



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Table of Contents

INTRODUCTION 2

WSIS Forum 2021: Chairman 3

Moderation: High-level Track Facilitators (HLTFs) 4

High-Level Policy Sessions 7

Opening of the High-level Track - Appointment of the Chairman of the WSIS Forum 2021 7

Session One: Bridging Digital Divides 12

Session Two: Bridging Digital Divides 45

Session Three: Bridging Digital Divides 79

Session Four: ICT Applications and Services / e-Environment/ Climate Change 112

Session Five: Building Confidence and Security in the use of ICTs 140

Session Six: Digital Economy and Trade / Financing for Development and Role of ICT 174

Session Seven: Inclusiveness, Access to Information And Knowledge for All / Media 198

Session Eight: Knowledge Societies, Capacity Building and e-Learning 234

Session Nine: WSIS Action Lines and 2030 Agenda / Enabling Environment 259

Session Ten: Ethical Dimensions of Information and Knowledge Societies 286

Session Eleven: ICTs and Gender Mainstreaming 302



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

INTRODUCTION

High-Level Policy Sessions

The WSIS Forum 2021 High-Level Policy-Sessions took place from March 22 to March 26.

The High-Level Policy sessions gathered High-ranking officials of the WSIS Stakeholder community, representing the Government, Private Sector, Civil Society, Academia and International Organizations. Interactive policy statement sessions will be moderated by High-Level Track Facilitators (HLTFs), nominated and identified by each stakeholder type and were grouped around different themes identified as important by the WSIS Stakeholders during the open consultation process. The main role of the HLTFs was to capture the vision, identify emerging trends, opportunities and challenges shared by the leaders of their session.



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WSIS Forum 2021: Chairman



H.E. Mr. Maxim Parshin

Deputy-Minister, Ministry of Digital Development, Communications and Mass
Media

Russian Federation

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

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 Bridging Digital Divides		Dr. Olga Cavalli	Co-founder and Director	South School on Internet Governance	Civil Society
Two Bridging Digital Divides		Ms. Eleanor Sarpong	Deputy Director and Policy Lead	Alliance for Affordable Internet (A4 AI)/Web Foundation	Civil Society
Three Bridging Digital Divides		Ms. Amali De Silva - Mitchell	Coordinator	Dynamic Coalition on Data Driven Health Technologies	Private Sector
Four ICT Applications and Services /e- Environment/ Climate Change		Mr. William Njoroge	Head of Technology	OI Pejeta Conservancy	Civil Society

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

<p>Five Building Confidence and Security in the use of ICTs</p>		<p>Mr. Nino Letteriello</p>	<p>President</p>	<p>DAMA Italy and EMEA,</p>	<p>Private Sector</p>
<p>Six Digital Economy and Trade/ Financing for Development and role of ICT</p>		<p>Ms. Rachel Sibande</p>	<p>Senior Director, Country Outreach</p>	<p>Digital Impact Alliance (DIAL) at the United Nations Foundation</p>	<p>International Organization</p>
<p>Seven Inclusiveness, Access to Information and Knowledge for All/ Media</p>		<p>Ms. Meera Das</p>	<p>Project Lead</p>	<p>The Code to Change</p>	<p>Civil Society</p>
<p>Eight Knowledge societies, Capacity building and e-Learning</p>		<p>Dr. Asan Gani Bin Abdul Muthalif</p>	<p>Associate Professor</p>	<p>Qatar University</p>	<p>Academia</p>
<p>Nine WSIS Action Lines and 2030 Agenda</p>		<p>Ms. Kristin Little</p>	<p>Senior Manager</p>	<p>IEEE</p>	<p>Technical Community</p>

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

<p>Ten Ethical Dimensions of Information and Knowledge Societies</p>		<p>Ms. Kirthi Jayakumar</p>	<p>Founder</p>	<p>The Gender Security Project</p>	<p>Civil Society</p>
<p>Eleven ICTs and Gender Mainstreaming</p>		<p>Mr. Clifford Schmidt</p>	<p>Founder and Executive Director</p>	<p>AMPLIO</p>	<p>Civil Society</p>



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

High-Level Policy Sessions

Opening of the High-level Track - Appointment of the Chairman of the WSIS Forum 2021



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

Opening Remarks

Hello, everybody, and welcome to the opening of the High-Level Track of the WSIS Forum 2021!

Over the course of this week, you are going to hear from some of world's leading voices in government, the private sector, academia, civil society and technical communities on topics ranging from gender and cybersecurity to accessibility and emerging technologies for sustainable development.

I am pleased to say that this week's speakers come from inside and outside the world of technology – and from all regions of the world. I know we all long to get back together in person, and we will. In the meantime, the Forum's new virtual format has resulted in a better gender balance and generated new opportunities and increased participation, including from Small Island Developing States, developing countries and regions such as the Caribbean and Latin America.

The WSIS Community is growing bigger and your actions can make a big difference, even more so at a time when COVID-19 has stalled or reversed many of the development gains achieved



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

before the pandemic. The innovations showcased at the Virtual Exhibition we inaugurated just last week, for example, make me confident in the ability of this community to build the world back better in line with the WSIS Action Lines and the UN Sustainable Development Goals.

Of course, none of this would be possible without the strong support of our partners, starting with ITU's co-organizers of the Forum – UNESCO, UNCTAD and UNDP – as well as all the participating agencies of our extended UN family. We have now more than 32 sister UN agencies, and that number keeps growing. I also want to express my sincere thanks to our partners and sponsors, including our primary partners – the United Arab Emirates, the Kingdom of Saudi Arabia and Qatar. Your commitment has been unwavering and for this we are forever grateful.

Ladies and gentlemen,

After more than two decades of remarkable achievements in terms of ICT development, improvement in connectivity is dangerously slowing and the ICT services that have proved so essential since the start of the pandemic are still too expensive for too many around the world.

The task before us is both to connect all the unconnected and to drive the development of new technologies ranging from AI to 5G that will be central to advancing the WSIS Action Lines and the UN Sustainable Development Goals.

What will be accomplished this week and during the rest of the Forum will shape important events in the months to come, including the upcoming UN High-Level Political Forum. My hope is that we can continue to align the WSIS process with the SDGs and use this moment to strengthen the power of ICTs to curb the virus and hasten recovery across the world.

I look forward to our discussions and the concrete outcomes that will come out of the High-Level Track. And I hope to see you all active online – networking, learning and sharing – until 17 May for the final week of the WSIS Forum 2021.

With this, I would like to turn it over to the Deputy-Minister of Digital Development, Communications and Mass Media of the Russian Federation, Mr. Maxim Parshin, who will serve as Chairman of the WSIS Forum 2021.

Short visual congratulating Chairman.

I would like to thank Mr Parshin and his team, in particular Natalia, for their commitment and dedication towards this Chairmanship. I am grateful for the Chairman's guidance towards the 2021 WSIS Forum, he has been actively engaged with the Deputy Secretary-General, Mr Malcolm



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Johnson and the WSIS Secretariat. He also had a virtual coffee with his team of High-level Track Facilitators last Friday – motivating them for this important task of conducting the high-level policy sessions successfully.

Congratulations Mr. Chairman! I invite you to please give your acceptance speech.

Thank you.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Chairman of the WSIS Forum 2021 - H.E. Mr. Maxim Parshin, Deputy-Minister, Ministry of Digital Development, Communications and Mass Media

Dear Mr. Zhao, ITU Secretary-General, Excellences, Ladies and Gentlemen!

Greetings to all of you. As a representative of the Russian Federation, I am pleased to address you with gratitude for your trust and appointing me as the Chair of the WSIS Forum 2021.

I would like to express my gratitude to the Secretary General of the International Telecommunication Union, Mr. Houlin Zhao, and in particular acknowledge his efforts to organize this Forum as a platform for the exchange of knowledge, experience and best practices. I would also like to thank the Forum coordinating team and international agencies that are working closely to make the Forum a success.

In a pandemic the importance of the access to telecommunication/ICT has grown more than ever.

Despite the fact that 15 years ago, at the very beginning of the WSIS process, only 15% of the world's population had access to the Internet, now 54% of the world's population already has it. Nevertheless, the problem of the digital divide is not losing its relevance as the pace of expansion of connectivity has begun to decline.

Despite its many negative consequences, the pandemic has undoubtedly become the engine of digital transformation around the world.

In Russia during the pandemic, the transition of many administrative procedures into the online format accelerated. Many additional electronic government services were introduced to support the population and business. Remote work of the government, executive authorities, government bodies, and educational institutions was promptly re-organized.

I am convinced that it is important to continue efforts to increase the WSIS Forum effectiveness, since within this exact format representatives of all stakeholders can come together at large to identify trends, priorities and innovations to accelerate the implementation of the "ICT for Development" agenda.

I would like to note that there is not so much time left to take stock of our activities, and it is important to start preparation now for the UNGA high-level meeting dedicated to the general review of the implementation of the WSIS outcomes in 2025. It seems expedient to take advantage of the format of the Multi-stakeholder Preparatory Platform WSIS +10, which ensures



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

the participation of all stakeholders on an equal basis. The obtained results will be expedient to use in the framework of the traditional intergovernmental process of preparation for the UNGA high-level meeting in 2025. This approach will also make a significant contribution to the review of the implementation of the 2030 Agenda for Sustainable Development.

Thank you for your attention and wish all of us a successful WSIS Forum 2021!

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Session One: Bridging Digital Divides

Recording: <https://www.itu.int/net4/wsis/forum/2021/Agenda/Session/133>



Moderated by High-level Track Facilitator:

Dr. Olga Cavalli, Co-founder and Academic Director, South School on Internet Governance

WSIS Action Line Facilitator:

Mr. Stephen Beraux, Deputy Director, Telecommunication Development Bureau, International Telecommunication Union (ITU)

Speakers:

1. **Afghanistan** - H.E. Ms. Masooma Khawari, Minister, Ministry of Communications and Information Technology (MCIT)
2. **India** - H.E. Mr. Sanjay Dhotre, Union Minister of State for Education, Communications and Electronics & Information Technology, Ministry of Communications, India
3. **Turkmenistan** - H.E. Mr. Hajmyrat Hudaygulyev, Chairman (Minister) «Türkmenaragatnaşyk» (Turkmen Communications) Agency of Turkmenistan



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

4. **Zimbabwe** - H.E. Dr. Jenfan Muswere, Minister of ICT, Postal and Courier Services, Ministry of Information Communication Technology, Postal and Courier Services
5. **Iran (Islamic Republic of)** - H.E. Mr. Sattar Hashemi, Deputy-Minister, Ministry of Information and Communication Technology
6. **Cambodia** - Mr. Chenda Thong, Chairman, Telecommunication Regulator of Cambodia (TRC)
7. **Poland** - Dr. Jacek Oko, President, Office of Electronic Communications (UKE)
8. **eWorldwide Group** - Dr. Salma Abbasi, Chairperson and CEO
9. **HeHe** - Ms. Clarisse Iribagiza, Founder and CEO



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Executive Summary by High-Level Track Facilitator

The first part of the High-Level Policy Session was opened with addresses from Mr. Houlin Zhao, Secretary-General, International Telecommunication Union and the WSIS chairman His Excellency Mr. Maxim Parshin, Deputy Minister, Chairman of the WSIS Forum 2021, Ministry of Digital Development, Communications and Mass Media, Russian Federation.

The second part of the session was about access and use of the Internet in the world. About half the world's people access and use the Internet, the other half do not.

Enabling all the world's people to access and use the Internet—and removing digital divides—remains a challenge that needs to be addressed if the world community is to achieve the United Nations Sustainable Development Goals by 2030

The benefits of the information technology revolution are today unevenly distributed between the developed and developing countries and within societies. We are fully committed to turning this digital divide into a digital opportunity for all, particularly for those who risk being left behind and being further marginalized.

To set the context and relevant WSIS Action Lines, WSIS Action Line Facilitator, Mr. Stephen Bereaux, Deputy Director, Telecommunication Development Bureau, ITU informed how the Action Line(s) are being implemented by the respective UN Agencies. Mr Bereaux explained that the pandemic has accelerated to an unprecedented level the shift to online engagement making the 11 WSIS action lines even more critical for the achievement of the sustainable development goals. He expressed that “While many places in the world have access to exceptionally good connectivity, we must remind ourselves that for almost half of the world, this is not the case”. He explained that those who live and work in rural areas, even sometimes in developed countries, women, persons with disabilities, indigenous populations, or any other sector the digital divide persist, and many persons are unable to connect or connect meaningfully and participate in our online world.

The initiatives of the Government of Afghanistan in bridging the digital divide within the country were explained by Her Excellency Ms. Masooma Khawari, Minister, Ministry of Communications, and Information Technology (MCIT) of Afghanistan. She explained how the Government and Private sector in partnership work together to mitigate the challenges caused by the digital divide. In her view “there is an urgent need to develop ICT infrastructure in Afghanistan, to



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

promote economic growth and social benefits”. She explained that “6000 km of fiber is being installed connecting many provinces”, this will reduce the digital divide.

India is a country with diverse culture and a large population distributed throughout different geographic terrains, remote rural and island areas. His Excellency Mr. Sanjay Dhotre, Union Minister of State for Education, Communications and Electronics & Information Technology of the Ministry of Communications of India, detailed the challenges being faced for bridging the digital divide and how India is addressing these challenges through policies and programs in a holistic manner. He explained that “it is very important to increase connectivity in rural areas of the country, there are nearly 600,000 villages which are being connected through 400.000 kilometer of optical fiber cable”. In his view, the country is willing and happy to share these experiences with other countries.

Turkmenistan through the agency "Turkmenaragatnashyk" (Turkmen Communications) is leading several projects towards promoting the digital economy and bridging the digital divide. His Excellency Mr. Chairman of the Turkmen Communications Agency of Turkmenistan Mr Hajymyrat Hudaygulyev, Chairman (Minister) explained how the agency is promoting digitalization and the functioning of small grids and the connection with other networks. The aim of this network is to connect all places of the country and increase penetration of broadband services. A national data center is also being created, and the national satellite allows communications all over the country. Since early 2021 tariffs have been reduced by 50%.

Zimbabwe, as other countries, has faced the Covid-19 challenges. His Excellency Dr. Jenfan Muswere, Minister of ICT, Postal and Courier Services of Zimbabwe, explained the lessons learned in these times and how to be prepared in the event of future pandemics in terms of access to broadband services. To be better prepared for the future, Zimbabwe is extending its broadband infrastructure across the whole country and they are working in learning strategies. He explained that in order to optimize the mobile network they set up 1187 sites for the deployment of 2G 3G 4G and 5g services, reaching out to 1500 schools, and give connectivity to 1700 health centers.

