу регулирования Всемирной паутины.

Желаю всем участникам успехов, новых конструктивных решений и идей!

Благодарю за внимание.



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ENGLISH VERSION:

POLICY STATEMENT

By H.E. Mr. Rashid Ismailov, Deputy Minister of Telecom and Mass Communications of the Russian Federation at high-level policy session of the WSIS Forum

(20 March 2018, Geneva, Switzerland)

Excellences,
Distinguished colleagues and guests,

Our Forum topic is "Leveraging ICTs to Build Information and Knowledge Societies for Achieving the Sustainable Development Goals (SDGs)".

It is generally recognized that the ICTs have a crucial importance for ensuring all three segments of the sustainable development, i.e. economic, social and environmental segments. The WSIS-SDG matrix clearly demonstrates close relations between WSIS Action lines and sustainable development goals and targets.

In the era of 4th industrial revolution, further development of information and knowledge societies that closely associated with the achievement of SDGs, relies on the development and introduction of the Digital Economy. The Digital Economy is becoming an important engine for growth in the world economy and plays a significant role in boosting economic development rates, increasing productivity of existing industries, establishing new markets and achieving sustainable growth.

Speaking today about bridging the digital divide, we should clearly distinguish between basic (physical/technical) opportunities for the population to have access to the broadband and regulatory (policy) activities that establish relevant environment for the development of both broadband access infrastructure and digital services and information opportunities for the population and businesses.

Introduction of the broadband technologies is a key element for high-quality, secure and affordable access to information and knowledge as was highlighted at the UN Broadband Commission meeting in Davos during World Economic Forum in January this year.

Russian Federation is an active participant in such global processes and we have accumulated a considerable experience in this field.



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We have achieved impressive performance indicators with regard to the broadband penetration. At the end of 2017, the number of Internet users amounted to 87 million people, with Internet penetration level exceeding 76.3% being one of the key enablers for successful development of the Digital Economy. Mobile Internet audience has increased up to 56% (67 million people), and at the beginning of 2018 more than a half of the adult population of Russia, i.e. 51.5%, had Internet access via smartphones.

Russia ranks second in the world in the affordability of mobile services and mobile Internet, and tenth in fixed Internet. This is thanks to a high level of competition in the telecommunication sector.

In addition, Russian e-government continues making tremendous progress. In 2017, the number of registered users of the Unified Public Services Portal increased by 25 million and amounted to 65 million people. Since 2012, the total amount of the portal users has increased almost twenty-fold. The Public Services Portal is actively expanding: last year 207 new federal services were established and now users have access to 968 federal services. In 2017, 1.3 billion public services were provided through the portal in total which is three times more than a year ago.

In 2017, amount of payments made by the portal users through the public services has increased nearly four-fold and amounted to 30.3 billion rubles. In 2016, this amount was 8.1 billion rubles.

At the same time, vast territory of our country remains important issue. In spite of optimistic indicators of 3G coverage, 70% of LTE penetration and high places of our country in the international ranks of ICT development, much more needs to be done. We understand that the development of the infrastructure is the basis on which the digital economy will be developed. Russia is actively working on strategic industry projects. More than 200 thousand kilometres of fibre-optic communication links shall be laid in Russia to connect all settlements with population from 250 to 500 residents. Approximately 5.7 thousands of such settlements have already been connected and nearly 46 thousand kilometres of fibre-optic links have been laid.

Speaking about policy decisions, I would like to note that they shall be of long-term and strategic character with well thought-out areas of development, giving reference points to all participants of digital gap bridging process.

In this context, I would like to note that the "Digital Economy of the Russian Federation" Programme was approved in July 2017. As key issues of digital economy development we see establishment of favorable investment climate, reducing administrative barriers, encouraging small and medium business, development of existing infrastructure for broadband Internet access and e-trade.

Implementation of "Digital Economy of the Russian Federation" Programme will allow establishing favorable conditions for the development of knowledge society, increasing public awareness of new opportunities; improving system for training and updating ICT skills, thereby decreasing risks when only a part of population has access to modern technologies, can use them and enjoy advantages from ICTs. We believe that educating, updating ICT skills and promoting new "information" way of life are intended to play the key role in the development of knowledge society, involving ever more population into the ICT world.



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Thus, it is just adopted decisions (approved public programmes) with clearly stated requirements that have allowed government jointly with operators to solve the task of covering population with broadband access to the information and services and making communications affordable for all citizens of our country.

I'd like also highlight that Internet is a basic element of the digital economy. We believe that for its successful, reliable and secure usage we need international frameworks regulating relations in the field of Internet governance. Russia supposes that such frameworks shall be developed under the auspice of the UN institutions.

Nowadays separate regulation aspects are divided between various organizations and their efforts to a large extent are not coordinated, while regulation complexity requires close international cooperation under the leading role of states.

More and more countries recognize that threats to ICT security cause risk for disruption of collective ability to use Internet for raising economic growth rates and global development.

In the digital environment, as in other spheres, states are given specific responsibility to ensure safety, stability and economic relations with other countries.

Currently, global ecosystem of information technologies is not in equilibrium state. All key decisions, key programmes generally originate from one country. This is a problem not only for Russia, but for the entire world. We are against such monopoly, and many colleagues from different countries stand in solidarity with us. We want to have equilibrium. Any market place shall not be controlled by one country or one company. It shall not be allowed that anyone controls 100% of market. There is a need in fair competition, opportunities for our new companies, they should be given a certain place in global market.

Russia proposes to join efforts in cooperative preparation of the UN universal convention on the secure functioning and development of the Internet in order to develop an international legal framework for the regulation of the World Wide Web.

I wish all the participants the success, new constructive decisions and ideas!

Thank you for your attention.



ESOA

**Mrs. Aarti Holla
Secretary General**

What can governments do to bridge the digital divide within their countries?

- ◆ The most important thing that governments can do is to foster the use of all technologies across a level playing field and encourage cooperation between different technologies & operators. Every country is different and has important differences within it - geographical, topographical, socio-economic, demographic and others. It is largely because of these differences that digital divides exist. Experts forecast that by 2020 4G/LTE will cover 63% of the world's population but only 37% of the landmass - that means millions of people without connectivity and that is a big problem.
- ◆ Big problems require many solutions: fixed networks, mobile networks, satellite and WiFi! Satellites match the diversity we see within countries: they are unique in being blind to national borders; blind to political regimes; they don't discriminate between rich and poor or between urban and rural citizens. They are an invisible solution that makes a huge and immediate difference to people's lives because they naturally and cost-effectively cover the whole territory.
- ◆ There are hundreds of examples of satellite connectivity contributing to the achievement of Sustainable Development Goals such as quality education, good health, reduced inequalities and gender equality. But even if satellite is the only solution that can reach certain areas, satellite services often don't benefit those whose lives they could change because of high import duties or unfavorable licensing regimes or because universal service funding is not made available.
- ◆ So governments need to ensure they are not taking a "one-size-fits all" approach but that they are creating an environment that enables all technologies and operators to contribute and cooperate. This inclusive approach on both government and industrial level is what is needed if we are to successfully achieve the Sustainable Development Goals.



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Digital divide and 5G: from dilemma to opportunity?

- ◆ We cannot deny that many governments on all world continents are hugely focused on 5G right now. And it is understandable given that we are living in an era where the pace of technological advancement is so fast and it seems as if everyone on the planet has a mobile phone! Unfortunately that is a reality that we can only wish for!
- ◆ The harsh reality is that enormous divides do exist and therefore policy makers must guard against seeing 5G and Digital Divides as competing objectives within digital portfolios. We have to be very careful that it does not become just another long-term issue within development portfolios but that it remains an absolute priority of digital policy as it should be and that's where we need to see concrete supporting actions within regulatory frameworks, investment policies and spectrum decisions.
- ◆ If anything 5G should make the subject of Digital Divides even more pressing because it risks turning the digital divide into a digital chasm which society today cannot afford. Development issues are priorities - this event with so many eminent participants is testimony to that - but it is also true that development issues often come with connotations of being potentially unachievable, stretch targets when they don't have to be. This is the moment when the common goals that we are all talking about need to be more than words but really translate into concrete and consistent actions across different policy areas.
- ◆ We have an opportunity to make a difference on bridging digital divides now. All technologies, mobile, satellite, WiFi are evolving at a tremendous pace and satellite is one that can make a difference within weeks. So it would be a mistake to see this as a dilemma of choice between either achieving 5G or bridging Digital Divides - there is an opportunity to positively impact peoples' lives now if we change mind-sets at all levels, stop focusing on specific technologies but stay focused on meeting the real needs of world citizens.



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Global Open Data initiative for Agriculture and Nutrition (UK)

Dr. Andre Laperriere
Executive Director

The Global Open Data for Agriculture and Nutrition (GODAN) initiative seeks to support global efforts to make agricultural and nutritionally relevant data available, accessible, and usable for unrestricted use worldwide. The initiative focuses on building high-level policy and public and private institutional support for open data.

The initiative encourages collaboration and cooperation among existing agriculture and open data activities, without duplication, and brings together all stakeholders to solve long-standing global problems. Open access to research, and open publication of data, are vital resources for food security and nutrition, driven by farmers, farmer organizations, researchers, extension experts, policy makers, governments, and other private sector and civil society stakeholders participating in "innovation systems" and along value chains. Lack of institutional, national, and international policies and openness of data limit the effectiveness of agricultural and nutritional data from research and innovation.

GODAN advocates for the use of the FAIR Data Principles; data which is Findable, Accessible, Interoperable, and Reusable. By encouraging a shared agenda for FAIR data, alongside action to build capacity for the use of data by all stakeholders, we can boost food security and sustainable livelihoods.

Data must be used responsibly. Open data policies must follow ethical guidelines to prevent power imbalances, empower vulnerable communities, and promote sustainable agriculture and nutrition. Inter-institutional cooperation can build understanding and consensus, while social certification schemes to leverage the power of ethical consumerism. We can also work together towards an international agreement on ownership of open data. GODAN calls on all organizations to develop open data and open access policies by default, in both public and private sectors, whilst respecting and working to balance openness with legitimate concerns in relation to privacy, security, community rights and commercial interests and advocate for the release and re-usability of data in support of innovation and economic growth, improved service delivery and effective governance, and improved environmental and social outcomes.

Session Three: Bridging Digital Divides

Webcast: <https://www.itu.int/net4/wsis/forum/2018/RP/Webcast/266#intro>



High level Track Facilitator: Ms. Crystal Rugege, Carnegie Mellon University Africa, Rwanda

High level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator UNDESA** - Mr. Vincenzo Aquaro, Chief E-Government Branch, Division for Public Administration and Development Management
3. **Brazil**– H.E. Mr. Andre Borges, Secretary of Telecommunications, Ministry of Science, Technology, Innovation and Communication
4. **Ghana** – H.E. Mrs. Ursula Owusu-Ekuful, Minister, Ministry of Communications
5. **Senegal** – H.E. Mr. Abdoulaye Balde, Minister, Ministry of Communication, Telecommunications, Posts and Digital Economy
6. **Poland** – Mr. Marcin Cichy, President of the Office of Electronic Communications, Office of Electronic Communications (UKE)
7. **SAMENA Telecommunications Council** - Mr. Bocar A. Ba, Chief Executive Officer
8. **ChunriChoupaal**– Ms. Iffat Gill, Founder and CEO (Netherlands)
9. **TEMA Telecom Equipment Manufacturers Association of India/CMAI Association of India**– Prof. NK Goyal, Chairman/President



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1. Introduction

This session examined the challenges and opportunities in achieving sustainable digital inclusion. With multi-stakeholder perspectives from ministers to regulators to telecom operators and civil society practitioners, there was a rich discussion that identified several common issues across the various geographic regions from Africa to Europe to Asia. Four major themes emerged in the discussion: access, affordability, viability and collaboration. There was a prevailing sentiment among panelists that there are key factors that can either narrow or widen the digital divide that must be addressed: infrastructure, political will, readiness of society in terms of digital literacy and affordability.

2. Vision

There was a common vision shared by all stakeholders, that digital inclusion is imperative to build a knowledge economy, but it will take the village to bring that vision to fruition. We can go further faster if we commit to a common agenda, align our priorities and pool our resources.

3. Fresh Priorities

- Reaching the farthest first, prioritizing the most underserved communities since in many developing countries they still represent that largest percentage of the population
- Access alone is not enough. Digital literacy is fundamental for finding a job, and remaining employable, competitive and productive.

4. Emerging trends

- Encouraging infrastructure sharing amongst telecom companies, government encouraging companies to share existing infrastructure, and lease infrastructure where they don't have access
- More strategic use of universal funds to bridge the digital divide for communities and individuals with limited finances.

5. Opportunities

- 5G has the ability to provide last mile connection and could play a significant role in closing the digital divide.
- Telecom operators need smart collaboration with regulators that will incentivize investment; policies also need to be put in place to stimulate demand and align priorities.
- Conversations are happening between public and private sector, but we also need private sector talking to each other, to optimize the CAPEX that can sustain the entire society.
- Priority sectors that can contribute to the digital economy were highlighted including agriculture, health, commerce, education, information, and creative/cultural sector.
- Upgrading digital skills of women will ensure innovation and growth, developing a generation of technology creators not just consumers



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6. Key Challenges

- 5G needs policies, standards and regulations in place to facilitate effective implementation.
- In order to invest in 5G infrastructure, mobile operators need to engage with governments to come up with viable business models to reduce the CAPEX
- Government needs to stimulate the demand and education the population so they can make good use of the ICT.
- As we move to a digital society and a data driven economy, we need to have policies ready for cross border data flows to address issues of data privacy.
- On average globally, the coverage of broadband access by country is still insufficient and not in line with SDGs
- Lack of safe spaces and unconscious bias hindering women from joining digital economy

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

- Ghana aims to connect the entire country by 2020. (Action Lines 1 & 2)
- Senegal aims to achieve digital literacy for all users by 2025. (Action Line 1 & 4)
- Senegal is currently providing all public universities with free high speed Internet. (Action Lines 1, 2 & 4)
- Poland has launched digital strategy with over 1 billion Euros dedicated to next generation networks, with the intention to connect 1.8 billion additional households by 2020, deploy 5G in one city 2020 and all transport hubs by 2025. (Action Line 1, 2 & 6)
- Code to Change has a program for professional women to upgrade technology skills in a safe learning environment (Action Line 4)

8. Case Examples

- Ghana's universal access fund in partnership with telecom companies to extend connectivity to underserved communities.
- Senegal's "Digital Senegal 2025 Strategy", already making significant strides providing free high-speed Internet access to all public universities.
- Senegal's legislative and regulatory reform on the simplification of the provision of Internet services, reducing the number of telecom providers by 50%.
- Brazil's program to incentivize private sector by providing land, technical facilities and tax exemption to companies that connect rural communities.



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9. Road ahead

- 5G could be revolutionary, but it requires massive investment, engagement with regulators and mobile operators, and viable business models to reduce the CAPEX
- There is still a great need to align priorities among stakeholders in practice and not just in theory, beyond what is agreed in high-level discussions.
- Private sector is ready to investment, and governments are ready to engage. However, it will require ongoing dialogue to ensure the right incentives are in place while maintaining a human-centered approach to bridging the digital divide.
- Looking towards the SDGs, WSIS provides a framework to set objectives and measurable targets to keep all stakeholders on track in creating an inclusive knowledge society and thriving digital economy.



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Brazil

H.E. Mr. Andre Borges
Secretary of Telecommunications
Ministry of Science, Technology, Innovation and Communication

Ladies and gentlemen,

I would like to thank the organization for the invitation to take part in this session dedicated to the theme of "**Bridging Digital Divides**". In fact, Brazil has interesting developments in Information and Communication Technologies (ICT) to report, as our country is about to launch its Digital Transformation Strategy.

The Strategy seeks to set up on actions for the digital transformation of our economy, with a horizon of 5 years, and for which priorities, goals and indicators of progress are being established.

Many countries have recently undertaken similar work, seeking to identify the specific vocations and potential of each in the globalized digital economy.

In the last ten years, Brazil has established as a priority the expansion of broadband Internet access, both by expansion of fixed access networks and mobile access networks. Today, notably with the broad coverage of mobile broadband in the country, and with the sensible reduction of costs of mobile terminals, access to the Internet with mobility is a reality for a large part of the population.

The coverage of satellite networks is also broadened. Of particular note was the launch last year of the Geostationary Defense and Strategic Communications Satellite, with capacity for broadband Internet coverage, operating in the Ka band throughout the country. Thus, even in the most remote areas, collective access points and the implementation of telecentres for Internet access are feasible.

This modern telecommunications infrastructure offers great potential for the process of digital transformation of the Brazilian economy.

The Internet, which already connects billions of people to the global economy, also grows by adding more and more smart devices to the "Internet of Things." Thus, a huge amount of data is collected, in what has been called "Big Data".

This, in turn, feeds a new set of data-driven business models, and exploited on digital platforms and "marketplaces". Opportunities open up in e-commerce, including for small and medium-sized businesses, by reducing transaction costs. At the same time, a new environment emerges for the creation of disruptive digital businesses, led by new digital startups.

It is in this context that the Brazilian Digital Transformation Strategy was formulated, based on two main thematic axes: the enabling themes of this transformation and the themes of digital transformation itself.



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The enabling themes seek to create an environment conducive to the development of the digital transformation of the Brazilian economy, with initiatives essential to leverage the digitization. Such initiatives include:

- Infrastructure of networks for access to information and communication technologies;
- Investments in research, development and innovation;
- Development of an appropriate regulatory environment, with norms and regimes that promote trust in the digital world;
- Education and professional training appropriate to the digital economy, and
- International insertion of Brazil in themes such as Internet governance and international trade.

This enabling environment fosters activities in favor of digital transformation, both in government and in the productive sector. Thus, the specific actions of digital transformation were grouped into two major themes:

- Digital transformation of the economy, with actions geared towards the data-based economy, to a reality of connected devices, and to new business models made possible by digital technologies.
- Digital transformation of the government itself, migrating to online digital platforms the set of services provided to companies and citizens, streamlining processes and reducing costs.

The challenges to implementing these strategic actions are not few. Therefore, this strategy contemplates, from this formulation, the coherence and synergy between different actors, aiming to take advantage of all the potential that digital technologies have to offer, with real growth of the Country and distribution of the benefits of the economy of the future for all.

The official launch of the Brazilian Strategy for Digital Transformation should occur in the coming days and should contribute significantly to the advancement of competitiveness and productivity in the Brazilian economy.

Thank you!



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Ghana

H.E. Mrs. Ursula Owusu-Ekufu
Minister
Ministry of Communications

Thank you for the opportunity. I bring you warm greetings from Ghana, where my President, His Excellency Nana Addo Dankwa Akufo Addo has tasked me, to help close the digital divide as the Government strives to digitalize the economy of Ghana.

The government of Ghana has embarked on a mission dubbed the “**Digital Ghana Agenda**”. As part of the digital Ghana Agenda, the Government is undertaking a number of initiatives to improve accessibility to Public Services irrespective of geographical location.

These initiatives are: **Paperless Port System, National Digital Property Addressing System, e-Certificate for Company Registration, Smart Workplace, e-Immigration System, e-Justice System, e-Parliament System, e-Procurement System** among others.

Significant benefits being derived from the implementation of these initiatives are cost savings for the citizens, reduction of risks as a result of travelling long distances to access services, time spent in accessing services and reduction in corruption.

The Government of Ghana has not lost track of the need to aggressively bridge the digital divide and to digitalize the economy.

There are three (3) areas we are considering to close the digital divide. These are infrastructure provision, access and affordability.

Mindful of this, various efforts have been made to revamp the ICT/Telecommunication environment. To address the broadband deficit of the country, the Government of Ghana has laid inland Fibre from the south through the middle belt to the northern part of the country and connecting both Togo and Burkina Faso as part of the ITU’s Connect the City Project.

Fibre has also been laid at the eastern part of the country to provide high-speed internet broadband connectivity to more than 120 rural communities along that route. There are plans underway to also connect the western part of the country with fibre.



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Government's efforts at providing broadband connectivity are being complemented by private investments from telecom companies to increase broadband capacity and accessibility to many communities in Ghana.

As a result of the favourable enabling environment, there are five (5) submarine fibre optic cable companies in Ghana all geared towards increasing the country's bandwidth.

Financial inclusion is one important divide we are closing quickly using technology to serve the unbanked. According to Ghana's Central Bank, Mobile Money is gradually becoming a major means of payment for the unbanked and the underserved in Ghana. The rapid growth in Mobile Money usage in Ghana is due to a combination of the *increasing usage and penetration of mobile phones in the rural areas and expanding communications coverage*.

Currently:

- The total number of mobile connections in Ghana stands at 36.7 million with a penetration rate of 127.87% for a population of just about 28.7 million
- Active internet users excluding ISPs stand at 23.9 million with a penetration rate of 83.27%

These statistics are mainly dominated by the youth because Ghana has a youthful population. These youth have a high craving for the use of the internet to undertake research, follow modern global trends in ICT, and access social media.

One of the crucial factors that affect digital divide is the high cost of service provision to less privileged persons especially in developing countries. There are wide disparities among the haves and have nots in my country especially in the acquisition of ICT tools and internet connectivity.

The Government has created an Enabling environment which has propelled fair competition in the ICT/telecommunication Industry. These Service providers have competitively developed data packages at relatively affordable prices for consumers.

Additionally, a number of interventions have been made under our universal access fund to bridge the digital divide. To date, two hundred and fourteen (214) Community Information Centers (CICs) have been constructed to provide community development information, connectivity and business services to the local communities at minimal cost.



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Connectivity has also been extended to Six Hundred and Thirty-Nine (639) institutions covering Senior High Schools, Vocational Institutions, Schools for the Blind and Deaf and Research Centers.

To further boost accessibility, Government has embarked on various projects as follows: the Rural Telephony Project, Rural Pay Phone Project, Easy Business Centre Project, Library Connectivity Project, Post Office Connectivity Project, ICT for Sustainable Fishing Project and the Digital for Inclusion (D4I) programme with the objective of creating smart communities.

Conclusion

To conclude, Ghana is on a roll, and we are not stopping until that gap is closed completely. The Government is determined to use technology to aid the growth of the country and bridging the digital gap is an important check box we intend ticking as soon as possible as we move towards attainment of the Sustainable Development Goals(SDGs).

Thank You.



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Senegal

H.E. Mr. Abdoulaye Balde
Minister
Ministry of Communication, Telecommunications, Posts and Digital Economy

Thème : « Réduire les fractures numériques »

Question 1 :

Monsieur le Ministre, le Sénégal dispose depuis octobre 2016, d'une stratégie « **Sénégal Numérique 2025** » largement partagée par l'ensemble des acteurs.

Dans ce document national de déclinaison de la politique relative au développement de l'Economie Numérique, quelles sont les principales initiatives en faveur de la réduction des fractures numériques ?

Eléments de réponse 1 :

- **Monsieur Président de la Conférence.**
- **Monsieur le Secrétaire Général de l'UIT**
- **Monsieur le Modérateur/Facilitateur**
- **Mesdames, Messieurs les Ministres,**

- **Mesdames, Messieurs les Ambassadeurs,**
- **Mesdames, Messieurs les Directeurs Généraux.**
- **Mesdames, Messieurs les délégués en vos rangs et grades,**

Il m'est particulièrement agréable, au nom du peuple et du gouvernement de la République du Sénégal de participer au Forum 2018 du Sommet Mondial sur la Société de l'Information, tribune de premier plan pour débattre du rôle des Technologies de l'Information et de la Communication (TIC) en tant qu'outil de mise en œuvre des Objectifs de Développement Durable de l'Agenda 2030 (ODD).

Monsieur le Modérateur,

Pour répondre à votre première question, je voudrais tout d'abord souligner qu'à travers le Plan Sénégal Emergent (PSE), document national de référence de la politique socio-économique, notre pays a fixé un nouveau cap en misant sur la transformation structurelle de son économie pour atteindre une croissance forte, soutenue et durable.



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Dans le Plan Sénégal Emergent, faudrait-il le rappeler, le secteur du Numérique a été identifié comme un des fondements à l'émergence.

En adoptant la stratégie « Sénégal Numérique 2025 », notre pays a fait un pas vers la prise en charge politique de l'opportunité d'accélération du développement et d'intégration qu'offrent les TIC dans un monde de l'information et de l'économie de la connaissance.

Le Plan Sénégal Emergent et sa mise en œuvre créent un environnement et un cadre indispensables au développement du Numérique.

La stratégie « Sénégal Numérique 2025 » a pour vision:

«En 2025, le numérique pour tous et pour tous les usages, avec un secteur privé dynamique et innovant dans un écosystème performant».

Elle est déclinée en trois (3) prérequis et quatre (4) axes stratégiques d'intervention prioritaires, avec un plan d'action de 28 réformes et 69 projets pour un cout total de 2,5 milliards d'Euros.

A cet égard, il me plait de souligner que dans ce portefeuille de projets et de réformes, d'importantes mesures sont été déjà prises et dont l'objectif général est de contribuer à la réduction des fractures numériques.

- **Au niveau législatif et réglementaire**, des réformes majeures sont été entreprises, notamment à travers la simplification des conditions de fourniture de services Internet.
En effet le régime de licence de Fournisseurs d'Accès Internet (FAI) a été remplacé par une simple autorisation, et le Gouvernement a octroyé des autorisations à trois FAI, en sus des trois opérateurs de Télécommunications disposant au moins de la technologie 3G.
Mieux, le principal opérateur a déployé la 4G depuis plus d'un an.
- **Pour ce qui est des infrastructures de Télécommunications/TIC**, nous avons mis en place un plan national haut et très haut débit en mars 2018, qui à partir d'un diagnostic exhaustif, se propose de renforcer les 6 000 km de fibre optique et les technologies mobiles haut débit (3G, 4G) sur tout le territoire national. Dans la même lancée, la stratégie d'accès/service universel est en cours d'actualisation. Il convient de rappeler que le Sénégal dispose d'une politique de service universel depuis 2004 et a octroyé en 2007 une licence régionale de service universel dans la région de Matam au nord du pays, et ce pour favoriser l'accès aux services de télécommunications en zone rurale.
- Aussi, le Sénégal a t-il inauguré son Point d'Echange Internet (SENIX) en Aout 2017, en vue de faciliter l'accès des populations aux ressources numériques. Nous envisageons d'ailleurs de positionner le Sénégal pour abriter un point d'échange régional.



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- Enfin, pour renforcer le développement des infrastructures de Télécommunications/TIC, le gouvernement a démarré, en partenariat avec la Banque Africaine de Développement, le projet de Parc des Technologies Numériques (PTN), dans le Pôle urbain de Diamniadio à 20 km de Dakar.
- **Au demeurant, en ce qui concerne l'accès à l'information et au savoir**, le projet des Centres Multimédia Communautaires (CMC) initialement lancé en collaboration avec l'UNESCO et la Coopération Suisse, a permis aujourd'hui l'installation de 40 centres fonctionnels dans les zones rurales et périurbaines pauvres et défavorisées du pays.
- **Dans toutes les universités publiques**, le gouvernement du Sénégal a mis à disposition une bande passante Internet très haut-débit pour permettre aux étudiants de bénéficier d'un accès Internet permanent et gratuit.
- **Les efforts du Gouvernement du Sénégal** pour renforcer la dimension genre dans l'inclusion numérique ont-ils été déjà confirmés en 2015 par l'UIT, qui nous a décerné le Prix Gem-Tech.
- **Sur la diffusion du numérique dans les secteurs économiques**, le Gouvernement a identifié six (6) secteurs prioritaires ayant un fort potentiel de croissance, tels que l'agriculture, la santé, le commerce, l'éducation et la formation, les services publics et les industries culturelles.

Monsieur le Modérateur,

Aujourd'hui, le Sénégal est conscient qu'il est de notre devoir non seulement de fournir un accès large bande à des services TIC abordables pour tous, mais également de mettre les TIC au service d'autres secteurs socio-économiques, en vue de contribuer fortement à l'atteinte des objectifs de développement durable de l'agenda 2030 de la Communauté internationale.

Dans ce processus continu d'édification d'une Société de l'Information inclusive au Sénégal, en Afrique et dans le monde, il convient de noter que la sécurité dans le cyberspace est érigée en priorité. En effet nous avons adopté, dans une démarche participative impliquant l'ensemble des acteurs, la stratégie nationale de cybersécurité (SNC2022) dont l'ambition est « **En 2022 au Sénégal, un cyberspace de confiance, sécurisé et résilient pour tous** ».

Question 2

En termes de planification à l'horizon 2025, quels sont, Monsieur le Ministre, les résultats escomptés par le Sénégal ?

Éléments de réponse 2

Monsieur le Modérateur,

Pour aborder la deuxième question, permettez-moi de saluer la forte volonté politique des plus hautes autorités du Sénégal en faveur d'une mise en œuvre efficace et efficiente du plan d'actions de la stratégie « Sénégal Numérique 2025 ».



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En effet, le pilotage stratégique de la mise en œuvre de la SN2025 est assuré par un Comité Interministériel qui est présidé par le Premier Ministre, avec un Comité technique présidé par le Ministre en charge du Numérique, et comprenant les représentants du secteur public, du secteur privé, de la société civile et des universités.

De façon spécifique, aussi bien sur l'accès, l'usage et la formation des ressources humaines à l'utilisation des TIC à l'horizon 2025 au Sénégal,

- le taux de pénétration de l'accès à Internet pour les ménages devra passer de 10% à 50%;
- des équipements informatiques et points d'accès Internet seront disponibles pour tous les élèves et étudiants;
- les établissements scolaires seront connectés et équipés à Internet avec un taux de 100% ;
- le taux de bancarisation électronique de la population devra passer de 12% à 50%.

Globalement,

- l'ambition de notre pays, à travers la stratégie «Sénégal numérique 2025 » au plan économique, est de redonner un nouveau souffle au secteur, en apportant de nouveaux relais et sources de croissance aux acteurs, afin de porter la contribution du numérique au PIB à 10% à l'horizon 2025.
- Il s'agira aussi de tirer parti du fort potentiel du numérique en termes de création d'emplois, avec un objectif de plus de 35 000 emplois directs dans le secteur du numérique à l'horizon 2025 ;
- les progrès attendus à l'horizon 2025, sont mesurés essentiellement à travers les classements internationaux à partir des indices ci-après:
 - ✓ d'une part, pour le « Network Readiness Index » (NRI) du Forum Economique Mondial, l'objectif visé est d'atteindre au moins la 70^{ème} place dans le monde, et le 4^{ème} rang en Afrique en 2025.
 - ✓ d'autre part, concernant l'Indice de Développement des TIC (IDI) de l'Union Internationale de Télécommunications, l'objectif visé est d'atteindre au moins la 90^{ème} place mondiale et le 4^{ème} rang en Afrique en 2025.

Par ailleurs, le Sénégal, dans sa politique d'ouverture et d'intégration africaine, compte jouer un rôle majeur pour l'établissement de points d'échanges Internet sous régionaux et régionaux, en vue d'optimiser les trafics entre pays, et favoriser ainsi la disponibilité et l'accessibilité aux infrastructures et services numériques qui à terme, vont contribuer à la réduction des fractures numériques à l'échelle du Continent.



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Pour terminer mon propos, je voudrais attirer l'attention de l'assistance, sur la nécessité de renforcer la coopération entre toutes les parties prenantes pour construire une société de l'information et de la connaissance durable pour tous, conformément aux grandes orientations formulées dans la ligne d'action 11 du SMSI.

Le Gouvernement du Sénégal, par ma voix, voudrait enfin remercier l'Union Internationale des Télécommunications et l'ensemble de ses partenaires, pour le soutien constant au secteur du numérique, mais aussi pour cette belle organisation du Forum 2018 du SMSI.

Nos remerciements vont également au pays hôte la **Suisse**, pour la qualité de l'accueil et les conditions optimales de notre séjour.

**Je souhaite plein succès au Forum 2018 du SMSI.
Merci à toutes et à tous de votre très aimable attention.**

**Monsieur Abdoulaye BALDE, Ministre en
Charge de l'Economie Numérique (Sénégal).**



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Poland

Mr. Marcin Cichy
President of the Office of Electronic Communications
Office of Electronic Communications (UKE)

Q: As the head of the Polish regulatory authority for the telecommunications market can you share what you have done to fill the gaps in access to information and communication technology (ICT) and the role of 5G and other major infrastructure?

Good afternoon Ladies and Gentlemen, I am honoured and pleased to attend the WSIS Forum 2018.

Answering your question, I would like to underline the relevance of the fact that Poland is still a rural country, so there is huge differentiation in infrastructure deployment between the rural and urban areas. A vast majority of people live in cities and therefore we have to deal with quite huge congestion in telecommunications networks. We need to ensure big capacity of these networks not only in order to boost ICT development but also to fulfill end-users' expectations. When it comes to rural areas, the challenge is making capital investments (CAPEX) and receiving payback from the existing investments. This problem takes root in the lack of even basic telecommunications infrastructure in some areas of Poland. The national coverage and broadband access (NGN) is still not sufficient and not in line with the European Commission goals. What we decided to do many years ago is to use EU funds in order to deploy NGN fibre networks. A special Operational Programme Digital Poland is implemented with over one billion EUR dedicated to deployment of next generation networks. Thanks to this investment additional 10% of Polish households (1.8 million) will be connected by the end of 2020. This will mean deployment of last mile fibre infrastructure – end users will gain access to the passive infrastructure. This investment will also cover the roll-out of connections to the buildings (house wiring), which is essential for ensuring competition. This is only the first part of our activity regarding the fixed infrastructure deployment.

We know that the work on 5G is ahead of us. 5G will be a completely new standard of communication that will change our economy. We plan to achieve ambitious KPIs - to deploy the 5G infrastructure in one of the Polish cities till 2020 and to deploy the 5G infrastructure in all big agglomerations and along the transport roads by the end of 2025. It is worth to mentioning that 5G ensures extremely low latency (lower than 5 ms), throughput of at least 1 Gb/s and it will allow connecting more than 100 devices per m2.



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It will be crucial not only for the retail market and the end-users perception of what kind of services would be available for them, but also for the economy – e.g. it will facilitate a boost in production and engineering. These strong pillars of economic development are included in the Strategy for Responsible Development adopted by the Polish government two years ago – it is a roadmap allowing us to fulfill the end-users expectations – not only by delivering tools and services, but also to deliver additional public services, e.g. e-administration services and online public services. This will mean e-communication between the end-users and the government or even local governments (the 16 voivodships, 380 counties and over 2500 communes that are in Poland).

Last but not least, I would like to underline that in the case of 5G infrastructure investments, cooperation with many private entities is needed, especially with mobile operators to find out how to organize the business model. Both CAPEX investments and payback should be reasonable for them. This is important from the European point of view, as the lack of investments is a challenge. We expect over 900 billion EUR to be spent on 5G deployment by the end of 2025 and only 500 billion EUR in revenue. The gap is over 55% and that is the challenge we have to face in the nearest future.



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SAMENA Telecommunications Council

Mr. Bocar A. Ba
Chief Executive

Your Excellences! Dear colleagues and participants!
It is an honor and a pleasure to be here today.

We are living in an era, which has created enormous opportunity and potential for economic- and socio-economic development and growth, for wealth-creation and prosperity and human development. Yet, digital divides persist and inequalities continue to affect progress towards the economic and social development of different regions, countries, households and individuals.

Last year's WSIS High Level Track on Digital Divides recognized that 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. Participants concluded that a holistic approach needed 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. So, how can such a holistic approach be adopted? SAMENA has identified three key principles that it advocates to advance the bridging of the digital divides that persist in its region.

Firstly, ensuring that the basic requirements for building digital economies are in place, such as Digital Economic Programmes or Agendas. From a policy perspective, SAMENA countries, especially in the GCC region, are largely on track, having adopted Digital Economic Visions or Agendas with horizons up to 2030, that set out key objectives and steps to be taken to further digital transformation toward building Digital Economies. Moreover, efforts are being made in reviewing current legacy regulatory frameworks, including on topics such as net neutrality, market definition, competition (also from Internet platforms), national broadband networks, and consumer and data protection.

Secondly, understanding and redefining the role of telecom operators in creating knowledge societies and meeting SDG requirements is key to overcoming digital divides. The private sector can assume a key role in closing the Digital Divide with regards to all identified areas. It already takes a prominent role in providing both content and services as well as the infrastructure that delivers the content and services. It is therefore key to ensure that the private sector, in particular telecoms operators, are sufficiently incentivized to make clear investment commitments into appropriate infrastructure to enable advanced Digital Services provision.