The actions taken by the Islamic Republic of Iran to eliminate digital inequality and divide were explained by His Excellency Mr. Sattar Hashemi, Deputy-Minister, Ministry of Information and Communication Technology of the Islamic Republic of Iran. He believes that Governments must develop a strategic plan focused on investments to eliminate digital inequality. In his view “technology equipment and services also need to be affordable to facilitate access to communication and technology in various geographical sectors”. Strengthening digital skills and knowledge is relevant for people and girls, to promote digital literacy.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

The current situation of digital divides in Cambodia was addressed by Mr. Chenda Thong, Chairman, Telecommunication Regulator of Cambodia (TRC), Cambodia. The country has over 16 million total Internet subscriptions with a highly developed mobile telephony services, with 101% penetration rate. He expressed that there are different penetration rates between cities and rural areas, specially in the most eastern provinces of the Kingdom. He stressed that “regulators should focus on priorities on the digital agenda, with focus on the quality of infrastructure”.

As the world recovers from and adjusts to the new normal created by the COVID-19 pandemic, there is a higher level of demand for broadband speeds, more urgent need of connectivity to keep people safe and new innovative services and applications for continued functioning of societies. The possible actions that should be taken by regulators were explained by Dr. Jacek Oko, President, Office of Electronic Communications (UKE), Poland. Dr Jacek explained the impact of the COVID 19 pandemic on the national traffic. He also addressed the actions undertaken by the regulator in Poland (UKE) aimed at bridging the digital divides and supporting all vulnerable groups (e.g. children) in the learning process and thus reducing the negative impact of the pandemic on the education. He expressed that “our educational campaigns are focused on keeping people active and safe online with special attention being dedicated to children and teachers”.

Dr. Salma Abbasi, Chairperson and CEO, eWorldwide Group explained how the pandemic has impacted the digital divide and the possible actions that governments and other stakeholders are undertaking to solve this problem. She expressed concerns about the use of people's personal data by companies, use of digital identity and the gaps in data protection and security. In her view the disconnected people are getting further and further marginalized and the lack of digital skills and lack of confidence online and the lack of trust in government is causing an imbalance with the benefits that the digital transformation could bring: She emphasized that “we need to think globally and act locally, we need to form strategic alliances with systems and countries that have worked and proven to be successful, during the pandemic. We must ensure that we can bridge the digital divide, for the informal sector, for women and for the people with disadvantages and disabilities”.

HeHe is one of the most successful e-commerce company of Rwanda. The mission of the company is to digitize Africa's trade ecosystem. Ms. Clarisse Iribagiza is the Founder and CEO of HeHe, and she explained how the Covid-19 pandemic has affected the plans and objectives of this organization. She also dedicates time to support rural communities and women. In 2019 she was nominated as eTrade for Women Advocate by the United Nations. Based on her experience, she explained how to unlock the potential of the digital economy for all. The COVID pandemic brought the problem of closed borders with difficulties for distribution of food. In this scenario,



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

the work that they did during the pandemic was to focus on the agriculture supply chain which employs over 80% of their population and the majority of those being women. They started an initiative called “Abundance Village” which allows farmers and their farmland, to be digitized. In her view “these are some of the initiatives that I see could really have an impact in allowing communities to participate in the digital economy”.

As a closing remark the panel agreed that every citizen should have access to the Internet and there should be no privilege to it. Society must think globally and act locally and build confidence among the different uses of the Internet, promoting public and Private Partnerships.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

AFGHANISTAN



H.E. Ms. Masooma Khawari
Minister
Ministry of Communications and Information Technology (MCIT)

Questions:

What measures are being taken in Russia to support socio-economic processes and reduce the digital divide in a pandemic?

What, in your opinion, are the key prospects in bridging the digital divide at the global level?

I want to convey my gratitude and greetings to all the respected organizers and attendees in this forum, His Excellency Mr. Parshin, Mr. Zhao, Dr. Cavalli, and Mr. Bereaux; Good evening to you all.

I am truly honored to be present in this forum, and it's an excellent opportunity to discuss the significant challenges in the ICT sector and particularly to address the digital divide challenges. I suppose we could alleviate the existing and upcoming challenges through our mutual efforts.

To answer the first question,

The substantial impact of technological advancements on human life and how it changes and brings more levels of human welfare in various fields such as education, industry, agriculture, and health, is undeniable, and yet it continues to expand furthermore.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

The advent of prosthetic limbs, digital currencies, the internet of things, and edge computing are examples of such advancements.

Yet we are far behind, and due to various factors, Afghanistan has been deprived of such technological progress; hence there is an urgent need that such determinants (like technical, infrastructural, socioeconomic, geographical, age, skill, or gender factors) be alleviated.

Providing these two elements helps to solve our societies' problems and reduces the digital divide:

1. more affordable Internet price, and 2. digital literacy

In recent years we have made some efforts to reduce the digital divide in Afghanistan, for instance:

1. Ministry of Communications and IT developed the digital literacy promotion strategy, and the work on National Digital Transformation is in progress.
2. A fiber infrastructure of around 6000 km is installed all over Afghanistan that covers many provinces. Moreover, we are planning to develop the fiber infrastructure. We intend to connect the remaining nine provinces and by that means, MCIT would be able to improve the underlying infrastructure so that it could provide the basis for a fast, reliable, and cheap internet connection as we intend to connect Afghanistan with neighboring countries.
3. Additionally, the establishment of more IXPs, connectivity of government offices, hospitals, and schools across the country are among our priorities.
4. Thousands of people, especially the young generation, have been encouraged and empowered to pursue their careers in the IT and telecommunications fields, with the assistance of the World Bank, ITU, and other international partners. With the help of Ministry of Higher Education (MoHE) and the Ministry of Education (MoE), We also plan to bring significant improvements to the curriculums at schools and enrich the higher education programs so it complies with global standards.
5. Many workshops and training sessions were held to promote digital literacy and gender in the ICT sectors, and MCIT plans to increase such establishments.

And by the spread of awareness about the digital divide and the provision of solutions and guidelines for it, we could decrease this gap and promote a better digital life for our fellow citizens.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Concerning your second question:

Some of the important challenges caused by the digital divide include digital illiteracy, lack of access to the internet, poverty, high costs for internet access, and lack of reliable partnerships.

Liberalization of the telecom industry can be one of the most effective strategies that can help bridge the digital divide because no company can anymore benefit from the monopoly of industry, and with the provision of such an environment, the government can encourage competition among different Telecom companies.

MCIT is on the verge of signing an MoU with the Investment Facilitation Unit, so that more opportunities are provided regarding the public-private partnership in the development of the ICT Sector, and such cooperation can help us connect the provinces through national corporations and private MNOs.

Last Words

Mitigating the digital divide challenges is essential for the promotion of democracy, sustainable development, high literacy levels, economic prosperity, and social growth, especially in Afghanistan.

To bridge the digital divide it is crucial to ensure people have access to affordable internet and internet-enabled devices as these are the basis for achieving the desired levels of digital literacy.

This is our vision, and we are committed to delivering it!

To succeed, I hope that we get all the support from our international partners in this regard.

Thank you!

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

INDIA



H.E. Mr. Sanjay Dhotre
Union Minister of State for Education, Communications and Electronics & Information Technology
Ministry of Communications

Question:

India is a country with diverse culture and large population distributed throughout different geographic terrains, remote rural and island areas. What are the challenges being faced for bridging the digital divide and how India is addressing these challenges through policies and programs in a holistic manner?

His Excellency Mr मैक्सिम पारशीन (Maxim Parshin), Deputy-Minister, Digital Development, Communications and Mass Media

His Excellency Mr हौलिन झाओ (Houlin Zhao), Secretary-General, ITU

Excellences, Dignitaries, Ladies and Gentleman from across the globe, Hon'ble delegates and distinguished members from other Member States;

My Greetings and Namaste to all of you!

At the outset, I would like to congratulate ITU for hosting this session on "Bridging the Digital Divides" as part of World Summit on Information Society Forum 2021. I would also like to express my sincere thanks to ITU for this opportunity to share India's views on a very relevant theme



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

“Bridging the Digital Divides” – ‘This concern is at the core of every nations’ policy objectives for achieving inclusive socio-economic development.

We recognize the role of Information and Communication Technology (ICT) as an important tool for modernization and transformation of the industry, promotion of inclusive economic growth and stimulation of the national economies to meet the Sustainable Development Goals (SDGs). We believe that it is necessary to lay special stress on granting the access and connectivity to people living in rural areas spread across different geographies and terrains, as well as groups of persons with disabilities. India has undertaken development of a ubiquitous, resilient and affordable digital communication infrastructure and services in line with our National Digital Communication Policy 2018.

Excellencies, Covid-19 pandemic has given us an opportunity to leverage ICTs using robust, reliable and pervasive communication services. Though there are several challenges in a large country like India, we have taken several policy initiatives to effectively manage the pandemic situation using innovative solutions such as Arogya Setu platform to monitor and alert health status of citizens, CovidSavdhan system for targeted messaging in a specified area, Work from Home and Work from Anywhere, effective use of public Wi-Fi under PM-WANI scheme enabling effective service delivery for the citizens across the country.

The Vision of our Honourable Prime Minister Shri Narendra Modi is to leverage different technological solutions for development of the nation. For development of telecom infrastructure, our flagship program called **BharatNet** is conceived aiming at connecting the Unconnected. Nearly 6,00,000 villages are being connected through laying of more than 4,00,000 Km length of optical fibre cable. Through use of satellite communication services and submarine cable networks, small and remote islands of Andaman & Nicobar and Lakshadweep and other inaccessible areas are being connected through Universal Services Obligation Fund. I am happy to share that under these initiatives, nearly more than half of the villages are already connected and work is in progress in the remaining villages as per schedules.

I am also glad to share that establishment of the ITU Area Office and Innovation Centre in India is in the final stages which will provide immense opportunities for Academia, SMEs and Start-ups from all developing countries in this region to actively participate in the development of future technologies best suited for rural and remote areas which will bolster efforts towards bridging the digital divides in many developing regions of the world.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

India is happy and willing to share its best practices and knowledge with developing nations and regions for growth and development of ICTs for ultimate objectives of meeting the Sustainable Developmental Goals.

Thank you all once again. Namaste!

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

TURKMENISTAN



H.E. Mr. Hajymyrat Hudaygulyev
Chairman (Minister)
«Türkmenaragatnaşyk» (Turkmen Communications) Agency of Turkmenistan

Questions:

***Your vision on the Bridging the Digital Divide;
What projects are seen for the implementation of the digital economy in the agency
"Turkmenaragatnashyk"?***

Dear Chairman!

Ladies and Gentlemen!

Colleagues!

Let me express my sincere gratitude to the organizers of the World Summit on the Information Society (WSIS) Forum 2021 for the invitation to participate in this important event, which will indisputably serve for the further development of societies based on information and knowledge.

Without any doubt, the past thematic workshops, consultations and a number of other events, upcoming statements and discussions will be fruitful and effective, and relevant questions raised during the WSIS Forum will receive apposite answers. This will ultimately enable the member states of the International Telecommunication Union to contribute to the implementation of the Sustainable Development Agenda.

Dear Forum participants!



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Let me briefly outline the steps that *Türkmenaragatnaşyk* (Turkmensvyaz) agency is taking to bridge the digital divide, as well as the projects planned to introduce the digital economy.

A Concept for the Development of Digital Economy for 2019-2025, developed under the instruction of President Gurbanguly Berdimuhamedov, was adopted two years ago.

It is aimed at increasing the efficiency of all sectors of the national economy and social sphere of Turkmenistan through the widespread use of information technologies and provides for the creation of e-government, the improvement of digital education, healthcare, e-commerce, etc.

The President of Turkmenistan invariably points out that innovations are not so much the introduced technologies, but are the very process of their constant renewal, it is the path of further development of the entire national economic complex of the country.

Global technological progress is unstoppable, it penetrates into all areas of life, changes communications and organizational aspects of work, forms of education and leisure. To keep up with the progress, Turkmenistan studies and acquires advanced experience and best practices, focusing on creating its own digital model based not only on the import of ready-made solutions and know-how, but also on its scientific and technological potential.

Nowadays, the fastest and most noticeable changes come with digital technologies in the industrial and agro-industrial complexes, in trade, mass media and other spheres, where, with introduction of innovations, fully digitally equipped factories are built in our country.

Our department - "*Türkmenaragatnaşyk*", the agency of Ministry of Industry and Communication, - is systematically carrying out work to promote digitalization and to ensure the smooth functioning of smart grids, their connection with each other and with the world.

This activity covers a wide range of areas, including the development of legislative support for the regulation and expansion of national network space and a range of Internet services.

To ensure the security of the rapidly developing national information systems in the country, a Cyber Security Service has been created within "*Türkmenaragatnaşyk*" under the instructions of the Honorable President Gurbanguly Berdimuhamedov.

A new member of the government has been appointed to the Cabinet of Ministers of Turkmenistan – a Deputy Prime Minister, who is also in charge of cyber security.

The country's educational institutions are introducing the most modern methods of training highly qualified personnel to service digital networks. A range of disciplines was introduced in



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

various fields, including logistics operations; information security of telecommunication systems; computer networks and others.

The tasks set by the President Gurbanguly Berdimuhamedov for an intensive industrialization of the country can be solved only with active acquisition of tremendous volumes of up-to-date world information and operational data exchange. In other words, the progress of the XXI century is inconceivable without the advanced development of communication networks and communication channels.

In this field, Turkmenistan has launched a whole block of large-scale projects aimed at creating a comprehensive communication system based on advanced technologies, increasing the volume, quality and range of communication services along with the penetration of broadband Internet access to the most remote corners of the country.

“Türkmenaragatnaşyk” has developed a draft of a Unified Identification and Authentication System, which, in order to provide electronic services, is designed to ensure authorized access to the state electronic resources for the participants of information interaction (citizens-applicants and officials of executive authorities).

Access is provided after completing the registration procedure on the Unified Portal of State Services of Turkmenistan - e.gov.tm.

One of our projects is aimed at developing mobile communications in the country. Taking into account the growing demand from the population, the national operator *“Altyn Asyr”* has to reach full and widespread provision of Turkmenistan with mobile communications, including 4G, and in the near future, 5G high-speed Internet and other mobile communication services. Affordable broadband Internet creates an opportunity for further promotion of distance education and telemedicine in the country.

Another project is aimed at the development of wired telephone communications. And not mere digital telephone stations, but modern ones that support the standards of the new generation - NGN (Next Generation Network), when telephony, IP-television, and the Internet are supplied from one telephone point.

Our national communication satellite *“Türkmen Älem 52.0E”* operates in many industries, including agriculture, where digitalization is also introduced along with new equipment from the world's leading manufacturers.

President Gurbanguly Berdimuhamedov emphasizes that resource-saving technologies that ensure stability, profitability and efficiency of agricultural production, as well as constant modernization of the existing capacities of the agro-industrial complex, are the basis for the



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

sustainable development of the country's agriculture. And the digitalization of the industry, like that of the entire country, will be the key to further prosperity of the Turkmen people.

Guided by the instructions of the Honorable President Gurbanguly Berdimuhamedov to bring the domestic agro-industrial complex to an innovative level, digital systems are being introduced into the agricultural industry, which makes power-driven work highly productive.

Thus, within the framework of the First Caspian Economic Forum, held in the Avaza National Tourist Zone, the following was signed: The concept of transferring agricultural machinery of the Ministry of Agriculture and Environmental Protection to a telematic digital system in three stages in 2019-2022 on the basis of a Memorandum of Understanding between The Government of Turkmenistan and "John Deere Walldorf".

In addition, a Memorandum of Understanding was signed between the Ministry of Agriculture and Environmental Protection of Turkmenistan and "John Deere Walldorf" on the implementation of a digital electronic control system in agricultural machinery and equipment for the period of 2020-2030.

Currently, "John Deere" not only supplies our country with high-performance agricultural equipment supplied with telematics, but also modernizes the agricultural equipment of the John Deere and Claas brands purchased earlier by Turkmenistan, installing telematics sensors.

A control center, where a real-time data on the equipment used in agricultural campaigns is delivered, has been launched in the administrative building of the Ministry of Agriculture and Environmental Protection of Turkmenistan.

A similar center - but at the regional level - is located in the city of Anau in the Akhal velayat (region). Also, in the velayat (regional) and etrap (district) centers, local observation points connected to a single nodal server are created, equipped with facilities for collecting, storing, analyzing and processing data.

To provide qualified personnel to manage the telematic system and its tools, special courses are included in the curriculum at the Turkmen Agricultural University for students enrolled in agricultural mechanization.

Thus, the development of wireless communications and satellite navigation systems in our country will also stimulate the agricultural sector, which is switching to precise, "digital" farming using telemetry systems. They are among the most innovative technologies in the field.

Currently, large-scale work is being carried out to introduce digital technologies into the banking system of Turkmenistan. Digital transformation will expand the range of banking services and the



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

capabilities of the national payment system, which are provided to customers, to increase the competitiveness of banks.

Multi-service billing platforms are being installed in the Ashkhabat city telephone stations and there is a need to expand such platforms in remote settlements. Modern communication services will be available to all rural residents, improvement of social conditions of which is determined by the President Gurbanguly Berdimuhamedov as the main task of the Program for the state regional development in Turkmenistan.

Another project aimed at the development of electronic services is the creation of a national data center - a center for storing and processing data, placing server and network equipment and connecting subscribers to Internet channels.

All this will create an opportunity for more efficient provision of various kinds of services to sectoral departments. For example, it will provide broad opportunities for developing the transport and logistics system, Internet commerce and Internet marketing at a higher level, conducting remote interactive multimedia training sessions, improving the healthcare system, etc.

All this would have been impossible without the launch of the national satellite *Türkmen Älem 52.OE*, with the help of which high-speed Internet services have now been established in remote areas of the country. This satellite broadcasts 11 local and 42 foreign TV and radio channels.

In recent years, the country has built hundreds of small telephone exchanges in rural areas. All of them entered the national network, and some of them were connected via our national communications satellite.

Summarizing the results of the work done and the outlined prospects, it can be noted with confidence that Turkmenistan has thoroughly approached the task of transitioning to a digital economy. Improving the legal framework, creating the necessary infrastructure, favorable conditions for the development of IT companies, solving staff issues and many more will certainly accelerate the achievement of the goals set by the Concept.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

ZIMBABWE



H.E. Dr. Jenfan Muswere
Minister of ICT, Postal and Courier Services
Ministry of Information Communication Technology, Postal and Courier Services

Questions:

What lessons has Zimbabwe drawn from the covid 19 era about the digital divides?

What would you recommend to other administrations so that they would be better prepared in the event of future pandemics, in terms of access to broadband services by their citizens?

We have learnt many lessons from Covid 19 about the digital divides, irrespective of whether the digital divide is between countries, persons of different economic background, genders, rural and urban populations, or institutions.

COVID-19 has made people and businesses rely more on technology. Governments, households, hospitals, businesses and schools, among other institutions, were getting by reasonably well, with little to moderate technology use, until January and February 2020. Then came Covid 19, and everything changed and so did our concept of the digital divides and their nature. We have drawn a number of lessons from our experience during COVID-19.

Firstly, we learnt that every member of society now needed a computer to lead a semblance of comfortable and normal life. Secondly, that it had become imperative to bridge the digital divide between the Haves and Have Nots. Reliable internet infrastructure and service, coupled with appropriate skills being a prerequisite.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

For developing countries, including Zimbabwe, communal internet access points that previously assisted with bridging the main digital divide of access, became of limited use, due to social distancing rules and restricted movement and lockdowns, as well as the risk of users getting infected by COVID-19, due to shared use of gadgets.

Then the lessons multiplied, but I can only cover a few here, due to limited time and these are:

- That the unprecedented closure of schools revealed a serious digital divide between not only students from more affluent and less affluent families, but between better electronically resourced learning institutions who quickly switched to online instruction and those less electronically resourced, who struggled to do so. Discrepancies in level of access to ICTs between students, created a digital divide between students from the same schools.

In terms of health, many people who developed other illnesses or who had existing illnesses, became afraid of visiting doctors or seeking treatment from hospitals, for fear of catching COVID. Those with access to connectivity resorted to online consultations with their doctors, while those without, could not, giving rise to digital exclusion in health, another digital divide.

COVID-19 made online shopping of groceries and other basic necessities even more necessary. Those with access to ICTs moved on to online shopping for necessities and those without access, could not and that became a digital divide of significance.

On the social scene, religious services and other social amenities which had always accommodated people from different economic backgrounds, now in the wake of lock downs and movement restrictions, only accommodate those with access to the internet through virtual means, thereby creating a spiritual digital divide. One that could have far reaching consequences on some people's mental health

The digital divide, between big businesses that are more technologically empowered and small business enterprises, with limited access to technologies became very pronounced in terms of production, marketing and service delivery, let alone access to ICT enabled customers.

The biggest lesson learnt was that COVID-19 and any subsequent pandemic, was derailing the race towards meeting the Sustainable Development Goals on eradicating poverty and hunger, good health and well-being, Quality education, reduced inequality and decent work and economic growth, as everything has become virtual and the world including Zimbabwe, had been caught by surprise and there is need to be better prepared next time.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

To be better prepared for the future, Zimbabwe is extending its Broadband infrastructure across the whole country, has unveiled an e-learning strategy and is strengthening its e-health delivery systems. To this end, 13 more Telecommunication tower sites are to be constructed, Expand and optimise the mobile network by setting up 1187 sites for the deployment of 2G,3G,4G and 5G services, 1500 schools are set to be equipped with e-learning equipment and connectivity; 1700 health centres and 20 local authorities are set to be connected. 16 smart agriculture projects are expected to be funded, All, in 2021

It is our recommendation therefore, that every administration needs to understand:

- That we have not seen the last of the pandemics. Their contagious nature makes isolation of people an integral way of containing them.
- That given the need for such isolation, every country needs to develop robust telecommunication infrastructure, that serves every part of the country, so that no citizen will ever be left unconnected in times of pandemics.
- That there is need for greater cooperation among neighbouring countries and the ITU community at large, in order to achieve economies of scale in developing ICTs
- That the focus should be in connecting every citizen, rather than a few privileged communities.
- That it takes innovative Policy making and a robust broadband plan, such as the one developed by Zimbabwe, to connect all its people.

Zimbabwe will leave no stone unturned, as it seeks to digitally transform itself and so should other administrations. The time for individualism or connecting selected well to do communities, is over. As one of our saying in Zimbabwe goes, “Iwe neni tine basa” (“You and I have a job to do”). Let us roll up our sleeves and connect the unconnected.

I thank you.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

IRAN



H.E. Mr. Sattar Hashemi
Deputy-Minister
Ministry of Information and Communication Technology

Missing Statement

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

CAMBODIA



Mr. Chenda Thong
Chairman
Telecommunication Regulator of Cambodia (TRC)

Questions:

What is the current situation of digital divides in Cambodia?

What is your perspective on bridging the digital divides in Cambodia and the developing countries?

H.E. Mr. Houlin Zhao, Secretary-General of ITU

H.E. Mr. Maxim Parshin, Chairman of the WSIS Forum 2021

Your Excellencies, Ladies and Gentlemen,

It is a great honor and pleasure for me to attend the WSIS Forum 2021's High-Level Interactive Policy Session. This is a first time for me to represent Cambodia as the telecommunication regulator.

Distinguished delegates,

In today's world, Telecommunications/ICT has become remarkably pervasive, playing a crucial role in every part of our lives. It has been an influential factor in enabling countries to achieve socio-economic growth, thus pushing governments to adopt the new digital agenda and policies. This has become even more prominent during the COVID-19 pandemic. However, the questions



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

remain, particularly on the digital divides between the more and less connected countries, communities, and people.

Question 1: What is the current situation of digital divides in Cambodia?

Cambodia's communications market has entered the post-4G era, with 4G penetration rate exceeding 70% and Data of Usage exceeding 25GB per user per month, ranking the top in the Asia-Pacific countries . At the end of 2020, the Telecommunication Regulator of Cambodia records over 16 million total Internet subscriptions, which is equivalent to 101% population penetration rate. 98.95% of these subscriptions are contributed to by mobile Internet subscriptions. Breaking down into localities, a gap of accessing to mobile 4G service between the city and rural communities is evident. For instance, the Phnom Penh capital city has the mobile 4G service penetration rate at 204%, comparing to the average of 33% for people living in the 4 most remote eastern provinces (Kratie, Stung Treng, Mondul Kiri and Ratanak Kiri) of the Kingdom .

Question 2: What is your perspective on bridging the digital divides in Cambodia and the developing countries?

The policy makers and the regulators should focus their priority on the digital agenda at the highest level possible. Some action items to be realized include:

- Continue to develop and improve access to Telecommunications/ICT infrastructure. Regardless of the quality of infrastructure in the country, people, particularly those in rural areas, cannot easily access it due to the cost, limited awareness of the benefits and value of Telecommunications/ICT, and lack of last mile coverage . Mobile broadband service, which tends to be cheaper than fixed broadband service, has increased rapidly and provided the most common means of accessing the Internet and online services.
- Broaden the pool of Telecommunications/ICT literate people. Telecommunications/ICT literacy framework should be established to:
 - (1) promote citizen's capability for managing, learning, analyzing and creating information,
 - (2) provide a cooperation mechanism among the concerned Ministries-Institutions to diversify Telecommunications/ICT curriculums for tertiary education, secondary education, primary education, and other vocational training education, and



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

(3) raise the awareness on the Telecommunications/ICT benefits to all individuals, especially to youth and women, and through workshop and publication or by other methods across the whole of the region.

Thank you!

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

POLAND



Dr. Jacek Oko
President
Office of Electronic Communications (UKE)

Questions:

As the world recovers from and adjusts to the new normal created by the COVID-19 pandemic we have already observed higher level of demand for broadband speeds, more urgent need of connectivity to keep people safe and new innovative services and applications for continued functioning of societies. What actions have been and should be taken by regulators to ensure the connectivity for all?

What are the actions undertaken by the regulator in Poland (UKE) aimed at bridging the digital divides and supporting all vulnerable groups (e.g. children) in the learning process and thus reducing the negative impact of the pandemic on the education?

Good afternoon everyone. Thank you, Mr. Chairman, Excellences, ladies and gentlemen. Thank you for inviting me.

The COVID-19 has impacted all spheres of our life. Also, it has had a significant impact on electronic communication markets. At the beginning of the pandemic the demand for digital services increased and consequently the requested capacity for electronic communications networks rose significantly. In Poland, in March 2020, operators observed a significant increase in the number and duration of voice calls (40%) as well as in data transmission (30%), compared to the pre-pandemic months of 2020. Connectivity has been crucial for companies as well as for



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

individuals in all age categories. At the beginning of the pandemic, it was critical to maintain functionality of networks. Later when the stability of networks was preserved, the increased demand and use of networks and services was the new norm. The crisis has proved that activities of all stakeholders (policy makers, regulators, operators, regional and international organizations) are important to properly react to the situation. In Poland, UKE - regulator, has cooperated actively with the industry to guarantee service continuity and prevent or remove the effects of network congestion. UKE regularly collects data from operators on internet traffic and has also participated in monitoring exercise launched by BEREC and the European Commission to monitor connectivity in Europe. UKE together with the Minister of Digital Affairs and the industry signed the special agreement and based on that we cooperated in the field of protection of internet usage against phishing sites, including for personal data. Operators in Poland have applied exceptional measures such as increase of data caps, extended invoice payment for elderly people, special free broadband internet access offers for teachers and healthcare professionals or improved electronic communication between providers and end-users. In addition, UKE has launched special consumer awareness campaigns urging the use of digital services and informing about their potential risks. The pandemic has confirmed that regulators play an important role not only in area of maintaining functionality of the network but also in the development of broadband and very high capacity networks which are capable of dealing with increased needs of end-users.

These advanced fixed networks should be complemented by new 5G mobile network. In some countries mobile networks are extensively used and have proved to work efficiently during the pandemic. 5G development is our high priority in Poland as the pandemic has shown that there are still actions to be taken to improve connectivity. There is a need towards pro-investment incentives for deployment of high capacity networks and towards rapid deployment of new 5G network.

Last year brought positive changes noticed by 72% consumers in Poland, such as increase in the number of offers and dynamic development of emerging technologies.

The pandemic has clearly shown one aspect of the digital divide. Only households connected to very high capacity networks are NOT digitally excluded. Such networks are capable of dealing with increased needs of a typical household and are necessary in order to enable remote work as well as online education that's why UKE activities responding to the pandemic goes beyond support for the development of the infrastructure and keeping quality of services. An important part of UKE's actions are educational campaigns aimed at keeping people active and safe online. Special attention is dedicated to children and teachers, who need to be equipped with digital



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

skills necessary to continue teaching and learning in a safe way. According to the survey conducted by UKE almost 60% of teachers agreed with the opinion that there is too much inappropriate content on the Internet. That's why UKE continues its online training sessions for children on safety in internet. Additionally, this year UKE started to organize webinars for teachers. UKE training teams discuss with teachers such phenomena like hate speech, games addictions or technologies that teachers can share with students. In my opinion WSIS Forum is an important platform for discussion and I hope that we will be able to meet personally in Geneva next year.

Thank you for your attention.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

EWORLDWIDE GROUP



Dr. Salma Abbasi
Chairperson and CEO

Questions:

How has the pandemic impacted the digital divide?

How can governments and other stakeholders address the widening digital divides?

Secretary General Houlin Zhao, Chairman, Your excellencies, honorable ministers and ladies and gentlemen, Good morning,

Please let me begin by congratulating the ITU and the WSIS team for organizing WSIS 2021 online. I sincerely appreciate the invitation to participate on this panel with these distinguished speakers.