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Appropriate enablers have to be in place. For example, to take advantage of emerging technologies such as 5G, AI and big Data, operators need to be able to “cloudify” and virtualize and build carrier clouds, which includes the storing and processing of personal data outside the home country. While data protection is of utmost importance and while it is also a key driver in the uptake of services, it should not undermine digital transformation efforts of operators through restricting cross-border data flows. Moreover, in order to enable 5G services, the license durations need to be extended to a time span of at least 20-25 years to allow for a better financial planning horizon.

To aid the process of digital transformation of operators, governments need to set hard targets, which reflect aspirations and time-frames and have clear policies to enable operators to make hard financial commitments. This can give operators the right frame of reference for investment to build out the necessary infrastructure. Moreover, in order to achieve the SDGs through the deployment of emerging technologies, a reference framework for Digital Services is needed, which sets out key Digital Services use cases across different verticals alongside their key enablers.

Lastly, accelerating co-operation building efforts between the private and the public sectors is key in bridging digital divides. Given the complexities of the digital ecosystem and its constantly evolving nature, consensus building through multi-stakeholder dialogue and partnerships is therefore fundamental.

Thank you for your attention!



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Session Four: Enabling Environment

Webcast: <https://www.itu.int/net4/wsis/forum/2018/RP/Webcast/267#intro>



High level Track Facilitator: Mr. Deepak Maheshwari, Symantec, India

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. **Bahamas** - H.E. Mr. Elsworth Johnson, Minister of State, Office of the Attorney General and Minister of Legal Affairs
4. **United Kingdom**– H.E. Mr. Julian Braithwaite, Permanent Representative and Ambassador of the UK to the UN and WTO, UK Mission to the UN
5. **Asia-Pacific Telecommunity** - Mr. Masanori Kondo, Deputy Secretary General
6. **IGF/MAG** – Ms. Lynn St. Amour, 2016-2017 Chair of the Internet Governance Forum (IGF) Multistakeholder Advisory Group (MAG)
7. **Microsoft Corporation** — Mr. Paul Mitchell, General Manager, Technology Policy



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1. Introduction

The session focused on creating a conducive and enabling environment for use of Information and Communication Technologies (ICT) with the objective of achieving and tracking progress of Sustainable Development Goals (SDGs) by fostering trust and inclusive decision-making.

2. Vision

Identify and mitigate the political, social and economic impediments in design, development and deployment of ICT.

3. Fresh Priorities

There is a need to identify and mitigate the political, social and economic impediments in design, development and deployment of ICT.

Metrics must be developed to track progress on the respective WSIS action lines with respect to the SDGs using real-time and accurate data so that planning and implementation priorities and resourcing can be suitably modified.

4. Emerging Trends

Multistakeholder model of Internet governance is gaining currency not just globally but even within regions and nations.

5. Opportunities

ICT also have the potential to bridge social, economic, physical and spatial inequities.

6. Key Challenges

The following challenges were identified during the session:

Increase in cyber threats both in numbers and severity; lack of capacity in understanding rights and responsibilities; accessibility; under-utilization of spectrum; and, lack of real-time & accurate data. Exacerbating digital divide due to higher investment in infrastructure and higher level of capacity in the urban areas thereby leaving the rural areas' concerns unaddressed timely and adequately.

Efforts to restrict free flow of data by and in certain countries are depriving people the benefits of modern technologies.

Power supply issues must be addressed while deploying ICT.

Taboos, apprehensions, misconceptions around ICT need to be mitigated via appropriate means and fostering trust. Varying levels of affordability, awareness, assurance, availability and accessibility of ICT.

Lack of appreciation and understanding of how technology is developed and deployed amongst a substantial number of policymakers.



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7. Case Examples

Several examples were cited during the session including but not the following:

While the annual Internet Governance Forum is held under the aegis of UN, it has spawned hundred plus National and Regional Internet Governance Forums around the world, all following the cardinal principle and incorporating the spirit of multi-stakeholder model.

The London process led to the 'Global Conference on Cyber Space' that offer a platform for stock-taking and decision-making.

Even an archipelago like Bahamas has seen positive impact education, health and traffic by using ICT.

8. Road ahead

We need to devote resources to enhance awareness and build capacity to leverage extant technology and international law to enhance overall cyber security. Use of emerging technologies like Cloud Computing and Artificial Intelligence for the benefit of humanity even while proactively identifying and mitigating the downsides.

Instead of being bogged down by diversity, let us embrace, enrich and celebrate it even as we all work towards achieving the SDG 2030. Partnerships are essential – across regions and nations but also across governments, industry, academia and civil society.

Think Global. Act Local.



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United Kingdom

H.E. Mr. Julian Braithwaite
Permanent Representative and Ambassador of the UK to the UN and WTO, UK Mission to the UN

Q - What do you think are the criteria to create an enhancing environment?

At the heart of WSIS is the willingness to create a people-centred, inclusive and development oriented information society. This can only be achieved if at least 4 criteria are fulfilled.

An open and free environment

The first key pillar of an enhancing environment is openness and freedom. Ensuring it is a free and open space allows the Internet and the information society more generally to be a powerful tool to support freedom, innovation, knowledge and growth. Free flow of data, free expression, free dissemination of information and greater accessibility are all part of this puzzle and central to achieve a vibrant information society and digital economy.

A competitive and predictable environment

We also need to ensure the development of a competitive environment, offering choice to consumer and encouraging innovation and affordability. However, competition does not mean no rules but we need to make sure we have rules in place that are stable, independent and predictable. This will provide the companies the certainty they need to invest and innovate.

A trusted environment

The UK supports a global Internet that promotes economic and social prosperity. It can only be achieved with trust. Without trust users and business will not fully embrace the potential of the digital era. This is why the UK National Cyber Security Strategy envisaged for 2021, a digital world that is secure and resilient to cyber threats, prosperous and confident.



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Through the opening of the National Cybersecurity Centre (NCSC), the UK is showing its commitment to making the UK the safest place to live and conduct business online.

Trust has two complementary elements. Firstly, trust in the security of networks; and secondly, trust that individual rights and freedoms are being respected. Ensuring that online services are safe and secure is the first part. Protecting people and their data, through technical measures, is central so they can communicate privately, use online platforms with confidence, and know that they are safe. However, this is not only about technical security it is also about rights and freedoms. Trust can only be won, if we ensure respect for fundamental rights and freedoms. If we don't protect these rights online, we will not win the support of our citizens. Human rights have to be protected online, the same way we protect them offline.

A multistakeholder environment

Finally, we need to develop strong multi-stakeholder partnerships. Indeed, the information society has not been created by governments only and it is thanks to the involvement of all stakeholders: private sector, academia, civil society that we can enjoy the global online community that we have now. Governments should ensure that the framework is here for the dissemination of information, the growth of investment and the unleashing of innovation. The multi-stakeholder approach allows to address the risks of the digital age while maximising the benefits.

Q - You talked about risks and a secure Internet environment. We see calls from certain stakeholders for a new international treaty on cybersecurity – what is your opinion on such a proposal?

There are a few calls to tackle Internet challenges through new international instruments. This is true for cybersecurity but we also see similar requests in other areas, related to human rights and privacy, cyberterrorism or cybercrime. It is still unclear what people would like from such instruments.

Application of international law online

The UK is not of the view that we need new international instrument to deal with the cyber environment. Indeed international law applies in the digital space. Instead of looking for new treaties that will take more time to negotiate than the time it took the Internet to develop, we should unpack and implement the tools that we have and implement existing international law.



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Focus on existing streams of work

The UK believes that developing a new treaty would only be an ineffective distraction from other important work such as educating users, developing a culture of cybersecurity, improving international cooperation to develop confidence building measures between states and promoting cyber security capacity building. Capacity building is indeed a central piece of the puzzle of a secure Internet and the UK is taking a leading role on this.

UK engagement on cybersecurity capacity building

Since 2012, the UK has spent over £10m building capacity in over 130 countries. A further £30m is planned for the next three years to build national cybersecurity strategic planning and incident response capabilities, facilitate the development of national law enforcement and criminal justice systems capable of addressing malicious cyber activity, and to support the development and implementation of regional confidence building measures between states.



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Asia-Pacific Telecommunity

Mr. Masanori Kondo
Deputy Secretary General

Excellences

Distinguished Guest

Ladies and Gentlemen

Firstly let me thank the organisers on behalf of APT and on my own behalf for inviting us to this very important forum. WSIS has been one of the important meeting to remind us how our sector (ICT) has been contributing for human kind and continue to improve ourselves for better tomorrow.

ICT needs no introduction and elaborate rationale for its contribution to towards achieving the SDG. The trend in increasing use of Mobile and Internet services indicates that ICT cuts across all sectors of economy and has supported people in numerous ways. ICT has enhanced competitiveness, increased productivity and economic development, promoted greater social inclusion, and paved way for its sustainable use in the future for the betterment of any nation. The deployment of broadband infrastructure and the development of broadband services is now the centre-piece of most national Telecommunications policies – especially in developing economies – and is likely to remain so over the next decade. For many years ICT has been the means to the end, be it education, health, agriculture, innovation or employment generation the list will never end. ICT has the natural scaling up property of making the small projects realistic and feasible. Therefore investing in ICT and ICT enabled services will definitely support to achieve the impact of SDG.

Global research has shown that there is very significant relation between access to ICT service and performance on SDG. In addition it is also found that ICT Sustainable Development Goals Benchmark has a greater association with Human Development Index compared to GDP per capita. This suggests that the key influencing factor is not the amount of resources available but how the available resources is utilised efficiently by using ICT.



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Since its establishment, APT, as an intergovernmental organisation has been instrumental in development of ICT service and infrastructure in the Asia-Pacific region. APT has played a vital role by providing a platform to discuss policy and regulatory issues and to share experiences among member countries. This effort is further strengthened with the 2014, Brunei Darussalam, ICT ministerial meeting on “Building Smart Digital Economy through ICT”. This has been the guiding principle to collectively work towards building a smart digital economy through ICT and address emerging challenges by fostering collaboration and cooperation.

Along the line with the theme of APT ministerial meeting and the SDGs 2030 the 14th Session of the APT General Assembly has set the strategic plan for the period 2018-2020. This strategic plan consists of five broad objectives namely Connectivity, Innovation, Trust, Capacity Building and Partnership. The detail APT strategic plan includes to:

- Increase access to broadband connectivity with an emphasis on unserved and under-served populations
- Improve practices in managing scarce resources for delivering connectivity
- Foster the development and adoption of the new ICTs
- Promote conducive environments for innovation and value creation in ICT
- Enhance the use of ICT as an enabler for achieving the Sustainable Development Goals 2030
- Develop and maintain secure, trusted and resilient ICT networks and services
- Address challenges related to disaster preparedness, risk reduction and mitigation
- Continue the development of ICT capacity building initiative, by assisting members, particularly developing and least developed countries, in enhancing and strengthening their human and institutional capacity
- Continue the development of ICT skills of the citizens to achieve digital inclusion including children, women, the elderly and persons with disabilities
- Take the lead role in shaping the development agenda and consolidating regional views on ICT issues
- Facilitate engagement by interested parties, such as industry, research institutions, academia, the technical community, consulting firms and policy makers and regulators in other sectors using ICT so as to build and leverage strategic partnerships to assist in addressing the needs of APT’s membership
- Increase exchanges and collaboration with the related international, regional and multilateral organizations as well as funding bodies to enhance cooperation for ICT development



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To realize the above plan APT will continue to implement work programmes like the ICT Development Forum, Symposium for Spectrum Management and Symposium for Cybersecurity etc. These programmes assist members to develop and/or update national plans, emphasizing the importance of the development of fair, predictable and transparent policy and regulatory environments that promote investment, productivity, competition and consumer safeguards. Connecting the unconnected and closing the digital divide has been the topic of discussion in every APT meeting as we know ICT has the potential to increase the rate of diffusion of very wide range of technologies, applications and platforms across the economy.

In many countries public services become to be delivered online thereby promoting good governance and efficient service. ICT has reduced the unit cost of service delivery by expanding the reach and reducing the time. As an example in this field, APT's cyber security forum has been instrumental to tackle the issues of data security and safe use of Internet.

In addition APT has been working on consolidating regional voice in order to make us understood. For instance, APT organizes preparatory meetings towards ITU's world conferences such as the ITU plenipotentiaries and World Radio Conferences in order to coordinate and facilitate regional positions and views to be submitted.

To conclude APT wishes WSIS-18 summit as another successful landmark in our endeavor to accomplish the SDGs 2030. To this end APT pledges our full support to work with the member countries and other stakeholders to achieve the collective goal of SDGs.

Thank you.



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IGF/MAG

Ms. Lynn St. Amour
2016-2017 Chair of the Internet Governance Forum (IGF)
Multistakeholder Advisory Group (MAG)

1) In 2005, the Tunis Agenda called on the UN Secretary-General to convene a new forum for multi-stakeholder policy dialogue—called the Internet Governance Forum (IGF). As the IGF enters its 13th year (becoming a teenager, if you will), can you talk a bit about how the IGF has evolved and the impact it is having on International Internet Public Policy issues?

Initially conceived of as an annual global meeting – the IGF quickly (and largely organically) grew to encompass a number of different intersessional or year round activities. Specifically, there are now just over 100 National, Regional, and Youth IGF Initiatives – all operating consistent with IGF principles of Multi-stakeholder, Open, Transparent, and Inclusive. We also have 3- 4 Best Practice Forums, covering issues such as Cybersecurity, Gender & Access, or Local Content. There are 17 Dynamic Coalitions – these are multi-stakeholder issue specific fora, some examples of them are: IoT, Blockchain Technologies, Gender & IG, Trade, etc. and we have a major Intersessional policy initiative – Connecting and Enabling the Next Billion(s) which has been running for 3 years.

The impact the IGF “ecosystem” is having is seen in the significant outputs from the activities I mentioned above – in forums, papers, discussions, and in “knowledge transfer”. These are consequential outputs. Good governance, and good decisions have to start with a good knowledge base, an understanding of the drivers, and of implications. All these discussions and outputs clearly inform decisions and actions taken back at national levels or in private sector or civil society organizations – where they should be taken. Where they were intended to be taken by the Tunis Agenda. This again is why we say the NRIs are one of the most significant outcomes of the IGF process. They both feed the discussions and in turn are part of the more local implementation mechanisms.



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2) The IGF is a unique forum, convened by the UN Secretary General and at the same time operates within a community led, bottom-up, open set of processes and programmes. As such, what do you see as future challenges (policy and otherwise), and what does the IGF experience tell us about the future of International Public Policy (processes)?

The IGF was constituted as a Forum for dialogue -- as in the wisdom of those involved in WSIS I and II, they knew that the issues we would be addressing were complex, highly interrelated, technology heavy, private sector led – in fact often led by one individual who had a good idea, and the entire space was and is fast changing. It was recognized then that new governance processes were required – ones that are open, and involved all stakeholders (not merely consulted but truly engaged all stakeholders).

We are all still grappling with what Internet Governance means, and what “governing” requires today. Expectations of “WHAT should be governed” and “HOW to govern” are changing, at the level of the individual, and also with and between governments. Finding the right models is a big challenge..... and when we are trying to find these new models against a backdrop of escalating cyber “events” whether security related or driven by various concerns around social media platforms or disinformation or fake news to name only a few – makes it even more difficult.

This is why forums such as the IGF and its associated activities are so critically important. They facilitate discussion and enable better understanding.



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Microsoft Corporation

**Mr. Paul Mitchell, General Manager
Technology Policy**

An enabling environment for broadband

When it comes to creating broadband infrastructure or cloud services it is important that policy makers understand the means by which the private sector makes investment decisions, as well as how political and regulatory decisions impact the technical functioning of the infrastructure or service.

Often, “an enabling environment” is a throw-away line that may refer broadly to deregulation or relaxing of tax or consumer safeguard rules.

But, it is really substantially more than that. Today's infrastructure is globally interconnected, relying on a myriad of both voluntary and mandatory interconnection agreements between network infrastructure providers. The global nature of the Internet means that you cannot create an enabling environment by only considering what is happening locally, but by considering the impact of local decisions on the broader interconnectivity options available to the various players. It is incumbent on the private sector to clarify these types of global issues at the local level.

When it comes to cloud services - the nature of the cloud is such that data is usually georedundant and frequently load-balanced to ensure a good customer experience. In some cases, services are able to offer guarantees of data residing in a particular data center - but that is not always the case. Provisioning services in developing countries can be especially challenging as frequently the core power infrastructure is not in place. In these cases - solutions for the power problem need to be found alongside those enabling the core networks as well as the services carried on the networks.

Ultimately, an enabling environment is one that stimulates the necessary investments in a way that results in a sustainable facility or service over time. Since the technology is changing so fast, it can be a daunting prospect for regulators. The private sector has the opportunity to be a partner to governments in enabling digital transformation of societies - bringing the power of ICTs to bear on a host of government, business, and citizen needs. Managing transitions from legacy infrastructure and services to a digital future will inherently entail some disruption - the private sector has the opportunity to be a partner in helping to upskill and empower people so they can take advantage of ICT-enabled services more directly.



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Microsoft's mission is to enable every person and organization on the planet to achieve more. We cannot fulfill that mission if people are not connected and able to reach our services. Although we are not a network operator - and do not intend to be one - we are very interested in finding solutions to the widening digital divide. While roughly half the population of the planet now has some access to connectivity - roughly half does not. And the gap in cost and capability between those in developed and developing words is substantial.

While there are many separate issues to address over the long term - including basic education, content in local languages, payment methods for unbanked populations, etc., a core problem is that in some parts of the world the business return for building and operating networks does not attract sufficient investment. Carriers choose to invest elsewhere because the return is better given the available technologies. So, we have been focused on ways to create wireless networks less expensively - especially in low-density situations where the cost profile is typically the most challenging. We have found that by using multiple radio technologies in combination - particularly including use of otherwise vacant TV-band channels - the TV White Spaces - these areas can be covered more affordably.

Over the past several years we have run trial projects with partners in Kenya, Tanzania, Botswana, the UK, the US, Singapore, Ghana, South Africa - and more. All of these projects have demonstrated that with innovation in the way the network is built and operated, service can be delivered affordably.

Last July, we announced Airband - the name for our program - initially focused in the US - to bring connectivity to 2 million unconnected people in the rural US - with our partners. We need an enabling environment. In the case of these projects that means a few things must be in place.

First, and most important, is a willing and capable local network operator partner. We look for a regulatory environment that will facilitate the projects, we look for the opportunity for community-specific use-cases that will help advance the projects, we look for local governments that are supportive and want to be involved the projects to make them successful. A key element to our approach has been the use of the TV White Spaces - and there we have worked with the FCC in the US and regulators in other countries - to ensure that there are rules in place allowing use of that spectrum on a non-interfering basis.

We continue to work with our partners and the Dynamic Spectrum Alliance, to effect rules for use around the world.



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The basic elements of an enabling environment in this context are stable law and regulation that welcomes new entrants and recognizes ongoing development and that values new forms of competition, access to stable financing sources and rates that enable a sustainable return, and effective promotion of the direction of travel - towards digital transformation - through education and skills training. Finally, ensuring that government services migrate online quickly will provide an incentive for people to go online.

The private sector can contribute by building facilities, operating services, managing investments, offering training and job-skills programs, and working with governments and regulators to build knowledge and skills in ICT overall.



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Session Five: WSIS Action Lines and the 2030 Agenda / Financing for development and role of ICT

Webcast: <https://www.itu.int/net4/wsis/forum/2018/RP/Webcast/320#intro>



High level Track Facilitator: Mr. Michael Nelson, Cloudflare, USA

High level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator ITU** – Mr. Yushi Torigoe, Deputy Director, Telecommunication Development Bureau
3. **Switzerland** – Mr. Thomas Schneider, Ambassador and Director of International Affairs, Federal Office of Communications OFCOM
4. **Bulgaria** – Mr. Rossen Jeliaskov, Chairman, Communications Regulation Commission
5. **Cuba** – Mr. Ernesto Rodríguez, IT Director, Ministry of Communications
6. **UNDESA** – Mr. Vincenzo Aquaro, Chief E-Government Branch, Division for Public Administration and Development Management
7. **ITC** – Mr. Anders Aeroe, Director, Division of Enterprises and Institutions
8. **Horyou** – Mr. Yonathan Parienti, Founder and CEO
9. **eWorldWide Group** – Dr. Salma Abbasi, Chairperson and CEO
10. **International Commission on Cyber Security Law** - Mr. Pavan Duggal, Founder and Chairman



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Introduction

This panel examined how to increase the amount of financing available for projects that can help nations reach the Sustainable Development Goals. Both the geographic diversity of the panelists and the wide variety of backgrounds was unusual. Most panels about development financing consist of bankers, economists, development experts, or financial analysts. But unlike those panels, this panel did not focus on business plans and rates of return, but (like High-Level Policy Session 4) examined the conditions that attract investors and innovators. The problem is not a lack of money. Several panelists stressed that for the most part the global financial system will provide money to projects where there is a clear need, a good business plan, talented people, trust and security, transparency, rule of law, and government policies that foster investment. Panelists described how ICTs can help identify opportunities, recruit and train talent, empower teams (no matter where the team members are located), and make it much easier to reach people in need.

Relatively little time was spent discussing financing for ICT infrastructure, something that organizations like the ITU, the World Bank, and the World Economic Forum have devoted a great deal of time and effort. Instead, the panelists emphasized how ICTs can solve problems as varied as food production, monitoring climate, energy efficiency, Smart Cities and traffic reduction, and improving health care. Not only are ICTs making it easier and less expensive to develop projects to address these challenges, they make it easier to replicate successful projects elsewhere. Social networks are a particularly effective way to assemble teams and share lessons learned. The most successful networks are international, interdisciplinary ones that span national borders and bring together people with a wide range of experience and training.

Several panelists stressed that the scarcity of talented people with the technical, management, and business skills needed to run effective development programs is one of the biggest reasons that projects do not get funded. Fortunately, ICTs can provide better online training tools, can help governments evaluate which training programs work and which ones do not, and can be used to publicize educational opportunities for students. Training programs will only be truly successful if they are inclusive and serve all sectors of society, including women, seniors, and those with disabilities (who are more likely to be elderly or poor or both).

Since government policies can do much to either foster or hinder private sector financing, it is critical that each government uses ICTs to develop and adopt best practices and policy, collect data needed to assess the impact of their policy decisions, and work through international organizations to collaborate and learn from other countries. The UN Department of Economic and Social Affairs (UNDESA), which is responsible for WSIS Action Line C7 (on e-government applications) and WSIS Action Line C11 (on international and regional collaboration), has a particularly important role to play in this area and has collected useful survey data on e- government programs around the world.



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Panelists mentioned several exciting new technologies, including the Internet of Things, 5G, social networks, artificial intelligence, block chain, digital currencies, and others, that can make it easier and much less expensive to meet the Sustainable Development Goals. But we must have “technology with a purpose,” which requires a clear vision of how technology meets human needs is essential. It’s not just about financial rates of return, ICTs can also foster creativity, the arts, and culture.

Trade has a key role to play in accelerating development, but we need “trade with impact” and that requires that governments do more than just support large, existing companies.

The International Trade Centre (ITC) is focused on helping entrepreneurs, especially women, who are building small and medium-sized business. The ITC is on track to reach its goal of helping one million women entrepreneurs by 2020. Fortunately, online services, e-commerce platforms, and Cloud computing makes it much easier and less expensive for small companies to develop and market their products and services to customers around the world. But such digital technologies will be less likely to be adopted if businesses, governments, consumers, and citizens do not trust them--if they are not reliable or secure.

International organizations and investors can do more to demand that companies and governments do more to address cyber threats like malicious hacking, botnet attacks, and identity theft.

Unfortunately, today, laws against cybercrime (and the level of enforcement) vary greatly from country to country. Or, rules in different jurisdictions conflict which each other. Worse, in some cases, laws designed to reduce cyber vulnerabilities are having unintended consequences and making it harder for companies trying to develop and provide online services globally.



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Switzerland

Mr. Thomas Schneider
Ambassador and Director of International Affairs
Swiss Federal Office of Communication (OFCOM)

Excellencies,
Distinguished Delegates,
Ladies and Gentlemen,

[Question 1: What is the role of ICTs and WSIS Action Lines in implementing the Agenda 2030?]

ICTs can play a crucial role and can greatly contribute in implementing the SDGs. From food production, to monitoring climate and weather, to allocating resources and energy, developing smart cities and traffic, but also improving health care and other issues relevant in our daily lives: ICTs and digital technologies can and should be used to improve all aspects of our lives.

They provide new solutions and where appropriate infrastructure, skills, and services are available, they can be incredibly powerful, e.g. in transforming education, healthcare, or the way we do business.

In order to harness ICTs' full potential, all stakeholders, across all sectors, should be aware of the vast opportunities created by ICTs and digitization – but also of their challenges, including structural change and transformation processes of societies and economies all over the world. But as technologies are neutral, also ICTs can be used for purposes that go against the goals of sustainable development. The best way to prevent this from happening is to empower people through education and capacity building, through guaranteeing their fundamental rights and giving them a chance to decide themselves how to contribute to a free and respectful digital society.

[Question 2: What is needed to successfully meet the SDGs on national and international level?]

Key to meet the SDGs will be constructive cooperation, improved exchange of information in relation to ongoing projects, and joint identification of relevant cross-sectoral issues and interfaces as well as strong partnerships between all stakeholders: governments, international organizations, the private sector, civil society, and the technical and academic communities.



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It requires networking between all stakeholders, openness of mind and respect of the values and needs of different stakeholder groups in order to enhance mutual comprehension and cross-sectoral, interdisciplinary cooperation between them. And it requires that all stakeholders agree on a set of principles that they are willing to respect and we respect the fundamental rights of users and citizens also in the online environment.

Let us therefore work together to leverage networks and research, stimulate innovation, scale up current initiatives and design new solutions in an inclusive and participatory way. There is need for new forms to connecting all stakeholders and provide them with real opportunities to exchange their experiences, best practices, and to discuss together the challenges at hand - both at a national and at an international level. Enhancing cooperation on national and international levels between governments and with all stakeholders is not a new idea, but it is still not sufficiently done and often not with the right attitude.

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

We need to connect those people working on implementing the 2030 Agenda, which serves as a kind of a “global overall strategy”, with those working on national digital strategies so that all these and other strategies are aligned and work hand in hand.

Cooperation and exchange of information between different ministries and government agencies should be encouraged, so that they are aware of each other’s activities and take advantage of synergies and do not fall into competition for resources, attention and recognition;

There is need to build trust between stakeholders and to take action against any prejudices.

Let us listen and respond to the needs of citizens and businesses. That includes also engaging with them as partners, taking their concerns fully into account and listening to their constructive criticism, because often businesses and civil society have experience that governments do not have.

Their trust and willingness to cooperate has to be earned by being accountable to them, but we also need to build capacities of businesses and citizens that they do understand that it is also in their interest that they act responsibly and accountably to society as well.

I know that appealing to all stakeholders to trust and respect each other and to jointly work on developing our societies may sound a little naïve in a world, where we witness many situations, where fundamental values and rules are broken and peoples’ rights disrespected by the ones that are looking for power, or to defend or even extend their power.



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But in the end, if we are serious about working towards achieving the SDGs, we cannot stop to argue for good governance, transparency and accountability by governments and businesses towards our citizens and users and by calling for a respectful and constructive cooperation to build our digital societies where people can live freely and respectfully together in peace and use the potential that the digital world offers for their economic and social development.

We do hope that for a where stakeholders meet to listen to and learn from each other like the WSIS Forum or the UN Internet Governance Forum help us all to understand that if we work together and not against each other, we will all have better chances to benefit from the opportunities of our digital societies.

So Switzerland is proud to have hosted the last IGF here in Geneva last December. And we are also proud to continue to be a supporter of the WSIS Forum, as we have been for many years.

To conclude, and on behalf of the Swiss authorities, I would like to invite **you to a reception to be held tonight at the premises of the CIGG.**

Thank you very much for your kind attention.



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Bulgaria

Mr. Rossen Jeliaskov
Chairman
Communications Regulation Commission

It is a great honor and privilege for me to be here with you today.

The World Summit on Information Society (WSIS) is the largest and most respected forum in the world of Information and Communication Technologies (ICT). Governments, intergovernmental and global organizations, civil societies, academia and businesses manifest here their commitment to implement the 11 WSIS action lines for achieving the 17 United Nations Sustainable Development Goals till 2030. Working solutions are being sought through exchange of information, knowledge and good practices. The future of mankind is being planned in an open consultation process. And this future is directly related to the use of ICTs that have penetrated over the past years in all spheres of our life and made possible the transition to information society. This is a society of knowledge in which innovations and scientific achievements are widely used, and the access to information is praised among the basic human rights.

ICTs helped to build the Internet as a "network of networks". They are the backbone of the global digital information infrastructure and of the worldwide social dialogue. ICTs offer immense opportunities to solve effectively problems in public governance and its democratization, in education, health care, management of natural resources, including energy and water resources, etc. In principle, their targeted and effective use can offer solutions to achieve each and every of the global sustainable development goals. That is why the theme "Leveraging ICTs to Build Information and Knowledge Societies for Achieving the Sustainable Development Goals" of WSIS 2018 is absolutely pressing.

We should join our efforts to determine the most reasonable areas of ICT usage. Those, which will make a significant contribution to solving essential global issues and reducing the inequalities and digital divide between countries.

ICTs provide enormous potential for economic growth, employment, innovations and, above all, for improving the quality of life and for protecting the environment as our home. But, we must have digital skills in order to avail effectively of this information and knowledge potential as a major resource for development. This is one of the major priorities of the Bulgarian government defined in the Strategy for Effective Implementation of ICTs in Education and Science.



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Ladies and Gentlemen,

I believe that we all understand what challenges we face today. As a representative of the Republic of Bulgaria, I would like to share with you the motto of my country "United We Stand Strong", which is incorporated in the Bulgarian coat of arms. In the first half of 2018, it will also be the motto of the Bulgarian Presidency of the Council of the European Union. To be strong, we need to be connected. That is why the European perspective and the connectivity of the Western Balkans and the digital economy and skills are among the main priorities of our presidency. At a regional European level, they fit, together with the policies of the European Union, in the global goals of sustainable development. Let the motto of small Bulgaria "United We Stand Strong" encourage us to identify actions in which ICTs will have the most effective and substantial contribution to the achievement of the global goals of the UN Program for the benefit of mankind.

Thank you for your attention!



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Cuba

Mr. Ernesto Rodríguez
IT Director
Ministry of Communications

Declaración moderada del Jefe de la delegación cubana en el segmento de alto nivel del Foro de la CMSI 2018.

Moderador: Los objetivos de desarrollo sostenible de la agenda 2030 constituyen un reto para los países del mundo y mucho se debate sobre el aporte de las tecnologías de la información y la comunicación (TIC) al logro de estos objetivos.

Desde la percepción de Cuba como país en vías de desarrollo: ¿Cómo concibe la construcción de una sociedad de la información que tribute al cumplimiento de los objetivos desarrollo sostenible?

Respuesta: Reciba, señor Presidente, a nombre de la delegación cubana, el compromiso de contribuir al buen desempeño de esta Reunión de Alto Nivel dentro del Foro de la CMSI 2018.

Nuestro país trabaja sobre la base de un plan nacional de desarrollo económico y social que incluye los ejes prioritarios hasta el 2030, la política para la informatización de la sociedad cubana concibe el desarrollo de una sociedad de la información y el conocimiento centrada en la persona, integradora y orientada al desarrollo sostenible.

El acceso a las tecnologías de la información y la comunicación y a internet debe favorecer que las personas, las organizaciones y las comunidades puedan desplegar su pleno potencial, promover su desarrollo sostenible y mejorar la calidad de vida.

El desarrollo de la ciencia es inconcebible sin las tecnologías de la información y la comunicación e internet. El Estado cubano promueve la ciencia, la tecnología y la innovación en las diferentes esferas y conduce e incentiva que los resultados científicos y tecnológicos sean aplicados y generalizados en la producción y los servicios.

Cuba trabaja sobre la base de una estrategia de acceso y uso masivo, inclusivo y no excluyente de las tecnologías que contribuyan y potencien el desarrollo humano sostenible.

El uso las tecnologías e internet estimulan el acceso a la información, a la comunicación social, la cooperación, la asociación y el trabajo en sus más variadas manifestaciones y como tal debe favorecerse.

El capital humano formado por la Revolución Cubana en el campo de las tecnologías es amplio y valioso, y constituye la principal fortaleza con que contamos para enfrentar los desafíos y retos futuros.

No obstante lo anterior, el bloqueo económico, comercial y financiero impuesto por el gobierno de los EE.UU a Cuba por más de 50 años entorpece estos esfuerzos.



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Es el obstáculo más importante para el desarrollo económico del país y el bienestar del pueblo cubano, y en particular para el desarrollo de las TIC.

Deseo ratificar la voluntad del Estado cubano de continuar fortaleciendo y desarrollando masivamente el acceso y uso de las TIC, en correspondencia con nuestras posibilidades económicas, siempre con una visión humanista, con el fin de conectarnos al conocimiento y participar del concepto de compartir y no excluir, como una necesidad imperiosa para la conservación de nuestras identidades culturales.

Muchas gracias.

Moderador: El objetivo número 5, relacionado con el tema género y cito: “**Lograr la igualdad de género y empoderar a todas las mujeres y las niñas**”. ¿Cuál es la situación de su país en este tema, específicamente en el ámbito de las tecnologías de la información y la comunicación?

Respuesta: Cuba fue el primer país en firmar la convención de las Naciones Unidas sobre la eliminación de todas las formas de discriminación contra la mujer, asumió los compromisos acordados a nivel de Jefes de Estado en la IV Conferencia Mundial de la Mujer, celebrada en Beijing en 1995 y participó activamente en la negociación y creación de la organización de Naciones Unidas ONU-Mujeres.

En Cuba el acceso a las tecnologías de la información y la comunicación es universal, sin discriminación por motivo de género.

Algunos ejemplos que ilustran lo anterior son los siguientes:

- Las mujeres representan alrededor del 40% de la fuerza laboral activa en el sector de las TIC.
- En los Joven Club de Computación, la mayor red de centros tecnológicos del país, dedicada a la formación de capacidades para el uso de las TIC, el 44 % de los profesores son mujeres y el 48% de quienes egresan de sus cursos también son mujeres.
- El 48.7% de los estudiantes en las enseñanzas primaria y secundaria son niñas, todas tienen iguales derechos al acceso y el uso de las TIC como parte de su plan de estudios.
- El 29% de los graduados de la enseñanza media en informática son mujeres.
- El 61% de los estudiantes universitarios en Cuba y el 65% de los graduados el pasado año son mujeres.



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- En el 2017, más del 28% de los estudiantes que ingresaron y más de 33% los que se graduaron en especialidades relacionadas con las TIC fueron mujeres.
- En la mayor universidad de Ciencias Informáticas del país el 36% de la matrícula actual y el 43.5 % de los graduados son mujeres.
- De las 22 universidades donde se imparten especialidades afines a las TIC, en 10 de ellas la rectora es una mujer.

La igualdad para las mujeres y las niñas es un imperativo social. Cuba apuesta al desarrollo de una sociedad del conocimiento, y para ello materializar el derecho de las mujeres y las niñas a acceder plenamente y utilizar las TIC es vital en la formación de los recursos humanos y el potencial requerido por la nación para su desarrollo sostenible.

Muchas gracias.



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International Trade Centre (ITC)

Mr. Anders Aeroe
Director
Division of Enterprises and Institutions

1. How can digital technologies transform the MSMEs that ITC works with on the ground?

Ladies and Gentlemen

We are in times of great opportunity: digital technologies have resulted in new platforms for trade and new possibilities and imperatives for MSME's to compete. This is timely, as we believe in "Trade Impact for Good", and that the increased participation by MSMEs in trade, accelerated by digital, will contribute to achieving many of the 2030 Sustainable Development Goals

Digital communications and tools are beginning to reach a significant share of the world's population, reducing distance between producer and buyer. At the same time, digital innovation is accelerating. Online platforms and social media offer new routes to market. Emerging technologies such as blockchain, artificial intelligence, the internet of things, and additive manufacturing are challenging the organization of global value chains. Radical new business models such as the sharing economy are disrupting incumbent firms' competitiveness.

Disruption brings new opportunities for developing countries, if accompanied by new capabilities and the implementation of appropriate strategies. Without these, disruption threatens to promote further disparities between countries who master the new digital-driven value chains and those who do not. The United Nations Sustainable Development Goals (SDGs) have set an ambitious agenda that will shape global growth and development to 2030.

The international community needs to accelerate its common actions to meet the 2030 agenda and trade is recognised as a key element to do this. The International Trade Centre (ITC) is expanding its range of tools and solutions to contribute this.



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At ITC, we are building digital into our development work: turbo-charging our reach and effectiveness and with digital technologies scaling the impact of our interventions. We refer to this as 'e-Trade for Impact.'