The corona virus pandemic has rapidly spread across the globe, ignoring all boundaries leaving a trail of devastation in its track. Sending shockwaves around the world, exposing every kind of “Divide” in countries and societies alike and highlighting fractures in our global alliances. The pandemic has also surfaced dangerous consequences of not having inclusive and well-integrated digital policies and frameworks holistically addressing the requirements ‘across and between ecosystems’ of supply chains from every sector, including education systems which have broken down in many countries.

Furthermore, COVID-19 has also demonstrated the need and importance to ‘think and act inclusively’ for all the diverse communities, documented and undocumented, and the need to



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

rapidly build digital capacity and resilience, with equity for all, within the fabrics of our diverse societies, particularly catering for the aging population and people with unique needs.

The pandemic has impacted the complex 'Digital Divides' in different ways, depending on where you live, your environment, your personal circumstances and your gender.

However, COVID-19 has broken barriers to 'Digital Adoption', almost overnight everything shifted 'Online' – clear examples of this can be seen in how COVID-19 was managed, mitigated and responded to;

1. Governments communicated health and safety messages online, tracked the pandemic hotspots using heat maps, testing, tracking and tracing applications, delivered vital medicine using drones and, in some cases, treated COVID patients with robots. Social well-fare and relief aid distributed through online systems and Some countries found creative ways to reach the unbanked using block chain
2. Large co-operations, industries and businesses, moved all of their operations and transactions online
3. Education institutions have moved online where possible, with varying degrees of success
4. Even our socializing moved into 'social media'

This resulted in boom for FB, Google, MS, ZOOM, Amazon, Apple and Netflix to name a few of the big winners.

It also highlighted the huge cracks in

- 1) Infrastructure: broadband connectivity missing the last mile, data centres, security and safety system, rural vs. urban reliable bandwidth
- 2) Data and Information Accuracy and security – inability to assure accuracy of information, misinformation, fake news and propaganda – causing authentic vital information to be ineffective in many case - Profiteering of DATA
- 3) Digital Identity and privacy personal data exploitation, manipulation, unethical targeting of vulnerable communities, women and children and mental health



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

- 4) Accessibility and affordability for everyone – families are making decisions of “Food vs Internet” Difficult decisions

(Poorest of the poor and vulnerable communities such as Migrants, Refugees, Elderly and PwD were lockout and isolated leaving them helpless and even more vulnerable and disconnected)
- 5) Lack of Digital Skills and confidence to engage safely online and conduct work in the new normal. The boom in online predators and criminals! Risks and vulnerabilities.
- 6) Lack of Trust in Governments

There’s lots to say but in the interest of time, I will stop here.

However, what should Governments and stakeholders do to address the expanding digital divides;

- 1) Think globally and act locally
Understand what other countries did right? What systems worked? In that context, last year we jointed hands with the IEEE to organize a series of webinars focusing on building digital resilience to support COVID-19 mitigation, response and recovery efforts to create a platform for knowledge exchange, policy reforms, solutions and collaborations. This enabled countries to formalize strategic alliance with countries that got it right.
And understand ‘How they built trust?’ such South Korea, Estonia and India’s Adhere system
Make a commitment and build a framework to earn and establish a ‘Trust infrastructure’. Without gaining people trust and confidence, digital future will not work. We can see some great examples from South Korea, empathy for each other and Estonia – transparency help build trust.

Understand and focus on your national priority sectors what’s THE ‘USPs’

Create an enabling environment for entrepreneur, start-up and local SMEs

Design and target the opportunities, risks and challenges at the local Government and village level
- 2) Put Human resilience at the core of everything, create Human centric policies!!!



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- 3) Fast track the Reform of policies, bills, laws and regulations in consultation with all stakeholders, bring in the young fresh minds, allow a true paradigm shift to occur – listen to women, informal sector workers, entrepreneurs and gig workers. Ensure inclusivity of 50% Women, Informal sectors. Creatively work with development banks, agencies and private sector

Introduce a variety of new digital regulations and taxes particularly for industry Giants and ensure data protection, proportionate taxation of profits from the “Monetization of Data” re-investment funds for social development, reskilling, R & D and job creation and hiring schemes incentives

- 4) Create effective evidence-based interventions and initiatives that will have sustainable impact at the grass roots - This will have real impact on the GDP and people’s wellbeing Measure their impact and adjust – think fluid and be agile.
- 5) Create a living and truly diverse stakeholder engagement framework “Public Private People Partnership” and feedback system that allows Governments to collaboratively understand and prepare their “National Human resource Development plans” Human capital is the best resource for every nation.

We need to understand and respond to the future labor demands, opportunities and adjust the skills and capability for future of work (reskilling and right skilling)

Develop ‘National Entrepreneurship Development’ for MCs for the ISDB.

The highlighted the critical components required to nurture and promote innovation, creativity and entrepreneurial spirit particularly risk task and that it is OK to fail and restart. This seems very relevant today as we try to restart. Understand and Revise

Launch creative initiatives focusing on holistically empower and engagement of youth and women

We have just launched an initiative in Luton ‘WIT4SDGs’ to address the gender digital divide in the UK to help fast track economic recovery from the pandemic which focuses on;

- 1) personal empowerment,
- 2) digital empowerment
- 3) economic empowerment

Creating unique inter-generation coaching and mentoring system between, “ Grandmothers, Daughters and Granddaughters” This will not only fast track digital skills



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

but also reskill the elders and enable a flurry of new localized start-ups and entrepreneurs at the grass roots, but it is designed in harmony with the cultural, social and traditional norms

In (Nigeria) we are launching 'RSAI' also focusing on holistic empowerment but also leveraging the opportunities in rural communities by creating a series of Smart village industry clusters that will integrate digital technology across the ecosystem creating a series of diverse jobs for the youth with diverse abilities and interests. Focusing on rural development, agriculture value chain building resilient food systems and the green economy, while supporting the SDGs.

This will help Governments to fast track their ability to Rebuild and RESTART within the new normal caused by the Big Rest from the pandemic and rebuild their commitments to the SDGs. We need to all work together to keep humanity safe!

Thank you very much for your time.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

HEHE



Ms. Clarisse Iribagiza
Founder and CEO

Questions:

Dear Clarisse, you are the Founder and CEO of one of the most successful e-commerce company of Rwanda, called HeHe. The mission of the company is to digitize Africa's trade ecosystem. Can you tell us how you are going about it, and how the Covid-19 pandemic has affected your plans or objectives?

As part of your activities, you dedicate time to support rural communities and women. In 2019, you have been nominated as eTrade for Women Advocate by the United Nations. In your views, what can help unlock the potential of the digital economy for all?

Statement Missing

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Session Two: Bridging Digital Divides

Recording: <https://www.itu.int/net4/wsis/forum/2021/Agenda/Session/154>



Moderated by High-level Track Facilitator:

Ms. Eleanor Sarpong, Deputy Director & Policy Lead, A4AI/Web Foundation

WSIS Action Line Facilitator:

Dr. Bilel Jamoussi, Chief of the Study Groups Department, Standardization Bureau, International Telecommunication Union (ITU)

Speakers:

1. **Jamaica** - H.E. Dr. Daryl Vaz, MP, Minister, Ministry of Science, Energy & Technology
2. **Trinidad and Tobago** - H.E. Ms. Allyson West, Minister, Ministry of Public Administration and Digital Transformation
3. **Chile** - H.E. Ms. Pamela Gidi, Vice Minister, Under Secretariat of Telecommunications



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

4. **Nicaragua** - Ms. Nahima Díaz, Director General, Instituto Nicaraguense de Telecomunicaciones y Correos TELCOR
5. **Saint Vincent and The Grenadines** - Mr. Apollo Knights, Director, National Telecommunications Regulatory Commission
6. **United States** - Ms. Jessica Rosenworcel, Acting Chairwoman, Federal Communications Commission
7. **Uruguay** - Dr. Mercedes Aramendia, Presidenta de Directorio de URSEC, UNIDAD REGULADORA DE SERVICIOS DE COMUNICACIONES (URSEC)
8. **Peru** - Mr. Luis Pacheco Zevallos, Manager of Enforcement Directorate, Telecommunications Regulatory Agency – OSIPTEL
9. **DIAL** - Ms. Kate Wilson, CEO



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Executive Summary by High-Level Track Facilitator

Opening remarks for this session were given by Mr **Malcolm Johnson, Deputy Secretary General, ITU**. Over half of the world's population around 3.7 billion people are still unconnected and most of these live in the rural areas and remote communities. In addition, ITU statistics show over 90% of the world's population live in places covered by at least 3G but many find broadband unaffordable. The digital divide falls along gender, geography and income levels amongst others. Bringing the unconnected people online and giving them meaningful connectivity in addition to providing relevant content and digital skills, is more important now than ever.

Setting the context and relevant WSIS Action Lines, Dr. Bilel Jamoussi, Chief ITU International ICT Standards Department, narrated how partnership and collaboration during his time at Telecom Firm Nortel in Tunisia spurred an evolution in the ICT sector which resulted in narrowing the digital gap. Such collaborations are even more significant now during the pandemic which has highlighted the critical importance of ensuring that all citizens and governments are able to benefit from digital transformations. In response, the ITU standardization is reinforcing new partnerships which are essential to achievement of the 2030 agenda for sustainable development. Dr Jamoussi encouraged stakeholders to engage in the various collaboration ITU and WSIS ongoing collaboration platforms and initiatives such as the Financial Inclusion Global Initiative (Figi), Digital Currency Global Initiative, United for Smart, Sustainable Cities Initiative and the AI for Good Global Summit.

The panel discussion kicked off with Hon. Min. Daryl Vaz, Minister of Science, Energy and Technology of Jamaica who mentioned that the ultimate intention of his country is to **make Internet access a public good** and ensure universal access. Accordingly, a national broadband strategy has been launched to provide Internet connection to every house by 2025 with key considerations being affordability and access, especially for the unserved and the underserved. A national broadband network will be deployed, *"such that no citizen is left behind."*- said Hon. Min. Daryl Vaz

H.E. Ms. Allyson West, Senator and Minister of Public Administration and Digital Transformation of Trinidad and Tobago highlighted how **partnering the private sector** was helping her country address the digital divide mainly along geography and social lines. She referenced the "Vision 2030 Sustainable Development Plan" which inspired partnerships with ISPs and the private sector to subsidize devices (particularly for persons with disabilities) and portable Wi-Fi devices to students for reliable Internet access to facilitate distance learning.



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The **power of infrastructure sharing** in addressing the digital access gaps was raised by H.E. Ms Pamela Gidi, Vice-Minister and Undersecretary of Telecommunications of Chile. In a plan to double fibre access, Chile initiated two projects - first, the national optic fiber project to impact more than 2 million people; and the law of national domestic roaming, which aims at expanding the coverage of mobile telephony and mobile Internet services in more than 3300 locations within the country. We were reminded of how the COVID-19 pandemic also affects women disproportionately with a staggering 88% of women forced to leave the workforce in Chile, because there was no connectivity for them to work from home. By targeting such women with special interventions, Chile is hoping to close the digital gender gap very quickly.

Intersectoral collaboration in closing broadband infrastructure gaps is equally important as aptly highlighted by Nicaragua, under its National Human Development Plan, which aims at improving basic services such as drinking water, electric power, road infrastructure and telecommunications for households. The country saw exponential growth in internet connectivity as it was paired with investments *in roads and electricity*. Director General Diaz, Director General of the National Police of Nicaragua, reiterated why this was a priority: “for us in Nicaragua, internet connectivity contributes to the reduction of poverty and inequality, by reducing the information and communication gaps.”

Moving on to St. Vincent and the Grenadines, Mr Apollo Knights, Director of the National Telecommunications Regulatory Commission (NTRC), highlighted how the **lack of affordable devices** contributes to the digital divide. According to him, despite his government’s policy of zero tax on computers, the penetration level of computers at household level remains at 51% compared to excess of 80% for major household appliances, such as televisions, fridges, etc. In addressing this challenge, the country is exploring improved market competition for devices through a partnership as well as creative financing solutions and payment systems for consumers including credit facilities with affordable interest rates.

We learnt more about the “homework gap” via Ms. Jessica Rosenworsel, USA’s Federal Communications Commission Acting Chairwoman, who explained how many students have fallen behind in schoolwork as learning migrated online due to the pandemic. US data shows that as many as 16.9 million children in the country fall into the homework gap. Initiatives such as an emergency broadband benefit are in place to help families struggling to pay for Internet service during this pandemic. In addition, there are specific interventions to connect marginalised communities such as tribal lands with affordable broadband. To close the gap, reliable data is crucial. “We need accurate maps, we need up to date data, and this will make sure our efforts to bridge the digital divide are focused on the right places.” - Ms Rosenworcel concluded.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

From Dr. Mercedes Aramendia, president of the Uruguayan Regulatory Unit of Communication Services (URSEC), we were reminded of the importance of inclusivity in tackling the digital divide. Given that the digital divide is complex and multi-dimensional with economic, social, political and cultural aspects, it was therefore essential to identify those inequalities between regions, mainly between the urban and rural areas and social groups of the population to look for inclusive solutions. She has also highlighted the need for respecting diversity in all the forms such as culture, languages, traditional beliefs and religions in content creation, policies, regulations and decision making. In addition to pursuing inclusive collaboration, policies and regulations should be agile.

New frontier technologies and Universal Service Funds (USFs) are key to closing the digital gap. These should complement the traditional deployment of 4G LTE support for wireless communications. *“We need to look for the best business models and combinations that work”* said Mr. Luis Pacheco Zevallos, Manager of Enforcement Directorate, Telecommunications Regulatory Agency - OSIPTEL, Peru. In addition, he mentioned that it was relevant to improve universal service fund policies so that the projects financed by these funds, incorporate new elements to achieve scalability.

Finally, Kate Wilson, CEO of the Digital Impact Alliance (DIAL) showed the relationship between collaborating creatively towards finding solutions for product and policy challenges in addition to pricing, procurement and investment capacity issues within the ecosystem. In her words, *“we need to build greater momentum and investment and really the policy and evidence base around why financing and public procurement for digital goods actually needs to be accelerated”*.

In conclusion, the session summed up the following ways through which the digital divide can be collectively addressed: (i) identifying the various digital gaps; (ii) obtaining clear standardised data; (iii) collaborating across sectors and with beneficiary communities to develop inclusive solutions; and (iv) pursuing creative funding sources backed by agile policy and regulatory frameworks to make it work.

Contributions from the distinguished panellists were followed by a series of questions and answers. Some of the questions were on how to improve collaboration at the regional level e.g., using ITU’s regional platform in the Americas and how to strike partnerships. The session was very engaging and the genuine interest to partner and learn from other panellists is a clear gauge of the relevance of this topic.

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INTERNATIONAL TELECOMMUNICATION UNION (ITU)



Dr. Bilel Jamoussi
WSIS Action Line Facilitator
Chief of the Study Groups Department
Standardization Bureau

Excellencies, colleagues, and friends,

It is a great pleasure to join you today to discuss where we stand in our work to bridge digital divides.

I am Tunisian and Canadian. I remember the 2005's WSIS in Tunis like it was yesterday. I was there representing Nortel, one of the world's biggest telecoms companies.

Nortel was an unsinkable ship, that sank. Nortel's margin over its competitors narrowed very fast. That divide disappeared faster than anyone could have predicted. It is one of many examples of how fast the ICT industry can transform.

The ICT industry continues to transform at an extraordinary pace. And all sectors are now transforming with the help of ICTs.

From Nortel, I joined ITU's standardization bureau, where we continue to see ITU standards bridging divides to the benefit of economies and societies worldwide.

Different industries are entering new shared space, with an associated convergence in the responsibilities of different regulatory authorities.

Inclusive standardization processes help us to move forward together.



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ITU standards now support digital transformation in fields from energy and transportation to healthcare, financial services, education, agriculture, and smart cities.

The pandemic has highlighted the critical importance of ensuring that all citizens and governments are able to benefit from these digital transformations.

Working together in ITU standardization, we are reinforcing the new partnerships that will be essential to our achievement of the 2030 Agenda for Sustainable Development.

This WSIS process aligns exactly with this Agenda. WSIS is a UN multistakeholder process that fosters global partnerships to achieve the full potential of ICTs for development. The WSIS Action Lines are a key framework for the digital collaboration required to achieve the SDGs.

We see closer collaboration between the public and private sector and among countries at different stages of ICT development.

In digital finance and mobile money, we see a prime example of how developing countries can pioneer new directions of innovation to the benefit of developing and developed countries alike.

We continue working to bridge the so-called 'standardization gap' to ensure that all countries share in the benefits of inclusive standardization processes and resulting international standards.

We also continue to bring ICT decision-makers together with decision-makers in other sectors to learn from one another and coordinate convergence.

The impressive line-up of policymakers in this WSIS session is evidence of our strong resolve to bridge digital divides and overcome challenges like this pandemic together.

I would like to encourage you to engage in collaboration platforms such as our Financial Inclusion Global Initiative, Digital Currency Global Initiative, United for Smart Sustainable Cities Initiative, and our AI for Good Global Summit.

These platforms are always available, always online, and their success lies in the diverse set of stakeholders that they bring together.

The world moves closer and closer together every day. And as we become more and more interconnected, we are reminded of our differences and the divides still to be overcome.



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What are the divides that our interconnections have exposed, and how can our interconnections help us to bridge these divides?

I look forward to learning your thoughts on this question.

Thank you.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

JAMAICA



H.E. Dr. Daryl Vaz
MP, Minister
Ministry of Science, Energy & Technology

Questions:

The issue of internet connectivity and access continues to be one that plagues many countries. What is the current state of broadband access in Jamaica and what is being done to overcome any challenges in this regard?

The Digital Age has taken on even greater significance and traction in recent times. In spite of this, the existence of the Digital Divide is still a challenge. Apart from the Broadband Network Initiative, what else is Jamaica doing to bridge the digital divide?

Distinguished ladies and gentlemen,

Let me begin by saying that the Government of Jamaica is pleased to join the International Telecommunications Union (ITU) and our global partners for another World Summit on the Information Society (WSIS) High Level Policy Session.

As it pertains to broadband access:

We know that technology and broadband can, when available, improve and enhance the way we work and live.



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With the introduction and accelerated advancement of technologies, having access to affordable and abundant broadband is quickly becoming the most critical infrastructure of our time.

In light of this, the issue of Internet access and connectivity is seen as perhaps one of the most fundamental concerns of nations within the region and globally.

Jamaica, with a population of just about 2.73 million boasts some 1.97 million mobile and fixed internet users as at September 2020. With the advent of COVID-19, the demand for broadband access is on the rise.

While our mobile penetration rate continues to be quite strong, with 2.78 million mobile connections as at September 2020, a penetration rate of over 100 per cent, the Internet penetration rate in Jamaica is just about 72.3%, a number with which we are not satisfied.

Notwithstanding the progress that we have made thus far, there are still communities in Jamaica that are lacking adequate Internet service or do not have access at all, creating this “digital divide” between those with access and those without.

Rural areas in particular are more costly and more difficult for provisioning advanced broadband networks. Given what has happened with COVID-19, the education system in particular is now experiencing greater reliability on digital learning and as such it is critical to address the ICT infrastructural paucity across the country.

Given this, the Government of Jamaica is rolling out a National Broadband Initiative. The aim of this Initiative is to provide Internet connection to every household by the year 2025 with key considerations being affordability and access, especially for the unserved and underserved.

The Government’s ultimate intention is to make Internet access a public good. The objectives of the broadband initiative are to: achieve universal access; boost adoption and usage; improve quality and coverage of key services, such as health and education, and more broadly, public services; and guarantee affordability.

The Broadband Initiative will seek to accomplish these objectives by first developing a National Broadband Strategy and then implementing a National Broadband Network; such that, no citizen is left behind.

Robust bandwidth we know, is the foundation for innovation as well as the key infrastructure needed to succeed and capitalize on the Internet’s applications and benefits. Research



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

demonstrates a direct correlation between the use of Internet applications and revenue growth and productivity for a country.

With today's economy more dependent on innovation and connectivity to survive and thrive, providing high speed Internet is critical in moving Jamaica forward.

As it pertains to Jamaica's work in bridging the digital divide:

In the current climate, there is a critical role for ICT in driving economic growth and social improvements as ICT is an obvious enabler of recovery and transformation. The notion of a digital society reflects the results of the modern society in adopting and integrating ICTs at home, work, in education and recreation.

However, there are Jamaicans who lack critical resources such as Internet service or technological devices, which puts them at a disadvantage in so many ways.

The COVID-19 pandemic has made us acutely aware of how essential access to devices and the Internet are and has profoundly

highlighted the urgent need for a national effort for the digital gap to be closed.

The Government of Jamaica recognises that it is of utmost importance that the lack of access to Internet connectivity and its affordability are being meaningfully addressed.

At present, the Government is:

- a) distributing tablets to students at the pre-primary, primary, and secondary levels, as well as at select teachers' colleges and special education institutions. Additionally, the Government is deploying laptops to some categories of students;
- b) deploying universal service strategies such as the provision of Community Access Points and free Wi-Fi in communities and public areas. These Community Access Points are computer labs established in underserved and unserved communities across the country in collaboration with community organizations;
- c) deploying Very Small Aperture Terminal (VSAT) to schools in remote areas. Thus far, VSATs have been deployed to 100 schools.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Clearly, we have to continue to make strides to conquer the digital divide. It is my hope that all of us will continue to strengthen the conversation about how we can bridge the divide as we continue to invest in digital technology.

Finally, COVID-19 has certainly given the Government and the people of Jamaica both clarity and opportunity to accelerate our achievement of the digital society and hence reduce, if not completely eradicate the digital divide.

As we advance in the digital age, all our countries must unite for this single purpose - to bridge the digital divide.

The Government and people of Jamaica stand resolute and remain committed to playing our part in advancing the welfare of the whole human race.

Thank you.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

TRINIDAD AND TOBAGO



H.E. Ms. Allyson West
Minister
Ministry of Public Administration and Digital Transformation

Questions:

***What does digital transformation mean to Trinidad and Tobago?
What have we done and are we doing to bridge the digital divide?***

The Government's comprehensive view of digital transformation is founded on leveraging technology to improve the quality of life and standard of living for our citizens. This Government's actions and responsibilities are focused on the creation of policies, legal and regulatory systems, processes, and the provision of enabling services to create an environment that allows the citizens of the country to flourish.

The Government of Trinidad and Tobago has a clear vision for digital transformation and part of that is to ensure digital equity. In our Vision 2030 Sustainable Development Plan, we have stated that *Trinidad and Tobago will be an inter-connected, technologically advanced society with modern information and communication systems driving innovation, growth and social progress.* Our view of social progress with regard to ICT is articulated in our ICT Blueprint which lays out the goal *Empowered People... where citizens have pervasive access to ICT; are connected to broadband infrastructure which provides a variety of services that are affordable, of high quality,*



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

safe, and secure; and are deriving high value from the use of ICT, benefiting themselves and society.

Our Government is fully committed to this journey and this is signified by this Ministry being specifically charged with the responsibility for the digital transformation of our nation.

We have recognised that there are two main manifestations of the digital divide in the country that often reinforce each other. One is social and the other is geographic. The impacts are seen in access and capacity.

To address access, through our Telecommunications Authority we are partnering with internet service providers to bring increased bandwidth to underserved locations in the country. We are also building out internet access centres in locations where affordability of access is a challenge. We have also partnered with the ISPs to have some sites zero-rated. That is, access to sites that are critical for citizens, and in particular the vulnerable in the society, such as the Ministry of Social Development, the Ministry of Health and the Police Service call centre, are not charged against data usage.

To address capacity, we are entering into a partnership with Microsoft to build the capacity of 50,000 citizens, initially, to enable them to increase their uptake and the realisation of maximum benefit. To effect this training we will engage two hundred and fifty monitors. These monitors will be assigned to our access centres to provide mentoring to citizens who require assistance to enable them to access the services of e-government.

One of the big concerns we have had is the disruption of student life for our primary and secondary school students as a result of the COVID 19 Pandemic. We are aware that some students did not have access to the internet and some did not have access to adequate devices for remote teaching. The Government therefore embarked on a programme, with the assistance or corporate and other citizens, to provide computer and portable Wi-Fi devices to students who do not have their own, or do not have reliable internet access to facilitate distance learning.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

The Government has a programme of subsidising smart phones for persons with disabilities and training such persons to maximize their use of those devices to allow improved access and connectivity.

In the delivery of e-services, the Government has prioritised services that meet the needs of social protection of our most vulnerable. The on-set of COVID-19 highlighted the need to ensure that protections are readily accessible. Government has prioritised the delivery of social services, health services and education.

We have embarked on increased availability of Government services on-line. The number of services have been developed including:

- School learning management system for students
- Access to civil registry services
- An almost full suite of e services in the judiciary to facilitate the more efficient administration of justice
- Improvements in the planning process, which would lead to the facilitation of responsible construction and creation of more sustainable living spaces and protection of the natural environment

It will be observed that we are addressing two priorities simultaneously. Even as we are introducing new e-government services, we are ensuring that this venture can be accomplished sustainably as we contend with the limited resources available to us. The challenge is not simply to provide access but to create an ICT literate society. To this end, we are providing our people with the tools they need to make the most of technology. Collectively, our e- Government objective is to create a new dynamic relationship between the government and citizens; a cycle that will become simpler and more participative.

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CHILE



H.E. Ms. Pamela Gidi
Vice Minister
Under Secretariat of Telecommunications

Questions:

What initiatives is the government taking to reduce the digital divide?
Was the digital divide affected by the pandemic?

Statement Missing

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NICARAGUA



Ms. Nahima Díaz
Director General
Instituto Nicaraguense de Telecomunicaciones y Correos TELCOR

Questions:

What lines of action has Nicaragua implemented to reduce the digital gap in coverage and affordability of basic services?

What Policies has Nicaragua implemented to guarantee the children and adolescents scholar participation, in the free education of the public schools during the Covid-19 pandemic, considering the existing social and digital gap?

In Nicaragua, since 2007 (**two thousand seven**) when our Government took office, progress has been made in improving the country's connectivity, with special emphasis on impoverished, vulnerable and historically marginalized communities and populations.

Our Government directed working with the National Human Development Plan to benefit Nicaraguan families. This plan is to improve basic services such as Drinking Water, Electric Power, Road Infrastructure and Telecommunications.

Thanks to this human development plan, 500 (**five hundred**) years of historic isolation from the Caribbean Coast have been eradicated with the construction of roads. 2,794 (**two thousand, seven hundred ninety-four**) new kilometers of highways have been built to connect the Caribbean Coast region with the Pacific region, thus obtaining a growth of 137% (**one hundred thirty-seven percent**) of the country's road network; placing Nicaragua since 2017 (**two thousand seventeen**) as the country with the best roads in Central America.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

In electrical energy, coverage has gone from 54% (**fifty-four percent**) in 2006 (**two thousand six**) to 97.7% (**ninety-seven point seven percent**) in 2020, with subsidies of up to 40% (**forty percent**) of the bill for those who consume less than 150 (**one hundred fifty kilowatts**) per month. In other words, the coverage went from a little more than half of the households, to cover almost the entire national territory in these 13 years of our government.

The improvements in the road infrastructure and electrical energy network have been a bridge to improve and expand the telecommunications networks.

In internet connectivity, we have gone from 49,833 (**forty-nine thousand eight hundred thirty-three**) subscribers in 2008 to 3,647,657 (**three million six hundred forty-seven thousand, six hundred fifty-seven**) subscribers in 2020.

Regarding cell phones, thanks to good consumer protection practices through public policies that encourage growth and healthy competition between providers, we have gone from 1,617,319 (**one million six hundred seventeen thousand, three hundred nineteen**) users in 2006 to 5,976,479 (**five million, nine hundred seventy-six thousand, four hundred seventy-nine**) cell phone users in 2020, with coverage in almost the entire national territory.

Through our Broadband Program, the construction of 2,580 (**two thousand five hundred eighty**) kilometers of fiber optic for broadband was achieved in the Caribbean Coast region of Nicaragua, that historically was the most isolated in the country. This deployment guarantees coverage to 93 (**ninety-three**) of the 153 (**one hundred fifty-three**) municipalities in Nicaragua, reaching 60.78% (**sixty point seventy-eight percent**) of national coverage of broadband infrastructure.

It has been achieved that 4.9 million people have the possibility of accessing fixed and mobile telecommunications services, equipping and connecting 149 (**one hundred forty-nine**) health care centers with broadband services and enabling 100 Productive Telecentres to train and take advantage of the applications developed to increase the efficiency of Producers, also we are working in connecting all the institution of our government with this deployment.

Regarding citizen security, police services have been modernized for the benefit of the population since technological kiosks have been installed in police units (Managua and in the departmental capitals). In addition, the website of the National Police was enabled to carry out online procedures and the online complaint was implemented.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

We also have the Center for Advanced Studies in Broadband for Development (CEABAD), which offers training adapted to the needs of broadband capacity building in the countries of Central America, the Dominican Republic and Mexico. Service offerings are composed of online courses, local workshops, and regional forums.

We consider that the ICT are a double-edged sword, in terms of inequality in societies, but their final impact depends on the policies of States, based on our economic and social realities. Promoting access to various telecommunications services in remote areas, the expansion of cellular telephony in all corners of the country and internet connectivity contribute to inclusion, redistribution, participation, protagonism and empowerment, and in this way contributes to the reduction of poverty and inequality, by reducing the information and communication gap.

These are some of the lines of action that our Government has taken to drive the country towards progress, reducing the digital breach so that the Nicaraguan population has access to better conditions and can improve their quality of life.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

SAINT VINCENT AND THE GRENADINES



Mr. Apollo Knights
Director
National Telecommunications Regulatory Commission

Questions:

What innovative approach do you think developing countries could consider implementing to address the issue of affordability of computers to their citizens?