An example of this in action is ITC's initiative for women entrepreneurs, SheTrades, which has created an easily accessible global network. Thanks to digital technologies, the target of bringing one million women entrepreneurs to market by 2020 has nearly been reached with 2 years to spare!

In Rwanda ITC is working with the Government and alongside GIZ on a two-year project started in late 2017 to lay the foundations for e-commerce: coaches will help firms to develop their e-commerce business and define a clear e-commerce strategy aligned with customers' needs, selection and preparation of goods, creation of online listings, online product promotion and customer order management. Along with shared logistics and payment solutions, enterprises will have improved opportunities to work in online marketplaces. Recognising that the strength of the local digital economy depends on the strength of the ICT service sector, ITC works to enable entrepreneurs to capture the potential of digital business models. In Senegal for example ITC is accompanying tech entrepreneurs, startups, small enterprises and sector associations in the acquisition of business skills for international growth. By working with local partners in incubation, we build an effective ecosystem and link tech firms to potential investors, partners and clients. Behind "eTrade for Impact" we have three simple principles; Share, Empower and Grow. We look forward to your support and supporting you in using digital to put these principles into action.

2. How will e-Trade for Impact contribute to achievement of the 2030 agenda? (supplementary contribution of 300 words or 2 minutes)

The 2030 Agenda recognizes international trade as an engine for inclusive economic growth and poverty reduction, and an important means to achieve the Sustainable Development Goals (SDGs).

Our work in "eTrade for Impact" is structured into three areas: e-Networks, e-Commerce and e-Entrepreneurship. In the first of these areas we enable inclusive access to information, learning, and platforms for networking and exchange. We have a major commitment to providing analytics for decisions; turning data into intelligence - a capability that is being used to support targeted actions toward the 2030 Goals. In support of SDG 17 (which is about "Strengthening the means of implementation...")



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ITC, together with WTO and UNCTAD, provides and updates the trade-related Global Indicators relevant to tracking achievement of the related targets.

Digital tools can enable more inclusive participation in international trade; I mentioned our work in “SheTrades” to empower women entrepreneurs to success in online trade. This initiative supports in a very tangible way SDG 5 (“Achieve gender equality and empower all women and girls”). Our teams also work with poor or excluded communities to link them to international markets, bringing connections to designers and international value chains.

Through the related areas of “e-Commerce” and “e-Entrepreneurship” we empower small businesses to overcome the barriers of selling in online marketplaces and we accompany entrepreneurs in capturing value in digital business models. Promoting improved access digital trade and nourishing the foundations of hi-tech entrepreneurship should be a major contributor toward SDG 8 “Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”.

These are just examples of how we ensure that digital underpins our initiatives, and I am sure that it will continue to do so in an even more significant way as the opportunities and disruptions of new technologies become increasingly apparent.



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Horyou

**Mr. Yonathan Parienti
Founder and CEO**

"Your Excellencies,
Distinguished Guests,
Ladies and Gentlemen,

It is my pleasure and honour to be with you today to explore solutions to support shaping better times through our interactions among WSIS participants coming from all continents.

Technology Backing a Social Network for Social Good

The topic that I would like to share here today with you is about technology and social good. And how technology can be at the service of social good.

A first statement is that technology is spreading everywhere and it would be unproductive to imagine our lives without it.

We use technology to connect and communicate on a personal as well as business levels; we use technology to teach and learn, to cure and save lives, to grow seeds, to produce energy and to live in comfort, to travel, and to do business in much more practical, swift and effective ways.

What's more: technology is almost unstoppable and we can consider that its impact on the future of humanity will be exponentially greater than the present times.

Thus, the biggest challenge facing us is to determine the type of future we want.

Technology that simplifies the way we do things is fine; technology that supports building a fairer, more inclusive and sustainable world is much better.

At a time 193 countries have agreed upon the paramount agenda of the Sustainable Development Goals, in September 2015, to end poverty, hunger and reduce inequality worldwide, the United Nations are clearly opened a way to believe in that aspiration.



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Social Network associated with Purpose, has the potential to be an enabler and accelerator for positive change.

Our goal with Horyou, is to use technology to fundamentally support a more inclusive and harmonious world, in resonance with the 2030 Agenda for Sustainable Development as outlined by United Nations. We call this approach **Technology with Purpose**.

Questions:

1) To what extent a social network for social good like Horyou can be an implementation accelerator of the United Nations Sustainable Development Goals?

We introduced Horyou platform - a social network for social good, a novel platform connecting global citizens, non-profit organizations, thought leaders and the private sector looking to conduct corporate social responsibility (CSR)-supporting the implementation of the United Nations Sustainable Development Goals.

On 18th December 2013, we launched Horyou social network, gathering since then a diverse community of change-makers and social good doers with more than 250,000 users and 1800 organizations from more than 180 countries.

In 2014, we established Horyou Foundation, a non-profit institution based in Switzerland, which promotes and advances causes for social good.

Horyou takes a number of initiatives including organizing international events like the Social Innovation and Global Ethics Forum, supporting organizations, civil society and local communities.

In 2016, we announced the creation of Spotlight, the first digital currency promoting economic inclusion and supporting the United Nations 2030 agenda. It was then been recognized as a disruptive innovation during the Global Entrepreneurship Summit on 28th November 2017 which was organized by the Republic of India and the United States of America.

We are now working on leveraging Blockchain technology, launching our Utility Token, HoryouToken to fuel a positive circle of interaction and support economic inclusion on all continents.



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We call this novel approach Blockchain with a Purpose.

2) Spotlight, the first digital currency promoting economic inclusion, was officially launched during the Global Entrepreneurship Summit last November; could you comment on how digital and blockchain could play a role in fostering social inclusion?

Horyou has created and launched Spotlight, a one-of-a-kind digital social currency (not a crypto-currency) to support its members' projects, actions and social good aspirations that have a proven social impact, in line with the SDGs, notably but not only via its Horyou Foundation.

On Blockchain, we could articulate that Blockchain technology is database technology in constant progress and upgrading. Blockchain decentralizes data, and takes care of its security. Each and every record is validated before it gets stored in the database. And the validation process is done via cryptography. Which is why, all data contained in blockchain is supposedly impossible to be tempered. Secondly, all transactions on the Blockchain are made easy, with reduced cost. Transactions are fast (real time), streamlined, with no middlemen and can keep the data decentralized and transparent.

Blockchain holds a great promise. A social network for social good powered by Blockchain can dress that technology with a social purpose to foster sustainability and inclusion. That purpose is sound and bears a strong legitimacy and integrity, to leverage digital and blockchain related technology to enhance economic and social inclusion.

Our aspiration is that by 2050, each citizen on earth on their path towards social good will be able to access and benefit from our technology for impact and purpose and use Spotlight and HoryouToken to support the emergence of a virtuous circle of interaction, wealth creation and distribution, materializing the paradigm shift towards a more harmonious and sustainable world."



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eWorldWide Group

Dr. Salma Abbasi Chairperson and CEO

Your excellences, ladies and gentlemen, SVK, good afternoon and bonjour. Please let me begin by quickly thanking the ITU particularly, Gitanjali and her team for the excellent arrangements of WSIS, and for once again inviting me to share my thoughts with you.

There is no doubt that we are making tremendous progress in constructively integrating ICTs across the full spectrum of the SDGs, which is creating a robust and holistic digital eco-system.

However, with the growing pressure of financial constraints in these turbulent times, many governments are struggling to overcome the multi-dimensional challenges to ensure holistic 'inclusion of all', in the eco-system. In fact, recent data highlights that the 'digital divide' is actually broadening across many dimensions, namely; gender, PwDs and the elderly.

Furthermore, a recent World Bank report highlights that now, over 1 billion people are currently living with disabilities around the world. 80% of these people live in developing countries. The higher prevalence of disabilities impact the poor, women and the elderly. 20% of the poorest people living in developing countries have a disability that is 1 in 5. In addition, other UN reports also highlight that 150 million children under the age of 18 are living with disabilities, and that approximately 20 million women become disabled each year, as a result of complications during pregnancy or child birth. In fact, WHO has stated that approximately 1 in 7 people around the world are living with disability.

More importantly, with the aging population, consequences of chronic diseases, coupled with the growing number of conflicts and natural disasters around the world, these numbers are steadily increasing. Therefore, this is a significant number that cannot be ignored or excluded any longer.

However, there needs to be a significant paradigm shift in the approach and consideration that countries take while developing integrated policies and strategies that cut across all aspects of life for PwDs. In addition, these policies and strategies need to be complemented with practical and localize interventions that internalize, reflect and address the negative perception, discrimination and biased, that exist in society and business today towards the PwD community.



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It is also important to acknowledge that disability is not a charity, it is a condition of the body and to appreciate that all of our bodies will eventually change with time. Therefore, it is crucial that we design for accessibility and inclusion, building practical and holistic frameworks that are developed in harmony with the local context, environment and societies.

With the recent breakthroughs in assistive technology, STEM and innovative applications of ICTs and AI, a unique opportunity presents itself to governments. This opportunity allows governments to collaborate and join hands with the private sector and research institutions to create innovative but practical interventions that will accelerate the access, inclusion and holistic engagement of the PwD communities. However, to ensure its success, clear policies, strategies and plans need to be crafted, along with specific targets and goals in collaboration with stakeholders to present the potential opportunity and incentives to motivate the private sector to address the unique needs of the PwD community as it potentially opens up a new market of over 1 billion people.

It is only through this compassionate type of ‘public, private, people collaboration’ will we be able to make affordable, sustainable and significant improvements in the quality of life, that provides dignity, respect, engagement, inclusion and holistic wellbeing for the PwD community in all aspects of their lives.



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Session Six: Bridging Digital Divides

Webcast: <https://www.itu.int/net4/wsis/forum/2018/RP/Webcast/321#intro>



High level Track Facilitator: Dr. Anuradha Rao, National University of Singapore

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. **Japan**– H.E. Mr. Masahiko Tominaga, Vice-Minister for Policy Coordination (International Affairs), Ministry of Internal Affairs and Communications
4. **Czech Republic** – Mr. Jaromír Novák, Chairman of Council, Czech Telecommunication Office
5. **Research ICT Africa**–Dr. Alison Gillwald, Executive Director (South Africa)
6. **Amplio (formerly Literacy Bridge)**– Mr. Cliff Schmidt, Founder & Executive Director (United States)
7. **Fundación Proacceso**–Mr. Aleph Molinari, President (Mexico)



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Introduction

Bridging Digital Divides explored the policies, priorities, innovations, and challenges in bridging digital divides in various parts of the world. The panel had a good representation of the various stakeholder types and regions, and produced interesting discussions on the multi-faceted nature of the divide, and the various ways in which governments, academia and civil society groups are addressing this issue.

In terms of access, the cases of Japan and the Czech Republic offered useful lessons on how to successfully bridge the digital divide. In the case of Japan, where 99.9% of the population has the capability to connect to the internet, telecom operators have played a key role in bridging the digital divide. This has been achieved with the government's support through the introduction of competition policies. Given Japan's (and indeed every country's unique context and conditions), the Japanese representative highlighted that the fastest way to bridge the digital divide was to find the best practices most suitable for one's country. Another successful example was the Czech Republic, where one of the key priorities is to introduce 5G along the lines of its successful 4G implementation. With connectivity not a problematic issue, the focus of their efforts to bridge the digital divide has been on digital literacy activities aimed at senior citizens, and the aim is to extend these efforts to the youth, to inform them of the possibilities and perils of being digitally connected.

Data emerged as a key talking point with the academic and civil society representatives, who viewed data as a critical tool for citizen empowerment as well as informed policy making. Conversely, the lack of adequate or accurate data in the Global South was highlighted as an impediment to measure the progress of ICTs towards the 2030 targets. With better data collection methods, such as those initiated by Research ICT Africa, inflated statistics about digital connectivity could be challenged, contributing to a more precise understanding of the actual digital divide and the progress towards meeting the Sustainable Development Goals (SDGs).

Another crucial issue highlighted was the digital paradox, viz., that efforts to bridge the digital divide have inadvertently exacerbated inequalities due to higher expectations and demands from already connected populations. It was also stressed that if efforts were not re-directed at connecting the least connected groups first, that the digital divide would almost certainly widen, doing most harm to the most vulnerable communities. The session discussed civil society efforts—in partnership with international organizations, governments and the private sector—to tackle this, such as efforts by Amplio and Fundación Proacceso to reduce the digital divide in rural areas and among poor communities in the United States and Mexico respectively. This includes providing low-tech gadgets as well as identifying and providing training and capacity building in the relevant digital skills that would be useful and practicable in workplace. In other words, a key goal to consider in bridging digital divides is how to enable people to leverage new technologies in ways that are empowering for them and enable them to contribute better to their societies.



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Overall, there was a recognition of the changing nature of the digital divide and digital inequalities, and the ways in which our understanding and analysis of the phenomena needs to shift if we are to tackle it more meaningfully. So, while access, infrastructure, and connectivity are still important factors to consider, the panel pointed to a variety of other factors that are reflective of digital inequality, i.e. of people's ability to participate in their environments. These include, among other things, data, content, skills, capacity building, and individual empowerment. Such a revised focus, which would also have to carefully consider the differences and inequalities between and within developing countries, would therefore link with several WSIS Action Lines, particularly C1-C5, and if done in a holistic manner, would put us on the right path to achieve the SDGs.



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Japan

H.E. Mr. Masahiko Tominaga
Vice-Minister for Policy Coordination (International Affairs)
Ministry of Internal Affairs and Communications

Question1:

In Japan, the population with access to the Internet is very high.
How did you bridge the digital divide?

Answer:

The population with the capability of access to the Internet reached more than 99.9% in Japan. 99% of households have the capability to connect with over 30 mega bps (best-effort type) of the fixed infrastructure including FTTH.

The telecom operators play a main role for bridging the digital divide. The government has been encouraging them to expand the connectable coverage by implementation of the competition policies. It is difficult for private operators to deploy connectivity in sparsely populated districts such as remote islands and mountainous areas, because of the cost ineffectiveness. The Japanese government subsidized the local governments, so that the deployment was driven by the collaboration of the local governments and the operators.

In the deploying process, one of the driving force was the local governments' recognition that the optical fiber connection is essential to promote the development of industry in their regions. Of course Japan's experience does not apply to all countries, due to differences such as geographical environment (such as isolated islands or mountains,), the population density, the activities of the operators and so on.

The fastest way to bridge the digital divide is to find the best practice suitable for your country through various achieved experience. Our number one priority is to get everyone connected to the Internet. Connectivity must be provided to people at affordable price so that they can keep connected. At first broad band connections with high speed internet may not be offered.



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Even without a broadband connection, people can benefit the new values of ICT. Once they connect and experience, I believe they will drive the digitalization of the society themselves.

Question2:

What should we keep in mind when we promote the policy to bridge digital divide?

Answer:

We have to give priority to accessibility even if it would not be broadband, considering the large cost to bridge the digital divide. But we should recognize the necessity of the broadband connection for the digital transformation from a long-term perspective. The digital transformation combines the physical space and the cyber space. This will give us opportunities to be free of the limitation of the physical world such as medical care and education in remote areas, and make it more efficient in the service and manufacturing and in the sectors such as agriculture.

Furthermore, people, local communities, countries and regions which have limitation in the real world can use their ability to their maximum extent by making the best use of digitization.

I believe promoting the digital transformation is important to develop our social economy, to live a better life, and to keep sustainable growth by overcoming various challenges we face. The digital transformation requires sufficient performance capability for the network to withstand applications operated by all people and things. Therefore an infrastructure we can built on is important. When we promote the policy to bridge digital divide, we should keep in mind the efficient investment considering the digital transformation such as the initial investment of a large capacity backbone network from a long-term perspective.



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Czech Republic

Mr. Jaromír Novák
Chairman of Council
Czech Telecommunication Office

I am very proud to be a part of the World Summit on the Information Society Forum on behalf of the Czech Republic.

It is more important for me because this year the Czech Republic celebrates 100- year anniversary of the founding of the Czechoslovak Republic – predecessor of the Czech Republic.

The Czech Republic has a long history in innovation – first railways in Europe, lump of sugar, contact lenses, nylon etc. etc. - all are inventions from the Czech Republic. And the word ROBOT was invented by the famous Czech author Mr Karel Čapek - the word which we use across the world when creating new helpers which make our lives easier.

In this forum I have to mention the Czech Republic has also proved its longstanding and strong commitment to the International Telecommunication Union, having served on the ITU Council several times (the last time in years 1998 - 2014).

Electronic communications and postal services should contribute to better communication between people. Both sectors, however, are subject to quite a dynamic development. In the area of postal services, for several years people have been abandoning traditional letters and postcards, and similarly also in the environment of electronic communications, we observe people gradually leaving communication ways which have been widely used recently, such as mobile phone calls or text messages. We are using instant messaging applications, emoji, social networks.

Therefore, we have to be focused on creation of conditions for technological innovation and development of new generation networks which will help facilitate data communication and smooth operation of new applications.

We consider high-quality infrastructure of electronic communications to be a basis for the development of a modern state. In this respect, I would like to mention importance of fixed and wireless infrastructure. It is very important for us to distribute radio spectrum for building new modern networks – 4G and in the near future 5G.



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Promoting almost ubiquitous coverage and competition is the ground for modern infrastructure. In the Czech Republic we are also focused e.g. on coverage obligations of railway corridors and motorways by the signal of mobile operators.

With respect of new 5G networks I have to mention also migration to the DVB-T2 standard in terrestrial TV networks, which is the most important platform for watching TV in our country.

But it is not only technology. Educated and skilled user is the important element of the digital world. Therefore, we continued to develop the project of Telecommunication Academy. It is intended for senior citizens and is based on the needs which are present in the consumers' everyday life. Our goal is to help this group of citizens to be more knowledgeable about the complex landscape of telecommunications.

Within the Telecommunication Academy we offer the participants practical experience based on real-life cases which are addressed by the Office as a part of our consumer protection activities.

And if I can offer you one tip for the future, explain your children what free and open internet is, what the dangers in cyberspace are and what the opportunities there are. Because 5G and enhanced digital economy will not be future if there are no experienced users.

One of our new activities was co-organization of 'hackathon'. In this competition, several dozens of young developers competed in development of applications for smart cities, open data, education or open source projects. As the project was successful, we plan follow-up events in the future.

It is said that data is a fuel of a new economy. Therefore, we support open data initiative, which I consider to be an unquestionable activity of the modern state. It is necessary that the state supports economy by making its own data available, where possible, in the open data standard.

The geographical position of the Czech Republic in Europe is highly favourable to facilitate international exchange of experience and good practice in the field of international telecommunication and ICT traffic. We consider the international cooperation as a key for sharing experience and moving forward the digital future. So, be assured you are always welcome in Prague!

Thank you for your attention.



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Research ICT Africa

Dr. Alison Gillwald
Executive Director (South Africa)

Research ICT Africa is an African public-interest ICT research ICT policy and regulatory network that has provided technical assistance to African countries, multilateral agencies and development banks for over a decade. It is the only organization systematically collecting comprehensive ICT supply-side and demand-side data for Africa that is available in the public domain and provides an evidence-base for policy makers. This is critical to identifying the exact points of policy intervention to reduce digital inequality in an increasingly complex global environment.

The truth is that we don't really have the data in the Global South to determine where we are now or to know what progress we are making towards overcoming the 'digital divide' or the ICT targets underpinning many of the Sustainable Development Goals. With the data from 28 000 interviews from 16 countries across Africa, Asia and Latin America surveys undertaken in conjunction with our Asian partner, LIRNEasia and Latin American partner network, DIRSI, the Inside Story of the Internet in Africa Asia and Latin America is told.

The #afteraccess nationally representative surveys collect all the basic indicators required by the Partnership on Measuring the Information Society and those that have been identified as necessary to measure the **SDGs**. But it goes much further in really establishing the factors and depth of the Digital Divide. It also looks at subjects from mobile money to microwork and cybersecurity.

What it also reveals is the very varied outcomes in developing countries, many officially having adopted the same so called 'best practice' reform practices. It is true that in many of the countries surveyed there is still a basic infrastructure challenge. Many of the countries still have less than the 20% **penetration level to reach the critical mass** required to enjoy networks effects associated with economic growth. But in some of them, even where we have over 90% mobile coverage and even 50% of devices are internet enabled, the penetration rate is 20% lower than that. So while supply side challenges remain **connectivity alone does not reduce inequality**. In fact as we move from voice into data services and Over the Top platforms, Internet of Things and Artificial Intelligence – the central policy challenge is that **as we increase ICT access and use so digital inequality is amplified**.



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To redress digital inequality far more attention will need to be paid to **demand stimulation measures**. Even where enabling environments conducive to investment have been created for the extension of networks, the survey data illustrated how **the socially and economically marginalized – particularly those at the intersections of class, gender, race or ethnicity – are unable to harness the Internet to enhance their social and economic wellbeing**. The data available shows that besides affordability, human development – particularly education and therefore income - are the primary determinants of access, intensity of use, and use of internet for production not only consumption. The development of relevant **local content in local languages and applications**, the enhancement of citizens' e-literacy are all important demand stimulants. But **until fundamental inequalities off-line are addressed they will be replicated and indeed, amplified on-line**.

Affordability remains a key challenge: the price of devices is the barrier to Internet adoption and the prices of services to use – the intensity of use being a critical factor of digital equality. Although costs drivers in developing countries are high as a result of currency volatility on equipment imports and the need to build out parallel infrastructure like roads and power. There are some that can be reduced by governments and regulators. The very high regressive taxes on devices and equipment in some countries could dramatically bring down prices. Effective regulation of wholesale access and market dominance, would reduce the cost of broadband as a critical input into other sectors of the economy.

What we do know with the high-level supply-side data available is that at the speed with which we are connecting people to the Internet today, we can never meet the 2020 target and the lag will continue to be from Global South, and Africa in particular. The fact is that even if we had effectively regulated, cost-based prices in Africa the vast majority of Africans would still not afford the use the Internet in any sustained and meaningful way at current prices based on existing business models, licensing frameworks and spectrum valuing and use.

This reality calls for **innovative policy that understands the need for a new interplay between state and market with new access, service delivery, investments and risk models that leverage private and community know-how and low cost technology innovations and complementary access solutions – such as free public wi-fi**. It will require even **greater regulatory agility** and insight to manage the tensions between the different policy objectives of competitive efficiency, innovation and consumer welfare, and the safeguarding of public and social value of the Internet, through extension of spectrum commons, unlicensed and social use spectrum... In most of our countries, most of the spectrum is largely unused outside of the main metropolitan areas. In the sharing-economy of the internet era, we are already seeing **voluntary infrastructure sharing by operators**. A critical resources management perspective, this should be embraced by governments. Enabling secondary spectrum use would enable new dynamic spectrum sharing, which operates at a fraction of the cost of GSM



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network to be deployed on new business models in the largely unused spectrum in rural areas, which could instantly provide low cost, high quality bandwidth there.

From With the long term evolution of 5G underway, African governments need to ensure that the potential of 5G technology which operates within a spectrum sharing environment with data off loads on to proprietorial and open public wi-fi, is harnessed for public purposes not just niche commercial applications

To get Africa connected will require doing things differently from what we are doing now. We need to explore **alternative policy and regulatory interventions** that do not assume **mature, competitive, effectively regulated markets operating within guaranteed human rights frameworks** – though of course we may continue to aspire to these. Recognizing the constrained institutional endowments and resources generally that exist in African countries, we need **to identify multiple strategies across the ICT ecosystem that will enable Africa to reach the critical mass and intensity of use needed for the network effects associated with broadband expansion.**

Accepting that large numbers of Africans will not be able to afford to be optimally online even if GSM broadband prices were cost-based, **deploying spectrum to create and extend the Commons** (unlicensed spectrum) would be a key enabler. Extending commercially available public wi-fi from elite urban areas, possibly through deploying poorly utilised universal service funds or other public resources to all public spaces, is a way of increasing the intensity of use in urban areas and enhancing network effects that would contribute to more inclusive digital development.



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Amplio (formerly Literacy Bridge)

Mr. Cliff Schmidt
Founder & Executive Director (United States)

Amplio is an NGO that has been amplifying the reach of government ministries, NGOs, and businesses since 2007. We do this through audio messages and technology designed for people who are often missed due to illiteracy or the challenge of reaching those living in remote rural areas. It is with this experience and perspective that we raise these concerns.

The 2030 Agenda declared that we will “reach the furthest behind first”, but our global community is rarely doing that. We may succeed at reaching millions of people with technologies that seem like intuitive solutions to people living in urban areas and working with well-educated colleagues. However, we are failing to adequately invest in our citizens who have been historically marginalized.

SDG 5 includes a goal to “give women equal rights to economic resources.” We cannot close the equality gap if we focus most of our investments in services that put women at a disadvantage. The GSMA’s 2018 Mobile Gender Gap Report states that women are at a 50% disadvantage compared to men in accessing the Internet in rural areas throughout Sub-Saharan Africa and across many countries in South Asia. And yet, we continue to invest heavily in Internet services without a balanced investment in solutions to reach those without Internet access.

In 2007, women made up two-thirds of the world’s illiterate population. In 2017, nothing changed; women are at the same disadvantage. So when we attempt to empower women with a new SMS text message service, we must acknowledge that we are probably empowering far more men than women—widening the gender divide, not narrowing it.

Even when we invest in technology centres in rural district capitols, we need to equally invest in solutions for those citizens who have limited or no transportation options to reach the capitol. If we do not, we may be providing a great service for some; but yet again, we are not reaching the furthest behind first. So what can we do? The International Telecommunications Union and the World Health Organization have partnered with Amplio to provide access to empowering health and agriculture knowledge to the hardest to reach. Together we are working with government ministries that want to find ways to put the furthest behind first.



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We are using technology, such as the Talking Book audio device, designed for the needs of those who haven't had access to education. We are creating health and agriculture audio recordings produced in local dialects with local participants. We share these recordings with communities having low literacy rates and limited access to the Internet or electricity.

The challenges are biggest where digital divide is the deepest; but we must take on those challenges if we are to reduce the digital divide for all people.



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Fundación Proceso

Mr. Aleph Molinari, President

What are the challenges and opportunities that you faced in the implementation of a digital inclusion project in the context of Mexico? And given that smartphones have really permeated the market, what is the next step to bridge the digital divide?

In the last ten years, we have faced many challenges in a rapidly changing context in Mexico. The main challenge, however, begins with infrastructure. Do we have necessary basic infrastructure to deploy a program that uses technology? This has been one of the first and foremost challenges for us because we work with low-income communities in Mexico, which at times don't have basic electrical or telecommunications infrastructure. The second challenge has been connectivity, which many now see as a given but which is highly limited in rural and even urban areas in Mexico. Third, the challenge is how to work with both the public and private sectors to be able to scale our projects and make them replicable. We need to create inter-sectorial alliances for our projects to have a high impact. On the NGO side, we seek to match funds with public and private sponsors, so that for every dollar spent on our side, we have another dollar on the federal and state level, another on the private side and finally a collaboration with other civil society organizations. Aligning the three sectors is of utmost importance to hurdle these obstacles.

For a digital inclusion project to be effective, we need to define what digital skills means. Most of the definitions we have found, from the UN and World Bank, to those of the many governments, tend to be ethereal and imprecise. So, we decided to go in a different direction and define the skills that are required on the labor side, by compiling the qualifications needed. Based on this, our programs teach our users how to create a *resume*, how to use basic office software (Word, PowerPoint and Excel), how to print, how to geolocate and do online research with quality sources. Rather than talking about loosely based definition, we focus on both the hard and soft skills required at the workplace.

Another crucial element is that connectivity and infrastructure are not sufficient. Digitally connecting people can only go so far. We need users who can access technological services in a productive way. Most basic users begin by connect through social media or consuming entertainment, and are not necessarily harnessing the full power of digital environments and applications. So the question is how are we going to leverage technology to create a better society that can have access to financial, educational, health and



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who can also take full advantage of both e-commerce and e-government?

Through this we find that bridging digital divides can also give rises to new divides.

What has happened in Mexico has been contradictory, as they have made bureaucratic procedures entirely digital. This has led to the rise of an intermediary economy of people who help those who don't know how to use computers, taxing digital ignorance. With a majority of Mexicans not knowing how to use a computer, they still have to create digital invoices or pay taxes online. This has created a new divide, a vacuum, putting at risk tax collection and formal business from registering. The key is to integrate technology in a transversal way between all of the sectors so people can have a complete participation and catalyse the economic and social advantage of technology.

Making a better use of digital technology. The most important is not to have technology but how to use it. So how do they do it in your country?

Digital access is not enough; a productive use of technology has to be the main driver. It is not the actual technology or the connectivity that matters, but rather the content behind it and how it is delivered. In our case, we have 120 educational centres with a robust technological infrastructure. At the heart of the project, however, is a team of 550 highly-trained facilitators who aid in breaking the barriers and stigmas related to the use of that technology. The majority of our users have never touched a computer and think that it not part of their socioeconomic segment, that it is too expensive, that they might break it or that they are too old.

With the aid of our facilitators, and much patience, we lead them by the hand and take them into a productive use of technology. This has been instrumental in changing the mind-set of our users by strengthening their self-esteem; once they start unlocking that part of themselves, they start learning how to learn autonomously. In the case of children, tactile technology (without peripherals like a keyboard or a mouse), has allowed us to reach younger children and immerse them in educational videogames and reading programs. What is key is the pertinence of the content for each age group and how this content can persuade users to start a business, study a career or gain access to an economic opportunity that can improve their lives.



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Session Seven: Building confidence and security in the use of ICTs

Webcast: <https://www.itu.int/net4/wsis/forum/2018/RP/Webcast/322#intro>



High level Track Facilitator: Mr. Pavan Duggal, Founder and Chairman, International Commission on Cyber Security Law

High level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator ITU** – Ms. Doreen Bogdan-Martin, Strategic Planning and Membership Department
3. **Romania** - H.E. Ms. Maria-Manuela Catrina, Secretary of State, Ministry of Communication and Informational Society
4. **India** – Ms. Aruna Sundararajan, Secretary (Telecom), Vice-Minister, Ministry of Communications
5. **Turkey**– Dr. Ömer Fatih Sayan, President & Chairman of the Board, Information and Communication Technologies Authority
6. **Norway** - Mr. Stein Schjolberg, Chief Judge (Ret.)



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Introduction:

The present High Level Session had distinguished panellists talking about various aspects pertaining to various measures aimed at building confidence and security in the use of ICTs. The Session first began with the Track Facilitator welcoming all the panellists. Ms. Doreen Bogdan-Martin, Strategic Planning and Membership Department, ITU gave her perspectives on thought leadership that ITU has taken in the WSIS process. She shared her inputs on 10th anniversary of Global Cyber Security Agenda and 15th anniversary of the Geneva Plan. She further gave perspectives on the contribution of ITU in providing appropriate platform for discussions and debates for creating more opportunities in the use of ICTs.

H.E. Ms. Maria-Manuela Catrina, Secretary of State, Ministry of Communication and Informational Society, Romania, spoke about the role of Government and public authorities in building and preserving secure online environment. She further gave perspectives on how we can prepare the new generation in facing the challenges posed by fast paced development of new technologies. She further gave the examples of approaches adopted in Romania in this regard.

Thereafter, Ms. Aruna Sundararajan, Secretary (Telecom), Ministry of Communications and Information Technology, Government of India, spoke about the specific challenges that the Indian nation faces towards ensuring safety and security in the use of ICT. She further elaborated the strategies and approaches adopted by India and the various steps taken by the Government of India for building confidence in the use of ICTs especially in the financial transactions. She also highlighted the Indian roadmap for future approaches to be adopted by the Indian nation towards safe and secure use of ICT.

She further highlighted the cogent positive steps through which India could potentially contribute to the WSIS process in terms of safe and secure use of ICT and the requisite Indian strategies in this regard. Thereafter, the session was addressed by Dr. Ömer Fatih Sayan, President & Chairman of the Board, Information and Communication Technologies Authority, Turkey who highlighted the efforts in Turkey to ensure users' confidence in the use of ICTs. He further explained the role of the Board, Information and Communication Technologies Authority on issues of ensuring users' confidence in the use of ICTs. He further gave various perspectives of Turkey to increase security regarding the use of ICTs.

The Session was also addressed by Mr. Stein Schjolberg, Chief Judge (Ret.), Norway, who talked about the need for having in place Geneva Convention or Declaration for Cyberspace. He further highlighted the various standards, norms and procedures that could be included in the Geneva Convention and Declaration for Cyberspace.

Thereafter, the High Level Track Facilitator Mr. Pavan Duggal, Founder and Chairman, International Commission on Cyber Security Law, gave his perspectives on the need for having in place international norms concerning cyber security at the international level.



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Then High Level Track Facilitator Mr. Pavan Duggal opened up the entire discussions with the audience. Various questions were asked by different stakeholders to the panellists concerning different aspects of confidence building and security. Number of questions relating to policy frameworks were asked. There were other questions which highlighted the technological strategies that countries faced in producing and proving cyber security breaches.

The panellists were unanimous that building confidence and security in the use of ICTs has to be number one priority. The speakers further highlighted that rather than emphasizing on discussions and debate, stakeholders must take appropriate steps in the direction of taking concrete action towards building confidence and security in the use of ICTs. The panellists agreed that lot of work needs to be done by all stakeholders in this regard. The panellist further agreed that the Governments cannot be alone responsible for building confidence and security in the use of ICTs but the private sector and other stakeholders in the information society need to also play an important role in this direction. The panellists recognized the kind of challenges that have faced by information society and the need for effectively addressing the challenges raised by the same by cogent positive action. The session ended with the note that far more work needs to be done in building confidence and security in the use of ICTs as dynamically changing landscape concerning cyber security is constantly evolving.



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India

Ms. Aruna Sundararajan
Secretary (Telecom), Vice-Minister
Ministry of Communications

ICTs have been recognized as one of the most important tools for attaining the SDGs. In order to realize the vision of inclusive growth, the Government of India has launched a holistic programme viz. 'Digital India' that envisages financial inclusion as well as social inclusion through universal penetration of ICT infrastructure and services throughout the vast and highly diversified geographical stretch of the country.

One of the most important initiatives is the Bharatnet project that envisages providing broadband access to 250 thousand clusters of villages through optical fiber connectivity by March 2019. Government of India is providing 100% funding for creation of this huge infrastructure that would be shared by all the service providers on non-discriminatory basis. Efforts are being directed to extend Mobile coverage to all the unconnected villages in the country including remote islands, hilly, and forest areas by laying submarine cables from islands to mainland and deploying solar energy based solutions in remote and sensitive areas. Another enabling tool of e-governance being emphasized in India is the JAM Trinity, i.e., combination of Jan-Dhan bank accounts, Aadhaar, and Mobile. Jan-Dhan involves banking the unbanked. Aadhaar is a unique digital identity being allotted to each and every citizen of India helping in targeted dissemination of subsidies thereby eliminating the leakages. In combination with these two, by universal provision of mobile broadband access, the ultimate goal of social, financial, and digital inclusion may be simultaneously achieved.

Policies regarding transparent spectrum allocation procedure, optimum spectrum utilization, ease of doing business, flexible Right of Way (RoW) rules, etc. have been effectively implemented. The success of these policy measures is reflected by the fact that broadband connections in India have increased from less than 15 million in July 2012 to nearly 325 million in September 2017 and it is further increasing. To enable the people to reap the benefits of e-governance and m-governance, India launched a massive programme intending to provide IT training to 60 million rural citizens by 2019. Summarily, India is adopting a holistic approach towards creating an enabling ecosystem in the country for social, financial and digital inclusion thereby contributing to the world efforts for attaining SDGs.



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Various policy initiatives taken by the Government of India in telecom sector have largely been successful. In future, role of 5G technology is going to be critical for inclusive growth and SDGs, e.g., key sectors for attaining SDGs such as e-health, e-education, disaster management, and agriculture are likely to leverage the benefits of 5G technology. With a view to incorporate global technological disruptions into futuristic policy endeavours, several initiatives are being taken for preparing the ecosystem for embracing 5G technology. Some of these initiatives are formation of a 5G High level Forum with involvement of all stakeholders for transition towards 5G implementation, inter-ministerial discussions for identifying potential use cases of 5G technology, establishment of 5G Test Beds in collaboration with industry and academia, a special 13 digit numbering scheme for IoT & M2M, establishment of Centre of Excellence for IoT, etc.

A forward-looking New Telecom Policy 2018 (NTP18) is being formulated which focuses on entire ecosystem development for growth of Telecom sector in India. In tune with the global technological developments, Indian policy initiatives for future are concentrating on Artificial Intelligence, Big Data, IoT, 5G, etc.

Some of the traditional challenges being faced in implementation of various policies are huge population living in highly diversified geographical, cultural, economic, and social conditions, vast and varied geographical stretch including large hilly terrains, desert areas, and densely forested areas, small and remotely located islands. Making and implementing policies that cater to highly diversified needs of whole populace across geographical areas is really a big challenge.

One of the most critical challenges that are encountered with technological advancements is the safe and secure use of ICTs, especially for financial transactions. India is taking steps for ensuring security in use of ICTs.

Many of the challenges are universally applicable – Vulnerabilities in the current products, services and infrastructure: the whole range of cyber issues – Data breaches, phishing and vishing attacks, malware which steals credentials and data, challenge of attribution of perpetrator of attacks, attacks on infrastructure to deny availability thorough DDoS, security of mobile apps, etc.

Vulnerabilities of the supply chain for ICT infrastructure equipment is an area of concern. Global vendors should recognize that they require putting in extra efforts to assure governments of the security of their products and provide a means for governments and user organizations to verify and validate the security of ICT products.



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India has come out with a Cyber Security Policy 2013. Respective sector regulators like the banking regulator (RBI), the stock market regulator (SEBI) and the insurance regulator (IRDA) have come out with detailed guidelines on Cyber security practices to be followed. India has mandated two level authentications for financial transactions. A sectoral Fin-CERT is in the pipeline. For information sharing in Banking and Telecom, Information Sharing and Analysis Centres have been created (ISAC).

There are sectoral data protection provisions for protection of customer data through regulation or license conditions. For example, the telecom sector service licenses provide for protection of customer data with penalties for breach. A program called information Security Education and Awareness (ISEA) is being run addressing schools, colleges and officials. A national task force on Artificial Intelligence has been constituted to kick start the use of AI for India's economic transformation. AI will play a crucial role in fraud and threat detection and mitigation and is expected to enhance trust.

Further, Block-Chain and Distributed Ledger Technologies have the potential to secure data and transactions and improve trust in banks and their operations. Looking ahead, we need to secure the mobile device, the mobile applications that the customer downloads, address concerns of data security and privacy in the cloud and build human and institutional capacity to fight cybercrime.

India has been closely associated with WSIS process for long. India has been taking numerous steps in line with WSIS agenda. Simultaneously, India has been associated with all other ITU forums for furthering the efforts towards attaining SDGs. Recently, India hosted and successfully organized ITU event on Financial Inclusion Global Initiative (FIGI) in India which deliberated various concerns pertaining to Digital Financial Services. India looks forward to hosting and organizing many more such programmes in India.

Also, India wants to have many more regional initiatives in close association with ITU which will benefit many people across the regions. India is in the process of partnering with various developed nations for executing various capacity building programs through and best practice sharing through its Centers of Excellence NTIPRIT/ ALTTTC etc. on latest generational technologies. As part of regional initiatives, India would also like to implement various projects in collaboration with countries in Africa, South Asia, and South-East Asia for extending the benefits of these latest Generational technologies.



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India is willing to extend all the support to other developing nations, through future proposed action plans, jointly with ITU and other International Organizations, for achieving SDGs and moving towards next generational technologies. India offers to share the low cost technologies for rural areas, developed by C-DoT for backhaul development for these 5th Generational technologies and the latest OneM2M C-DoT Common Service Platform (CCSP) for smart city solutions as part of development of holistic solutions for all-inclusive socio-economic development. India is willing to do Technology Transfer through UN Technology Bank with the help of ITU and its associate organizations.

Further, India contemplates working with ITU and other International standard setting Organizations like ETSI etc, to develop a framework for secured use of ICTs and next generational technologies for building confidence and trust in these future networks taking into consideration contemporary developments.

India offers to share her vision and experiences and is also willing to learn from global best practices and policy initiatives. It is India's firm belief that with this collaborative approach we will soon realize the dream of global smart society and finally achieve the Sustainable Development Goals through safe and secured use of these next generational technologies.



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Turkey

Dr. Ömer Fatih Sayan
President & Chairman of the Board
Information and Communication Technologies Authority

In the “Building confidence and security in the use of ICTs” session, Dr. Ömer Fatih Sayan, Chairman of the Board and President of the Information and Communication Technologies Authority (ICTA) of Turkey, highlighted the efforts in Turkey to ensure users’ confidence in the use of ICTs. In his statement Dr. Sayan explained the role of the ICTA on issues of ensuring users’ confidence in the use of ICTs. He gave various perspectives of Turkey to increase security regarding the use of ICTs.

1: What are Turkey’s efforts to ensure users’ confidence in the use of ICT? Could you please explain your work on this issue?

Thank you Mr. Chairman. Before answering this question I would like to take this opportunity to express my special pleasure of being here and addressing you all in this session on the occasion of WSIS Forum. *Please allow me to extend my sincere thanks to all speakers and participants who contribute to the Forum as well as to the organizers this successful event.*

As in most of the countries, the statistics in Turkey show us that the usage of ICTs has been rising constantly. However, to keep these trends, it is very important to ensure that users do not lose their confidence in such technologies.

As the regulator of Turkey, we have many activities regarding this. For example, we established “Safe Internet Center” to increase awareness on safe use of Internet. Also, we started to operate an “Internet Helpline” and a “Safe Web” website where families can find advices for safe use of the Internet. Besides, we put “Safer Internet Trailer” into service to provide children and young people with a platform where they can experience technology and to raise awareness on safer use of Internet.

Since we know the fact that ensuring users’ confidence in ICTs requires close cooperation with many actors, we, as ICTA, signed agreements with the Ministry of Family, with the Ministry of Education and the Ministry of Youth to support all families, especially children so that they could become more conscious internet users.



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For example, in collaboration with the Ministry of Education, we conducted trainings for trainers on the safe use of ICTs and created distance education modules through which more than 50,000 trainers have been trained, and these trainers trained 107,000 teachers approximately so far.

In addition to public agencies and NGOs, we try to collaborate with private sector. Last year, with Samsung Turkey, we started a movement with the title; “Do not be a cyberbully! Be aware of it.” Our aim is to attract people’s attention to this problem and to raise awareness of young people, families and teachers against malicious use of ICTs and protection of their personal rights in 20 pilot schools.

To sum up, the issue of ensuring users’ confidence in ICTs has been a matter of priority for us and it seems that we have to keep working on it in the coming years.

Que2: How could we increase security regarding the use of ICT? What would be Turkey’s perspective on that?

Thank you.

Security has always been an essential need for humanity, however today security is not only related to the real world but also has become a requirement in the cyber-world.

Individuals, companies, critical infrastructures and states have been under serious cyber-threats. In the future, we will face increasingly more complex cyberattacks. We view cyber-security as a part of our National Security because of the risks associated with the course of social and economic life.

We are aware of the importance of being watchful and so developing preventive measures are crucial in cyberspace. Our efforts are focused on detection of the cyber incidents before they occur and to minimize the potential negative effects by incident response and coordination while increasing our technological capabilities.

Three essential components for increasing the cyber security are technology, human resources and well-defined processes. According to research reports, 6 million cyber security employees will be needed in 2019, globally. We are aware of this need and we opened up post-graduate programs at more than 20 universities on cyber-security.

In ICTA, we established National Computer Emergency Response Team (TR-CERT) to carry out coordination at the national level in order to fight against cyberattacks.



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Recent technological developments require a paradigm change in cyber security. Firstly, the reactive measures against cyber threats must be replaced by simpler and cheaper preventive actions. Secondly, controls in networks and infrastructure levels are needed besides system access controls. Thirdly, users must be informed and the awareness level regarding vulnerabilities and risks of infrastructures and applications systems must be increased. Lastly, cooperation at international level is of great importance.

We, as Turkey, would like to invite all nation states to work more on international cooperation issues so that we can increase security regarding the use of ICT together.

Thank you for your attention.



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Norway

Mr. Stein Schjolberg, Chief Judge (Ret.)

1. Is a Geneva Convention or Declaration for Cyberspace needed?

From the year 2000 the global organization of United Nations participated in the developments of Internet, also as leading organizations through United Nations organizations such as the International Telecommunication Union (ITU) in Geneva, and the United Nations Office for Drug and Crime (UNODC) in Vienna.

The United Nations became a leading global organization on developing issues of cybersecurity and cybercrime, and was early engaged in relevant multiple efforts.

Various bodies within the United Nations, especially ITU and UNODC, have provided significant research and negotiations efforts to reach consensus on a number of cyberspace topics, including setting standards on providing security for networks, and establishing a dialogue on a number of problematic issues.

Cybersecurity is one of the most profound challenges of our time. The rapid growth of cyberspace has created new opportunities to exploit online vulnerabilities and cyberattacks on the infrastructures of sovereign states. The global cyberattacks may even constitute a threat to international peace and security, and need a global framework to promote peace, security and justice, prevent conflicts and maintain focus on cooperation among all nations.

Governments and the global society are relying upon continuously availability and integrity of information and communications infrastructures. Maintaining the confidentiality, integrity, and availability of the cyber networks and the data they carry, increases the trust that the global community place in the information and communication infrastructures.

Cyberspace as the fifth common space, after land, sea, air and outer space, is in great need for coordination, cooperation and legal measures among all nations. Dialogues and cooperation between governments on norms and standards in cyberspace must best be achieved through a United Nations framework. Regional and bilateral agreements may not be sufficient. Cyber-attacks against critical information infrastructures of sovereign States, must necessitate a response for global solutions.

International law is necessary to make the global society able to respond to cyberattacks.



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In order to reach for a common understanding, a proposal for a United Nations Convention or Declaration for Cyberspace that includes solutions aimed at addressing the global challenges has been presented¹. The most practical alternative in the world's geo-political cyber situation may be a Geneva Declaration for Cyberspace² as the global framework on cybersecurity, and may avoid fragmentation and diversity at the international level.

Today the technological development of social media, such as Google, Facebook, Apple, YouTube, Twitter, and more, have been so rapid and the impact on society so fast and enormous, that codes of ethics, and public sentiments of justice, have not kept pace.

Conducts in social media need a better protection by cybersecurity and criminal laws. But the development of social media the last 5-6 years have been so enormous that it may be reluctance by the global social media companies in developing similar responses in international laws or guidelines.

At the 2005 World Summit on the Information Society (WSIS) in Tunis, government leaders recognized the real and significant cybersecurity risks and entrusted ITU to take the leading role in coordinating international efforts on cybersecurity. ITU has been the sole Moderator/Facilitator of WSIS Action Line C5 *Building confidence and security in the use of ICTs*.

A Global Cybersecurity Agenda (GCA) was launched by the ITU Secretary-General in May 2007 as a framework for international cooperation aimed at enhancing confidence and security in the information society. The GCA High-Level Experts Group (HLEG) was established in October 2007 with the purpose to advice ITU in developing global strategic proposals. This independent group delivered their advices in August 2008, in a Chairman's Report with recommendations on cyber security and cybercrime.³

I was the Chairman of the High-Level Experts Group (HLEG) of almost 100 experts from around the world that was established in 2007. The *Chairman's Report* from 2008 included also as follows:

Cyberspace is borderless: cyberattacks can inflict immeasurable damage in different countries in a matter of minutes. Cyber threats are a global problem and they need a global solution, involving all stakeholders.

10 years have passed without any more initiatives for a global solution. Why has the technological development not resulted in a global solution on the United Nations level?

¹ Stein Schjolberg and Solange Ghernaouti: *A Geneva Convention or Declaration for Cyberspace*, VFAC Review, No. 12, October 2016, Korean Institute of Criminology, see <https://eng.kic.re.kr> and www.cybercrimelaw.net

² Also presented at the 11th Pan-European Conference on International Relations, Barcelona, Spain, September 13-16, 2017. <http://www.paneuropeanconference.org/2017/>

³ See <https://www.itu.int/en/action/cybersecurity/Pages/gca.aspx>



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Listen to...

Some lawmakers in the United States Congress⁴ admitted in 2016 that they were calling for A Geneva Convention for Cyberspace, and stated:

We're setting ground rules that everybody agrees to abide by. A world where there are ground rules is a much safer world than a world where there's not.

President and Chief Legal Officer Brad Smith, Microsoft, USA, has made a proposal:⁵

Just as the Fourth Geneva Convention has long protected civilians in times of war, we now need a Digital Geneva Convention that will commit governments to protecting civilians from nation-state attacks in times of peace.

At the World Economic Forum Meeting in January 2018, George Soros made the following statement in his presentation:

The Internet monopolies have neither the will nor the inclination to protect society against the consequences of their actions. That turns them into a menace and it falls to the regulatory authorities to protect society against them. In the US, the regulators are not strong enough to stand up against their political influence. The European Union is better situated because it doesn't have any platform giants of its own.

And Listen to...

- Listen to the WannaCry ransomware cyberattacks on May 12, 2017. More than 300.000 computers in 150 countries and vital governmental and private sector infrastructures were infected. The cyberattacks have been shutting down critical infrastructures and crippling governmental networks, as explained by the Europol Director at a conference in Lisbon, November 8, 2017.
- Listen to the problems of buying ads on Facebook, Google and other social media, with the intention of harmful activities against other countries, possible both in the US election of 2016, the French election of 2017, and lately in the Catalonia crisis in Spain as explained at a European Union meeting in Brussels, November 2017.
- Listen to the Deputy Attorney General, US Dept. of Justice, on October 4, 2017: *"We in law enforcement have no desire to undermine encryption, however, the advent of warrant-proof encryption is a serious problem."*

⁴ Reps. Lynn Westmoreland (R-Ga.) and Jim Himes (D-Conn.), the chair and ranking member of the House Subcommittee on the National Security Agency, in a letter to the U.S. State Department, January 2016. They called for an "E-Neva Convention" in their letter.

⁵ <http://www.geneve-int.ch/brad-smith-takes-his-call-digital-geneva-convention-united-nations>



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- Listen to the new FBI Director on October 22, 2017: *“FBI has only been able to access encrypted communications in half of the mobile phones in the investigations. To put it mildly, this is a huge, huge problem. It impacts investigations across the board – narcotics, human trafficking, counterterrorism, counterintelligence, gangs, organized crime, and child exploitation.”*
- Listen to Senator Dianne Feinstein, US Senate, on November 10, 2017: *it is time to bring back the Burr-Feinstein Bill of 2016, cited as Compliance with Court Orders Act of 2016.*

Yes, a Geneva Convention or Declaration for Cyberspace is needed.

2. What kind of standards, norms and rules should be included in a Geneva Convention or Declaration for Cyberspace?

Regional and bilateral agreements may not be sufficient. More than 125 countries have until 2018 signed and/or ratified regional cybersecurity and cybercrime instruments, having resulted in fragmentation and diversity at the international level.

Norms, rules, and standards in a Geneva Declaration for Cyberspace may avoid fragmentation and diversity at the international level, and be a global framework on cybersecurity.

A Global Declaration for Cyberspace is clearly needed as a framework on cybersecurity and cybercrime, and as a contribution for peace, security and justice in Cyberspace.

ITU is the leading organisation of coordinating international efforts on cybersecurity in the United Nations system, and could develop strategies for model guidelines for cybersecurity, in a proposal on a Geneva Declaration for Cyberspace.

The discussions of global standards, strategies and recommendations for addressing the wide range of challenges relating to global cybersecurity and cybercrime should include:

- *Standards for international cybersecurity measures* - a framework for international cooperation aimed at proposing strategies for solutions to enhance confidence and security in the information society;
- *Standards for legal measures* – to develop advices on how criminal activities committed in cyberspace could be dealt with through legislation in an internationally compatible manner;
- *Standards for international coordination and cooperation on investigating* - serious global cybercrimes through INTERPOL;



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- *Standards for global public – private partnerships*: through INTERPOL to establish partnerships with key stakeholders in the private sector seeking the most efficient assistance and partnership from experts in the global private sector, academia, and non-governmental organizations;
- *Standards for an International Criminal Court or Tribunal for Cyberspace*;
We must never forget that the main element in international treaties and national legislations is the prevention element.

3. CONCLUSION

Switzerland is a unique country with many United Nations Institutions. Geneva is a very special United Nations city, and has named several previous Geneva Conventions and Declarations. ITU is a leading organisation of the United Nations system in coordinating international efforts on cybersecurity, and should bring together other UN organisations to discuss model guidelines on norms, rules, and standards in a Geneva Declaration for Cyberspace.

Developing a Geneva Declaration for Cyberspace may take 1 year, 3 years or 5 years to finalize. Let me use a citation from the former US President John. F. Kennedy:
But let us begin!



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Session Eight: Inclusiveness – access to information and knowledge for all

Webcast: <https://www.itu.int/net4/wsis/forum/2018/RP/Webcast/323#intro>

High level Track Facilitator: Ms. Moira S. Patterson, Global Affairs Program Director, IEEE Standards Association, USA

High level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator ITU** – Dr. Reinhard Scholl, Deputy Director, TSB, ITU
3. **Greece** – Prof. Konstantinos Masselos, President, Hellenic Telecommunications & Post Commission (EETT)
4. **Zimbabwe** – Eng. Samuel Kundishora, Permanent Secretary, Ministry of Information Communication Technology, Postal and Courier Services
5. **Ukraine** - Mr. Olexandr Ryzhenko, Head, State Agency for E-Governance
6. **Facebook**– Dr. Robert Pepper, Head of Global Connectivity Policy and Planning
7. **International Network of Women Engineers & Scientists (INWES)**- Ms. Yvette Ramos, Vice-President INWES, External Relations
8. **UN Major Group for Children and Youth** – Mr. Ryan Kelly, Student

1. Introduction

This panel brought together stakeholders from governments, industry, and civil society to discuss how we can ensure access to information and knowledge for all through ICTs, as articulated in the WSIS Action Lines and the UN SDGs.

2. Vision

Agenda 2030 for sustainable development includes a call for information and communication technologies (ICT) for all as ICTs enable opportunities for people. Some key themes that emerged were that it is critical to involve all stakeholders, including marginalized and disadvantaged ones, in discussions around internet inclusiveness. Furthermore, education of users is key. The representative from Greece highlighted a key point, which is that while ICTs are exciting, what really matters is social impact, and therefore we should view ICTs as a resource to be used to achieve the greater good.

3. Fresh Priorities

A key priority that was discussed was the inclusion of all stakeholders. Two civil society groups were represented on the panel, representing youth and women, and this signals the importance of including



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these groups. However, it was also noted that more individuals of these (and other) groups need to be part of all WSIS participants, serving as government or industry representatives as well. Going beyond this symbolic representation, inclusion needs to be reflected throughout ICT development, policy making, and user communities. Persons with disabilities or other challenges were also mentioned, and needs of the different-abled need to be considered, especially as many societies are aging.

4. Emerging Trends

The session showed the importance of institutional tools to bring change, such as policy changes, roadmaps, and indexes. Several panellists have been working with such tools and showed their value. The Internet Inclusiveness Index study by Facebook, based on 57 indicators measured for 83 countries, showed some interesting trends:

- Internet connectivity grew by 8 % year-over-year, and in the least developed countries it grew by 65% year-over-year.
- A 2G 'skinny connection' is not sufficient to reap the benefits of connectivity, leading to the problem of the under-connected. People need 3G or 4G, and those are slowly becoming more prevalent.
- The digital gender divide continues, with more men than women connected on the Internet. However, countries with gender inclusion programs seem to be successful.

5. Opportunities

Several opportunities were discussed during the panel. The abovementioned study showed that while the gender digital divide continues to exist, places where programs to address that divide existed showed a decline in the gender digital divide. This shows that designing thoughtful interventions can work. And another opportunity is the use of roadmaps. Every year Ukraine develops its open data roadmap which is a guiding document created with the participation of all stakeholders. Ukraine has developed and launched the state's open data portal which contains more than 25'000 data sets, which also contributes to transparency.

6. Key Challenges

While it was noted that thoughtful interventions can work, several panellists highlighted that not enough has been done to reach the inclusiveness goals with regards to women and youth.

INWES stated that they can offer resources, such as best practices and mentoring programs, to share with governments and organizations wishing to address the gender gap, but it was observed that more needs to be done to overcome structural barriers. The UN Major Group for Children and Youth representative highlighted the need for increased transparency and data practices that protect individuals' rights and access to basic services. Finally, resources, both financial and technical, are other challenges that were noted.



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7. Link to WSIS Action Lines & Sustainable Development Goals

The direct WSIS Action Line connection is to C-2 and C-3 and related SDGs, the discussion showed the interconnections between these and the other action lines, as the role of government and all stakeholders, the enabling environment and other items were also discussed.

8. Case Examples

Zimbabwe provided an in-depth example of how it modernized its national ICT infrastructure through policy and regulatory changes that were built on a consultative process with all stakeholders and consideration of relevant risks and rewards, 2) the deployment of a fiberoptic infrastructure nationwide, and 3) promotions and awareness-raising. Part of the strategy is to create access centres for citizens to use in remote areas, leveraging post offices where they exist, and deploying container locations in even more remote areas. These access centres serve as awareness and education centres, as well as giving people access to e-Services.

9. Road Ahead

To continue the positive strides that have been made towards making knowledge for all through ICTs a reality, the following points stood out:

- Articulate clear goals with measureable targets. Then indexes or other measurements can be developed and progress can be measured.
- Create roadmaps towards achieving the goals. Thoughtful and planned approaches are necessary to effectuate change.
- Institutional changes and spaces are needed where all stakeholders can participate in the process.



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Greece

Prof. Konstantinos Masselos
President
Hellenic Telecommunications & Post Commission (EETT)

One of the goals of the 2030 Agenda for Sustainable Development is Information and Communication Technologies (ICTs) for all. Indeed, ICTs should be deployed to access knowledge and facilitate communication and dialogue without hampering alternative or traditional methods of knowledge transmission. We should emphasize that knowledge and its application are catalysts for any development and are an essential resource and an indispensable prerequisite for the progress of societies all over the world.

ICT is exciting, but it is its social impact that makes it relevant!
ICT is important when it reaches global scale, when it affects our everyday lives...

Today, no one can think working without email, traveling without booking online, buying something without searching the web or making a payment without using web-banking.

Our lives are so ICT dependent and limiting our access to ICT limits our everyday options and overall possibilities.

Fast forward a little bit further and limiting our access to ICT services will limit our access to autonomous vehicles, restricting our mobility, or invalidate our (by the mile/smart) car insurance. Our 'cloud' health monitoring vitals will be gone, our mobile payments will be down and we will not be able to talk (and real-time translate) to our foreign customers at work...

ICT is a 'meta-resource' we constantly need to safeguard it and make it accessible to EVERYONE. And we don't just need ICT resources, we need fast, efficient and accessibly priced ICT resources living in big-data, AI, IoT and Industry 4.0 driven economies.

Big data will reach 403 EB by 2021, up almost 8-fold from 25 EB in 2016. Big data alone will represent 30 percent of data stored in data centers by 2021, up from 18 percent in 2016.

Unless someone thinks these Exa and Zeta-bytes of data are useless, we are already LATE on 5G and optical-fiber deployment for reaching SMEs, micro-companies and digital-nomads. Bigger companies and large corporations will manage...



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Unless someone thinks that big-data, machine learning and eventually AI is nothing more than marketing hype reaching its peak.

Unless someone thinks that we are not actually moving towards IoT and Industry 4.0...
We have a very challenging TO-DO list to process.

The technical and financial challenges related to delivering the reliability and performance needed for these type of applications is staggering!

Unless International collaborations are established and a common language is agreed towards a common goal, wealthy economies will be challenged and weak economies will fail meeting the demand, impeding advancement, further deepening the digital gap of economic and social inequality.

Inclusiveness and access to information and knowledge for all is our goal and this goal is multidimensional. We need to support technological advancement but also make sure none is left behind. Regardless of the context: national policies, market regulation or the potential of a single person to advance, to do and be more, including or especially with regards to disadvantaged, marginalized and vulnerable groups.

A special reference should be made to these people, as more than one billion or 15% of the world population live with some form of disability or significant difficulty in functioning their everyday lives according to data from the World Health Organization and the World Bank. In practice, this number is growing due to population aging and to the increase in chronic health conditions. Therefore, we must consider addressing disability-related disadvantage as key parts of our priorities, as is confirmed by the explicit reference to persons with disabilities in the 2030 Agenda for Sustainable Development.

Inclusiveness and access to information and knowledge for all is our goal and innovation is our tool. Supporting innovation is the proven one-track path to democratization of access.

This is something we very deeply believe in...

ICT is an extremely delicate and vital meta-resource for our societies. Within the next three years most of our business will be conducted in the cloud and historically unprecedented amounts of data will need to cross our networks, get stored and processed.

We need to democratize access, support the digital transformation of our societies and innovation will be our tool. Challenges of that size can only be addressed at international level.

Let's meet and discuss cooperation opportunities, exchange ideas and best practices. Work together to democratize access to information and knowledge.



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Zimbabwe

Eng. Samuel Kundishora
Permanent Secretary
Ministry of Information Communication Technology,
Postal and Courier Services

How far has Zimbabwe gone in ensuring inclusive access to ICTs and what are the key highlights of your national strategy, in this regard?

1. Policies and regulatory environment:

- Creating policies that promote and not stifle development and investment in the ICT and telecommunications Sectors
- Sector was fully liberalized back in 2001 and completion is mature in all segments of the ICT value chain including International and national network segments as well as service provision.
- Modernization of the National ICT Policy – over-arching and making reference to the need for sector policies and roles of key stakeholders such as Academic Institutions and Parliament: We have reviewed our National Policy on ICTs to ensure that the blueprint remains relevant and forward looking in the face of convergence, explosion of new services and application as well as evolving consumer needs, wants and expectations.
- Modernization was also done to account for emerging risks and threats in the cyber environment.

2. Communications Infrastructure:

- Infrastructure is key to inclusive access and the knowledge for all Agenda.
- I will break the infrastructure into three segments namely the International connectivity, national backbone and access segments.
- Thanks to widespread investment in undersea cables, we have seen our international bandwidth grow from 2Gbps in 2010 to 100Gbps in 2018 and the demand continues on the same trajectory, unabated.



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- Although we are a land-locked or Land-linked country I am excited to share with colleagues we connect to a number of undersea cables including EASSy, SEACOM and WACS. In fact two of our Operators are shareholders in one of the undersea cable providers.
- Our national backbone is optic fibre-based and we continue to grow the backbone to touch every district of the country.
- As is the case with most if not all developing nations of the world, Mobile Networks are the mainstream technologies that we are leveraging to achieve universal access.
- In terms of geographical coverage for 2G we have thus far achieved 78% coverage and our target is 87% by 2020. The remaining 13% of Geographical Zimbabwe is reserved for National Parks and is, of necessity only covered by satellite.
- Our 3G coverage is at 70% and we have achieved this figure through the implementation of 3G in bands below 1GHz i.e. in the 900MHz.
- Likewise LTE is coming up and we hope to accelerate the coverage through the release of the digital dividend that is spectrum in the 700 and 800MHz band.
- By the way I can also share that our mobile penetration rate now stands at **100.5%**
- The USF has gone a long way in helping us build the network beyond those areas that are perceived by Operators to be economically feasible for them. Our model in this regard involves the construction of shared rural sites, together with the provision of site energy and security amenities; Operators would then come on board once the site is ready for equipment installation.
- We are working towards developing this model further into a full-fledged Multi-Operator Radio Access Network (MORAN).

3. Promoting the use of ICTs among its nationals, in particular the rural and marginalized communities.

- In terms of the consumer hierarchy of needs once infrastructure is in place and services are being provided affordability becomes the next barrier.
- Through competition, cost-based tariff models and USF interventions we have managed to keep a downward pressure on prices and hence ensure affordability in the market.
- Confidence and Trust are key levers in promoting universal access and usage of ICTs



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Key Programmes for promoting a digital culture:

- **Enhanced Connect a School Connect a Community** programme (Establishment of E-Learning laboratories)
 - **Community Information and Learning Centres** - structure/objective
 - o Access to e-Government content
 - o Upload of vital statistics in times of disasters in a community
 - o Provides for the development of Content (Community Data and information) about the community
 - o CICs Assist in collecting ITU indicators
 - o Provides a better platform to coordinate inputs to and produce from the community
4. **Innovation Drive** – fund that promotes and support ICT Innovations
- Fund collected as a % of Operator contribution to USF Fund
 - Applicants apply and are assessed using the criteria on how far the innovations are to fruition



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Ukraine

Mr. Olexandr Ryzhenko
Head
State Agency for E-Governance

An open government is not just about the government making information available for public. It is also about the government listening to and engaging with civil society. I have seen a variety in this regard – from governments that publish a lot of information but do not listen, to some other governments that publish information and actively prevent civil society to organize around that information.

Citizens do not like to spend their evenings checking through large government datasets on expenditure. However, it only takes a few to highlight questionable payments and so make officials look more closely at the justification for everything they spend. In Ukraine, different social groups have started using data to agitate for change. They do not look at data in the abstract and think about a cause; they have a cause and want to make an improvement or make any decisions.

Ukraine achieved a lot in the last few years in developing open data movement. As a result, we noticeably improved our ratings. For the first time since the measurement started in 2013, the country is among the 50 most open nations, ranked 31st in [Global Open Data Index](#). In Open Data Barometer rating, Ukraine improved its result by 18 positions, having taken 44th place. In these ratings, we have outstripped our neighbours and some of the countries of the European Union.

We consider open data as part of a single e-policy, since open data is one of the keys to the development of the digital economy, public services and decision-making process. It's about the effective use of data and information in local bodies and in the Government, business, science, education and the entire society. The goal is to increase the quality and efficiency of data and create its added value.

At the moment, we are just beginning reaping the benefits of the open data - anticorruption, social and economic impact. We created strong policy to support the impact. In our Open Data Roadmap 2017, we have 59 tasks, which are divided into 6 sections. Each task is quite complex and comply with the principles of the International Open Data Charter, which Ukraine joined in autumn 2016.



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These principles are

1. Open by Default
2. Timely and Comprehensive
3. Accessible and Usable
4. Comparable and Interoperable
5. For Improved Governance & Citizen Engagement
6. For Inclusive Development and Innovation

For example, for the implementation of the section of openness by default, we created the policy which required for government bodies to publish open data. We co-created the policy together with civil society and business as its due to their demand the list of datasets to be opened was created.

To ensure implementation of the section on availability and use of data, we work on improvements of the national open data portal data.gov.ua so public has easy access to the open data.

I would like to note our work for inclusive development and innovation. We promote the use of the open data and creation of new start-ups and business models. We conducted the research on the economic impact of the open data in Ukraine and it showed that open data brought more than 700 million dollars to our economy. If we keep publishing high quality open data, economic impact will double. That is why we initiated Open Data Challenge, national competition of IT projects based on the open data to support innovation. During the first cycle, we received about 170 applications, 10 of which received a two-month incubation and three winners received financial and expert support. Today we already have second cycle with 190 applications and 20 teams of two-month incubation.

In Ukraine, government has a challenging task to ensure minimum standards and local responsiveness across huge national public service delivery networks. Hence, there has been a self-interest for central government to adopt an open data policy as it creates greater transparency in the performance of public services. This enables local communities to engage and press for local improvements where they are due. It improves performance and encourages greater accountability.

We are facing a time where there is an erosion of trust in governments by citizens. Therefore, governments need to be more open about what they are doing, how they are providing services, and engage with citizens. That is the way – the only way – that they can maintain public trust. Engaging local communities is also the way that services can be developed to meet local needs.



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International Network of Women Engineers & Scientists (INWES)

Ms. Yvette Ramos
Vice-President INWES
External Relations

1. What are the key strategies your organization brings in to provide more inclusive access to information/ knowledge for all?

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 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.

We represent here today INWES, a global network of organizations of women in Science, Technology, Engineering and Mathematics (STEM), with over 50 Organizational Members, Corporate Members, University/Institutional Members, all together representing over 250,000 women from 100 countries around the globe.

Women are much underrepresented in STEM globally. This matters:

- ✓ because STEM provides individuals opportunities for social-economic well-being
- ✓ because economic growth is predicted for STEM roles and sectors
- ✓ because it is a matter of business and political necessity

... It really matters for our industries, for our leadership, for our colleagues, for our young ones and for our future.

2. What are the priority actions INWES is working on in the coming years to help solve reduce digital divide?

Our priority actions are aligned with INWES vision and ITU/WSIS strategic principles that are **to build a better future worldwide through our Engineering and Scientific societies, including men and women's participation in ICTs.**

Yesterday Monday the 19th March 2018 we organized two successful workshops led by women Engineers & Scientists working in ICTs and in inclusive projects around the globe. We were supported by the Swiss Ambassador to the UN and the Benin minister of Digital



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Economy, together with a key partner from the regulatory world: IFT de Mexico and the Director of the BDT Dr Sanou.

The workshops put the light on the role of women engineers & scientists activities in implementing solutions for inclusiveness and access to the Internet and ICTs for all, while bringing sound and sustainable economic development and contributing positively to poverty reduction strategies and actions.

Concretely we have 3 outputs:

Number 1: INWES will continue to work in collaboration across our global platform with partners and governments: We will provide expertise, workshops and projects to support the engagement, recruitment and retention of women in ICTs.

Number 2: INWES will share good practice in ICTs for women and girls: we will provide programmes for mentoring for women and girls in ICTs; resources and materials to reach all young people; technology and leadership programmes to empower women to be influencers, creators and developers of ICTs.

Number 3: INWES will build on past campaigns to raise awareness at the highest levels of gender issues in ICTs: we call now on governments and policy-makers to implement gender mainstreaming in ICTs.

INWES members through its regional networks and partners are ready to help you right now.

As we all know: Empowering women empowers everyone.

Thank you for your attention.

For the International Network of Women Engineers & Scientists (INWES):
MSc.Eng.-MBA Yvette Ramos, Vice-President INWES, External Relations



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UN Major Group for Children and Youth

Mr. Ryan Kelly
Student
University College Maastricht
Netherlands

Thank you Ms. Moderator-

My name is Ryan Kelly, a student at the University College Maastricht in the Netherlands speaking on behalf of the UN Major Group for Children and Youth, the formal General Assembly-mandated, and self-assembled space for meaningful youth

participation in various intergovernmental processes at the UN such as the 2030 Agenda.

Spanning more than 6000 organizations across 170 countries, we will share a few reflections on the theme of inclusion and the role young people play in promoting it in their communities.

We would first like to highlight the inherent contradiction that technology both solves problems and creates them. The trade-offs are often inadequately considered. While the rapid deployment of ICTs has helped accelerated progress towards the SDGs, its positive impacts have not been felt by all and are certainly not equally shared.

Our vision for harnessing the potential of information technology and systems in promoting meaningful inclusion includes the following:

First... Recognise and overcome the **structural barriers that perpetuate the digital divide**. All **rights holders and critical segments** of society must be included in ICT development, as **we each play** a role in ensuring information systems are designed for people and planet. The inclusion must be multidimensional, bridging generational, gender, geographical, and economic divides, as well recognizing the value of diverse forms of knowledge (formal, informal, traditional and indigenous).

Second ... The market-driven obsession with “**delivering new innovations**” is misguided. Rather, we need more effective solutions for “**innovating the delivery**” of **existing and proven sustainable technologies and knowledge**. In this regard, community-based innovation and endogenous capacities need to be supported and promoted, while recognising inherent knowledge disparities between-and-within countries that need to be overcome through sincere knowledge and technology transfer initiatives. We think the UN Technology Facilitation Mechanism has the potential to fill this role.



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Third ... To truly leave no one behind, any vision to harness SDGs should be based on the recognition that technologies such as the **internet** are **global public goods and should not be subjected to proprietary interests**. Incentives must be aligned to support both STI capacities and democratize access, including open access to software and hardware, upholding net neutrality laws, and ensuring that publicly funded research is made easily accessible.

This is only possible through **comprehensive, inclusive and anticipatory technology governance frameworks at global and national levels** that ensure information technology and systems serves the 2030 Agenda and interests of those “left behind”.

Fourth ... Acknowledgement of technology justice as an integral part of development justice. STI should work towards the ambition of the 2030 Agenda instead of reinforcing inequalities. Investments in information systems should be informed by evidence and participatory-based assessments to provide an array of environmentally sound, socially just, culturally sensitive and economically equitable technology options in line with development agendas and capacity building measures.

Fifth... Transparency to ensure that data practices of states and corporations does not violate civil liberties, privacy, socio-economic rights of individuals, or harm universal access to basic services such as health care and education. Attaining these recommendations will require a paradigm shift away from production-line, reductionist, linear thinking towards a more dynamic, systematic mode of thought that recognises the reality that who we are to one, becomes who we are to all.

We cannot perpetuate a linear growth-centric economic paradigm that views people and planet as incidental externalities, while deciding to reduce our individual carbon footprint through more sustainable lifestyles. Young people have a central role to play in orienting systems, discussions, and decisions in ways that reduce the seemingly incompatible pressures between the social, economic, and environmental dimensions of sustainable development and moving towards a more circular economy overall. With the time we have here, we must move beyond initiating dialogue to begin to make an impact. This impact should be such that the young of tomorrow are able to move two steps ahead in this pursuit of inclusion with human rights and justice at its core. One way to start is to establish dedicated, institutional spaces for a youth-led mechanism in the follow-up and review of the WSIS Action Lines, working closely with other constituencies within ITU.