Do you believe the disparity in currency exchange rates between developed and developing countries contributes to the digital divide?

Excellencies, colleagues and participants Good morning and good afternoon.

Thank you, Madam Chair for the opportunity to be part of this panel of stakeholders addressing some of the critical issues facing our countries relating to the Digital Divide such as my own St. Vincent and the Grenadines located in the Eastern Caribbean.

1. What innovative approach do you think developing countries could consider implementing to address the issue of affordability of computers to their citizens?

Two main digital divide two dimensions are connectivity and access devices. While smart phones provide a great level of accessibility to citizens, it can be safe to say that for real productivity and human resource development, access to computers is key. While St. Vincent and the Grenadines has had a Government policy of zero tariffs on the importation of computers for many decades our penetration level of computers at the household level is 51% compared to excess of 80% for major household appliances such as televisions, fridges etc. The computer can be considered in the category of a major appliance in our country as the price points are similar. One may then



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

ask why the penetration rate is so different between the other major appliances when compared to computers. This has to do with affordability. Our society is still highly cash based with a very low percentage of the population having credit cards. As such the purchase of major appliances is normally done via in store credit facilities referred to as hire purchase which came around in the 1980s. Interest rates for these purchases are normally around 20% annually (like a credit card). However, such an option for computers did not arrive until around 7 years ago but is only done by one major retailer but with annual interest rates ranging from 29% to 49% depending on which repayment period is chosen. A one-year repayment plan carries an interest rate of 49%. One may consider such interest rates if implemented by our banks to be loan sharking.

To address this Digital divide situation our regulator the NTRC has been mandated by our Government to proceed with a pilot project this year to do a Public Private Partnership (PPP) with one or more of our computer retailers to facilitate a more affordable credit option to our citizens. We are starting the pilot with a quarter million EC dollars fund which is about \$100,000US to test the concept. If it works, we can scale it up. The concept is also designed to be self-sustaining over time.

So, let me summarize our innovative approach on this concept. We have asked computer retailers to submit proposals base on our concept and guidelines and we will then choose one or more to partner with. The NTRC will finance the upfront cost of the computers.

We have set a cap on the mark up our retail partner can charge their customers for cash purchases which is 25%. We have also set a cap on annual interest rates of 12% annually for credit purchases which is like the interest rates that our banks and credit unions will charge on consumer loans. The retailers will share the profits (both from cash sales and credit interest) with the NTRC on an agreed ratio. The retailers will handle all aspects of advertising and selling the computers at their stores and dealing with credit approvals and payments. The share in profits received by the NTRC as well as the cost price received back from payments will go back into the computer fund to purchase more computers. It will not be a profit-making business case for the NTRC but all in the public interest. So hopefully at WSIS 2022 I could report on how this pilot initiative has worked.

We see this as just another form of subsidizing as is done with other Universal service initiatives that we have done in the past, but which were mainly geared at broadband access and not devices. Our Ultimate goal is to have household penetration of computers to be more than 90%.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

2. Do you believe the disparity in currency exchange rates between developed and developing countries contributes to the digital divide?

While computers in SVG are tariff free (only attracts a 4% customs levy) a model that would cost \$500 US in New York will cost someone in SVG around \$1700EC. So, the retail price has changed due to a few factors, the currency exchange rates of the two countries, shipping cost, small customs tariff etc. With the main one being the currency exchange rate. Now if the wages in our country were higher when compared to those in the USA at the same ratio as the exchange rates then the real cost to each buyer would be very similar as one can say there is purchase parity of citizens in both countries. However, it is not. The minimum wage in the USA is around \$8 US per hour while in our country its \$1.62US. Here lies the real issue of affordability in developing countries compared to the developed. It is all about the currency exchange rates. Yes, we can say some countries are wealthier than others and is the reason for the difference in exchange rates. That could have been the reason 5 decades ago but not the full picture today.

It seems that developing countries are still having their currency backed by some commodities be it gold or another currency while it seems that the developed countries have moved away from this requirement. The USA for example whose currency is the standard for global trade had their currency backed by gold until this practice was stopped in the early 1970s. However, our country currency the EC dollar is backed by the US dollar and has fixed exchange rate to the US dollar of 2.71. So, we are limited by a requirement for a backing in our currency but the country that we are using as a backing has no requirement for a backing.

I know it sounds a bit complicated but the point I am trying to get across is that the disparity in currency exchange rates which is not being driven by the same parameters directly drives up the cost of access devices like computers that in most part designed, developed, and sold by companies in developed countries and requires developing countries to use foreign exchange to import them.

A good question one may consider is whether cryptocurrencies might be a solution to this legacy problem noting they are not issued by a central authority and subject to the value manipulation as our existing legacy currency system which drives the exchange rates among currencies globally.

So, as I close it is important that we look at innovative solutions that are applicable to our own unique contexts and development level. Such solutions can be groundbreaking while others could be variations of other solutions existing either in our country or elsewhere. And most



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

importantly we should not be afraid to try new solutions due to a fear of failing as all successful companies and individuals would have many testimonies of failures on their path to success.

Thank you.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

UNITED STATES



**Ms. Jessica Rosenworcel
Acting Chairwoman
Federal Communications Commission**

Questions:

You have been a passionate advocate for the need to address a particular form of digital divide, the “homework gap”, which has been made especially evident by the Covid pandemic. What steps has the FCC taken to address the homework gap? What are the major barriers to home broadband adoption? To broadband adoption in general?

What roles do regulators and policy makers have to respond to this challenge of lack of connectivity, and how can we better prepare for the future?

Good morning! It’s such an honor to join so many high-level representatives from the WSIS stakeholder community.

As Acting Chairwoman of the Federal Communications Commission, I believe that the future belongs to the connected. No matter who you are or where you live you need access to modern communications to have a fair shot at 21st century success.

Of course, nothing has demonstrated the importance of connectivity like the ongoing pandemic. As a global community we need connections—physical and digital—that strengthen our mutual bonds. We need communications that reach all and help us work, learn, be informed,



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

enlightened, and entertained. And we need connections that can break down barriers that for too long have held too many back.

So, thank you to my distinguished peers for sharing their experiences. Today we are learning that there are so many aspects to the digital divide. But I'd like to bring laser-like focus on one of them: what I call the Homework Gap.

When I was growing up, homework required nothing more than your siblings leaving you alone and a Number 2 pencil.

Those days are gone. Because now internet access is required.

The best evidence of this is this past school year. In the United States, many schools shut down part-time or full-time and reverted to remote learning. What this means is that students were told to head online to class. But students without internet access at home are locked out of this virtual classroom.

This is happening all over the world. So let's do the math. In the United States, our data shows that as many as 16.9 million children in my country alone fall into the Homework Gap. According to a report commissioned by the United Nations Children's Fund and the International Telecommunication Union, 2.2 billion—or 67 percent of children around the world—lack internet access at home.

I believe this is the cruelest part of the digital divide. We need to make it a priority to fix this Homework Gap and connect every student so they can have a fair shot at continuing their education.

So let me share three things we are doing in the United States to help fix this. First, we have launched an Emergency Broadband Benefit to help families struggling to pay for internet service during the pandemic. This new program will connect more families to jobs, healthcare services, and virtual classrooms. Our program provides a discount of up to \$50 per month toward broadband service and up to \$75 per month on Tribal lands. Families also can receive discounts to purchase computers and other equipment to connect them to the internet.

Second, we are expanding our federal programs to connect schools and libraries to broadband. Specifically, in the coming weeks the FCC will adopt new rules that will help provide schools with Wi-Fi hotspots and other connectivity solutions to help students who lack reliable internet access at home.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Third and finally, we are taking action to better understand the scope of our national broadband deployment challenges. After all, we cannot manage problems we do not measure. So one of my first actions as Acting Chairwoman was to stand up a Broadband Data Task Force to help us build the most accurate, up-to-date maps of where broadband service is offered throughout the country. This will make sure that our efforts to bridge the digital divide are focused in the right places and making a difference. I look forward to sharing more about what we learn from this effort soon.

This pandemic has taught us like nothing before that broadband is no longer a nice to have, it's a need to have, for everyone, everywhere. That's especially true when it comes to students trying to keep up in classes that have gone virtual.

Thank you.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

URUGUAY



Dr. Mercedes Aramendia
Presidenta de Directorio de URSEC
UNIDAD REGULADORA DE SERVICIOS DE COMUNICACIONES (URSEC)

Questions:

***What are the factors that influence on the reduction of the digital gap?
What are the main regulatory challenges facing this objective?***

There is no simple factor that influences the reduction of the digital gap. The digital divide is complex, multidimensional, economic, social, political, and has cultural aspects that directly and indirectly influence the digital gap, influencing people, businesses, and governments.

It is essential to identify those inequalities between regions, mainly between the urban and rural areas and social groups of the population, to look for equality.

The evolution of the telecommunication industry has been positive in Uruguay; for instance, as of 2019 we have a mobile penetration of more than 160%. Also, by 2019 we had an Internet connection of 88% of households and fixed broadband of 71%.

Internet access is widespread, but differences in access are identified according to income level and whether we are in Montevideo (Uruguay's capital city) or other regions (such as rural areas).

For example, in Uruguay, in 2019, among households in the highest income quintile: 95% of these households have an Internet connection, and 86% have fixed broadband. In families with the



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

lowest income, 84% have an Internet connection, and 51% with fixed broadband. If we compare Montevideo with other regions of the country, in other regions: internet connection: 83%, fixed broadband: 63%, and in Montevideo: internet connection: 94%, fixed broadband: 79%.

There is no doubt that the pandemic of Covid-19 has accelerated the digital transformation all over the world, which helped to introduce and develop digitalization increasing access to information and connectivity, but it is important to work on an agenda and to set up a plan, to work on the gaps.

In this sense, as recognized by the 2015 World Summit on the Information Society, among the main challenges on which we must work, I highlight the following:

- Protect all human rights, ensuring that they are respected online and offline.
- Integrate the equality perspective, seeking to empower women, looking for their full participation, as well as equality in all spheres of society and decision-making processes.
- Reduce the digital divide. Expand access to Information and Communication Technologies (ICT) and connect everyone, for which it is necessary to improve and facilitate the construction and implementation of telecommunications networks.
- Increase access to information, education, and knowledge for all. All people must have the basic knowledge and means to participate in the information society.
- Guarantee the full right of all people to express themselves, to create and disseminate their work and content.
- Respect human diversity in all its forms, culture, languages, traditions, beliefs, and religions.
- Generate confidence in using ICTs, it is essential to increase security and privacy on the network.
- Raise awareness of the ethical dimension of the use of ICTs and promote interdisciplinary dialogue.

It is certainly not an easy process, but what is crucial is dialogue, the constant exchange between the entire ecosystem, because not only is it necessary to be clear about the goals but also how we work to arise them it's essential too.

Good regulation is key to develop services, contributing directly to drive innovation and research while providing predictability, clarity, and clear rules, all of which are essential for joint development.

Challenges are several. Among them, I highlight:



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

- Find the balance: regulation has to be, necessary, proportional and suitable. It is essential to find the means and also promote self-regulation, as it contributes to being more flexible, adapting faster, and in some instances to respond accordingly.
 - It is not a simple process. There are many stakeholders with diverse interests and needs. In general, everyone has their part of the reason, so it is necessary to be flexible, adaptable, to listen and dialogue constantly.
 - There is a lot of uncertainty about future, but decisions have to be made and we must work within the framework that we have (or trying to improve it), seeking collaboration and contributing with the entire ecosystem to reach the best potential solutions.
 - Everything is changing very fast, so we have to find a fair rhythm. If it is too slow, we may fall behind and do not respond as we should, and if we go too fast, we probably cannot listen or consider all aspects.
 - We do not have to invent the wheel. It is essential to learn from the good and bad examples from other experiences that may have similarities and adapt them to our own reality.

Given the above, it is necessary to provide security, predictability, and transparent rules.

In some cases, as the change is constant, regulation should be adapted, and it is cardinal to understand the technical and business aspects, being flexible and adaptable, and look constantly for proportional solutions. If it is regulated without understanding all of these, there are significant risks of limiting without basis, affecting development and innovation.

We must tend to collaborative regulation, dialogue, listen, and jointly analyze the phenomenon and address those aspects that require it, such as to work together on: (a) quality access for all; (b) digital skills and education for all; (c) innovation (new technology and services); (d) protect consumers and public safety; (e) protect fair competition; and (f) guarantee citizen's rights.

We have to attend the objectives, needs, possibilities, and analyze current regulations, to update or modify whatever is necessary to respond adequately.

Finally, I want to emphasize that in order to achieve sustainable development, minimize gaps and leave no one behind: the adoption of transversal actions is needed, also to collaborate and coordinate with the whole ecosystem, at the national, regional and international levels.

Thank you.

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PERU



Mr. Luis Pacheco Zevallos
Manager of Enforcement Directorate
Telecommunications Regulatory Agency - OSIPTEL

Questions:

What kind of technology should be implemented to get better results for bridging digital divides?

Would the massification of 5G technology help to achieve this goal?

Regarding optimal technologies for bridging digital divides:

- We can mention that by far, wireless technologies are the most suitable solution to provide the conditions to connect unserved areas considering lower costs and easier implementation compared to other last mile technologies, especially in the first stages and when those areas are within the reach of high-capacity terrestrial transport networks. Investing in these terrestrial backbones is extremely relevant to achieve the connectivity goal.
- In Peru we have the national fiber optics backbone and regional fiber optics projects that are adding around 40 thousand kilometers of fiber optics connectivity to more than 1500 (fifteen hundred) municipalities and more than 6600 (sixty-six hundred) rural towns wirelessly connected within the country.



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- Although now, the current attention is now focused on the adoption of 5G technologies, it should be noted that it's necessary to continue with the deployment of 4G LTE, that will continue being the main connectivity support for wireless communications, and a feasible solution to bridge the digital divide.
- Since, in the short term, 5G networks are still being deployed, and their coverage is limited, the final consumer experience on mobile connectivity will still heavily depend on 4G LTE for the next few years.
- Likewise, it is important to explore new technological alternatives that can also be used to bridge the digital divide, especially in the most isolated areas. Those technologies can be HIGH ALTITUDE PLATFORM SYSTEMS and HIGH ALTITUDE IMT BASE STATIONS, Broadband Low and Medium Orbiting satellite constellations, White Space Technology, among others.
- Innovative models should be promoted in parallel with these technologies. In Peru, we have the Mobile Rural Infrastructure Operator model, which is a neutral active infrastructure provider which brings access to other mobile operators in order to offer final mobile services to users in rural areas.
- It is also important to point out that the reduction of the digital divide will depend on finding the best combination of deploying technologies and the most efficient models that consider implementation of commercial projects and private public partnerships with the use of universal service funds.
- Moreover, it is relevant to improve universal service funds policies, so that new projects financed by these funds, incorporate new elements to achieve scalability, economic sustainability and social profitability.
- In addition to the need to accelerate the bridging of the digital divide, it is important that new projects **consider actions related to improve digital literacy**, which allows people to be able to take advantage of the potential benefits for their daily life, personal growth and business entrepreneurship.