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Allow us to share a tool aimed at promoting inclusion in 2030 Agenda implementation:

- U-Report is a digital platform developed by UNICEF and used by organizations such as the World Association of Girl Guides and Girl Scouts to allow young people to share reflections on issues concerning their communities. Data, disaggregated across several variables, is displayed in real time on the U-Report website and used to inform policies at the national level. To date the platform engages close to 5 million U-Reports through an online social media platform.

This gives us hope and a continued motivation to engage in these discussions. Thank you for providing a space for our participation and recognising the valuable contribution to be made by youth in the fulfilment of the 2030 Agenda. We look forward to engaging with you all along the course of the week and beyond that!



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Session Nine: ICT applications and services

Webcast: <https://www.itu.int/net4/wsis/forum/2018/RP/Webcast/324#intro>



High level Track Facilitator: Mr. Pierre Mirlesse, Hewlett Packard Enterprise, EMEA, Switzerland

High level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator ITU** – Mr. Yushi Torigoe, Deputy Director, Telecommunication Development Bureau
3. **Niger** – H.E. Mr. Ibrahima Guimba Saidou, Ministre, Conseiller Spécial du Président de la République, Agence Nationale pour la Société de l'Information - ANSI
4. **Azerbaijan**– H.E. Mr. Elmir Velizade, Deputy Minister, Ministry of Transport, Communications and High Technologies
5. **Oman** - Mr. Dr. Salim Al Ruzaiqi, CEO, Information Technology Authority
6. **Nokia Corporation**– Mr. Marc Vancoppenolle, Head of Global Government Relations
7. **25th Century Technology Limited**– Dr. Kwaku Ofose-Adarkwa, Managing Director



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Introduction:

The Panel was very engaged in providing Actionable Insights and best practices From Niger, Oman, Azerbaijan and Mexico to turn ICT into Application and concrete services for the benefit of Society and aligned with the SDGs. The exchanged expanded with the Private Sector representatives from Nokia Corporation and 25th Century Limited.

The key questions discussed by the track facilitator, Pierre Mirlesse, were:

How can one deal with accessibility challenges in such a large country as Niger and with limited incomes. What strategy Niger has put in place to develop local services and applications?

What are the level of Use and tangible outcomes of ICT Applications and Services in Azerbaijan and the country plan for the future?

From the Mexican execution example, which services are most important to Digitize and what recommendation can be deployed in a Public ICT Policy definition?

What are the best practices and learnings that can be shared from the Oman PKI Initiative ICT success leading it to one of the top 5 UNCTAD ranked countries in the Global enterprise registration portal?

What are the Policy recommendations from the private sector, promises of broadband and 5G enabled infrastructure? What are the positive impact of the 4 Industrial revolution to be considered and its IoT infrastructure?

What are Performance indicators and measurement system are to be deployed and leveraged to track progress towards defined goals?

Key insights shared, Opportunities and findings:

ICT application and services must derive from and cohesive ICT policy, focus on tangible outcome for society (supporting each country's priorities) and thus be measured towards the SDG impact they enable.

There are many best practices to be shared and leveraged. From Oman's National PKI initiative to Smart Villages in Niger, from Policy clarity in Mexico to Citizen Engagement and eGov Services in Azerbaijan.

The Discussion even pointed to a collaboration opportunity between Azerbaijan and Niger.



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The collaboration between Private, Public and Academic actors has proven a key success driver in ICT applications and services best practices.

Looking to the future road ahead:

- ICT applications and Services are fundamental to the advancement of SDG progress in a country.

a) Access to connectivity

b) Ease of public services engagement (through broadband infrastructure expansion, e-Services and GCloud) driven by use cases: Healthcare, Education, government services etc.

c) Ease of doing business (ICT Policies) are fundamental to this journey.

-They should inform a Public policy and investment based on country priorities.

-They should be tracked and measured to provide insights to business leaders and Policy makers.



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Azerbaijan

H.E. Mr. Elmir Velizade
Deputy Minister
Ministry of Transport, Communications and High Technologies

Dear Ladies and Gentlemen,

Today Azerbaijan and some Middle East and Asian countries are celebrating the national holiday of Novruz. This holiday has been included into the list of UNESCO's intangible cultural heritage. This holiday reflects the arrival of spring and I congratulate all of you on this occasion. And of course if anyone wants learn more about this holiday you can easily do so with the means of IT applications. This fact indicates that ICT has been highly developed in Azerbaijan. Generally speaking, ICT development is part of the country's development priorities and important activities are being carried out in this direction. The National Strategy on the Development of Information Society and the State Program on its implementation have been adopted. We have the opportunity to use ICT applications and services based on the latest technologies.

Today, the Internet penetration rate in Azerbaijan is 78%, 72% of this number is broadband Internet users. There are 112 mobile users per 100 people. Fixed, wireless as well as mobile technologies are used for access to the Internet. All inhabited territories of country are covered by these technologies. The most widely used ICT applications are e-government solutions. E-services are widely used in order to deliver public services to the public. At the same time e-services are widely used by the population in e-commerce, banking, insurance and other fields. The number of mobile applications is rising day by day. The electronic signature, including the use of mobile signature, creates conditions for reliable use of these services.

The country also focuses on regional projects. Azerbaijan's space technology projects cover not only the region but Europe, Asia, Middle East and Africa. The Azerspace-1 telecommunication satellite allows broadcasting TV and radio and delivering Internet services to these territories. The second telecommunications satellite, Azerspace-2, which will be launched into orbit in mid-2018, will further expand these opportunities. Our Azersky low-orbited satellite is beneficial for the monitoring of the Earth's surface at any place in the world.



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The TIER-III Data Center, built in Azerbaijan, serves not only for domestic needs but also regional demand. G-cloud is being created on basis of this Data Center and government agencies and business structures services are provided with cloud technology services.

Today, the main and alternative routes of the EPEG (Europe-Persian Express Gateway) fiber-optic line extended from Frankfurt to Oman are laying through the territory of Azerbaijan. The TASIM project (Trans Eurasian Super Highway), initiated by the government of Azerbaijan and which can contribute to the digital development of the region raised the interest of countries of the region.

All of these are the today's issues. Now our vision of the future is directed on apps and services based on the Internet of Things, Big Data, Artificial Intelligence and Cyber Security. Recently, the Government of Azerbaijan has ratified the "Action Plan on the Transition to the Digital Government".

Establishing sustainable opportunities in these areas and building mutual cooperation among the countries could serve the common goals. We believe that opportunities for cooperation in these areas should be considered and given that such projects are expensive we need to create favourable conditions for their implementation.



Oman

Mr. Dr. Salim Al Ruzaiqi
CEO
Information Technology Authority

Oman has launched its National PKI in 2013, what are the services that it provides and what are the impacts since then?

- Oman National PKI launched / went Live in July 2013
- Oman National PKI legalized by e.Transactions Law 68/2008
- 56 electronic System/Portals are integrated to Oman National PKI
- Services provided by Oman National PKI are:
 - Strong authentication
 - Electronic Signature
 - Encryption
 - Electronic Stamp
 - Time Stamp
 - Registration Authority Accreditation
- Total number of the digital certificates issued by Oman National PKI (Till end of 2017):
 - National ID (eID) : 12.5 Million certificates
 - Mobile ID (Mobile PKI) : 74,000 certificates
- Total number of the real electronic transactions performed in Oman using PKI:
 - National ID (eID) : 7.2 Million transactions
 - Mobile ID (Mobile PKI) : 2.1 Million transactions



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3. UNCTAD has ranked Oman in 2016 in top 5 countries in the world in the Global Enterprise Registration portal, what are the technological advancements Invest easy project was able to bring to Oman's e-Transformation landscape?

- The initiative is based on the government's national plan of e-Transformation and the execution is completely based on whole of Government model.
- 23 government E-Systems are seamlessly integrated for delivering high quality online services through a single window.
- All the 5 key pillars of the National eTransformation vision such as ICT Governance, Service Delivery, Internal Efficiency and Effectiveness, ICT Compliance and Organization improvement has been effectively addressed.
- The initiative is highly demanded from most of government entities/private sector to have business registry data and integrate with licenses system.
- Invest Easy was also successful in bringing whole of government changes by making Updates to laws and regulations and fees,
 - Process simplification and re-engineering.
 - Organization restructuring.
 - Modern management style (Dashboard and KPIs - change management).
 - Upgrading to latest technologies (infrastructure) and business standards (ISIC4, XBRL).
 - Cost Savings and Optimization.

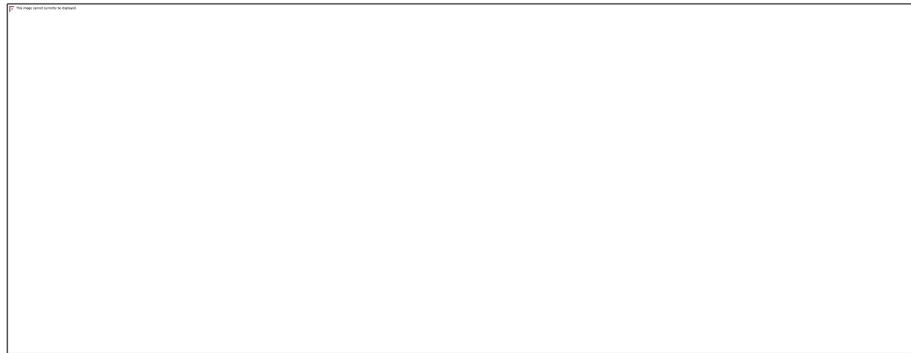
License Simulator service and a full integrated e-license application service are implemented

- Portal responsive for all devices and has average uptime of 99.36% over the past 3 years.
- Dashboard available for key decision makers 24/7 anywhere
- The **Internal Efficiency and Effectiveness** mandate of National eTransformation vision was addressed and all offices has been connected and all across Oman Invest easy system is being used to provide services and Implementing the use of modern technologies such as Cloud Computing and also making use of National infrastructure such as PKI, ePayment, Government Network etc. Also Call Center and systems has been upgraded.



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- Based on the previous calculations it is clear that the system average revenue per year is approximately OMR 38 Million (US \$ 95 M)





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Nokia Corporation

Mr. Marc Vancoppenolle Head of Global Government Relations

We are at a critical moment in our industry, where stakeholders are redefining themselves and actively exploring new digital applications and business models driven by digitalization. 5G is defining a new era of broadband and is coming our way fast. 5G will enable a variety of new use cases including human-to-machine and machine-to-machine communication, while ensuring service flexibility and optimized operational costs. Overall, 5G networks will underpin and speed up the digitalization of multiple industries, bringing new opportunities many segments of the economy. 5G trials are ongoing in various parts of the world and commercial deployments are expected to start in 2019, if not earlier. But to ensure timely deployments of 5G infrastructures and services, policy frameworks must be adapted and be '5G ready'. In this context, there are three priorities for policy makers:

1. Making more spectrum available: Accelerating spectrum identification and allocation to mobile broadband is critical, as well as ensuring the appropriate rulings in those spectrum bands.
2. Modernizing rules to incentivize and facilitate the deployment of telecom infrastructure: In this context, replicability of processes and simplification of installation regimes for small cells can help dramatically decrease deployment timelines and costs.
3. Ensuring new business models and services can flourish: Here's where balanced net neutrality rules are critical, allowing 'quality of service' differentiation. While preserving the principles of the open internet, differentiating network traffic is important as users require higher speeds and lower latency connectivity for specific usages ('network slices'). In addition, cross border free flow of data is essential to incentivize and scale cloud based services. Regarding data-protection and security, a delicate balance must be found to effectively protect end-users while enabling new digital services.

In addition policy work to foster digitalization is also needed beyond the telecom sector. This was the context of a study led last year by Nokia within the [UN Broadband Commission](#), which analyzes the policy and regulatory readiness for digitalization of vertical sectors like transportation and health, and provides insightful recommendations to policy makers and the industry alike.



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The keys to our future are not to be found in the status quo of human and technological development, or in going back to the past. The solutions will be found in the future-oriented scientific and technology advances underpinning digitalization. We should therefore embrace new technologies without fail. For us to do so effectively, it is essential that politicians and decision makers gain an understanding of the potential of digitalization for our society going forward. Policy makers should develop an environment for the utilization of enabling technologies that fuels the positives and mitigates the concerns. Governments, institutions, industry and other stakeholders need to assume the responsibility to communicate the expected benefits and changes to citizens. This means not only looking at the economic potential, but also at the personal and societal benefits: better lives, preserving our planet's resources, and giving people more time and freedom to connect with each other and with the things they enjoy.



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25th Century Technology Limited

Dr. Kwaku Ofosu-Adarkwa
Managing Director

Strengthening the Alignment between WSIS Action Line C7 and SDG Target 6.B and SDG Target 9.C: Towards the Creation of Synergy to Facilitate the Leveraging of ICT in Waste Management: The case of Ghana.

For a good period of 15 years, the WSIS process has been constantly evolving. In recent years the evolution is being effected through the strengthening mechanism of ensuring close alignment between the WSIS Action Lines and the Sustainable Development Goals (SDGs).

Under WSIS Action Line C7, committed to in 2003, rapid results had been expected from the use and promotion of ICT to serve as instrument for the attainment of environmental protection measures that will inure to the sustainable use of natural resources. Action Line C7 had further placed emphasis on the initiation of actions that will lead to rapid implementation of projects and programs to propel sustainable promotion of environmentally safe disposal and recycling methods of waste of all forms.

Notwithstanding these laudable plans, the process leading to the attainment of WSIS Action Line C7 targets had been slow, particularly in emerging economies, thus necessitating the introduction of an alignment within the 2015 SDGs with the view to propelling the rapid attainment of set developmental targets related to solid waste management among others.

In pursuit of that, under SDG Target 9.C nations are urged to strive that by 2030 universal and affordable access to Internet would have been achieved, such that, the provision of ICT access to the citizenry will have positive and inclusive impact on the strengthening of the participation of local communities in improving water and sanitation management, as per SDG Target 6.B.



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Faced with this challenge, nations, particularly emerging ones, are enjoined to ensure that significant progress made in the provisioning of access to ICT, reported over the years, and normally measured by the proportion of their population covered by a telephony and mobile network technology will of necessity be linked to ICT applications that benefit the local citizenry in respect of improving environmental improvement and waste management.

The quest to achieve an inclusive participation in the leveraging of ICT in the waste management sector poses a lot of challenge on countries, particularly emerging economies, to translate and measure their reported ICT growth in terms of capacity to harness them on supportive services application platforms.

According to figures released by the ITU, mobile-broadband subscriptions have grown more than 20% annually in the last five years reaching 4.3 billion globally as at the end of 2017. This translates to about two-thirds of the world's population now having access to mobile phone of which more than half of all mobile connections around the world are now broadband.

The question arising out of this impressive growth pattern is: to what extent has global economies taken advantage of this technological advancement (SDG Target 9.C) to strengthen the participation of local communities in ensuring ICT-enabled waste management (SDG Target 6.B)? And further what are the challenges posed to Ghana in this respect and how are they being addressed?

Snapshot of Ghana's ICT Growth

As of September 2017, the National Communication Authority (NCA) of Ghana released Ghana's mobile data subscriptions figure as 22,865,821 representing a penetration rate of 79.94%. All the five major Telecom service providers were reportedly competitively placed. In respect of mobile voice telephony, as of the same period, the total number of subscriptions was 37,445,048, representing a penetration rate at the time at 130.91%. Aside this there is massive growth recorded in ICT infrastructure development including the establishment of a universality service fund to cater for the extension of ICT access to far flung areas.



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Snapshot of Ghana's Waste Management Ecosystem

Governments across the globe, Ghana's inclusive, have tried to eradicate the problem of garbage. However, as the population and economic activities increase over time, garbage creation also doubles and calls for proactive measures to treat and recycle garbage for economic benefits. Based on the 2014 population estimation of 27 million, a total of 12,710 tons of household solid waste is generated per day in Ghana. It is further estimated that across the country, waste generation rate ranges from 0.28 kg/person/day at municipalities to 0.63 kg/person/day in metropolis and cities. In the urban municipalities alone, it is estimated that up to 40% of municipal wastes in Ghana remains uncollected (Fei-Baffoe & Mensah 2015). Meanwhile of those collected, large volume is classified as having the capacity to be transformed into organic usage when processed to bring economic value. However, only 300 metric tons of municipal solid waste is treated per day by an Accra Compost and Recycling Plant, a private sector entity yielding an average organic compost of 30 metric tons per day.

The implication is that cities and a large number of municipalities and assemblies do not have any processing facilities resulting in haphazard dumping of wastes all over the landfills which are also difficult to be acquired. The lack of adequate storage and collection facilities coupled with the lack of waste segregation and treatment methods has also resulted in:-

- Improper waste disposal that is evident in littering in communities.
- The clogging of canals, and gutters with all different kinds of wastes.

Legal framework for the deepening partnership between the Driving Ministry, the District Authorities and the Private Sector:

Under Section 12 (1) (a) of Ghana's Local Government Act, Act 936, District Assemblies have the mandate to "**Exercise political and administrative authority in the district**" and linked to this under Section 12 (b) the Assemblies are duty bound to "**promote local economic development**". Certainly the major players that the Assemblies can relate to in terms of waste management is the private sector players engaged in the waste industry as well as the private sector ICT solution providers. This is a real opportunity for partnership to close this gap in development. Ironically however, the platform of WSIS Forum appear not to have attracted the participation of many of representatives from the Local Authorities over the years to enable them appreciate the enormity of the global targets set in effective waste management under the WSIS Action Lines and now linked to the SGDs: a gap to be closed.



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Leveraging ICT in Waste Management: Ghana's policy terrain

With the phenomenal growth recorded under Ghana in ICT sector, including the laying of extensive fibre optic network across the country, it was about time the numerous policy initiatives put in place were taken advantage of to facilitate the development of technological innovations in the waste management sector.

In terms of data management the technological platform created in Ghana, under the purview of the Ministry of Communications, to facilitate housing address system can provide the needed data to guide the development of the pilot program for waste management analytics-based indicators and alerts to improve the performance of the entire fleet of waste conveyance trucks towards the design of a more efficient system for picking up waste.

Additionally the establishment of the Ghana's Digital Innovation Village in the city of Accra and Community Information Centres in the municipalities can lead to dedicated attention being given to young IT Software and solution developers who could partner the private sector players and the District Authorities to provide IT-based solution platform for waste management. This should also be seen as job creation opportunity for the youth.

Some of the technological solutions that can be explored may include:

- a) Designing platform to ensure the visibility of city and urban sanitation solid waste management,
- b) Facilitating route planning and monitoring for garbage collection
- c) Adding visibility of waste bins and their locations etc,

The Inclusiveness of the Citizenry:

The creation of awareness among the citizenry is key to the evolution of any meaningful waste management technologies. Implicitly it is incumbent on all stakeholders to strive to ensure that citizens are involved in IT-based solution development for common sanitation problems. Citizens would in turn become participants in the process to enable them offer feedback on all applicable solutions. With Ghana's phone penetration rate having wide spread penetration of 130.91% of which 79.94% is broadband facilitated, the citizenry may be encouraged to use the medium of mobile telephony to post comments to dedicated monitoring centres at all District Assemblies. Indeed the telecom service providers are potential partners in the development of these platforms as they will also serve as avenues for branding and marketing that also will have business case for them.



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Some Challenges to be surmounted

In all these instances one may raise the issue of Internet Affordability. Ghana is reported among the countries that have signed on to the implementation of the Alliance for Affordable Internet (A4AI) recently declared “**1 for 2**” Internet Affordability target. The pursuit of this target is intended to yield the dividend 1GB of mobile data priced at 2% or less of monthly average income and in the process reverse the current levels 3-5% of GNI which renders income earners including bottom 20% unable to afford cost of basic broadband connection. With the problem of Internet affordability being handled through the infrastructure sharing and open access model, and rural community connectivity programmes under the Universality Fund initiatives, it was about time a massive take off was effected to utilize the many investment in ICT specifically to initiate a massive e-waste management. The problem of source of funds may not arise as in all cases cost and revenue sharing models can be developed to the mutual benefit all stakeholders.

Conclusion

Ghana needs to put in place a multi-sectoral approach to utilize its ICT platform at the applications level. For now waste management and recycling have a lot of prospects to reverse the poor environmental sanitation being experienced. The significant change in ICT systems ought to be translated to ensure effective application platforms with the active participation of the citizenry as envisaged under SDG Target 9.C supported by SDG Target 6. B.

What is needed is a public-private sector platform around which specific initiatives can be developed with the partnership of academia, the private sector and the civil society. And this is where the **25th Century Technology Limited**, based on its research outcome, has positioned itself to champion, through the establishment of close interaction with the sanitation, local government and communications sectors policy makers to ensure that Ghana will turn her impressive telephony penetration rate to build inclusiveness in the leveraging of ICT in waste management. There is no doubt that the adoption of innovative and smart technologies can help increase efficiency and productivity in the waste management and recycling industry in Ghana

Session Ten: Inclusiveness – access to information and knowledge for all

Webcast: <https://www.itu.int/net4/wsis/forum/2018/RP/Webcast/325#intro>



High level Track Facilitator: Ms. Cristina Valdés Argüelles, Geneva International Model of United Nations, Switzerland

High level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator UNESCO** – Mr. Boyan Radoykov, Chief of Section, Section for Universal Access and Preservation
3. **Pakistan** – H.E. Ms. Anusha Rahman Ahmad Khan, Minister, Ministry of State for Information Technology and Telecommunication
4. **Colombia**- H.E. Mr. Juan Sebastián Rozo, Vice Minister of Connectivity and Digitalization, Ministry of Information Technologies and Communications
5. **Practical Action**– Mr. Paul Smith Lomas, CEO
6. **ARTICLE19**– Ms. Mahsa Alimardani, Iran Programme Officer
7. **Association for Progressive Communications**– Dr. Carlos Rey-Moreno, Community Networks Project Manager
8. **University of Geneva** - Prof. Yves Flückiger, Rector
9. **CODATA (Committee on Data for S&T)** – Prof. Chuang Liu, Chair of Data Publishing Subgroup, CODATA Task Group in Developing Countries (China)



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1. Introduction and vision

This session focused on the necessity to implement inclusive access to information and knowledge for all individuals, organizations and societies by connecting the unconnected and implementing appropriate education on digital skills.

The main shared vision captured was to enable people and societies to own their own destinies by having the rightful access to information and knowledge and by connecting the unconnected. A second collective vision was presented during the session, implying that technology is a strong tool to continue evolving and improving the wellbeing of the respective societies.

2. Fresh Priorities

ICT's infrastructure is constantly evolving and, hence, governments may need to be continuously focusing on providing the latest technology and infrastructure to the people.

Knowledge sharing and solutions shall be handed to users in the right form; information shall be contextualized –by, for example, producing the information respecting multilingualism– and shall be responsive so that they achieve their greatest potential.

Provide the unconnected areas with the same quality of lifestyle that the connected areas may have the following idea was introduced: Societies should move forward from naivety in what concerns the cyberspace and create a framework to prevent from cybercrime.

3. Emerging trends

Education in the field of digital skills and technology usage is being fostered particularly among youth, women and people living in rural areas. Also, Pakistan is focusing on the demand and supply side partnering the private and public sectors.

Two opposed trends came to the fore during the session: on the one hand, the idea of regulating the Internet so as to create a legal framework and, on the other hand, the idea of leaving the Internet untouched and free of regulation.

4. Opportunities

By sharing knowledge and providing sound and inclusive education on digital skills, societies will be able to provide access to information and knowledge. Technology represents a powerful tool to take into consideration for innovation and evolution of inclusive societies. By strengthening the programs involving technological and digital education, especially for the younger generations, information societies will evolve following an inclusive path.



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5. Key Challenges

Increase the efforts to provide inclusive connection, because the population as well as the needs increase as well.

High cost of this latest technology is an impediment for part of the population who cannot afford them and, to this matter, governments shall invest to connect the unconnected. Especially in developing countries, due to budgetary deficits, the total budget gets diversified in other areas. Solutions have to be taken to scale and sustained, working in partnership with the governments and the private sector. Free access and online neutrality should be protected.

The still remaining digital divide is to be broken.

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

This panel was in line with WSIS Action Line C3 regarding “Access to information and knowledge” and the 2030 Agenda for Sustainable Development, specially contributing to the implementation of Goals: GOAL 4 (Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all);

GOAL 9 (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation);

GOAL 10 (Reduce inequalities within and among countries; GOAL 16, target 16.B (Promote and enforce non-discriminatory laws and policies for sustainable development)

7. Case Examples

A case example cited within the panel was: “Ciudadanía Digital”, which is a Colombian program aimed to provide the citizenship with the skills they will potentially need to make good use of the new technologies and improve their life standards.

University of Geneva is pioneer in challenge-based learning for SDGs by creating a program called Geneva-Tsinghua, encouraging students to innovate in the frame of sustainable development.

The WSIS Award winning program “ConvertIC” presented by Colombia helped connected people with visual disability.

8. Road ahead

Create momentum for empowering people and societies through information and knowledge.

Appropriate education on digital skills is seemed as a priority to access and benefit from information. As the founder of Practical Action once said: “You can provide someone with material goods and you will make them dependent. Give them knowledge, and you set them free”.



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Practical Action

Mr. Paul Smith Lomas
CEO

Practical Action believes that technology can play an important role in development. ICTs are not a silver bullet, but they can be a very effective channel to provide access to information and knowledge for all.

Information should be made available, accessible and affordable to all regardless their social and economic status including women and men from marginalized groups and those groups traditionally viewed as “hard to reach”

To be effective, the content of information should meet the needs of target audience. Therefore, information needs to be contextualized and localized (i.e. translation in local language, consideration of local knowledge and wisdom, and sensitive to local culture and circumstances).

Knowledge is most effectively shared as part of a dialogue – where it is directly meeting the needs or questions of the recipient community.

To serve the last mile (also known as the first mile), online engagement should go hand in hand with offline face-to-face engagement.

The roles of information intermediaries, e.g. community extension workers and social mobilisers, are critical to help to contextualize and facilitate learning. Knowledge sharing is also about trust – who produces and delivers information, and facilitates the learning processes is important.

Information in itself does not necessarily lead to development outcomes unless people know how to transform (online) information into knowledge and actions. People need to be equipped with digital skills in order to access and use the (online) information as well as to participate in development process.

We have to be mindful of unintended consequences of ICTs used in information and knowledge sharing. ICTs are not neutral, and, if not used carefully can exacerbate information asymmetry and digital divide. And they can exacerbate the power-dynamic between those who have control of ICTs and information and who don't.

In order to deliver the WSIS Action Line on inclusiveness – access to information and knowledge for all, it is necessary to focus very strongly on “the demand side” – on making sure that people have the necessary skills and can access quality, affordable content. This will require an ongoing multi-stakeholder approach and significant additional resources. This is an investment worth making as knowledge sharing can be a most effective way of delivering poverty reduction.



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Association for Progressive Communications

Dr. Carlos Rey-Moreno Community Networks Project Manager

1) More than 10 years after the realization of WSIS, open, affordable and free internet access remains a critical challenge. Despite the new possibilities created by innovations in low-cost communications technology, bottom-up locally owned/managed communications infrastructure and alternative local access infrastructure models are not widely known or adequately understood and supported. Why are these

alternative telecommunication infrastructure models important to a healthy telecommunications ecosystem and essential for achieving affordable connectivity for all?

Significant digital divides remain, such as those between and within countries and between women and men. These divides hinder the achievement of the World Summit's vision of a people-centered, inclusive and development-oriented information society.

According to ITU statistics more than one billion people still do not have access to basic voice communications. More than three billion do not have access to the internet. Even if they have access, many people face cultural, economic and social barriers in using it. Just two examples:

- In Nigeria, Africa's biggest economy, a survey done by Research ICT Africa indicates that men are 18% more likely to use the internet than women⁶.
- In Mankosi, a rural community in Africa's second biggest economy, South Africa, people spend more than 22% of their total income on communications.

Even the GSMA, the association of mobile network operators, acknowledges that at current rates of mobile expansion it will take them at least seven years, until 2025, to connect the next billion to the internet. That is why we need to talk about, alternative telecommunication infrastructure models. These models can build on and complement the achievements of the mobile revolution in making communications accessible to all. Among the different models available, community networks are proving to be particularly effective in realizing the goal of universal and affordable access to ICTs.

Community networks can be broadly defined as locally owned and operated networks. They can be commercial or non-commercial. Ownership can be either by the community or an individual, as long as

⁶ https://researchictafrica.net/wp/wp-content/uploads/2018/01/AfterAccess_IGF2017-1-2.pdf



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they are local to the communities they serve. They exist all over the world, in both urban and rural environments, and in developed and developing countries.

There is a growing body of knowledge on these alternative models in, for example reports of the IGF's Dynamic Coalition on Community Connectivity and Best Practice Forum on Connecting the Next Billion. They are referred to in ITUD resolutions and they have been discussed at previous WSIS Forums.

In spite of this attention the reality is that these community networks do not get the recognition or support they deserve. Most telecoms policy and regulatory frameworks and funding mechanisms are designed to support centralized, large scale operators. Changes are needed to accommodate the decentralized, small-scale nature of most community networks and provide them with the support they need and deserve.

These networks do more than just provide access. They contribute directly to WSIS action lines. They build information and communication infrastructure, contribute to local content and human capacity. They support the SDGs through building resilient infrastructure and fostering innovation. They enable improved education, gender equality and empower women and girls through supporting their use of ICTs.

2) What is necessary to make progress on connecting the unconnected through these alternative models and what could be the role of governments in this regard?

Resolution ITU-D 19 from the International Telecommunication Union's World Development Conference in 2014 recommended that "administrations, in their radio-spectrum planning and licensing activities, consider mechanisms to facilitate the deployment of broadband services in rural and remote areas by small and non-profit community operators."

It is critical that governments and regulators take measures to implement this recommendation. They can do this by:

Enabling community networks through their licensing activities:

- For example, by allowing community networks to deploy telecommunications infrastructure and provide information and communication services.

Accommodating community networks in their radio-spectrum planning

- It was done by the Mexican regulator IFETEL who allocated unused spectrum in the 900 MHz and 1800 MHz bands to Social Purpose Licensees.

- They can also expedite the implementation of TV white space (TVWS) regulation and exempt community networks from licenses to use it.

- They can implement dynamic spectrum sharing on other bands and make Industrial, Medical and Scientific (ISM) bands available to community networks free of cost.

- Overall, regulators should create less onerous licensing regimes, in terms of both paperwork and cost.

Regulators and governments can also adopt open telecom data approaches, as recommended by UN's Economic and Social Council.



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We call on regulators to make information they hold regarding radio-spectrum allocations and usage available to the public in open data format. This data can support monitoring and evaluation and evidence-based policy making.

Finally, Resolution ITU-D 19 from 2014 recommends that these alternative models “be supported by universal service funds.” We support this recommendation and extend the call for support to other funders and investors in the telecommunications sector.

The Association for Progressive Communications is coordinating a programme, in collaboration with the Internet Society and Rhizomatica, to facilitate the creation of enabling conditions for community networks. We are open to collaborating with any organization, government and regulatory agency willing to work in the same direction.

Thank you very much.



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University of Geneva

Prof. Yves Flückiger
Rector

Q1 University of Geneva is pioneering challenge-based learning for the SDGs, as part of the Geneva Tsinghua initiative with Tsinghua University. How does this work in practice?

In choosing a challenge-based approach for our education programmes on the SDGs, we are inspired by Jean Piaget, one of the great thinkers about education of the last century, and a professor at University of Geneva.

As Piaget once famously said:

“The principle goal of education should be creating men and women who are capable of doing new things, not simply repeating what other generations have done.”

Our Geneva Tsinghua Initiative for the Sustainable Development Goals is a collaboration with the International Organizations in Geneva, based on a partnership with China’s top University, Tsinghua University in Beijing. In the context of this initiative we are encouraging our students to do new things – in other words, to innovate – just as Piaget proposed. We are doing this in many different formats – from two-day long SDG hackathons to a two-week long SDG Executive Education to two-month long SDG summer schools to a two-year SDG Dual Masters programme. Very often, the innovations made by the students are based on novel uses of ICTs. For example, in our SDG Masters programme, a team of four women students recently created an app called FemFriendly for mapping facilities available for women to manage menstruation with dignity. As the students discovered, this is a health and dignity issue not just in emerging regions. It affects women and girls here in Switzerland, too. At work, in schools, in restaurants or public places. So the students learned how to build the app, and they also used digital fabrication technologies to make certificates that restaurants can display, to show they are complying with good female hygiene standards.

In conclusion, instead of having students sit in a classroom, learning knowledge that already exists in books, we use challenge-based learning to encourage our students to go out and explore the world around them, and understand how they can personally make an impact on the SDGs.



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This is what makes the Geneva Tsinghua Initiative such a pioneering programme.

In the context of this initiative, what is the role of ICTs in ensuring inclusiveness and access to information and knowledge for all?

We realize that what we can do in our classrooms here in Geneva is limited, compared to the impact we can have online. University of Geneva has been a pioneer in Europe in producing MOOCs, massively open online courses. We recently launched a five-module MOOC on Ecosystem Services, for example. In the context of the Geneva Tsinghua Initiative for the Sustainable Development Goals, we have extended challenge-based learning to the Web, by creating a novel e-coaching programme, where we work with student teams around the world on SDG Challenges. This programme is called Open Seventeen, and this week we are launching a new version in collaboration with ITU and WHO, in collaboration with their “Be Healthy, Be Mobile” partnership. Over 50 student teams from around the world will join online, for a couple of hours every week, to be coached on how to ensure their own SDG projects have impact. In this case, all the projects will address mobile health solutions for non-communicable diseases, which are the theme of Be Healthy Be Mobile. And the resulting coaching sessions will be recorded and repackaged in a MOOC format, with suitable translation, so that even more students around the world will be able to benefit.

In conclusion, at University of Geneva, we believe that challenge-based learning is a powerful means of ensuring that students learn how to tackle the SDGs. And we also believe that novel interactive ICT-based solutions, like the Open Seventeen, provide the best way to ensure inclusiveness and access to information for all.



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Session Eleven: ICT applications and services

Webcast: <https://www.itu.int/net4/wsis/forum/2018/RP/Webcast/326#intro>



High level Track Facilitator: Ms. Moira de Roche, IFIP IP3 Chairman, Global Industry Council Director

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. **Iran (Islamic Republic of)** – H.E. Mr. Nasrollah Jahangard, Vice Minister for Technology and Innovation, Ministry of Information & Communication Technology
4. **Poland** – H.E. Mr. Karol Okonski, Undersecretary of State, Ministry of Digital Affairs
5. **India** – Mr. Prabhash Singh, Member (Technology and Services) Telecom Commission, Department of Telecommunications, Ministry of Communications
6. **SSVAR - Swiss Society of Virtual, Augmented and Mixed Reality** – Mr. Jean-Philippe Mohamed Sangare, Founder and CEO



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1. Introduction

The panelists in this session were primarily from Government but included the WSIS Action Line facilitator who is from ITU, as well as an NGO. This diversity provided a diversity of views.

2. Vision

Virtual, Augmented and Mixed reality must be used for more than games. There are many opportunities for business and the information society.

Provide access to ICTs in a fair and equitable manner.

Governments can work with public sector to provide services to underserved areas.

3. Fresh priorities

- Green computing
- Using ICTs for Disaster management and relief
- Cybersecurity, ICT applications, accessibility, connectivity.
- Using VAR for education
- Emerging trends
- Projects in Iran are aligned with ALs, and have been in the national development plan for 15 years
- Green initiatives to reduce carbon footprint

4. Opportunities

- In Iran, more than 50% of the population have access to the internet, and there are more than 50 million mobile phones, and there is a good opportunity for investment in the country because of the huge growth potential especially in the telecommunications sector.
- Work with all UN agencies to achieve ALs and SDG's – cooperation is essential.
- Data sharing (public data with citizens and businesses) – it become public information.
- From an economic point of view, augmented reality already has attracted significant investment, and this is set to grow exponentially.

5. Key challenges

- Important to have resilient strong infrastructure
- Thinking “green” in all aspects of ICT e.g. reducing waste, emissions and more
- Safety and security and trust in use of digital products is essential
- Managing disasters using a portal to distribute information
- Opening public data for transparency, but still keep it reliable and secure. This is to share the public data with everyone.
- Sustainable development and auditing progress
- User friendly portal.



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- Encourage business to re-user public open data, but training and education is key. Public data can also benefit start-ups.
- Sufficient and robust ICT infrastructure
- Localisation is important in providing access

6. Link with WSIS Action Lines & SDGs

Action Line C7 ICT Applications: E-government; E-learning; E-health; E-environment
SDG 1, 3, 4, 7, 8, 12, 17

7. Case Examples

- ITU working with ILO to produce a toolkit for Digital Skills
- SSVAR – 3D augmented reality used in the Health sector to teach doctors in underserved areas. Common exchange programme for technologies and ideas
- Localised internet content (Iran)
- Digital financial inclusion projects (with Gates Foundation)

8. Road ahead

- Governments should work to make ICT application safe and secure. This should be done at in-country, regionally, and with global cooperation to ensure cross-border security.
- Mobile learning event in Paris next week with UNESCO, in support of e-education
- E-Health, e-banking, e-payment, e-learning and any other aspect of services to push the country toward the mobile Government services.
- ICT people must continually interact with other sectors
- Improved Connectivity and accessibility monitoring
- Trans-border digital identity recognition for improved safety



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Iran (Islamic Republic of)

H.E. Mr. Nasrollah Jahangard
Vice Minister for Technology and Innovation
Ministry of Information & Communication Technology

Excellencies, Ladies and Gentleman,

It is my pleasure to address WSIS Forum 2018 here in Geneva. As you know all, yesterday was the World Happiness Day; it is the first day of spring and also the first day of Iranian New Year which we called it Norooz. Norooz means New Day and I wish you all the peace and prosperity time in this New Year.

Our national policy in Iran in ICT sector is to provide facilities and infrastructures that would provide the needs of users across the country in a balanced and fair manner. In this regards many ICT-related projects have been done in national level, which are according to all aspects of WSIS Action Lines. Some of them were started from 2003 when we had engaged in the first phase of WSIS and continuously involved in all the related procedures. These projects have been implemented during Iran five-year national development plans in past 15 years.

Fortunately, President Rouhani in new government and his cabinet fully supported these ICT activities, and boosted the implementation of National Broadband Network (NBN), all over the country; so as currently all cities in Iran, i.e. 1246 cities, have coverage of 3G and 4G services, and near 20000 villages have access similar service. Penetration rate of mobile access is more than 100 percent and the penetration rate of internet broadband access is more than 50%.

In this year the President ordered to start new service for freedom of access to state information for all the people in the country and right now all Iranian have access to this service.

More than 50 million mobile users have smart phone in Iran. It means the government has a good opportunity to accelerate the provision of different e-services, such as e-health, e-banking, e-learning, e-agriculture and push the county towards the mobile government service in near future. Therefore, a suitable ICT infrastructure and access platform for deploying online eservices has been set up. In this regard more than 100000 Persian applications have been innovated and developed by Iranian young entrepreneurs in past three years and it is expected there will be one million opportunities for creating new App in near future in Iran.



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Some of these applications make a huge job opportunities and new business, so as more than one hundred thousand jobs have been generated through them in each year. The total capacity of this market estimated to be raised triple in next five coming years and this shows the potential of Iranian market for ICTs and related services. This is a very big signal to the investors and players in the world as well as inside the country to be participated in deploying the new platforms, services and tools.

The other achievement that is the result of supportive policies for private sector and making use of PPP, is very rapid growth of local content and information, so as the Persian content on the Internet has been doubled in past four years.

Like other countries, this rapid growth and progress has faced to some challenges. Three most important ones are improvement users' digital skills, providing user privacy, and providing data security. To overcome these challenges we try to define the roles and responsibility of players, and arrange security rules and regulations to facilitate the production and use of the contents in the network. In this regards we are looking for best practices, exchange experiences to find suitable solutions, since we think these are global challenges, and need international collaboration more than before.

Thank you.



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Poland

**H.E. Mr. Karol Okonski
Undersecretary of State
Ministry of Digital Affairs**

**Your excellencies,
Dear Delegates,
Ladies and Gentlemen**

Let me begin by appreciating this opportunity to be here with you at this great event. It is an honor for me to be among you at the WSIS Forum here in Geneva. Thank you.

I would like to focus my speech at this High Level Policy session on open data and what Poland is currently doing in this field. Public administration creates and collects vast amounts of data.

We understand how crucial data is in nowadays economy for creation of innovative goods, services and products. We also acknowledge that access to data or more generally to information is a fundamental instrument of social supervision over the activities of the State as it increases the accountability and transparency of the activities of the government.

In this context the crucial task is to share public information with everyone: entrepreneurs, non-governmental organizations, civil society and all citizens. So they can process, enrich, combine the data creating new business, social or scientific value.

In order to implement in a structured manner open data policy in Poland in 2016 we launched a Public Data Opening Program for 2016-2020. It is our first governmental strategic document, which aims to improve the quality and increase the amount of open data. To achieve this goal we formed a two-level implementation network comprising a policy task force – the officials at the level of deputy ministers who make strategic decisions and Open data officers in each ministry, who supply the governmental data platform with new, high quality data. The implementation of the Program is supervised by the Ministry of Digital Affairs.

The results of our activities are impressive. According to the OECD Government at a Glance 2017 report, Poland has progressed from 28th to 20th place in OURDATA INDEX. Moreover in the European Union Open Data Maturity 2017 Poland was promoted from observers to fast-trackers status. This shows that our work is appreciated and makes us achieve even more.



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Currently in the Ministry of Digital Affairs we are implementing a large scale project Open Data. It focuses on three strands access, standard and education. Within this project we are developing a new version of the single open data portal. We also develop standards for data opening in three different dimensions: legal, security and technical.

We open essential databases for the recipients via the API. Moreover we conduct trainings and workshops for public administration, which are aimed at improving the quality and openness of data being made available. We would like to increase the awareness concerning the benefits of re-use.

There is still a lot ahead of us. For example, we are also planning to create an analytical center facilitating the development of data openness policy in different institutions. This will provide a comprehensive support in terms of legal, technical and security solutions. The Open data officers will be provided with necessary tools for supporting data openness. They will enable error monitoring, statistics access and communication improvements.

Secondly, the supply of data will be expanded with new project partners, from the public and private sector. This shall be done in an innovative and dynamic way. Expansion will also include piloting programs. Another priority lies in education. The project will continue expanding education programs and training activities for officials in the area of data opening and public data usage.

Lastly, international cooperation will strengthen the exchange of experiences and best practices. Key assumptions of Poland's Data Opening Program include cooperation with various partners, not only in Europe but around the globe, active participation in shaping standards and policies. This goal can be also reached with the help of ITU, which enables exchange of experiences in many different fields.

International cooperation, not only the area of data openness, is important for Poland. We are an active ITU member and spark and get involved in a broad range of initiatives which the ITU facilitates. Having said that I would like to inform about the upcoming elections for the ITU Council, where in Region C we are seeking your support, so that Poland could continue its mission in the ITU environment. It will be my honor extend this fruitful cooperation with all of you present here.

To sum up this positive message, I once again thank you for this invitation and hope this Forum will lead to many interesting discussions and conclusions. Thank you for your attention.



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India

Mr. Prabhash Singh
Member (Technology and Services) Telecom Commission
Department of Telecommunications
Ministry of Communications

Advancements in Information & Communication Technologies (ICT) present several important solutions for mitigating disruptions due to disasters. National disasters have resulted in death of nearly a million people world over in the last decade. It is well known that in many cases of disaster, the loss of human lives can be avoided if proper precautions and measures are in place. Ironically, even if the disaster is predicted by the concerned agency with sufficient time in advance, lack of measures for timely dissemination of the alert about the disaster to the citizens and authorities prevents execution of proper measures which can significantly reduce loss of lives.

To overcome this challenge, ICT tools are being leveraged across the globe for Disaster Management Solutions. One of the ways used for issuing early warnings and mitigating the effects of a disaster is through Early Warning System by using ICT tools which can be defined as a set of capacities needed to generate and disseminate timely and meaningful warning information of possible extreme events or disasters (e.g. floods, drought, fire, earthquake and tsunamis) that threatens people's lives. This advance information enables individuals, communities and organizations to prepare and act appropriately and in sufficient time to reduce the possibility of harm, loss or risk.

In India, Department of Telecommunications (DoT) and National Disaster Management Authority (NDMA) are envisaging to build a Common Alerting Protocol (CAP) compliant Geo-Intelligence Platform for Disaster Early Warning and Resource Management to address the measures for prevention of disaster, mitigation, preparedness and capacity building. CAP is a XML-based standard message format, especially designed for alerting the public as well as agencies responsible for mitigating the disaster. CAP increases warning effectiveness and simplifies task of activating a warning for responsible officials. It is based on Recommendation X.1303 laid down by the international Telecommunication Union (ITU) and has been implemented in several countries such as USA, Germany, Canada, Australia and Italy.

With this platform in place, a single alert can trigger a wide variety of public warning systems, increasing the likelihood that intended recipients receive the alert by one or more communication pathways. CAP provides the capability to include rich content, such as photographs, maps and video and more as well as



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the ability to geographically target alerts to a defined warning area. CAP warning message can be issued in multiple languages according to the region in which the warning is to be disseminated. It also supports audio text messages for visually impaired citizens.

The pilot trial for exchange of messages over CAP has been completed in four Indian States, namely Andhra Pradesh, Gujarat, Orissa and Uttarakhand with the state owned Telecom operator BSNL. Cooperation of private telecom operators has been sought for extension of CAP trial in their networks on pan India basis. The project is expected to result in early response to disaster situation in the country and prevent loss of lives.

Another important domain where ICT has facilitated the sustainability and reduced carbon footprints is Green Communications. To promote Green Telecommunications, Government of India has decided to adopt measures to green the telecommunication sector setting broad directions and goals to achieve the desired reduction in carbon emission through the use of Renewable Energy Technologies and energy efficient equipments. Based on TRAI Recommendation dated 12.04.2011 "*An approach towards Green Telecom*" (attached) instructions were issued to TSPs in 2012 to the licensees for implementation with immediate effect.

Renewable Energy Technology (RET) Committee, consisting of members from DoT, MNRE and other stakeholders was constituted to develop a roadmap to facilitate increased use of Renewable Energy Technologies for powering telecom networks and to suggest steps for promoting use of green technologies in telecom sector. The committee has inter-alia recommended for making a reference to TRAI regarding methodology for measuring carbon emission, calibration of DoT directives and approach for implementation. In response to this reference, TRAI has submitted its recommendation on "**Approach towards Sustainable Telecommunications**" on 23.10.2017 which are being examined by Policy Division of DOT for further necessary action.



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In addition to above, several other measures have been taken at policy level by the Government of India to promote green telecom. Department has Telecom has permitted Aadhaar based e-KYC (Know Your Customer) since 2017 for new as well as existing mobile connection which is an important initiative for Green Telecom.

At present nearly 98% of new customers are being on-boarded using e-KYC while more than 36% of existing customers also have switched over to e-KYC (as per data of 2.3.2018). In all, more than 63% of the total mobile customers (totaling 84.11 crores out of mobile customer base of 133.38 crores) in India have adopted this environment friendly measure as per summary below:

Total active subscriber base as on 31st January, 2018	Subscribers acquired thru Aadhaar based EKYC process out of (A)	Acquired through document based process out of (A)	Reverified through Aadhaar E-KYC as per instructions dated 23.03.2017 out of (C) as on 2.3.2018	Mobile Connections acquired/re-verified through with Aadhaar E-KYC process
A	B	C=A-B	D	E=B+D
133,38,11,305	55,54,27,337	78,42,10,637	28,57,12,460	84,11,39,797

This initiative of Department of Telecom complements the Government of India's *Digital India* vision under which the Government has placed special emphasis on proliferation of the Digital India program which has significant positive impact on Green India Initiative by way of promoting paperless working for availing government services, encouraging electronic payments and receipts by the users and facilitating m-Government using mobile telephones.



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These policy initiatives of the Government have resulted in significant growth in Data Consumption. The average monthly data usage per subscriber has seen a manifold growth to 1.6 GB in September 2017 from around 70MB three years ago. As per [TRAI](#) report, the average data usage per subscriber per month was at 70.10MB in June 2014 which grew to 1600MB in September 2017. This explosive growth in data consumption points towards the positive effect on telecom on green telecom initiatives as applications and services are moving towards digital payments and electronic delivery of services.

India is willing to share its low cost technologies, best practices and effective solutions with all developing nations through ITU and various Multilateral platforms through collaborative approach towards meeting SDGs envisaged in WSIS.



SSVAR - Swiss Society of Virtual, Augmented and Mixed Reality

**Mr. Jean-Philippe Mohamed Sangare
Founder and CEO**

1. Context

Interactive technologies such as Augmented (AR) and Virtual Reality (VR) are set to transform the ways in which people communicate, interact and share information on the internet and beyond. This will directly impact a larger number of worldwide industries ranging from the cultural and creative industries, manufacturing, robotic and healthcare to education, entertainment and media, enabling new business opportunities. The challenge is to forge a competitive and sustainable ecosystem of providers in interactive technologies.

2. Building networks: SSVAR

What is SSVAR - The Swiss society of virtual and augmented reality?

Two years ago I had the opportunity to try a virtual reality headset. I was so thrilled by this discovery that I wanted to meet other people who like me want to share their experience.

I started to meet amateurs, entrepreneurs and researchers. The more I met, the more I realized the need to bring them together so that they could exchange and work on their shared passion.

I was certain that these innovations brought with them the ability to change the way we learn, work and play.

It was then that I had the idea to create the SSVAR.

And thanks to the incredibly stimulating environment put in place by the Swiss Confederation to support Innovation, I was able to start and realize my project:



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"Building a community platform that aims to create a network of professionals and amateurs with a common interest in virtual, augmented and mixed reality technologies."

We currently have about 200 registered members with a team of about twenty people from diverse backgrounds: professionals of these technologies, researchers but also physicists, doctors, financiers and even an opera singer.

We are connected to other actors on the international scene as well as to international organizations. We have received support from Google, Microsoft, Samsung, from the Economic Office of Zurich and many others like HP.

From a purely economic point of view two figures:
In 2016, the market size worldwide was around \$ 5 billion.
In 2020 it would be around 162 billion dollars!

It is the financial value that augmented reality and virtual reality should represent, according to research firm IDC.

I want through the SSVAR to contribute to make known small businesses, startups who are struggling to find funding for their projects. That is why on April 20, 2017 in Zurich we created the first Virtual Reality Investment Forum.

Our modus operandi is to create thematic and targeted events. We are not interested in overly general festivals that have flourished around the world for two years and do not add much to understanding the issues.

What interests us is to meet professionals from all sectors of industry, doctors, teachers etc ... to make them discover the possibilities but also the limits of these technologies so that they see how to use them in their practice.

Virtual or augmented reality is not just 360 videos or gaming there are uses in all areas!

Medicine

Virtual reality has been used for years to treat victims of post-traumatic stress or phobias. But this is probably only the beginning of a revolution. Two years ago, Professor Ahmed Shafi, a British surgeon, filmed a 360-degree operation of colon cancer: thousands of medical students wearing



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VR helmets were able to analyze his actions very closely. The medical applications of VR or AR are very promising.

Education

After questioning teachers who have used virtual reality headsets as part of a pedagogical experiment on possible applications in their professional practice, the answers of course differ according to their teaching discipline.

In literary subjects, these teachers / students imagine a possible use to film oral presentations of students, or rehearsals theatrical, which could then be viewed with students to improve their performance.

On the subject of science, they mention possible applications in geometry in space to put students "in the heart of volumes" and manipulate them.

Beyond strictly disciplinary applications, these young teachers imagine using VR to organize virtual tours of places that are difficult to access for reasons of resources, time, security or remoteness.

3. Key applications

All the sectors are concerned and can have benefits from these technologies.

ARVR technologies will impact many fields of activity

Infotainment: VR games, augmented television, interactive cinema

Education: basic education (e.g. sciences, history, art), professional training, serious games

Healthcare: virtual training, augmented medicine, telemedicine, rehabilitation

Cultural Heritage: virtual and augmented travel, museums

Industry: open design and innovation, virtual prototyping, augmented factory, on-site maintenance with remote expertise

Building and urban : architecture, mediation, construction, assisted sales, maintenance

Transportation: design, assisted sales, maintenance, simulation, infotainment, logistics

Merchandising: virtual and augmented stores, communication and marketing

Human Resources: assessment and training of competencies

Social media: social presence, augmented experience

Defense & security: virtual telepresence e.g. for search & rescue operations



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1) Emerging Trends related to WSIS Action Lines identified during the meeting

- 1) The Coordination and Support Action for an "Interactive network and community building",
- 2) The Research and Innovation Action named "Future interaction"
Research and industrial capacities specifically in two domains:
 - a) Multi-user interactions
 - b) Higher quality experiences

SSVAR is willing to grow by connecting to other universities, associations or startups in Switzerland and all around the world so it could be able to share, best practices and effective solutions through ITU and various multilateral platforms through collaborative approach towards meeting SDGs envisaged in WSIS.



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Session Twelve: Gender mainstreaming

Webcast: <https://www.itu.int/net4/wsis/forum/2018/RP/Webcast/327#intro>



High level Track Facilitator: Ayanna T. Samuels, Aerospace Engineer & International Development Professional specializing in ICTs for Socio-Economic Development, Technology Policy and Gender-Equality. Consultant, She Leads It, Jamaica

High level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator ITU** – Ms. Doreen Bogdan-Martin, Strategic Planning and Membership Department
3. **United States of America** – Ms. Liesyl Franz, Senior Policy Advisor, Office of the Coordinator for Cyber Issues, U.S. Department of State
4. **Germany** - Dr. Uwe Petry, Head of the Economic Affairs Division, Permanent Representation of the Federal Republic of Germany to the UN in Geneva
5. **European Commission** – Ms. Maya Plentz Fagundes, Innovation Policy Advisor
6. **UN Women** - Ms. Hiba Qasas, Chief of Crisis Prevention, Preparedness and Response
7. **Italy** - Ms. Roberta Cocco, Deputy Mayor for Digital Transformation and Services to Citizens, Municipality of Milan
8. **Facebook**– Dr. Robert Pepper, Head of Global Connectivity Policy and Planning
9. **Health and Environment Program** – Dr. Madeleine Scherb, President
10. **She Loves Tech** – Ms. Virginia Tan, Founder and CEO



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1. Introduction

This session was about efforts being undertaken to secure Gender Equity in the ICT Sector and balanced digital inclusion across various organizations and countries. The remarks given were within the context that the gender digital divide is one of the largest gender divides we face in the world today.

2. Vision

Across the different organizations and countries represented, the shared vision was the eradication of gender inequity through the implementation of tangible initiatives which address present challenges in the realm of digital inclusion, affordability, accessibility and readiness.

3. Key Challenges

An unlevel playfield continues to exist as it concerns the reality of men and women men across the scope of the ICT sector. The panelists did an excellent job in articulating existing challenges which must be overcome if we seek to usher in true gender equity. Some of the challenges around which we must seek to find solutions are:

1. 184 million fewer women own a mobile phone compared to their male counterparts
2. Just 2% of disbursed venture funding in the US went to Women in 2017.
3. 98 million girls are out of school and need to be re-incorporated, but the timeframe for completion of same presently is too long with current approaches being utilized.
4. 1 out of 5 girls are married which robs them of the opportunity to realize their full educational and career potential.
5. 250 million fewer women using Internet than men
6. In Europe, only 17% of IT jobs are held by women

4. Fresh Priorities & Emerging Trends

Within the context of the present persistent gender-based inequities in the ICT Sector, the following is a sample of the fresh priorities and emerging trends which were shared:

1. The Girls in ICT Day movement is continuing to evolve and will take place in 166 countries in 2018!
2. Mindfulness of the need for gender diversity yields results. The IGF has been very concerned with gender diversity and as such, they have taken the proactive step of requiring that reports of IGF sessions contain information on the number of women present and whether gender was discussed. Female participation in the 2017 IGF consequently reached 43%, compared to 39.6% in 2016, and 33% in 2015.
3. Under the German G20 presidency, the #eSkills4Girls initiative was launched. #eSkills4Girls promotes education and employment for women and girls in an ever-increasingly digital world. The initiative received much support from all G20 member states.
4. Italy has established #STEMintheCity, a project which demonstrates how cities can champion issues such as equal opportunities alongside other policies



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across a range of areas that are of strategic importance to its citizenry, including digital transformation, employment, and education.

It will take place in April in Milan.

5. Opportunities

1. On March 8, International Women's Day, USAID formally launched their latest women's empowerment initiative, the WomenConnect Challenge. USAID's WomenConnect Challenge will identify and accelerate solutions that bridge the digital gender divide and empower women and girls to access and use digital technology to drive positive health, education, and livelihoods outcomes for themselves and their families.

2. The annual EQUALS in Tech Awards recognize that ICTs are a powerful tool for transforming the lives of women around the world, and that women play an important role in tech development.

Nominations are now open for these Tech Awards which represents an opportunity for greater visibility for exciting Women in Tech initiatives.

3. Through She Loves Tech, Asia has been presented with a strong opportunity for women to grow their knowledge in the ICT Sector and grasp capacity building opportunities by contending within ICT competitions.

4. In Africa, ICTs remain a potent tool for change in fighting issues from violence against women to the opening up of new careers and greater development opportunities for young girls. Leapfrogging opportunities are immense given that basic concerns such as illiteracy still runs rife, with over 50% of women in 12 Sub-Saharan African countries being illiterate which disenables them from meaningful engagement in the political arena.

6. Link with the WSIS Action Lines and Sustainable Development Goals

High costs of devices and internet service, lack of digital literacy, and prohibitive social norms continue to disproportionately impact women. This reality is completely orthogonal to the objectives of the WSIS Action Lines and SDGs and as such measures to remove these barriers must continue in earnest to secure digital inclusion for all. This will ensure the best breeding ground for full socio-economic development and complete self-actualization for all. Specific links to the WSIS Action Lines which consider the SDGS, are as follows:

- Italy's #STEMintheCity initiative and USAID's Gender and ICT Survey Toolkit (which addresses the challenge of poor disaggregated data on gender at the sub-national level), support WSIS Action Lines 1 & 5
- To address education gender disparities, UN Women has established a Second Chance Education Programme through virtual schools. This addresses WSIS Action Line 3 Germany's #eSkills4Girls addresses WSIS Action Line 4
- Africa Code Week, an initiative of the German software company SAP, took place in 35 African countries in 2017. It enabled 1.3 million youth,



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among them more than 40% girls to write their first lines of software code. This addresses WSIS Action Lines 6 & 7

- Asia's She Loves Tech ICT Competitions support WSIS Action Lines 8 & 9.
- In Rwanda, Ghana and Indonesia, Germany supports partners in updating the quality of technical vocational education and training. Additionally, the Argentinian G20 presidency is connecting to #eSkills4Girls, and has agreed to continue the work that has been done in the Digital Economy Task Force. These initiatives support WSIS Action Line 11.
- Facebook and the Economist's work on the Inclusive Internet Index strongly supports WSIS Action Line 14, which speaks to the all-important need for follow-up and evaluation.

7. Case Examples

Some of the exciting case studies shared are as follows:

1. Within the EU, making research grants and venture capital funding available for women is a significant priority and tangible steps are being made to level the playfield in this regard.
2. Facebook in collaboration with the Economist released the Inclusive Internet Index two weeks ago which speaks to key issues re: the availability, affordability and readiness of the Internet. A key fact shared is that of the 86 countries assessed, 80% have a gender gap in favor of men.
3. The EU Parliament voted last week for the inclusion of gender in trade agreements. The EU Commission was charged to support the inclusion of a specific gender chapter in all future EU trade agreements. This will help to close the gender gap in trade and firm productivity for Women Owned Businesses.

8. Road Ahead

In order to close the gender gap the road ahead must include the following initiatives:

1. Partnerships are needed between government, the UN, the Private Sector, and Civil Society around a common framework that would be predicated on tangible steps to redress existing inequities.
2. Each party in the above partnership should freely share the initiatives they are presently working on and cross-pollinate good practices.
3. Research ought to be continuous regarding access, affordability and readiness.
4. Countries that have seen significant increases in women digital inclusion have seen this result consequent to specific enabling initiatives being implemented. Proactive initiatives to address gender gaps can thus yield positive results!
5. If women are left behind we are all left behind, as such all stakeholders must ensure gender mainstreaming is infused within the governing policy of all fulcra of a functional and progressive society.



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United States of America

Ms. Liesyl Franz
Senior Policy Advisor
Office of the Coordinator for Cyber Issues
U.S. Department of State

It is a pleasure to be here as a high level representative to this 2018 World Summit on the Information Society (WSIS) Forum on “Leveraging ICTs to Build Information and Knowledge Societies for Achieving the Sustainable Goals”. Like so many of you, I am honored to be part of this annual platform for discussion and sharing of best practices in the implementation of WSIS outcomes among all stakeholders to build information and knowledge societies.

During the past quarter-century the world has made tremendous progress in the diffusion and update of telecommunications and information communication technology (ICT) services and in increasing access to broadband. This progress reflects the continued success of public-private and multistakeholder cooperation, market and regulatory reforms, technological innovation, and commitments on the part of diverse stakeholders.

One area where we believe more progress needs to be made is in bridging the digital gender divide. Access and usage of digital tools empowers women and girls by connecting them with essential services for health, safety, education, and economic growth opportunities. While the reach of digital technologies continues to rapidly expand, the gap between men and women accessing the Internet has widened over the last three years. A woman is 14 percent less likely than a man to own a phone in low and middle-income countries. Globally, this equates to a mobile phone gender gap of roughly 200 million women. Moreover, high costs of devices and internet service, lack of digital literacy, and prohibitive social norms disproportionately impact women.

To address this, we’ve engaged in a series of programs, projects and policies reflecting the United States’ commitment to promote device ownership, digital literacy, and policies promoting ICT use by women and girls all over the world.

- On March 8, International Women's Day, the U.S. Agency for International Development (USAID) formally launched their latest women’s empowerment initiative, the WomenConnect Challenge. USAID’s WomenConnect Challenge will identify and accelerate solutions that bridge the digital gender divide and empower women and girls



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to access and use digital technology to drive positive health, education, and livelihoods outcomes for themselves and their families. The funding window is now open and USAID is accepting applications through May 4. I encourage you to visit usaid.gov/wcc to learn more and get involved.

- USAID has partnered with AusAID (Australia’s government aid agency), GSM Association (GSMA), and Visa under the GSMA Connected Women Program to enable 15 million underserved women to own and effectively use mobile phones in order to increase their access to vital information, networks, and services.
- Women and the Web was a three-year training program in Kenya and Nigeria that grew out of the 2014 African First Ladies Summit. A partnership between USAID, NetHope, World Vision, and Intel, the program trained over 100,000 women in digital literacy, computer, and Internet skills.
- USAID’s Gender and ICT Survey Toolkit addresses the challenge of poor disaggregated data on gender at the sub-national level. The Toolkit was developed to facilitate the collection of gender-disaggregated information by providing draft survey questions and research design around women’s access and use of ICTs.

I would also like to highlight the work that that Internet Governance Forum has been doing on gender issues. The IGF and its Multistakeholder Advisor Group, or MAG, have consistently been supportive of gender equality and the empowerment of women. The membership of the MAG itself and the workshops at the IGF have always had a gender diversity requirement, along with diversity requirements for stakeholder group, geography, and perspective. And, I note that female participation in the 2017 IGF here in Geneva in December reached 43%, compared to 39.6% in 2016, and 33% in 2015.

An addition to the regular statistics that the IGF provides on the various aspects of IGF participation, the IGF has taken the proactive steps of self-monitoring its gender performance by requiring that reports of IGF session contain information on the number of women in the session and whether or not gender was discussed. The information used by the IGF’s Dynamic Coalition on Gender and Internet Governance to compile a “gender report card” for the forum.

Gender was a popular topic for the 2017 IGF. There was a high number of gender-related session submissions for the 2017 program, resulting in about 20% of the overall program, and the MAG supported holding a main session on gender for the time at an IGF. In the lead-up to the 2017 IGF, half of all workshop proposers were women, and in both 2016 and 2017, gender was one of the standalone sub-themes. So, we have been please with that progress, and we look forward to continuing the trend at the IGF.



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As many of you know, the IGF also includes intersessional work to which the MAG and the global community contribute on an on-going basis in addition to the annual IGF conference itself. One of the “Best Practice Forums,” or BPFs is on gender and access, and it has worked on a continuous basis for three annual cycles through 2017. Through the BPF, the IGF partners with UN Women and the ITU through the EQUALS partnership; contributes to other IGF intersessional work, including the Connecting and Enabling the Next Billion initiative and the national and regional IGFs; and engages with the ITU Broadband Working Group on Gender and Access.

If we’re to achieve the full benefits of a global information society, women must be fully connected. We look forward to discussions with all of you this week on ways to address the important issue of how connectivity can increasingly reach all of the world’s citizens.



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Germany

Dr. Uwe Petry

Head of the Economic Affairs Division

Permanent Representation of the Federal Republic of Germany to the UN in Geneva

What strategies and policies have been developed to promote women's access to and participation in the digital revolution?

- Promoting the participation of women and girls in information and communication technology is a key issue for the future, in particular in the context of the Agenda 2030 for Sustainable Development.
- The web helps to bring out the voice of women and girls worldwide.
- The digital revolution offers new channels to promote equal access to rights, education and economic opportunity.
- Female talent remains one of the most under-utilized business resources. One in three tech companies regards women's workforce participation as an opportunity for expanding the talent pool.
- Women who are economically empowered are proving to be major players in influencing development. They usually invest gains in areas that further enhance development – from education to child healthcare and to the digital economy.
- As the digital economy is progressing rapidly, particularly in our African partner countries, the time to act is now.
- This is why, under the German G20 presidency, we have launched the #eSkills4Girls initiative. #eSkills4Girls promotes education and employment for women and girls in an ever increasing digital world. We are happy that the initiative received so much support from all G20 member states.
- At the G20 summit in Hamburg, the heads of state and government endorsed a statement on #eSkills4Girls, which was a great success.



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- In this statement, the G20 committed to invest more in the participation of women and girls in the digital economy in a number of action areas. They agreed, amongst other things, to encourage multi-stakeholder partnerships among the public and private sector, international organizations, academia and civil society.

What actions have you made to promote girls' and women's digital skills development?

- Germany supports the development of software coding skills among young people. The Africa Code Week, an initiative by the German software company SAP, took place in 35 African countries in 2017. It enabled 1.3 million youth, among them more than 40% women and girls to write their first lines of software code.
- Last year, we organized a global “hackathon” on practical solutions to overcome the gender digital divide and established a network of coding initiatives for girls in Africa.
- We also implement projects that aim at encouraging more women to pursue a career in the male dominated tech industry. In Rwanda, Ghana and Indonesia for example, Germany supports partners in updating the quality of technical vocational education and training. These are projects which aim at involving stakeholders from the private sector in order to allow practice-oriented training.
- As regards our eSkills4Girls initiative we set up an online platform –eSkills4Girls.org - to collect and disseminate information, policy recommendations and good practices on supporting women and girls in the digital economy.
- The platform includes a world map that points to more than 600 existing initiatives in the field from a variety of stakeholders and flagship projects of G20 member countries.
- But in order to make a contribution to closing the gender digital divide. The eSkills4 Girls initiative needs continued efforts by different stakeholders, including governments, international organisation, the private sector, academia and civil society. Therefore, we are happy that:
- The Argentinian G20 presidency is connecting to #eSkills4Girls, and has agreed to continue the work that has been done in the Digital Economy Task Force.



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- With EQUALS, the Global Partnership for Gender Equality in the Digital Age, implemented by ITU and UN Women, we have found many stakeholders who are also working for the goal of closing the gender digital divide. Together with UNESCO and other partners we are working on the so-called the skills track which focuses on promoting digital skills training at school, university and on the vocational level.
- I would like to encourage you to have a look at the EQUALS partnership and consider joining us in this important endeavour.



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UN Women

Ms. Hiba Qasas Chief of Crisis Prevention, Preparedness and Response

Excellencies, Esteemed Guests, Ladies and Gentlemen,
Thank you for the opportunity to address this panel. New Technology in the 21st century has the potential to reshape the future and achieve gender equality. **We at UN Women recognize that technology and innovation have the capacity to promote inclusive development and reach those hardest to reach, with transformative effects.**

At the same time, the largest beneficiaries of the digital revolution tend to be the well-educated, middle to high income, technologically literate- urban populations. The 3.9 billion people who are not connected tend to be poorer, rural and are more often girls. Once we add the gender dimension, if we do not have a strategy to change this trend, this inequality and existing gender digital divide, which has increased, risks contributing to greater marginalization, we risk women and girls being left behind.

Before we speak on engaging the 21st century labour market, the gender digital divide means that there are 250 million less women online, one in seven girls under 15 years old do not have access. Today 98 million girls are out of school, at current rates, it will take us 95 years to achieve parity in lower secondary for the poorest 20%. If you are a man and an ICT graduate you are five times more likely to find a job, in developing countries you are eight time more likely. Gender stereotypes persist regarding men as better in ICT. We also know that women are the largest pool of untapped labour, there are 655 million less women are economically active.

As we move to a 21st century labour market with greater automation, technical skills are needed to manage transition to a labour market that works for everyone: Ensuring that women and girls have the skills they need to find and retain jobs, not only today but in the future. And addressing structural and societal gender barriers and supporting behavior change.

In UN Women we believe that we need to work on both the supply and the demand side. Working with industry leaders such as yourselves we are developing markets that are responsive to gender innovation, being mindful of these barriers and dynamics we co-founded **EQUALS**, a network of committed businesses, governments, NGOs, and media to devise solutions and address the digital divide.

Promoting women as innovators and entrepreneurs, creating role models and supporting them in working towards building a cadre of girls in STEM, girls who see a future in this sector. Investing in technology



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driven solutions that meet the needs of women and girls toward resilient societies and support targeted interventions with the right technology at the right level. For example, in Rwanda with the WFP we buy from women to foster participation across value chains through digital and mobile enabled platforms to connect women farmers to the market.

We need to raise awareness and secure political commitment to harness the capacity and knowledge of partners to support real action through investment. In Humanitarian Action and Crisis Response, technology and innovation are powerful vehicles to address compound vulnerabilities and exclusion. In crises we are seeing these vulnerabilities compounded by changing family structures, 30 to 40% of households Yemen and Syria are headed by women. These women do not have the skills, training or experience to access the market, they remain excluded in many ways and are left unable to provide for their families. Girls are twice as likely as boys to dropout of schooling. While one in five girls experience sexual or gender based violence (SGBV), especially likely in the case of child marriages. Restrictions on women and girls' freedom of movement can result in further exploitation and worse subjugation, while access to our programming can be lifesaving and have multiplier effects for women and their families. Women are disproportionately affected and disadvantaged; in natural disasters, women are 14 times more likely to be affected or die.

The use of technology in designing, implementing and scaling education programming such as the UN Women's Second Chance Education (SCE), Alternative Livelihoods, or online learning provides opportunities and empowerment through access to basic literacy, numeracy, and both online and off-line learning linked to improving livelihoods. Women can be protected through empowerment, we have already reached 259,000 displaced people and will be rolling out SCE in 264 empowerment hubs around the world.

Engaging with the potential of block chain technology we are considering the possibility of sending and receiving digital assets and providing women with an economic identity; 42% of women, especially among displaced women, are unbanked. It is even harder to access in cases such as Afghanistan or Syria, where one in eight women do not have identification. Initiatives are beginning with UNOICT digital blue helmets and Innovation Norway, for example a Hackathon to live test a pilot solution in a simulation lab. This is an engine to advance Gender Equality and Women's Empowerment (GEWE) by increasing women's access to education and socio-economic opportunities. Raising awareness to support real action in addressing harmful gender-stereotypes, helping with limited market awareness, increasing political commitments, increasing women's presence and representation in ICT, supporting women's innovation, and augmenting data access and usage in low and middle-income countries.

I would like to thank you all for your continued dedication to inclusive development, leaving no one behind. Events such as this provide the platform to affirm our commitments, capitalize on our collaboration, create stronger ties across sectors to close the digital divide and achieve planet 50/50 by 2030.