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Coordination among different sectors is urgent to point towards the national policy of deployment and usage of broadband connectivity, and the appropriation by the people of its benefits. The best example of this coordination with the Education sector is to foster connectivity to homes for children to follow distance learning basic education in these times of COVID-19 Pandemic. The same is urgent with the Public Health sector.

On the other hand, regarding 5G Technology:

- In its different stages, 5G Non-Stand Alone and 5G Stand Alone, the adoption of 5G generates improvements in the connectivity path, that will be reflected in investment in transmission and aggregation networks, even considering the possibility of extending the service coverage areas.
- Although in a first stage, 5G technology is oriented to offer services in niches and vertical industries, focusing its attention on areas with higher density and speed requirements; it is also important to keep in mind that depending on the spectrum band to be employed, 5G can also be used as a technology that provides wide coverage, especially in low bands (700 - 800 MHz).
- In this sense, this could be an option to be evaluated for covering underserved villages, especially when vertical industries are located near the underserved areas. The design of spectrum auctions can consider the offering of services to these underserved villages in a beauty contest model.

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DIAL



Ms. Kate Wilson
CEO

Questions:

What are the main drivers of the digital divide today and where should international attention focus?

What changes are needed in our approach or partnerships to lower the digital divide and leave no one behind?

Thank you for asking for my comments on what are the main drivers of the digital divide today and where should international attention focus as well as what changes are needed in our approach or partnerships to lower the digital divide and leave no one behind?

I would like to put this in the context of the amazing country stories which we heard today of those on their path to digital transformation journey. As the panelists noted, each are facing similar challenges that manifest themselves in slightly different ways. For instance, when I started working in broadband access about 20 years ago, the conversations were oriented around service extension and how value added services could live side by side. Many were skeptical that broadband would scale quickly but as the last year has shown us, broadband access is a necessity not a luxury. What 2020 has also illustrated is that while each country is on its own unique journey, we are all “digital transformation learners” and the issues are too complex and move too fast to tackle alone – digital cooperation to tackle the digital divide is essential

At DIAL, the Digital Impact Alliance, we are a think - do - replicate tank. We look at common problems, test innovative solutions and figure out how to set up reusable models that countries,



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NGOs and businesses can adapt to fit their digital transformation journey. When considering this, we look at the main drivers of the digital divide. We consider what governments need, how the private sector functions and make sure to connect that with citizen interests so that no one is left behind. We believe that a few key drivers are shaping the current divide

- Appropriate products: This is everything from connectivity to hardware and software. Simpler, easier to find and sustainable product solutions are needed

-Innovative policies that embrace and regulate tech partnerships. It is critical that policymakers are ahead of the curve of digital innovation and working alongside tech partners to design products and business models that don't exacerbate the current divide. Simply regulating them is not enough

-New pricing and procurement models: Our current pricing and procurement models don't take advantages of economies of scale that leverage larger purchasing. We encourage both countries and multilateral groups to rethink pricing and procurement models optimized for development sectors (e.g., health, education) and structure them to drive increased supply side solutions from tech companies.

-Digitally skilled people: What we call in development the human capacity problem. At DIAL, we don't think that this is a developed/developing world problem or just a citizen skills issue. Most people can pick up new tech quickly. What is hard are all the background technology pieces and the collective ability to confidently design scalable tech to serve national interests

When we think about increasing digital cooperation, there are a few areas where we think that the international community can come together to work together on this. The first is that we need to have a shared view of where we are going. There are currently 27 different definitions of digital transformation and the factors that shape it. How can we reach a destination if we don't agree on where it is? To understand this, we emphasize collaboration and partnership. We also are taking an "A, B, C" approach personally. This means working with a few countries to "Accelerate" their digital transformation journey. Second, we are working with groups like the ITU to "Build" greater consensus on what is needed in this journey and third, we hope to connect proven solutions together and make them more discoverable to national leaders shaping their digital transformation journeys. This is work that we're undertaking with the government of Estonia, ITU, and the government of Germany."

Thank you for letting us share our path with you.

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Session Three: Bridging Digital Divides

Recording: <https://www.itu.int/net4/wsis/forum/2021/Agenda/Session/183>



Moderated by High-level Track Facilitator:

Ms. Amali De Silva – Mitchell, Founder and Coordinator, Dynamic Coalition on Data Driven Health Technologies

WSIS Action Line Facilitator:

Dr. Reinhard Scholl, Deputy Director, Telecommunication Standardization Bureau (TSB), International Telecommunication Union (ITU)

Speakers:

1. **Bhutan** - H.E. Mr. Phuntsho Tobgay, Secretary, Ministry of Information and Communications
2. **Indonesia** - Dr. Ismail Ismail, Director General of Frequency Management and Postal and ICT Devices, Ministry of Communication and Informatics of Republic
3. **Germany** - Dr. Wilhelm Eschweiler, Vice President, Bundesnetzagentur
4. **India** - Dr. P.D Vaghela, Chairman, Telecom Regulatory Authority



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5. **Sweden** - Mr. Dan Sjöblom, Director General, Swedish Post and Telecom Authority
6. **International Trade Centre (ITC)** - Mr Robert Skidmore, Chief Sector and Enterprise Competitiveness
7. **CMAI Association of India** - Prof. NK Goyal, President & Chairman Emeritus



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Executive Summary by High-Level Track Facilitator

Introduction

The session showcased the various approaches that countries and organizations are using for capacity building initiatives so as to bridge the digital divide. The innovative policies and applications of information and communication technologies (ICTs) for e-Health, e-education, e-agriculture, e-commerce and e-employment, were fast tracked where-ever possible and when possible, so as to keep country economies resilient, through the Covid-19 pandemic. The miracle (*speaker 2*) was that the existing technology was able to bare the significant uptick in users, as global citizens had no option but to embrace ICTs during the Covid-19 pandemic. Going forward, what can be digital must be digital (*speaker 1*), for pandemic recovery and long-term economic robustness. Leadership through an international multi-stakeholder collaborative process is sought, so as to empower the global community to connecting all global citizens with quality internet and hence Bridge the Digital Divide.

Vision

The International Telecommunication Union's (ITU) vision for ICTs is for creation of Inclusive, Resilient and Sustainable Societies and Economies. ITU encourages the global multi-stakeholder community to come together internationally and collaborate to provide every global citizen with affordable, quality, accessible internet, that is safe and delivers, so as to meet the United Nations Sustainable Development Goals through implementation of the WSIS Action Lines.

2 inspiring quotes

- Overcoming "Social Inclusion; Digital Exclusion" **Dr P.D. Vaghela**
- "Connectivity must be fit for purpose" **Ms. Doreen Bogdan-Martin**

Common themes highlighted during the session

1. All global citizens, without exclusion, must have access to the internet / ICTs. ICT development must not just re-enforce existing access to a better-quality standard for some, but must fully, and meaningfully provide access to ICTs for all global citizens.
2. There is an urgent need for rapid adoption of ICT technologies to rural, remote, hard to access areas such as land-locked regions, small islands and for Small and Medium Sized Enterprises (SME).



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3. The Covid-19 pandemic has highlighted the critical need for universal connectivity and access to ICT technology development to meet global citizen needs.
4. The urgent need for connection, means that whatever is currently available as a resource must be used to connect the unconnected, rather than waiting for the newest technology in development to be adopted such as 5G, 6G or 7G. E-waste management through re- purposing technology could be explored.
5. Content must be locally centered to be meaningful. Citizens must have digital skills and awareness of cybersecurity issues, to effectively participate on-line in a safe manner.
6. International cybersecurity initiatives are important to protect infra-structure and public access globally.
7. Challenges of connectivity met by land-locked areas and small islands by traditional broad band access, should be supplemented by additional technologies such as satellite and other emerging technologies for connectivity. Collaboration with neighbouring countries to develop access for the infrastructure backbone is also required.
8. Moving to 5G plus, enhances accessibility of ICTs for the disabled, and elderly, due to the Artificial Intelligence (AI) and advanced Human to Computer interaction capabilities of these enabling technologies.
9. Data silos are being broken down and integrated service delivery with e-ID for citizens and business are being developed.
10. AI and the impact of data over physical infra-structure is challenging traditional manners of infrastructure management in innovative ways.
11. Testing AI algorithms for ethical and other compliance and risk management frameworks, enable trusted data inputs and outputs to be championed for.
12. Misinformation and data bias can erode data trust and impact single source trusted data systems.
13. It has become evident that market driven forces are insufficient, to reach the requirements of financing the global last mile for connectivity, with quality service. Public Private Partnerships (P3) have become a necessity.
14. Innovative funding strategies with small to large enterprises within a P3 environment; open markets; broad spectrum access and so forth are being actively put into place. Opening opportunities for a multi-stakeholder approach to financing and resourcing the requirements to enable the last mile of connectivity and enhance existing infra-structures is being advocated.
15. A call to collaborate internationally at all levels of capacity and knowledge building as well as financing, so as to connect the marginalized in society was made. The need to work with an urgency so as to mitigate issues of ICT access, for these segments of society, across the world, was emphasized.



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16. The issues of the digital divide have become accentuated with the global Covid-19 pandemic and the need to surmount these issues is imperative.

Relevance for Covid-19

ICTs have facilitated the sustainability of many societies impacted by the recent Covid 19 pandemic. The session outlined the critical need for internet accessibility for every global citizen and the need for rapid acceleration of internet access, so as meet the citizen's needs for: healthcare, remote work, education and training, access to markets such as for agriculture and for services for the small and medium sized enterprises (SME) in particular.

Key announcements from UN Agencies:

- International Telecommunications Union (ITU) / World Health Organization (WHO) Focus Group on AI for Health (FG-AI4H) open to all stakeholders
- International Trade Center (ITC) Aid For Trade portals

Country Announcements; Achievements; Launches; Agreements; Commitments

Countries and Organizations have made a commitment to collaborate and partner within a multi-stakeholder environment and invest in connectivity that goes beyond finding solutions for the immediate pandemic recovery. For long term resilient economies and societies, with a focus on empowering last mile connectivity initiatives, a call for an ITU working group focused on accessibility for the marginalized and income dis-advantaged was made.

Applicable United Nations Sustainable Development Goals (UN SDGs)

The issues of the Bridging the Digital Divide transcend all the UN SDGs. The session noted especially, the following goals. **Goal 1:** End poverty in all its forms everywhere; **Goal 2:** End hunger, achieve food security and improve nutrition and promote sustainable agriculture; **Goal 3:** Ensure healthy lives and promote well-being for all; **Goal 4:** Lifelong learning for all through the access and digital literacy; **Goal 8:** Promote inclusion and sustainable economic growth, employment an decent work for all (Assisted devices) ; **Goal 9:** Build resilient infrastructure, promote sustainable industrialization and foster innovation (skills) ; **Goal 10:** Reduce inequality; **Goal 16:** Promote just, peaceful and inclusive societies; **Goal 17:** Revitalize the global partnership for sustainable development.

Applicable WSIS action lines



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Application of the UN SDGs requires a multi-stakeholder approach with international, regional and local in-country level collaboration. All WSIS action lines are relevant for this vision, but the session highlighted the following action lines in particular. **C1:** The role of Public Government Authorities and all stakeholders in the promotion of ICTs for development **C2:** Information and communication infrastructure **C3:** Access to information and knowledge **C4:** Capacity building **C5:** Building confidence and security in ICT **C6:** Enabling environment **C7:** ICT applications

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BHUTAN



H.E. Mr. Phuntsho Tobgay
Secretary
Ministry of Information and Communications

Questions:

What are the initiatives undertaken by the Royal Government of Bhutan (RGoB) to bridge the digital divide in Bhutan?

What were the challenges the country faced while implementing these activities to bridge the digital divide?

- In line with the Royal vision, the Royal Government of Bhutan (RGoB) has prioritized the development of ICTs with the vision of “An ICT-enabled, knowledge society as a foundation for Gross National Happiness.”

Enabling RGOB Policies:

- a. Bhutan Telecommunications and Broadband Policy was approved by the Government in 2014.
 - The Royal Government of Bhutan (RGoB) recognises Telecommunications and Broadband as important contributors to the socioeconomic development of the country and the policy has been adopted to enhance competitiveness, increase productivity and contribute to economic development, and for promoting greater social inclusion. Telecommunications and Broadband are the foundation on which “An ICT enabled, Knowledge Society as a Foundation for Gross National Happiness” will be built.
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- The objectives of the Telecom Policy are to: Ensure development of Bhutan's Telecommunications Sector in line with international trends and that people of Bhutan are able to enjoy quality ICT services; Ensure that the Telecommunications sector provides a strong foundation for Bhutan's ICT enabled Knowledge based Society, and a true engine for its socio-economic progress; Guide and facilitate evolution of the sector to attain its full potential; Ensure that a conducive environment for infrastructure, regulations, private sector participation and government support is promoted; Promote innovations in the sector; Promote green Telecommunications and ensure environmental responsibility.
- The key elements of Telecommunications policy are: Universal Access, Universal Service Fund, Green Telecom, Licensing Framework, Competition Framework, Mobile Development, Quality of Services, Consumer Protection, Security & Privacy, Spectrum Management, Consolidation of Fiber Assets, Infrastructure Sharing and Right of Way, Disaster Communications, Emerging Trends, Regulatory Framework, Institutional Setup, Skills and Capacity Development.
- The objectives of the Broadband Policy are: To contribute towards the well being and health of the people by provisioning of broadband enhanced health services; To contribute towards increased economic welfare of Bhutan and its people by creating sustainable employment opportunities and making Bhutan more attractive for business investments and tourism; To promote social development and cohesion through broadband and conserve Bhutan's culture and tradition; To enhance Public and Private Sector Efficiency and Performance through use of Broadband; To enhance education and training through Broadband; To harness on benefits of mobile broadband for increased innovation and opportunity especially in taking public services to the people; To promote development and access of local content via broadband; To enhance Global Integration and International Relations by enabling connection of Bhutanese businesses and communities with the wider world.

b. Electronic Governance Policy:

Electronic Governance(eGov) policy was approved by the government in 2019 to guide during the implementation of e-Governance initiatives in the country. The specific objectives are:

1. Ensure all government services are made online, where possible, to transition from a conventional paper based to a more convenient paperless environment;
2. Ensure online government services are accessible to **all individuals, including people with disabilities**; efficient; secure; and sustainable;
3. Ensure robust delivery of online public services through a holistic approach to reduce redundancy of ICT initiatives through consolidation and reuse;



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4. **Ensure adoption of ICT Standards and enable the use of emerging technologies;**
5. Ensure confidentiality and privacy of citizens are protected to increase trust in online services.