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Italy

Ms. Roberta Cocco
Deputy Mayor for Digital Transformation and Services to Citizens
Municipality of Milan

Municipality of Milan is deeply committed to promote STEM studies among female students in Milan, from preschool on up to the highest levels of post-graduate education, means inviting girls and young women to undertake studies that are better suited to the job market and to the opportunities being provided by new technology, but, above all, it means believing in an education system able to stimulate the opening of horizons and the enrichment of the tools of life for every individual, as well as develop a mindset that can help girls and young women to face the challenges of the future in their personal and professional lives in a spirit of critical analysis. The study of technical and scientific fields helps young women to grow and to be aware of their abilities in a manner that is in touch with the times in which we are living, regardless of the career path they choose to embark upon. And Milan will continue to be there with them, supporting them and promoting their talents, from young girls in preschool on up to young women engaged in university research. Out of these foundations came #STEMintheCity, a huge project that seeks to become a best practice showing how city government can face issues such as equal opportunities alongside other policy generally across a range of areas that are of strategic importance to the city and to its citizenry, including digital transformation, employment, and education. It will take place in April in Milan across the entire month, with a STEM Marathon of events driven by Municipality on April 10th – 13th 2018

Prestigious public and private organizations have believed in the value of this project from the start, supporting #STEMintheCity throughout its development and giving even greater strength to its messages. The ambitious goals of the program—related to the promotion of STEM, the consolidation of a proper gender culture, and the overcoming of stereotypes that hinder women in their careers—is strongly connected to the mission of the International Telecommunication Union (ITU) as well as of the international campaigns for sustainability, inclusion and human rights 17 Sustainable Development Goals and Together. The connection with ITU is of fundamental importance in framing the project within a broader European and global context and including it within the series of international actions to provide new career opportunities for young people in information and communications technology (ICT).



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The calendar of events will be divided into two different phases, which lent greater continuity to the project and helped to establish the initiative at the highest level. Schools, associations and organizations contributed to conveying the values of #STEMintheCity in the various segments of society that give the city of Milan its vibrancy. Courses, workshops, tech trainings other moments of reflection, and prominent public events were a feature of the initiative throughout the month of April.

More than 100 events are going to take place, reaching up to 3.000 girls Collaboration between the public and private sectors is a strategically important aspect of the project. In the same way, the partnership between government, volunteer associations, and other public and private-sector organizations is another important driver that made it possible to bring out the great many resources of the area and to promote the most significant experiences. Milan wants to become the first Italian city to launch STEM scholarships. With this edition, the Milan City Council will be calling upon the city's universities where STEM programs are available in order to take on a major challenge, that of providing scholarships to female students to give the real support in achieving their professional STEM aspirations.

The next goal will then be to make Milan an increasingly virtuous city, one in which the gender gap continues to close and STEM studies become an integral part of the knowledge and cultural wealth of every individual.



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Health and Environment Program

Dr. Madeleine Scherb
President

Présenté au WSIS Forum 2018 dans le débat de Haut niveau par Dr Madeleine Scherb, Présidente de Health and Environment Program

L'Afrique taux d'alphabétisation des femmes ne dépasse pas les 50% dans plus de 12 pays d'Afrique subsaharienne. Il reste même en

dessous des 20% dans certains cas. Les femmes sont freinées par des obstacles socio-culturels dans l'obtention de fonctions de leadership et de gestion. Le fossé numérique dû à la société traditionnelle africaine où la femme aurait un rôle tranché et défini à savoir celle de domestique et où elles n'ont pas le droit à la propriété et à la succession ne cesse de se creuser entre les sexes. Que représentent donc les TIC pour les femmes Africaines ?

Les TIC pour faciliter leur autonomisation en offrant un service de téléphonie mobile au village, en utilisant Internet ou en profitant des nouveaux débouchés de carrière et d'emploi.

Les TIC un outil de changement dans le combat contre la violence faite aux femmes et de l'utilité des TIC dans la redéfinition des espaces public et privé.

La révolution apportée par les technologies de l'information et de la communication (TIC) a d'importantes répercussions sur les femmes africaines, mais quels avantages tangibles a-t-elle procurés lorsque les problèmes d'inclusion et d'exclusion sociale sont généralisés ? La fracture numérique, quels enjeux et quelles perspectives?

Perspectives: Définir des nouveaux cadres d'apprentissage en rapport avec l'intégration sociale; diversifier les modes d'enseignement; mettre en oeuvre l'application des mesures sociales accompagnant l'accès aux infrastructures par une inclusion de la femme partant des compétences de base telles que l'alphabétisation....

Pour résorber l'obsolescence des TIC, mettre en place des formations pour la grande majorité de ces africaines numériquement exclues et à statut socioéconomique fragile.

En conclusion, Instaurer un organe proactif de suivi par la formation continue ou académique en y associant les organisations non gouvernementales; créer des espaces publics numériques. Autonomiser les femmes équivaut à autonomiser les sociétés dans leur ensemble. C'est l'un des fondements les plus solides à une paix et à un développement durables.

Session Thirteen: Digital Economy and Trade

Webcast: <https://www.itu.int/net4/wsis/forum/2018/RP/Webcast/328#intro>



High level Track Facilitator: Natalia Vicente, Head of Public Affairs, ESOA, Belgium

High level Speakers:

1. **Chairman of WSIS Forum**
2. **WSIS Action Line Facilitator ITU** – Mr. Torbjörn Fredriksson, Chief, ICT Policy Section, Division on Technology and Logistics, UNCTAD.
3. **Singapore**– Mr. Leong Keng Thai, Deputy Chief Executive, Infocomm Media Development Authority
4. **VEON**- Mr. Tomas Lamanauskas, Group Director Public Policy
5. **ASIET (Asociación Interamericana de Empresas de Telecomunicación)**– Mr. Pablo Bello, Secretary General
6. **Pathfinder4 (Caribbean)**– Mr. Matthew McLarty, Co-Founder — CEO
7. **Association for Proper Internet Governance**– Mr. Richard Hill, President
8. **Kiwicampus**– Mr. Sasha Iatsenia, Head of Product
9. **Intervale** - Dr. Yury Grin, Deputy Director General
10. **African Civil Society on the Information Society** - Dr. Cisse Kane, President



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Introduction

This panel had a balanced representation of stakeholders who spoke about the different challenges and opportunities that regions are facing for the development of the Digital Economy as related to bridging Digital Divides as well as the importance of data transfer, management and use.

The panel shared different figures that all highlighted that Digital Divides are still very much a reality even if there have been improvements. In the least developed countries, still only 1 out of 6 citizens use the Internet and only 1-2% use e-commerce, while in developed countries e-commerce is used by between a 60-80% of the population. Important gender inequalities also exist in the use of digital technology with 25-30% fewer women using them compared to men. Meaningful use of data is very low in different regions and different economic barriers also prevent stimulation of the economy.

In order to overcome the various challenges, the panel suggested focusing on different priorities such as building robust and resilient infrastructure, building a secure and trustworthy ecosystem for data transfer and enhancing and supporting true collaboration between different stakeholders.

In addition, some panelists emphasized the importance of regulators and countries in developing policies that create enabling environments and promote public private investment. Data sharing & use was identified as one of the value markets that needs greatest attention and could have an important impact in the future.

Security and ease of use were also noted as key for the development of a Digital Economy, noting the importance of understanding and taking into regional differences and an inclusive approach.

There was consensus that UNCTAD together with the ITC and the EU will have a key role to play as facilitators of Action line 7. The discussion was directly relevant to Action line 7 (E-business) and Action line 5 (Building confidence and Security in the Use of ICTs). However, Action line 2 (Information and communication infrastructure) and Action line 6 also have great relevance to the ability to achieve specifically SDG 8 which promotes inclusive and sustainable economic growth, employment and decent work for all, SDG 9 on building resilient infrastructure, promoting sustainable industrialization and fostering innovation, SDG 10 on reducing inequalities within countries and SDG 1 on Ending poverty.

Different initiatives that help the digital economy in world regions were mentioned. They include:

- **eTrade for all** is a common online platform providing information across policy areas to support developing countries more effectively and efficiently
- **SMEs go digital** from Singapore helps SMEs adopt technology and transform the way they do business
- The **E-commerce conference** in Geneva was mentioned because it will address how ecommerce will transform society.



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- The **open data initiative** enables different actors to benefit from data-sharing
- The ITU Special group on Digital Financial services and Group on Digital Currency are also very useful.

All panelists agreed that even if there are challenges ahead, collaboration between stakeholders and communication and sharing of best practices will contribute to the benefit of all citizens and the achievement of the SDGs.



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Singapore

Mr. Leong Keng Thai
Deputy Chief Executive
Infocomm Media Development Authority

Mr. Chairman His Excellency Eng. Majed Sultan Al Mesmar

Mr. Secretary-General Mr. Zhao Houlin

Honourable Ministers, Excellencies,

Ladies and Gentlemen,

On behalf of Singapore, I would like to first express our utmost appreciation to the International Telecommunication Union (ITU), United Nations Educational, Scientific and Cultural Organisation (UNESCO), United Nations Development Programme (UNDP), United Nations Conference on Trade and Development (UNCTAD) and the various United Nations organisations for the relentless efforts in bringing together government officials, experts, civil society leaders, academics, business leaders and international organisations for the World Summit on Information Society (WSIS) Forum 2018. In Singapore's view, the WSIS Forum has without doubt continued to be the key global multi-stakeholder platform in advancing sustainable development through the use of Information and Communication Technology (ICT).

2 The world is experiencing a new era of digitalisation, impacting the way we work and live. And in recent years, the ubiquity of digital technologies has also led to the development of the Digital Economy which has attracted the attention of policymakers all around the world. This development is not surprising given the increasing adoption of sophisticated digital technologies that has empowered both businesses and individuals. Recognising this, it is Singapore's belief that governments must work even more closely with all stakeholders to co-create the future and improve the quality of life of our citizens.

3 I would like to take this opportunity to share Singapore's view on how governments can help facilitate the development and success of the Digital Economy. In our view, there are three important areas which governments should focus on – a robust and resilient ICT infrastructure serving as the foundation for digital interactions and transactions to take place; putting in place enabling policies and develop a strong workforce with deep tech capabilities; and lastly, building an environment of trust where data flows freely between borders and stakeholders have the confidence that the data would be protected and used responsibly. I will elaborate each of these areas below.



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Robust and Resilient ICT Infrastructure

4 To support the growth of the Digital Economy, there is a need to establish fast and pervasive connectivity through building a reliable and resilient digital infrastructure that spurs innovation, supports positive disruptions and enables data flows. Governments need to adopt open and progressive regulatory frameworks that would continue to facilitate investment in digital infrastructure such as data exchange platforms, next generation broadband networks and new wireless technology such as 5G. In Singapore, the Infocomm Media Development Authority (**IMDA**) has begun seeking industry feedback to help build the spectrum roadmap and regulatory frameworks for 5G that would best address market needs. IMDA will also facilitate 5G technology and service trials by the industry till end-2019 after the release of the first phase of 5G standards, which is expected to be in mid-2018.

5 There is also the growing importance of submarine cable connectivity to deliver high-speed, resilient international connectivity and facilitate cross-border data flows. This requires strong partnerships and collaborations across different stakeholders to open up new markets, develop new cable routes and protect existing ones. For example, the Association of Southeast Asian Nations (**ASEAN**) has embarked on several initiatives to strengthen the resilience of submarine cable networks and to facilitate faster service restoration time.

6 While infrastructure is widely recognised as the backbone of the digital economy, data is acknowledged as the unlimited resource that fuels its growth. Driven by the wide adoption of digital technologies such as cloud computing and data analytics, the digitalisation of trade and the resultant increase in data flows has resulted in the evolution of global trade from the traditional movement of goods and services. In this changing landscape, countries would need to re-imagine and re-shape themselves as a “platform” to harness the economic benefits of digital trade.

7 In Southeast Asia where the region continues to be the fastest-growing Internet economy with the potential to exceed US\$200 billion by 2025⁷, Singapore is working with the ASEAN Member States to streamline regional trading rules governing e-commerce to enhance digital connectivity and to support seamless economic activities. It is hoped that this will provide greater internationalisation opportunities such as easier access to new markets and overseas customers for enterprises of all scales and sizes.

⁷ According to the Google-Temasek e-Conomy SEA Spotlight 2017 report released in December 2017.



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Sectoral Digital Transformation and Manpower Development

8 To help traditional sectors digitalise, governments have a key role to play in coordinating economy-wide transformation and addressing cross-sectoral issues. To this end, Singapore has developed the **Industry Transformation Maps (ITMs)** for 23 sectors, detailing the plans to address digital issues within each sector and enhance partnerships among various stakeholders for our future economy. Keeping in mind that talent is a key asset in resource-scarce Singapore, we have also detailed the manpower and skills development strategies for ICT as part of the ITM for the Infocomm Media or ICM sector, with the aim to develop talent with tech knowledge so as to power the digital transformation across different sectors. More importantly, we want to ensure that all Singaporeans, regardless of age, genders and income, are equipped with the relevant skills to seize job opportunities in the digital age.

9 An example of this effort is the **TechSkills Accelerator (TeSA)** initiative developed by IMDA to support individuals and companies to develop a pool of skilled ICT talents. Till date, TeSA has empowered over 27,000 ICT professionals to up-skill and/or re-skill themselves. Further, IMDA launched the **Skills Framework for ICT** which provides career information on the ICT sector, including career pathways, job roles, skills, competencies and training programmes. The Framework charts out the core competencies for ICT professionals across different sectors and identifies about 80 existing and emerging skills and competencies. This means that employers or individuals in non-ICT sectors, such as finance, retail and logistics, can also use the Framework to identify and address skills gaps and training needs. With this repository of information, we hope that individuals, employers and training providers are enabled to prepare for the digital future through career planning, human capital development and training.

10 Besides equipping our people with the right skills, another key focus area for Singapore is to help Small and Middle Enterprises (**SMEs**) digitise. Sectoral digitalisation would not be successful if SMEs are averse to digital technologies and innovation or suffer from the lack of awareness and expertise to apply digital solutions to grow their businesses. In Singapore, we are making digitalisation simple for SMEs through the **SMEs Go Digital programme**⁸, which was launched last year. The progress so far has been encouraging, with more than 650 SMEs benefited from the programme. Under the programme, IMDA develops sector-specific **Industry Digital Plans for SMEs (IDPs)** to provide step-by-step guidance to SMEs

⁸ There are four key thrusts under the SMEs Go Digital programme – (i) Industry Digital Guide (for SMEs to understand where they are on the digitalisation roadmap); (ii) Pre-approved digital tech solutions and/or digital advisory and consultancy (for SMEs to gain access to digital technology and advisory services); (iii) Projects to uplift whole sectors (for SMEs to enjoy accelerated growth through partnering large companies and industry sectors); and (iv) Skills Framework (for SMEs to raise digital skills of their employees).



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on the use of digital technology at each stage of their growth. We have launched the Retail and Logistics IDPs last November and aim to develop more this year. SMEs can refer to the IDPs to easily deploy digital technology through IMDA pre-approved digital solutions and industry-led pilot projects with the potential to uplift the whole sector. This will help SMEs to boost their productivity and build important digital capabilities such as in cybersecurity and data analytics. SMEs can also receive advice on the digital technology use at **SMEs Centres** and more specialised consultancy at the **SME Digital Tech Hub**.

Building Trust in Data Flows

11 As the production and consumption of digital products and services grow, businesses will want to leverage on technology and digitalisation to expand into new markets, deliver new products and services to consumers. Key to the beauty, and the benefit of digital platforms is the borderless nature of such technological developments. Imagine the amount of data generated, the data flows and potential valuable insights the data can provide to businesses as a result of such inter-connectivity. Understandably, increasing digitalisation is not without challenges – such as concerns over data security and the protection of personal data. On a similar note, the digital economy thrives better if data were able to flow freely with minimal restrictions, but it must be coupled with the assurance that safeguards are in place to protect and secure the information. There is a need to put in place necessary frameworks to strengthen digital data flow and management capabilities of governments and businesses around the world, for instance adopting high standards of data protection and security. These frameworks should also strongly advocate and support innovation and consumer protection.

12 We are also fostering such positive beliefs on data governance closer to the region, this year, ASEAN has started the development of a regional **ASEAN Framework on Digital Data Governance** to further facilitate regional economic integration and regulatory compliance in support of the Digital Economy. The Framework will play a critical role in providing business certainty in digital adoption and innovation, as well as build good data protection standards when the data moves across borders or operates in a digitalised environment within ASEAN.

13 Beyond ASEAN, Singapore also participates actively in international foras to enable digital flows such as the Asia-Pacific Economic Cooperation (**APEC**) Cross Border Privacy Rules (**CBPR**) System which was developed to support cross-border flows of personal data. The APEC CBPR is a uniform system for businesses to transfer data across participating Economies, instead of having to comply with multiple systems of domestic laws when operating in multiple APEC Economies. CBPR also provides an assurance that certified businesses adhere to internationally-approved data protection standards and requirements.



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14 In Singapore, the Personal Data Protection Commission (**PDPC**) has started to explore future-ready enhancements to the Personal Data Protection Act (**PDPA**) which was enacted in 2012 to allow for a more progressive approach to collecting, using and disclosing personal data in the Digital Economy, while providing greater transparency when data breaches occur through online activities and transactions. One such effort is the **Guide to Data Sharing** launched by PDPC to provide clarity on how organisations can share personal data for collaborations and provide enhanced services to their customers. The Guide also includes the introduction of a regulatory sandbox that allows organisations to apply for data sharing arrangements that would be exempted from one or more obligations under the PDPA on a case-by-case basis. The regulatory sandbox allows companies with new ideas to go to market and for the Government to better understand industry needs and to fine-tune proposed amendments to the PDPA.

15 Another important aspect is that of cybersecurity. This requires a collective effort among all the various stakeholders to ensure that the global ICT infrastructure and network remain resilient against cyber-attacks which undermine trust in the Digital Economy. In this regard, Singapore has been participating actively in the global dialogue on cybersecurity and contributing to the building of trust in the ICT environment. Singapore has also developed an **Infocomm Security Masterplan** and established a dedicated Cyber Security Agency (**CSA**) to address the challenges of cybersecurity. In February 2018, Singapore passed the **Cyber Security Bill** which authorises the CSA to prevent and respond quickly to cybersecurity threats and incidents, and sets out the designation of Critical Information Infrastructures (**CIIs**), duties of CII owners and requirements of the licensing regime. The measures and requirements under the Bill are non-intrusive with respect to personal privacy, and are mainly technical, operational or procedural in nature. This “light-touch” approach is to strike a good balance between industry needs and cybersecurity in the Digital Economy.

Conclusion

16 The global ICT community needs to form new partnerships and develop innovative approaches so as to harness the full potential of the Digital Economy as well as to address challenges that digitalisation may bring. Singapore hopes that by sharing our experience, we can collectively co-create a common digital future and jointly contribute to the WSIS Action Lines and achievement of all 17 Sustainable Development Goals (**SDGs**).



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VEON

Mr. Tomas Lamanuskas
Group Director Public Policy

A DIGITAL WORLD FOR EVERYONE – VALUES-DRIVEN DIGITAL INCLUSION

The digital economy brings great benefits for better access to new services, the creation of new jobs and improved efficiencies for both businesses and governments. Research shows that the average return on investments in the digital economy is almost seven times that of non-digital investments⁹. To reap these benefits, appropriate policies and regulatory frameworks should be implemented that address the new dynamics and facilitate opportunities of a digital economy. These

efforts in the digital economy will only pay off however, when economic fundamentals are addressed, and a sustainable economic model is in place, particularly in the markets of tomorrow.

A sustainable economic model requires a future oriented environment with predictable and consistent regulatory conditions across jurisdictions and industrial sectors as these are key risk factors in long-term investment decisions. A healthy investment climate should be pursued, underpinned by clear taxation regimes. In some cases, corporate income tax rates are over 55 percent of revenues, and sector-specific taxes aimed specifically at the digital economy can amount to over 50 percent of the total tax burden, which is not fully aligned with the objective of promoting socio-economic growth through increased connectivity. Moreover, foreign direct investment restrictions should be lifted to fulfill the \$600 billion¹⁰ annual funding gap in communications infrastructure investments. The policy and regulatory environment should be neutral and not disadvantage any specific players – be it by design or by actual implementation – so that everyone can find the best ways to innovate, satisfy consumer needs and create value.

Building on these fundamentals, digital policies and regulatory frameworks should be developed. Data is a major driver of digital ecosystems, and global data flows now contribute almost as much to global GDP as trade in goods¹¹. National and regional data protection frameworks are often outdated, incompatible or inexistent however, or are overly stringent with data localization requirements in place, increasing costs

⁹ Oxford Economics: Digital Spillover – measuring the true impact of the digital economy, 2017

¹⁰ OECD, 2016

¹¹ McKinsey: Digital Globalization – the new era of global flows, 2016



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of digital services for SMEs by 30-60 percent¹². Policymakers should develop intelligent data protection frameworks that recognize the global nature of data and its economic significance. Restrictions of data use and management should be adequate with regard to the sensitivity of data collected and processed. Attempts to apply “personal data” concepts to legal persons as well as in such new areas as Internet of Things and Big Data risk unduly and prematurely limit service and technology innovation.

Digital ecosystems can only grow when people can transact online, but many remain excluded from formal financial services. Already within the twelve markets in which VEON operates over 400 million people remain unbanked. To expand account ownership and use, licensing regimes should facilitate the evolution of the financial services industry, driven by new technologies and non-bank actors entering the market; recognize that not all (digital) financial services carry the same risk profile as core banking activities; and ensure that all relevant authorities are involved and collaborate, including telecom regulators.

The discussion on relevant online content and internet use needs to move away from the idea that providers will fill the internet and subscribers are passive users that will simply consume. Instead, users need to be considered as active participants. Corporate and government initiatives that promote softer skills such as entrepreneurship are therefore key, and platforms that enable the development of local ecosystems should be encouraged to ensure sustainable internet adoption and future growth. These efforts of development should be inclusive, with gender equality being a priority as the gap in internet use between men and women is almost 12% worldwide.

It is not only governments that are responsible to shape a better digital future for all. We recognize that we as a business have our duties as well. Inclusive growth requires responsible business, driven by values. Long term gains, driven by consistent integrity and truthfulness trump short term benefits. Collaboration is another key element in creating sustainable growth. By developing a shared vision in collaboration with partners and stakeholders, building on each other’s strengths and recognizing and respecting each other’s limitations, we can work from our respective positions on a sustainable, resilient and prosperous digital future.

¹² UNCTAD, 2016



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ASIET (Asociación Interamericana de Empresas de Telecomunicación)

Mr. Pablo Bello Secretary General

Desde la Asociación Interamericana de Empresas de Telecomunicaciones agradecemos a la UIT la oportunidad de poder compartir nuestra visión sobre este importante asunto.

El desarrollo de la Economía Digital en América Latina presenta una serie de requerimientos que condicionan las iniciativas a desarrollar. Los cimientos se basan en la necesaria existencia de una infraestructura digital de clase mundial y en el cierre de la Brecha Digital que aún existe en la región, donde la mitad de los ciudadanos aún no usa internet. Por tanto, en aquellos países con un menor grado de desarrollo el primer cometido debe ser facilitar el acceso de los ciudadanos que no están conectados, y el despliegue de la infraestructura que servirá como base para el posterior avance de nuevas aplicaciones y servicios. Cerrar la Brecha Digital y tener una infraestructura de telecomunicaciones acorde con las necesidades presentes y futuras son condiciones necesarias, pero no suficientes para el desarrollo de la economía digital regional. Además, debemos favorecer el uso de esa infraestructura para la transformación productiva.

En ASIET, como representantes de los operadores - públicos y privados - de telecomunicaciones de América Latina, creemos que disponer de un entorno adecuado es esencial para el objetivo de cerrar definitivamente la Brecha Digital, y para permitir a la vez un desarrollo efectivo de la Economía Digital que nos lleve a alcanzar los beneficios económicos y sociales de la Sociedad de la Información; y, consecuentemente para el logro de los Objetivos de Desarrollo Sostenible (ODS).

A nivel global, a finales de 2016, se contabilizaban 3.200 millones de personas que utilizaban Internet, lo que representa aproximadamente el 47% de la población mundial. El acceso a Internet es un catalizador del bienestar económico y social, de ahí la necesidad de conectar el restante 53% de la población y así aprovechar todo el potencial disruptivo y transformador de Internet.

Para lograr lo planteado resulta fundamental incentivar la innovación, la construcción y desarrollo de las Tecnologías de la Información y la Comunicación (TIC), e impulsar adecuadamente el despliegue de la infraestructuras necesaria. Esto requiere actualizar con urgencia y diligencia los marcos legales y regulatorios de los diferentes Estados, así como sus actuales estrategias nacionales, para adaptarlos al nuevo escenario de la convergencia.



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Entendiendo el Ecosistema Digital actual, atendiendo a los cambios que han producido las diferentes disrupciones tecnológicas y de mercado, y olvidando antiguos dogmas regulatorios es como conseguiremos impulsar y sostener las inversiones necesarias para el despliegue masivo de la infraestructura de nueva generación que demandan las tecnologías que vienen como el 5G o el Internet de las Cosas. Esta es la palanca clave para fomentar la digitalización para la transformación productiva de América Latina, impulsando, el emprendimiento local y la innovación con talento latino.

No debemos olvidar que aunque en nuestra región se han logrado importantes avances en conectividad, uno de cada dos latinoamericanos no accede a Internet, y que la brecha digital es la brecha de la pobreza; el 50% no conectado, es el 50% **más pobre**. Cerrar todas las brechas digitales -también la existente entre quienes viven en el mundo urbano y el rural, y las relativas a edad y género- es un imperativo ético que debemos acometer con urgencia, para evitar además que surjan y aumenten nuevas brechas, como la que apunta al crecimiento de la desigualdad con el mundo desarrollado respecto al número de dispositivos conectados. Esta creciente brecha en el IoT puede significar importantes diferencias en cómo las sociedades se benefician de las externalidades positivas de Internet y de las nuevas generaciones de la transición digital (M2M), América Latina corre el riesgo de llegar tarde a la transformación productiva de la revolución digital, como pasó con la revolución industrial.

En el informe publicado por el Centro de Estudios de Telecomunicaciones de América Latina (cet.la), 'Desafío 2020. Inversiones para reducir la Brecha Digital en América Latina'¹³, se estimaba el valor de las inversiones necesarias en redes fijas y móviles para que once países de la región redujeran al máximo la distancia que los separaba de los países más desarrollados, en términos de penetración de servicios de comunicaciones. El estudio concluía que la inversión necesaria para cerrar la brecha digital en el conjunto de la región estaría en torno a los **400.000** millones de dólares, entre 2013 y 2020. Apuntando a un imprescindible aumento de las inversiones en infraestructura por encima del crecimiento esperado.

Sin embargo, los objetivos mencionados se tornan de difícil cumplimiento si analizamos el complejo escenario en el que se encuentra el sector. A reducción de precios ha tenido un impacto en el perfil económico del sector, cada vez hay una mayor demanda de las redes con un crecimiento exponencial del tráfico de datos I - se espera que en el periodo 2016-2021 se multiplique por 7-; esto unido a los bajos niveles de retorno (ARPU) que tiene América Latina comparada con los países desarrollados. ARPU móvil de nuestros países muestran una tendencia decreciente (pese a escenario de compensación derivado del

¹³ *Desafío 2020. Inversiones para cerrar la brecha digital en América Latina*
<http://cet.la/estudios/cet-la/resumen-ejecutivo/>



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mayor uso de datos móviles) a consecuencia de un menor crecimiento económico, el aumento de las presiones competitivas de actores como los OTT, y mayores cargas regulatorias, especialmente enfocadas en los jugadores tradicionales, que ponen el acento en la recaudación. Ante este entorno es esencial actualizar los marcos normativos para promover las inversiones necesarias. Las regulaciones y cargas de contraprestación tienden a incrementar costos asociados a la inversión y operación de las redes de telecomunicaciones, por ello, se necesita un marco regulatorio estable, convergente y propicio, con visión de largo plazo que garantice un entorno dinámico y competitivo para todos los actores del ecosistema, y que incentive la inversión y la innovación. Además, son fundamentales niveles tributarios simples y moderados. La carga impositiva para las telecomunicaciones en América Latina (12.12%) es la más alta si la comparamos con otros sectores claves para la economía como la energía o el transporte, como expone el Dr. Raúl Katz¹⁴ en el informe Retornos y Beneficios generados por el Sector de las Telecomunicaciones en América Latina (cet.la 2017).

El estudio estima que una reducción del 1% en el pago de impuestos, generaría un aumento de 0,85 dólares de inversión per cápita. Adicionalmente a esto existe una asimetría entre la carga impositiva de los jugadores OTT y los jugadores tradicionales, que efectivamente actúan en el mercado como competidores ofreciendo servicios sustitutos (telefonía, mensajería...). Finalmente, son imprescindibles también normativas que faciliten el despliegue físico de infraestructuras en las diferentes localidades; y, por supuesto, una política de espectro que planteen asignaciones en un horizonte planificado, estable y razonable, en el que las empresas compitan por objetivos de inversión y cobertura (beauty contest); contrariamente al actual enfoque recaudatorio.

Como conclusión, el desarrollo del Ecosistema Digital, y por ende de la Economía Digital, adquiere especial importancia en América Latina, donde la productividad ha sido identificada en numerosos trabajos como una de las principales barreras hacia el desarrollo y el sostenimiento del crecimiento en niveles elevados. A nivel regional supone un reto que va más allá de las fronteras nacionales y de los ordenamientos particulares de cada país, si se quiere una Economía Digital a nivel regional es **necesario** trabajar conjuntamente en la creación de unas **condiciones de contorno** que la hagan posible.

Para esto resulta esencial que existan unas reglas del juego equilibradas que favorezcan la inversión y la innovación en redes y en contenidos, aplicaciones y servicios digitales. Hoy por hoy no hay una definición

¹⁴ *Retornos y Beneficios generados por el sector de las telecomunicaciones en América Latina.*
<http://cet.la/estudios/cet-la/retornos-beneficios-generados-sector-las-telecomunicaciones-america-latina/>



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de política coherente y equilibrada para el Ecosistema Digital, existiendo una sobrerregulación para las operadoras de telecomunicaciones que implican serios desequilibrios en materia tributaria; junto a una fuerte asimetría para servicios sustitutos dependiendo de la forma en la que se proveen, por lo que hay que caminar hacia la neutralidad tecnológica; además, hay que atender los desafíos de la jurisdicción que requieren resolverse. El Ecosistema Digital debe ser un espacio abierto, competitivo y sostenible, que favorezca la innovación y la competencia a través de toda la cadena de valor; con un marco regulatorio liviano y flexible que sea adaptable al contexto dinámico del ecosistema y que facilite los incentivos a la innovación en todo el Ecosistema Digital la flexibilidad y facilidad para propiciar el despliegue de infraestructuras (cierre de brecha de cobertura, ampliar capacidad de redes); y la flexibilidad para el desarrollo de ofertas comerciales. Es sencillo, el marco regulatorio debe ser neutral, basándose en el principio del *level playing field*, mismos servicios, mismas reglas.

Desde ASIET consideramos que si se toman en cuenta las apreciaciones que se manifiestan en esta declaración pueden ser de gran ayuda para que la región consiga superar la Brecha Digital y desplegar las infraestructuras necesarias para lograr una Economía Digital efectiva, dinámica y vibrante que le permita avanzar a la par que otras regiones más avanzadas, contribuyendo al crecimiento económico y a la reducción de la desigualdad.

ACERCA DE ASIET: *La Asociación Interamericana de Empresas de Telecomunicaciones (ASIET) nació en 1982 con el nombre de AHCET y está conformada por empresas públicas y privadas del sector de telecomunicaciones de los países del continente americano. Trabajamos para el desarrollo de las telecomunicaciones y la Sociedad de la Información en nuestra región a través del diálogo público-privado, promoviendo el crecimiento de la industria y favoreciendo el intercambio de conocimientos y buenas prácticas, velando por el interés común de nuestros socios y la industria.*



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Pathfinder4 (Caribbean)

Mr. Matthew McLarty
Co-Founder — CEO

Thank you for the privilege of sitting on the WSIS 2018 panel for Digital Economy, bringing the perspective of a Caribbean private sector business.

The Digital Economy is very broad with numerous stakeholders and multiple critical success factors.

As a private sector company, we tend to view the macro environment and associated policies from a functional perspective in relation to the enablers and the inhibitors of the Digital Economy.

In this rapidly emerging era, it can sometimes be challenging to understand what policies (beyond the obvious basics) will be relevant in 5 - 10 years' time. Traditional stakeholder consultations don't always unearth the most critical elements and due to the speed and complexity of technological change this may become even more challenging in the coming years as the pace accelerates. As we speak the macro and micro outcomes of the 4th industrial revolution are still emerging and will likely follow a path of continual metamorphosis for some time.

One way of improving the process is the 'sandbox' concept which the UK and other jurisdictions are using with great effect. Aside from facilitating the innovation which would otherwise be heavily burdened by regulation, it gives the government a first-hand/experiential window into the granular circumstances of various emerging sectors. As such the 'sandbox' approach can be a powerful aid in shaping real-world, high impact policies.

We believe that the same model of partnership and oversight can be applied, not just in heavily regulated sectors but those which are of national significance.

With this in mind, we are coordinating with policy influencers in Jamaica to create a pilot program to develop data literacy and specialist employment via an outsourced model. I will very briefly outline this project below, but before that, we should look at some of the basic circumstances and government



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initiatives taking place. I will use Jamaica as a good example of a number of the islands in the region. Let's first take a look at some of the relevant foundational elements of the region's digital economy:

- core infrastructure (including well-distributed connectivity),
- software developer skills,
- high user engagement;

beyond those, we also need key enablers of digital business including ecosystems/platforms as well as easy means of exchanging monetary value.

Connectivity and Usage in the Region:

The physical Infrastructure needs to be improved, but we do have a reasonable starting point for entering the Digital Economy.

Most Caribbean islands are connected to the world via undersea fibre optics, and most islands have 4G coverage of a serviceable quality, certainly in urban areas, and this is improving.

Our region has experienced some of the fastest growth rates of internet usage over the past 15 years, mostly via mobile. Internet usage across most Islands of the Caribbean ranges from around 50-80% of the population.

Skills:

As far as the basic skills go, approximately 35% of tertiary graduates in Jamaica focus on STEM subjects, and all indications are that it is likely to grow. The overall number of graduates is proportionally low and to make matters worse, we are losing large numbers of them in the 'brain drain' to overseas jobs. So we have improving digital infrastructure, increasing usage, and a reasonable mass of STEM skills, BUT there is a critical break between the digital and financial infrastructure.

The Disconnect:

Most internet users in Jamaica are surfing the internet for social and information purposes BUT there is very little exchange of monetary value.

This is partly due to the high numbers of unbanked and under-banked individuals who are unable to transact economically (many do not have use of credit cards or access to services such as PayPal). This paucity of economic wealth online limits the incentive to create the ecosystems, platforms and marketplaces for local and international trade.

Thus, there is a disconnect between the digital and financial infrastructure. Establishing that connection will ultimately enable a broader distribution of wealth, open-up new ways of working such as fluid gig economy both locally and internationally and allow for better distribution of key services like healthcare and education.



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Jamaica is dealing with this by creating stronger means of personal identification via a new National Identification System where each citizen will be linked to a unique identification number which could then be tied back to biometrics and other personal data.

The National Identification System will be a tremendous help with things like “know your customer” (KYC) anti-fraud mechanisms, credit referencing and banking the un-banked.

While that step is only part of the solution, it will go a long way in helping us achieving sustainable development and improving quality of life.

Experiential Insight

Retaining our skilled people is critical to growing the Digital Economy. This will only be achieved through up-skilling and channeling talent to deliver new viable services through employment or entrepreneurship.

PathFinder4 is currently working in partnership with key policy influencers including public, academia, NGO and private sector stakeholders on the island to create skills and capabilities to underpin viable enterprises providing premium data services to local businesses and more importantly, into the export market.

We aim to improve data literacy to enable Jamaicans to provide services that are non-fungible and deliverable from Jamaica worldwide using digital technology. We are confident that increasingly turning data into insight and then into action will become one of the most important skills of the 4th industrial revolution.

Scaling our initiative to impact the economy of Jamaica positively will need the support of all of the entities involved to inform and push through the requisite supporting policies. Their first-hand involvement in emerging technology skills will provide them invaluable experiential insight and help to inform policy discussions across a broad and relevant range including digital infrastructure, data security, academic direction, local and international trade, flexibility and speed of policy amendment and so on.

We hope that this pilot, which will have noticeable impact on a small island nation, will seed an impactful strategy which Jamaica can use to become a model for other developing nations.



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Association for Proper Internet Governance

Mr. Richard Hill¹⁵
President

Why should data flow freely?

Summary

The principle that data should be borderless and that it should flow freely is a policy decision that has profound effects. Some base that principle on the idea that data is a commodity that should be freely traded.

But the idea that data should flow freely does not actually flow logically from the idea that data is a commodity: commodities are taxed and the producers of raw material are compensated for providing that material to the industries that transform it and add value to it.

Further, the idea that data is a commodity to be freely traded contradicts fundamental human rights.

And the benefits of free flow of data have been overstated: indeed free flow of data likely increases income inequality.

There is no obvious justification for policies favouring the free flow of data other than to allow OTTs to continue to accumulate huge profits (often monopoly profits) by extracting and refining data, without paying taxes and without compensating the users who produce the data in the first place.

As a consequence, there should be a moratorium on negotiations regarding the free flow of data.

Background and Introduction

On 25 May 2017 Council decided that Open Consultations for the CWG-Internet would be convened on the following issue:

Considering the rapid development of information and communications technology (ICT) which led to the advent of Internet-based services commonly known as “over-the-top” (hereafter: OTT), all stakeholders are invited to submit their inputs on the following key aspects from policy prospective:

1. What are the opportunities and implications associated with OTT?
2. What are the policy and regulatory matters associated with OTT?
3. How do the OTT players and other stakeholders offering app services contribute in aspects related security, safety and privacy of the consumer?



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4. What approaches which might be considered regarding OTT to help the creation of environment in which all stakeholders are able to prosper and thrive?

5. How can OTT players and operators best cooperate at local and international level? Are there model partnership agreements that could be developed?

1. What are the opportunities and implications associated with OTT?

It is obvious that personal data has great value when it is collected on a mass scale and cross-referenced.¹⁶ The monetization of personal data drives today's OTT/Internet services and the provision of so-called free services such as search engines.¹⁷

Thus issues related to the flow of data have major implications for OTT's.

2. What are the policy and regulatory matters associated with OTT?

We examine below the policy and regulatory matters related to the flow of data which, as noted above, are matters associated with OTTs, because OTTs cannot thrive without data flows.

Some, in particular certain types of businesses and certain developed states, appear to base much discussion, and some decisions, on an implicit (or explicit) principle that data should flow freely. That principle appears to be derived from other implicit (or explicit) principles, including "the Internet is borderless, and so is data associated with the Internet" and/or "data is just another commodity, and so should not be subject to restrictions on trade".

The statement "the Internet is borderless" has no meaning. A correct statement is "some aspects of the Internet are not tied to national borders, for example many domain names and most IP addresses are not allocated on a national basis."

It is not contested that offline law applies equally online. So a meaningful statement would be "what national and international laws are appropriate for the Internet, and is there a need to change existing laws?"

It is in this context that there are calls to treat data as a commodity that should not be subject to trade restrictions.

¹⁶ See for example pp. vii and 2 of the GCIG report, available at: http://ourinternet.org/sites/default/files/inline-files/GCIG_Final%20Report%20-%20USB.pdf . Henceforth referenced as "GCIG". See also 7.4 of http://www.oecd-ilibrary.org/taxation/addressing-the-tax-challenges-of-the-digital-economy_9789264218789-en ; and <http://www.other-news.info/2016/12/they-have-right-now-another-you/> ; and the study of data brokers at: <https://www.opensocietyfoundations.org/sites/default/files/data-brokers-in-an-open-society-20161121.pdf> ; <https://www.internetociety.org/blog/public-policy/2017/03/my-data-your-business> ; <http://www.economist.com/news/leaders/21721656-data-economy-demands-new-approach-antitrust-rules-worlds-most-valuable-resource>

¹⁷ <http://www.theatlantic.com/technology/archive/2014/08/advertising-is-the-internets-original-sin/376041/> and 7.4 of the cited OECD report; and <http://www.other-news.info/2016/12/they-have-right-now-another-you/> and <https://www.internetociety.org/blog/public-policy/2017/03/my-data-your-business>



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In section 2.1 below we consider the idea that data is a commodity, and show that the implications of that idea are that data should be taxed and that users should be adequately compensated for the data that they provide.

However, in section 2.2 below, we show that this idea is false: data is not a commodity and cannot be treated as such.

2.1 Data as a commodity

A propensity by some to advocate in favor of the principle of the free flow of data was clearly illustrated in the workshop on “Data Localization and Barriers to Cross-Border Data Flows”¹⁸ held at the 2017 WSIS Forum. The description of that workshop includes the following:

There is growing debate about the spread of national data localization restrictions and barriers to Cross-Border Data Flows (CBDF). Localization policies include requirements such as: data must be processed within a national territory, and involve a specific level of “local content,” or the use of locally provided services or equipment; data must be locally stored or “resident” in a jurisdiction; data processing and/or storage must conform to unique national standards; or data transfers must be routed largely or solely within a national or regional space when possible. In addition, in some cases, data transfers may require government approval based on certain conditions, or even be prohibited. Governments’ motivations for establishing such policies vary and may include e.g. promoting local industry; protecting (nominally, or in reality) the privacy of their citizens, and more broadly their legal jurisdiction; or advancing national security or an expansive vision of “cyber-sovereignty.”

The stakes here are high. McKinsey has estimated that data flows enabled economic activity that boosted global GDP by US \$2.8 trillion in 2014, and that data flows now have a larger impact on growth than flows of traded goods. The growth of localization measures and barriers to CBDF could reduce these values and impair not only business operations but also vital social processes that are predicated on the flow of data across the Internet. Hence, language limiting such policies has been included in a number of trade agreements, including the TPP and the proposed TTIP and TiSA. It also is possible that at least some of the policies in question are inconsistent with governments’ commitments under the WTO’s GATS. But the extent to which these issues should be addressed by trade instruments remains controversial, with many in the global Internet community and civil society remaining critical of non-transparent intergovernmental approaches to the Internet, and many privacy advocates opposing the application of trade rules to personal data.

This workshop will take stock of the growth of data localization measures and barriers to data flows and assess the impacts of these trends; consider what can be achieved via international trade instruments in the current geopolitical context; and explore the possibility of a parallel track of multistakeholder dialogue

¹⁸ <https://www.itu.int/net4/wsis/forum/2017/Agenda/Session/272#intro>



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and norm setting that is balanced and supported by diverse actors. It will consider whether normative approaches involving monitoring and reporting could help to ensure that data policies do not involve arbitrary discrimination or disguised digital protectionism, and do not impose restrictions greater than what is required to achieve legitimate public policy objectives.

We stress here the last sentence above “do not impose restrictions greater than what is required to achieve legitimate public policy objectives”.

This raises the question: who will decide what public policy objectives would not be legitimate? During the workshop, it was made clear that the legitimacy of restrictions, and of public policies themselves, would be made by arbitration panels under the WTO or related agreements. That is, the intent is to subordinate decisions made by national parliaments and national governments to the opinion of a panel of international jurists regarding whether or not those decisions are “legitimate” in light of the provisions of treaties such as TPP, TISA, etc.

But why should trade agreements be given primacy over other international instruments, in particular those regarding human rights? Some recognize that trade is not the only, or even the pre-eminent, matter to be considered.

For example, at the 2017 WSIS Forum High-Level Policy Session on “Digital Economy and Trade”¹⁹, H.E. Mr. Julian Braithwaite, UK Ambassador and Permanent Representative to the United Nations and Other International Organisations in Geneva, stated:

There are two big public policy challenges on digital the first is over data and as the Internet is so important for wider public policy the regulatory response to that, child protection online, cybersecurity, privacy is to regulate in a way to apply online the laws you that are applied offline. Putting your arms in a data in a national jurisdiction. This may be the right response for that particular public policy issue but the unintended consequence of that is you close down data flows internationally and you potentially break up this extraordinary advantage of the Internet providing as a global platform. How one achieves the wider public policy goals which involve the safe, responsible use and sharing of data while maintaining the cross-border flows that are the things that lead to the advantages, that's the first question.

According to this view, cross-border flows are always beneficial, so it is important to consider the disadvantages that might result if cross-border data flows are restricted, for example to protect privacy.

¹⁹ <https://www.itu.int/net4/wsis/forum/2017/Agenda/Session/287#intro> The transcript is at: https://www.itu.int/net4/wsis/forum/2017/Content/Uploads/DOC/3490e121a88547aea5502d3f5cba96a9/Captioning_287.pdf



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However, it is not obvious that cross-border flows are always beneficial. Reacting to the above statement, and to and other statements, a staff member of the European Commission stated, speaking in a private capacity:

I wanted to raise a word of caution from the European Commission, I will talk in my personal behalf as an economist. You introduced this session saying there is a wide consensus that broadband will grow, jobs, et cetera. I would say that's not 100% true. There is increasing evidence and papers, other international organizations saying that technologies are increasing inequality and in the long run, thus is a cause of slowing growth. This is an important point. The enthusiasm that's tried to be here for the new technology should probably be kind of moderated if we think about the Sustainable Development Goals. So the thing is, probably on the Agenda of the international organization, it should not only be data trade, common rules for access to data, et cetera, but also some other very hot issues like taxation of multinationals, migration problems, et cetera which are closely related to evolution of digital technologies.

Indeed, if data is considered to be a commodity, subject to trade facilitation rules, then why isn't it considered a commodity also from the point of view of taxation? And why aren't the producers of the raw material (the end-users who provide the data) fairly compensated for their production?

Data in the OTT context has often been compared to oil. Nobody expects the owners of the ground in which there is crude oil to provide the crude oil for free to the companies that refine it, add value to it, and sell the products derived from crude oil. And nobody expects the flow of oil to escape taxation.

So there is a fundamental inconsistency here: if one argues that data should be treated as a commodity, because it is valuable when it is combined with other data, then one cannot simultaneously argue that it cannot be taxed and that end-users should provide their personal data without adequate compensation. Of course users are, at present, compensated for their data because they receive so-called "free" services, such as social networks, search engines, etc. But the value of those services is far less than the value of the data, as can be seen from the fact that the OTT providers are extremely profitable: in fact, far more profitable than other extractive industries. Thus, users do not receive adequate compensation for the raw material that they provide: their personal data.

2.2 Data is not a commodity

But personal data is not a commodity like any other commodity: it is related to a person's private life and thus to his or her human rights.

The Universal Declaration of Human Rights provides in its Article 12:

No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks.



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Thus it is up to the law (meaning national law) to define what an “arbitrary” interference with a person’s privacy is. Many states, in particular in Europe, have enacted, and enforce, laws regarding the protection of personal data. Since those laws implement the human right to privacy, they take priority over other laws. Consequently, data is not a commodity like oil, because data can only be processed in accordance with laws that protect personal data, and the privacy of the people to whom the data relates.

Further, the Universal Declaration of Human Rights provides in its Article 22:

Everyone, as a member of society, has the right to social security and is entitled to realization, through national effort and international co-operation and in accordance with the organization and resources of each State, of the economic, social and cultural rights indispensable for his dignity and the free development of his personality.

As noted above, data is a valuable resource: OTT’s derive their profits from extracting and refining data. People have the right to realize the economic rights needed for their dignity and the free development of their personality. That right includes the right to be adequately compensated for the value of the data that is provided to OTT providers, both individually, and as residents of a state, through taxation of data flows.

2.3 Trade negotiations

Past and current trade negotiations have resulted (or are likely to result) in agreement on provisions that place restrictions on the ability of states to restrict data flows.

For example, Article 14.11 of the Trans-Pacific Partnership (TPP), which is now thankfully irrelevant (a development for which we must thank US President Trump) includes the following provisions²⁰:

2. Each Party shall allow the cross-border transfer of information by electronic means, including personal information, when this activity is for the conduct of the business of a covered person.

3. Nothing in this Article shall prevent a Party from adopting or maintaining measures inconsistent with paragraph 2 to achieve a legitimate public policy objective, provided that the measure:

(a) is not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on trade; and

(b) does not impose restrictions on transfers of information greater than are required to achieve the objective.

What will prevent a state from arguing that taxation of data is a disguised restriction on trade, which is not required to achieve a legitimate public policy objective?

²⁰ <https://ustr.gov/sites/default/files/TPP-Final-Text-Electronic-Commerce.pdf>



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Or from arguing that data localization requirements, thought to be necessary to protect privacy, are a disguised restriction on trade, which is not required to achieve a legitimate public policy objective? Recall that disputes regarding the interpretation and implementation of trade agreements are not decided by national courts. They are decided by arbitration panels composed of international jurists. Thus national measures regarding data flows can be overturned even if they have been democratically decided by a national parliament.

This appears to us to be a violation of the human right to take part in the conduct of public affairs, as provided in Article 25 of the International Covenant on Civil and Political Rights (and also in Article 22 of the Universal Declaration of Human Rights).

Leaked²¹ versions of the documents being discussed in the context of the Trade in Services Agreement (TISA) indicate that provisions similar to (or even worse than) those of TPP are being negotiated at present. This must stop. As two experts put the matter²²:

One must wonder whether this [trade negotiations regarding e-commerce] will be an opportunity to foster digital rights or leave us with even lower standards and a concentrated, quasi-monopolistic market benefiting from public infrastructure. The rhetoric of opportunities for the excluded – connecting the next billion – sounds great, but only if we disconnect it from the current realities of the global economy, where trade deals push for deregulation, for lower standards of protection for the data and privacy of citizens, where aggressive copyright enforcement risks the security of devices, and when distributing the benefits, where big monopolies, tech giants (so called GAFAs) based mostly in the US, to put it bluntly, take them all.

...

Never before has a trade negotiation had such a limited number of beneficiaries. Make no mistake, what will be discussed there, with the South arriving unprepared, will affect each and every space, from government to health, from development to innovation going well beyond just trade. Data is the new oil – and we need to start organizing ourselves for the fourth industrial revolution. The data lords, those who have the computational power to develop superior products and services from machine learning and artificial intelligence, want to make sure that no domestic regulation, no competition laws, privacy or consumer protection would interfere with their plans.

²¹ The TISA negotiations are secret (as are other trade negotiation): even members of parliament have been denied access to negotiating texts. The discussion of such matters in secret forums is a blatant contradiction of the principles of transparency and multi-stakeholder participation. For that reason alone, these negotiations must be stopped.

²² <https://www.opendemocracy.net/digitaliberties/renata-avila-burcu-kilic/new-digital-trade-agenda-are-we-giving-away-internet>



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Disguised as support for access and affordability, they want everyone to connect as fast as they can. Pretending to offer opportunities to grow, they want to deploy and concentrate their platforms, systems and content everywhere in the world. Enforcement measures will be coded in technology, borders for data extraction will be blurred, the ability to regulate and protect the data of citizens will be disputed by supranational courts, as local industries cannot compete and local jobs soar. If we are not vigilant, we will rapidly consolidate this digital colonisation, a neo-feudal regime where all the rules are dictated by the technology giants, to be obeyed by the rest of us.

2.4 Conclusion

The principle that data should be borderless and that it should flow freely is a policy decision that has profound effects. As shown above, it does not flow logically from the idea that data is a commodity, it contradicts the human right to privacy, and its economic benefits have been overstated (indeed, free flow of data is likely increasing income inequality).

There is no obvious justification for policies favouring the free flow of data other than to allow OTTs to continue to accumulate huge profits (often monopoly profits) by extracting and refining data, without paying taxes and without compensating the users who produce the data in the first place.

As a consequence, there should be a moratorium on negotiations regarding the free flow of data.



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Session Fourteen: Knowledge societies, capacity building and e-learning / Media

Webcast: <https://www.itu.int/net4/wsis/forum/2018/RP/Webcast/329#intro>



High level Track Facilitator: Mr. Alfredo M. Ronchi, EC MEDICI Framework of Cooperation

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. **Mauritius** – H.E. Mr. Yogida Sawmynaden, Minister, Ministry of Technology, Communication and Innovation
4. **Rwanda**– H.E. Mr. Jean de Dieu Rurangirwa, Minister, Ministry of Information Technology and Communications (MiTEC)
5. **Ukraine** – H.E. Mrs. Emine Dzhaparova, First Deputy Minister, Ministry of Information Policy
6. **United Arab Emirates** - Mr. Ali Al Yafei, ICT Minister Advisor, Ministry of Education
7. **Centro de Estudios Avanzados en Banda Ancha para el Desarrollo (CEABAD)**- Mr. Sungham Choi, Program Director
8. **EDACY**– Mr. Temitope Ola, Founder and CEO



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9. **AIESEC**– Mr. Abdelrahman Mohamed, Global President of AIESEC International (Netherlands)
10. **Evolution of Mind, Life and Society Research Institute (EMLSRI)**- Dr. Yohko Hatada, Founder and Director

Abstract

This session embraces a wide range of relevant topics connected by a fil rouge: from education and capacity building the media and knowledge society. The contribution of the distinguished speakers covered the different aspects providing an insight on information and communication in critical environment such as in Ukraine as well as capacity building and employment in Central America passing through the challenge to keep capacity building at the same pace of innovation in the United Arab Emirates. More in detail the specific contribution provided by the panelists are:

SUMMARY

We had eight distinguished speakers providing a view on the topics from different countries and regions. To summarize we can identify three main topics related to different SDGs (4,8)

- a) [Capacity building](#)
- b) [Power of media](#)
- c) [Deep relation between human and the cyber world.](#)

Major part of the distinguished speakers presented the state of the art and future trends of education and capacity building in their country outlining the strategies and methodologies applied.

Mauritius invested in the full capacity-chain being the ICT one of the national pillar of economy. They created IT Academia and IT Polytechnic, Rwanda did similar initiatives connecting the whole country with broadband. UAE explained their structured methodology to achieve better results in capacity building keeping the same pace of innovation that in UAE is a cutting edge priority. The need of re-shape the curricula in order to better fit with actual and future job position requirements is a paramount as well as the need to reshape education to better meet the expectation of young generation in terms of methodology and format.

The power of media in impacting society and shaping the opinions and the perceived reality, the ability to setup a kind of parallel universe fully controlled by the information “managers”

Last but not less relevant the contribution provided by Yohko concerning the deep relation between human and cyber technology and how to start the process to better the quality of life.



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Mauritius

H.E. Mr. Yogida Sawmynaden
Minister
Ministry of Technology, Communication and Innovation

Ladies and Gentlemen

Good afternoon

How do you see the evolution of the ICT sector with the emergence of knowledge societies and the accompanying challenges?

It is indeed a great pleasure for me to be here in your midst to share views on the Knowledge societies, capacity building and e-learning.

We are living through an exciting time when we are experiencing the emergence of knowledge societies across the globe.

Mauritius, my country, is no stranger to the digital transformation sweeping the world. In an effort to digitalize governments, businesses, non-governmental organizations and so on, it is becoming clearer and clearer that we need increasing numbers of technology skilled people.

Especially when the ICT sector or the digital economy is the 3rd pillar of the Mauritian economy behind financial services and tourism and contributing 5.7% to GDP. The sector is host to some 23,000+ employees in 750+ companies.

On the human resource side, our universities – traditional houses of learning – are experiencing difficulties to skill the people at the pace of change of technology happening in the outside world.

Skills mismatch is appearing as a challenge to reckon with on the path to build knowledge societies.

How is your country addressing the skills mismatch problem?

At home, we are investing in partnerships with industry leaders like Oracle which will soon (April 2018) operationalize the Oracle Centre of Excellence in collaboration with the University of Technology (Mauritius) offering Oracle professional courses.

Other initiatives include the offer of IBM courses in emerging topics like mobile apps development, Cloud computing.

Universities are being encouraged to embed work placements in their courses.



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The ICT Polytechnic of Reduit which is in the process of being setup, will eventually focus on the acquisition of skills demanded on the market through diploma courses with curricula worked out in collaboration with industry. Keeping the curricula at par with shifting demands of the industry will be the specificity of the polytechnic offered courses.

The e-learning platform will be privileged for delivering courses as it matches the needs of each and every learner.

Ladies and gentlemen

We need to prepare our youths for a world where creative thinking and problem solving skills are equally important. My Ministry through the National Computer Board is running the Digital Youth Engagement Programme whereby students in upper primary and lower secondary classes are being initiated to coding. Some 1,200 students would have been exposed to coding by end of this financial year.

Ladies and Gentlemen

Conscious of the challenges represented by a small population, Government eased the way for foreign students studying ICT in Mauritius to have an opportunity to work for up to 20 hours per week.

Also, companies operating in the sector are on the lookout for new expertise/skills that may not be readily available on the market. That is why, Government came up with a scheme whereby the companies can recruit the appropriate experts from overseas provided that they put up equivalent numbers of Mauritians on study to ensure the proper skills transfer and capacity building.

Lastly, I am looking at the setting up of a Digital economy skills council that will group all relevant stakeholders so that we can constantly review progress achieved in growing ICT talents and make appropriate recommendations for policy interventions for improving the skills offerings in the sector.

With these words, I thank you for your kind attention.



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Ukraine

H.E. Mrs. Emine Dzhaparova
First Deputy Minister
Ministry of Information Policy

Ladies and Gentlemen,

After the Autonomous Republic of Crimea and the city of Sevastopol were occupied by Russian Federation in February 2014, Ukrainian mass media have been subject to unlawful interference in their activity and persecution by the occupational authorities, forcing them either to cease functioning or leave the peninsula.

Since the beginning of the armed conflict, the issue of the violation of international law by the aggressor State in terms of using Ukraine's radio frequency resource for broadcasting programs of the Russian Federation in the territories occupied by it is critical. Now, Ukrainian channels are prevented from being broadcast in the occupied territories, and only Russian television and radio broadcasters are available, which in fact deprives the population of the said territories of the right to free access to information and to obtain reliable information from various sources.

For the proper protection of the interests of the state and citizens of Ukraine at the national and international levels, systematic monitoring and analysis of the seized radiofrequency resource and losses of television and radio broadcasters that have been unable to function due to Crimea's occupation are carried out.

In late February - March 2014, the Russian Federation conducted an operation to capture part of Ukrainian territory - the Autonomous Republic of Crimea and the city of Sevastopol. Russia's further presence in Crimea till now is defined as continued occupation.

Given the provisions of the 1949 Geneva Convention relative to the Protection of Civilian Persons in Time of War, the fact that the occupation did not meet armed resistance does not affect the status of the occupied territory. By forcefully seizing power and occupying the Crimean Peninsula, Russia violated the rules of international law enshrined, in particular, in such instruments as the UN Charter, the Declaration on Principles of International Law concerning Friendly Relations and Co-operation among States in accordance with the Charter of the United Nations, the Final Act of the Conference on Security and Co-operation in Europe of 1 August 1975, and



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others. Russia's occupation of Crimea can be qualified as an act of aggression (in accordance with the provisions of the UN General Assembly Resolution 'Definition of aggression', 1974).

On 27 March 2014, the international community by virtue of the United Nations General Assembly Resolution 'Territorial integrity of Ukraine' (68/262) affirmed the need for the strict observance by States of their obligations under international law, as well as their commitment to the sovereignty and territorial integrity of Ukraine within its internationally recognized borders. The General Assembly urged all States, international organizations and specialized agencies not to recognize any change in the status of the Autonomous Republic of Crimea and the city of Sevastopol.

In accordance with Ukrainian legislation, international law and the position of the civilized international community, the Autonomous Republic of Crimea and the city of Sevastopol are an integral part of the territory of Ukraine.

In violation of the rules of international law, since April 2014 Russia declared Crimea part of its territory and extended its legislation to it, in particular, in the field of freedom of speech and the work of mass media. As a result of requirements for the re-registration of all Crimean mass media, the prohibition on setting up mass media by foreign nationals and other 'novelties' in Russian legislation, those mass media which were not able to accommodate to new conditions or openly opposed the occupation had to cease functioning or leave the peninsula.

During the first two years of occupation, frequencies were withdrawn from almost all private Crimean radio companies. Subsequently, as a result of competitions, the rights to these frequencies were given by the occupational authorities to large Russian media holdings.

Crimea's largest television and radio companies have also been subjected to persecution after the occupation, for example, TRC Chornomorska (Black Sea TV and Radio Company) and Crimean Tatar TV channel ATR.

Indeed, in August 2014, the occupational authorities arrested and seized all equipment of TRC Chornomorska in a television station building in Simferopol. Subsequently, the broadcasting of the TV channel was stopped, and its equipment illegally used to provide broadcasting of Russian TV channels. As a result, TRC Chornomorska was forced to leave Crimea and move to Kyiv.



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Crimean Tatar TV channel ATR also moved to Kyiv from Crimea because of systematic persecution of journalists and the editorial staff. In January 2015, the Russian authorities carried out an illegal search and withdrawal of servers at the office of the TV channel in Simferopol, disrupting the broadcasting as a result. In February 2015, Roskomnadzor handed the frequencies of ATR over to another broadcasting company. Despite appeals to the occupational authorities, the ATR management has not yet received permission to preserve the right to broadcast in Crimea.

Currently, most Ukrainian TV channels are deprived of the opportunity not only to work in Crimea, but also to broadcast to the peninsula.

The cleansing of Crimea's information field by Russia was accompanied by the severance of Russian legislation in terms of countering extremism and separatism, show trials and persecutions of independent Crimean journalists.

In general, the occupation of Crimea has led to large-scale and systematic violations of human rights in the field of freedom of speech and expression, as evidenced, for example, by the Resolution of the XXV session of the OSCE Parliamentary Assembly 'On Violation of Human Rights and Fundamental Freedoms in the Autonomous Republic of Crimea and Sevastopol'.

The instrument recognizes and condemns restrictions on freedom of the media and freedom of expression in Crimea, where Ukrainian TV channels are turned off and replaced by Russian TV channels, Crimean Tatar mass media are forced to shut down, and journalists are threatened, intimidated and persecuted. Among other instruments are the report of the Office of the United Nations High Commissioner for Human Rights 'Situation with human rights in the temporarily occupied Autonomous Republic of Crimea and the city of Sevastopol (Ukraine)' (September 2017), relevant resolutions of the Parliamentary Assembly of the Council of Europe on Crimea and reports of Ukrainian and international human rights organizations.

Now, the radio frequency assignments are being unlawfully used to broadcast Russian programmes, which are contrary to the Constitution of the International Telecommunication Union (hereinafter referred to as the 'ITU'), the ITU Radio Regulations, the statement by the ITU Secretary General at the 2014 ITU Plenipotentiary Conference, as well as to the requirements of UN General Assembly Resolution No 68/262 (2014).

Currently, part of the sovereign territory of Ukraine - the Autonomous Republic of Crimea and the city of Sevastopol - is being temporarily occupied as a result of Russian aggression.



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Therefore, in the Autonomous Republic of Crimea and Sevastopol the following number of TV and radio companies is deprived of the right to carry out:

- *terrestrial (analogue) television broadcasting* - 31 TV and radio companies. They are deprived of the right to use 292 frequency assignments for broadcasting in 69 localities;
- *digital television broadcasting* - 28 TV and radio companies. They are deprived of the right to use 72 frequency assignments for broadcasting in 18 localities;
- *terrestrial radio broadcasting* - 39 TV and radio companies. They are deprived of the right to use 139 frequency assignments for broadcasting in 31 localities.

Also In June 2017, the providers blocked Ukrainian Internet traffic in occupied Crimea. In June 2017, a bill was submitted to the Russian State Duma on the prohibition of the use of technologies which allow evading the blocking of websites.

In Crimea there is a lack of freedom of speech, independent mass media, and the right of the professional activity of journalists and other media professionals. The categories of violations include: the establishment of censorship, attacks on media offices, detentions, interrogations, imprisonment of journalists, searches in their homes, limiting access to the meetings of the self-proclaimed authorities, particularly the courts, introduction of Pro-Ukrainian journalists in so-called lists of “terrorists” of the Russian Federation, blocking of Ukrainian TV channels and websites. Activists and journalists, who advocate the observance of human rights, are subjected to torture and intimidation.



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United Arab Emirates

Mr. Ali Al Yafei
ICT Minister Advisor
Ministry of Education

Building Capacity unlocks people's potential to build a future that is unimaginable. It is the way of bringing new qualities to human lives. We see ICT in education as something beyond a facility: an enabler of capacity building.

It plays a powerful role in enhancing the quality of education through smart learning, which is essential for building highly effective individuals, who contribute to the growth of our nation's economy.

Our aim is to integrate sustainability through e-learning to ensure the positive impact of digital transformation. For example:

- Increasing learner's engagement through attractive, interactive means of learning using virtual reality, augmented reality, and gamification.
- Increasing cognitive and remembering capacity by automating neuroscience concepts such as: spaced learning where the forgetting-curve is minimized.
- Providing personalized learning by using artificial intelligence through adaptive learning.
- IT allows the collection of data from different interactions happening between learners and teachers, as well as between curriculum and assessment builders.

The UAE ministry of education has built and is working on improving an ecosystem that will enable us to have total visibility concerning learning and teaching activities in the education system.

Use of ICT in education within the ministry has given us insight, which in turn refines and supports our policies, basing them on facts and data rather than intuitions and guessing.

ICT has made governance much easier through automating processes and policies.

It has also provided the country's decision makers with near real-time dashboards and cockpits, allowing visibility across all levels, be it the country's leadership or the teachers, eventually reaching the students.



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In the UAE Ministry of Education, we have taken a holistic approach **to ensure change for sustainability**. We have covered the classical method of teachers' professional development as well as the skills' building programs. In addition, we have developed several frameworks that create sustainable, organic capacity building through systems of self-evaluation, and performance management. Following is a few examples:

- E-Maturity Model with 4 levels Basic to Leading.
- Teacher and Student Competency framework, with five levels; starting from exchange ending with empower.
- eSafe Maturity Model “Aqdar”
- Creating Communities of practice and knowledge sharing.

The top factor influencing e-learning transformation is creating a sustainable environment that drives change and continual improvement within the teaching and learning community.

It is important to shift the mindset of school leadership, teachers and students to believe that continuous capacity building and skills' improvement is driven within oneself. Our mission is to unleash their inner power, enabling them to build their own capacity across their future journeys.

The biggest puzzle-piece is this: we can have all the tools and technology in the world, but technology does not change anything, people change; if people have the right skills and capacity, in turn they will have intrinsic value and motivation to align their professional goals with the goals of the organization. More than technology, it is the change in people's attitudes, perceptions and assumptions that will drive change and achieve our vision. These are our hopes and aims.



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Centro de Estudios Avanzados en Banda Ancha para el Desarrollo (CEABAD)

Mr. Sungnam Choi
Program Director

1) In the aspect of ICT capacity building, do you think that what kind of strategy or initiative should be measured considering development of broadband in Central American Region?

Thank you Chair. Dear excellencies, participants, colleagues, good morning to all.

I am very pleased to join this honorable session. Participating the WSIS, I got impressed that most of people emphasized the importance of capacity building. I also agree that capacity building is the key toward digital economy and to realize digital ecosystem. In this sense, I believe that this session is quite important.

I working in Nicaragua, one of Central American countries. Still some countries in Central American Region do not have a national broadband plan, in other hands, other countries in the Region already have their own national broadband plans and implemented their plans.

The reason why whether a country has a national broadband plan or not is important because usually a national broadband plan has a comprehensive capacity building program. However, even though a country has a comprehensive capacity building program, they have another problem is that just few people can implement those programs.

I believe that those two problems, lack of capacity building programs & lack of experts or specialists in public sector, are main challenges in Central American Region. Also, we can find the same problem in the other regions. Thus, I am sure that capacity building program strategy or initiative in national wide should be taken under national broadband plan or digital agenda.

In order to solve those problems in Central American region, CEABAD, Regional Broadband Training Center by Inter-American Development Bank (IDB), with support of Government of Korea (Ministry of Science and ICT) and Government of Nicaragua (TELCOR, Institute of Telecommunication and Post) was established at Managua, Nicaragua, June 2014.



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Until now, we have provided online and offline programs on various topics regarding broadband and ICT more than 3,000 government officials & experts in mainly Central American Region and other countries in Latin America during the last 3 years.

Through the center programs, there was significant impact regarding the capacity of governments to address the many challenges of dealing with public policies and regulations related to the access, adoption and use of broadband.

For example, the government of El Salvador announced they adopted a digital broadcasting standard in January 2017. In order to support this policy formulation, the Center provided local workshops, professional consultation and online courses for officials in El Salvador from 2015 to 2016.

Another example is Nicaragua. They are constructing national broadband backbone network started last year. To support their broadband infrastructure and regulatory framework, our Center provided several workshops, seminars, and online courses for government officials and experts in private sector in Nicaragua from 2015 to 2017.

We are also providing a platform to facilitate and boost development of broadband in Central American region by organizing high-level regional forum every year.

2) CEABAD has successfully provided online courses in Latin American countries. Please share us your experience such as challenge and achievement while developing and managing CEABAD online campus?

Regarding online courses, We, CEABAD, has provided 12 online courses since April 2016. We are targeting Spanish Countries government officials so we are offering 100% Spanish courses. As you might know well, there are many online course platforms like Coursera, edX but most of programs are based on English. So, without language barrier, if you have mother tongue of Spanish, you can easily join our virtual campus.

In addition, we have developed our contents based on needs and realities in telecommunication sector in Latin America. Actually, we hired international experts who worked and lived in Latin America and collaborated with international organizations which have regional office in Latin America like ITU to create quality and useful contents. Thus, we are providing practical and tangible information and knowledge for participants in their work place.

Most of all, we had efforts to create well designed contents to encourage people to keep learning. Indeed, one of reasons to fail online courses is not easy to keep attention. We pretty much focused on well-organized materials to deliver simple and core ideas and concepts in short time, well graphic designed pages to have more fun and attention for learners. Recently, we are providing webinar services to provide



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a place to meet instructor in cyber space to have private clinic session and keep motivation.

The most important thing is that I believe that our team members have confidence to develop and operate online courses by ourselves. When we started this project, nobody in the Center had enough experience to develop and operate online courses. Indeed, most of things like creating contents, instructional and graphic design of contents, and marketing were made by outside of the Center. However, like our TEAM slogan, learning by doing, our staffs have increased their capacities by working and finally, we launched new course, called digital business, last month by 100% ourselves.

Recently, Nicaraguan government opened national online university benchmarking CEABAD. Also, we got lots of offers from private sector in telecommunication in the Region to develop their online programs.

Through our experience, our staffs find their potential, vision, and dream to manage online courses. I believe that this kind of confidence is quite important achievement through the project.

Thank you.



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Evolution of Mind, Life and Society Research Institute (EMLSRI)

Dr. Yohko Hatada
Founder and Director

Q1. What are we aiming at using Knowledge for societies? Why? Q2. How could future society and civilization be built?

Knowledge must be meaningful. What for? Why? Society, globe is our individual's life incubator. My point of view is billion years <- evolution of life on globe. So meaningful – for all of those, time, material, evolution process, so as for future direction of billion years. What is meaningful human civilization contribution to this evolution process? Core is individual.

Individual's quality of life. Individual must LIVE truly. Which comes from true understanding of the self and living for connecting / integrating the self-deeper and further, to the world, to the environment, to the time, to the evolutionary time. If this true connection to the self is achieved, who I am, what I am, what I want to do, passionately throughout life; the individual is ignited to light up the world and the self. That is life. This process requires "finding own calling" unique life mission; which everyone has. Then one starts to live own life, not others', or believing but not truly so. One becomes unique, innovator of own life.

That's what we need. This is needed for anyone and everyone. I call to build **"Calling right" for UN as a part of HR**, because this is critically important for future building with uncertainty in dramatic revolutionary times like now. We need to signify it, verbize, recognize it and need to make civilizational movement. Current world function is squashing individual's quality of life, dignity of HR, democratic society, global symbiotic ecosystem. These values need to be aligned within the self and among individuals, industries, institutions and sovereign states, internationally and globally. And those must be aligned for global evolution. I call this HDS E: Humanity, Democracy, global ecosystem Symbiosis for evolution. H D S E. When such nurturing democratic societies globally co-innovate, then we evolve our evolvability for each individuals' calling. If individuals are commoditized / labour is dehumanized, financial gambling is rocking the system itself, the fabric of institutions in society are fundamentally damaged in data + Neoliberalism, information for PR, and impoverished diversity and true functional connections. The way we currently operate our worldly function would not allow to live for long with the technology that has already emerged with exponentially increasing computing power. If so what is the tech advancement for?



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A system works when all the parts play different roles but work with integrity, not conflicting. When we have cancer in the body, the life ends eventually unless we remove the cancer.

Profitability single-minded data surveillance Neoliberalism, tech industry with unaccountable algorithms use, environment damaging irresponsible human actions, immature political will: all those are reducing the chance of human participation in global civilization evolution.

Competition principle needs to shift its paradigm into international co-innovation, co-evolution into the future. UBI, IDI instead of GNP, liquid democratic system, global life-environment-information ecosystem, encrypted whistle blower system, supporting journalism system, just name a few, would be helpful. The core is all of each of us to live constructively / connecting / contributing to the true self and to the surrounding with aligned values and integrity. Then each can feel the fulfilled moment, the day, and the life till one's death. Only such a happy international society can allow human civilization to survive the future with artificial life together, otherwise we die off by our own aggressiveness. Nature of what we are experiencing currently is labour pains of giving birth to a culture creating civilizational movement, truly internationally co-evolving. Tech must serve for this very humane aspiration, if we are to succeed at such a cultural movement with paradigm shift. The core is individual's living in own Calling. This would be very enjoyable for each of us, and immediately, too!