The policy has two (2) guiding principles which are:

1. Whole of Government(WoG): Integrating the collaborative efforts of all government agencies to meet aspirations and to address common challenges of e-Governance. It will bring together all government agencies to implement e-Governance initiatives in a coordinated, cost effective and sustainable manner.
2. Citizen Centric: Which ensures seamless delivery of online services by placing citizens at the core of all e-Governance initiatives. RGoB considers citizens' needs and their active participation as its highest priority.

And Six(6) Policy statements which are:

1. Digital by default: Which states that ICT is becoming more accessible and affordable for citizens and businesses alike. This has resulted in increased adoption of ICT and demand for effective and efficient online public services. To fulfill the ever growing demand of the citizens and businesses, RGoB is required to deliver convenient, efficient and effective services. Further, to enhance the delivery of services, the conventional "over the counter" systems must be **supplemented** by online services.
2. Shared ICT Assets: The RGoB has invested in numerous ICT initiatives to provide reliable, secure and efficient public services. However, the absence of a clear policy has resulted in multiple investments in redundant systems and infrastructure across the government agencies. This results in excessive ICT assets within government agencies which are often underutilized. Optimal utilization of ICT assets (systems, infrastructure or data) through sharing and reuse will result in significant savings for the RGoB.
3. Single Source of Truth: Due to lack of coordination, many agencies collect the same data. Since upkeeping the currency of these data is a challenge, the data differs from one agency to another. This entails various risks, such as misinformed decision making based on statistics and reports of such data, hampering the data integrity of all government ICT tools. The challenge of maintaining and updating quality data can be easily overcome if the data is used from reliable sources.
4. Information Security and Privacy: RGoB has embarked on digitization of public services in resonance to the increasing demand for online facilities. However, due to associated risks such



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as identity theft, data theft and disclosure of confidential information, protection of electronic information/data of citizens and government are inevitable.

5. **Need Driven Initiatives:** The ICT initiatives in the agencies are often driven by factors such as the availability of budget/donor agencies and also adoption of ICT solutions without proper **need analysis**. Moreover, any ICT initiatives in the agencies are usually led by the ICT officials rather than the domain experts. Consequently, required ownership and support for effective implementation of the initiative is hampered leading to failure.
6. **Sustainability:** ICT initiatives often overlook the needs to conduct long term investment analysis and develop meticulous sustainability plans. This attributes to unsatisfactory quality of post implementation support and lack of budget to meet recurring expenditures. As a result of it, investments in ICT initiatives may have poor outcomes and thus, the confidence of both users and owners in ICT adoption may be adversely affected.

Programs and Projects implemented for ICT uptake:

- A Universal Service Fund (USF) was established to support extension of telecommunication services in rural Bhutan. We are actively utilizing the USF to provide mobile cellular services in the rural areas and with 83% budget utilization. So far 776 rural villages have been connected.
- As of December 2020, the proportion of the population availing mobile services stands at 99.5 per 100 inhabitants which is an increase of 42.8% when compared to 56.7 per 100 inhabitants in 2010. Further, the number of active broadband users also stands at an impressive rate of 92.4 per 100 inhabitants in comparison to 13.4 per 100 inhabitants in 2010, which is an increase of 79% during the past one decade. However, a lot of work is still needed for the country to reap the benefits of the 4th Industrial revolution in technology.
- Further, there are 200 community centres as of now, which serve as a platform for the people in villages to avail online G2C (Government to Citizen) services. The work is in progress for developing 5 more community centers in Gewogs(blocks) which are mostly off-grid and are at rugged geographic locations.
- Bhutan has also established a ground station and satcom network comprising 81 Very Small Aperture Terminals (VSATs) in 20 districts, 60 Gewogs and DDM to utilize the South Asia Satellite (SAS). The SAS is used for Digital Broadcasting of 2 BBS TV channels, 2 BBS radio channels and 2 Kuzoo FM Radio channels. A disaster management network is established on SAS using VSATs to be used for emergency communications during disasters. VSATs have also



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been installed in the three off-grid gewogs (Soe, Naro and Lingzhi under Thimphu Dzongkhag) to provide Internet services.

- As of date, Bhutan has two International Internet Gateways with a total bandwidth of ~51Gbps. An additional redundant International Internet Gateway is being explored from an alternate route.
- Similarly, a Bhutan Internet Exchange Point (btIX) to keep the local traffic local, thereby reducing the latency and the cost of local content and the Internet, is established with all network operators in Bhutan connected to it.
- Further, as part of the National ICT Backbone infrastructure development, all 20 districts and 201 Gewogs (Blocks) are now connected with high speed optical fiber backbone networks. These National Fibers are leased for free (to telecom operators and Internet Service Providers) to enable lower prices for ICT services in the country.
- A private network called the Government Network (GovNet) which connects all the Government agencies in the country is also being established. The RGoB is currently working on expanding the networks to connect schools, hospitals and agencies around the country.
- Further, a DrukREN (Druk Research and Education Network) is being instituted by the Government. The DrukREN is a high speed 10Gbps network that connects research and education institutions like colleges, schools and hospitals. DrukREN is currently connected to 15 colleges and 11 hospitals. RGoB is currently working on expanding the network to schools and unconnected hospitals.
- Furthermore, introduction of ICT curriculums including coding in schools has been a major development towards building an ICT skilled human resource in the country. The Ministry of Education has rolled out the implementation of ICT curriculum with coding as a major component from this academic session for all levels (class PP-XII).
- A *Policy Guideline and Strategic Framework of Media Literacy Education in Bhutan* was developed in 2009 in collaboration with the Ministry of Education and Royal Education Council. Accordingly, several activities have been carried out, and till date the program covered 3,039 teachers, 6,800 high school and college students, 487 NFE Instructors sensitized, 548 others (civil servants, youth, radio jockeys, nuns, and GAOs). In line with the *Policy Guideline and Strategic Framework of Media Literacy Education in Bhutan*, Media Studies as a diversified curriculum has been introduced for Classes XI and XII by REC and MoE since 2015. In 2020, a



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Memorandum of Understanding for Media and Information Literacy (MIL) Program in Schools and Institutions (2020-2023) was signed among the MoIC, MoE, RUB and REC to roll out MIL program for the teachers, staff and students of schools in the country, which are not yet covered by the MIL program. This program will also carry out the MIL program for the preservice teachers of Samtse and Paro College of Education and development of a MIL module at these colleges. In addition, DoIM/MoIC attended the central consultation workshop for LGs Course Development organized by DLG and RIM and MIL to be included in the LGs Course.

- Additionally, with growing concerns of cyber security incidents reported in the country, the MoIC has also begun the development of national cybersecurity strategies. The strategy outlines plans and programs to protect the national cyberspace with the goals to achieve National Cybersecurity Governance and Coordination, Protect Critical Information Infrastructure, Strengthen Cybersecurity Legislation and Policies, Robust Incident Response Management, Promote International and Local-Cooperations, Develop National Cybersecurity Guidelines and to build Cybersecurity Capacity and Awareness. The whole cybersecurity ecosystem along with the gaps and opportunities were considered while developing the draft National Cybersecurity Strategy. In the wider scope of the protection of the national cyberspace, the Bhutan Computer Incident Response Team (BtCIRT) have been providing both proactive and reactive cybersecurity services, including public awareness and advocacy programs around cybersecurity threats and vulnerabilities, cybersecurity capacity development of ICT professionals, management and response to incidents, scanning of information systems vulnerabilities, among other activities.
- Leveraging on the investment made in ICT thus far and to harness the power of growing technologies to further narrow the digital divide, RGoB is implementing a whole-of-Government initiative through a flagship project called Digital DrukYul(DD) Flagship Program under the current 12th Five year plan; from 2019 to 2023. The program is currently under the 1st quarter of the 3rd year of its implementation. The DD flagship program consists of 8 major components as follows:
 - a. **National Digital Identity:** Digital Identity is a fundamental requirement for delivery of any public services for all Bhutanese residents. Bhutan lacks the capability to authenticate digital identity which is a fundamental requirement for online delivery of services. The objective of this component will be to build the Infrastructure, and applications necessary to securely and reliably authenticate online digital identity. This will enable end-to-end provision of online services for all citizens and residents of Bhutan irrespective of which agency provides the service. This transformation will dramatically strengthen the G2C services that have been deployed and will also become the platform for accelerated transformation of conventional



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services in the future. The project will have enhanced security using two factor authentication with digital signatures and if necessary 3 factor authentication using biometrics to enable secured online and also offline public service transactions.

- b. **Digital School:** Education is a necessary condition for achieving social, cultural and economic goals of the country. However, a study conducted by the Royal Education Council shows that currently, the main challenge facing the education sector as a whole is to improve the quality of education. A study for classes V, VII and IX in English, Mathematics and Science found that student learning outcomes are below the minimum expectations of their grade levels. The reason for these gaps can be attributed to several factors such as teacher competencies, adequacy in teaching learning materials, lack of ICT infrastructure, large class size, classroom practices and learning environment, etc. From these factors, ICT is seen as an enabling tool to achieve the quality of education. Therefore, the integration of ICT in teaching learning has been identified as an important factor to improve learning outcomes and promote lifelong learning. Recognizing its importance, under this component, MoE will develop e-learning platform and train teachers on digital pedagogy which has a direct impact on the quality of education. In addition, this initiative will also develop an improved Education Management Information System as a single source of truth for all education related information in the country to enhance administrative efficiency.
- c. **Electronic Patient Information System(ePIS):** The electronic Patient Information System aims to provide better health services to the citizens through the use of Electronic Medical Records (EMR) and automated procedures in the Hospitals. The Government aims to replace the traditional, isolated paper based prescription by a holistic, centrally stored electronic medical records for all the patients. This approach not only improves efficiency and transparency in the Hospital System but also provides quality health care to patients. Moreover, the project is also guided by the vision of a nation with the best health, where the health sector has emphasized the importance of using ICT-enabled solutions to improve the delivery of quality health service to the people of Bhutan.
- d. **Government Initiated Network(GIN):** While most agencies are connected to the government network there are still many offices in the Thromdes, districts and gewogs that are not yet connected. A total of 1400 offices need to be connected including colleges, schools, hospitals, regional offices, local government offices. To also ensure reliable connectivity in the country there are loops of the national fibre network that need to be closed off to provide better redundancy in the network to improve reliability from 98% to over 99.9%.



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- e. **Integrated Citizen services(ICS):** While Bhutan has achieved a lot with online public services there are still many opportunities to re-engineer service delivery by ignoring agency boundaries and developing services that cut across multiple agencies providing citizen centric services. The objective will be to reengineer services to automate services in such a way that approvals from agencies will be automated and made online and services shall be designed end-to-end irrespective of which agencies are involved. 10 most commonly used integrated services shall be re-engineered and integrated across agencies to minimise the interactions that citizens will need with the bureaucracy. Those 10 common services are Birth registration, Death reporting, Construction approval, marriage certificate, Permit services, Rural timber services, Student information, Vehicle information, Pension and GIS services. The implementation will ensure that services can be applied and delivered online without the need to visit any government office. This shall include all prerequisites for those services as well. Dzongkha Translation tools shall also be developed by the DDC to ensure greater availability of Dzongkha content.
- f. **Electronic Business:** The Integrated Business Licensing System consist of services like Environment clearances, location clearance, sectoral clearances like agriculture sector for commercial agricultural or herbs cultivation, or medical sector for pharmacy or diagnostic services, among others are still not automated for business licenses. An automated end-to-end online business licensing system that takes into account all prerequisites for starting a business will be developed. A Single Customs & Trade System for approval for citizens importing or exporting goods in and out of the country shall be created linking all agencies via a single portal shall be
- g. **Enhancing the capacity and capability of ICT professionals:** With increasing investments in ICT and digitization across the country it is necessary to build capability within the country to ensure the sustainability of such major investments. This will require strengthening cyber security, enhancing digital literacy across the country to take advantage of online public services and strengthening the ICT Industry to support these initiatives domestically. Under this component, capacity and capability of both formal as well as non-formal sectors will be developed through training programs, digital contents and advocacy and awareness programmes.
- h. **Bhutan Integrated Tax System:** This component focuses on developing a robust Tax management system for the country which can cater to both direct as well as indirect taxes. Through the integrated management of all taxes under one umbrella , the country's domestic revenue management is expected to be improved significantly.



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- i. Additionally, as Digital literacy plays a significant role in materializing the full impact and benefit of these ICT initiatives. The digital literacy training program which is also one of the components under digital drukyul flagship has been initiated across the country to enhance digital skills of the people, to educate them on the growing significance of technology and safe use, economic empowerment and most importantly to be independent tech natives.

2. What were the challenges the country faced while implementing these activities to bridge the digital divide?

- a. **Mobile Cellular and internet connectivity:** Difficult geographical terrain coupled with sparsely populated areas has been one of the challenges in reaching mobile cellular and internet services to all populations in the country.
Through the Universal Service Fund, financial subsidy was provided to the two telecom operators to take the mobile cellular services to all the rural areas that were not beneficial to the operators.
- b. **Television access:** Difficult geographic terrain with sparsely populated areas was one of the issues in ensuring 100% access to television by all households.
 - Availability of technology, initially, to access television (Bhutan Broadcasting Services) and radio services from the South Asia Satellite.
The Government, therefore, extended support to private Permit holders to distribute Ku-band dishes to those households that have television but no television connections. Till date, 6,827 Ku-band dishes through South Asia Satellite (with BBS TV Connectivity) were installed in rural areas.
- c. **ICT and Media Literacy:** Low level of ICT and media literacy among our population. The Media Impact study conducted in 2008 highlighted the importance of media and information literacy to understand their role and impact on the socio-economic development of a country as well as for the individuals.
Rigorous ICT and media literacy programs were initiated and implemented during the current Five Year Plan for students, non-ICT and non-media literate populations.
 - To resolve ICT and Media literacy among our students.
MOU signed with the Royal Education Council to include ICT and media curriculum in our education system. Further, MoIC in collaboration with MoE is working on establishing computers labs for our schools.



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- d. **Cyber Security:** Lack of cyber security knowledge and awareness among the population. Lack of cyber security awareness meant people were easily conned to reveal important information to the hackers . Thereby, leading to increased cybersecurity incidents.

The Ministry is developing a national cyber security strategy which includes plans and programs aimed at increasing the cybersecurity knowledge among the population and professionals, awareness on cybersecurity issues and threats and capacity development of ICT professionals.

- For a developing country, financial resources is still one of the critical challenges to developing robust, secure and resilient ICT infrastructure.

Additional information on Covid-19 response: How did Bhutan tackle COVID-19 pandemic by using ICT?

- Promotion of online education, where discounted internet data schemes were introduced for students to enable them to continue their academic studies
- In order to tackle the COVID-19 situation in the country, the RGoB has developed several online systems such as Druk Trace Mobile Apps, Checkpost Management System(CPMS), Health Facility System, Entry & Exit system, Essential Good Monitoring System, Quarantine Management System, Single Window contact Tracing system and Vaccine rollout system.
- One of the mobile applications developed is the **DrukTrace** app which is used for community tracing in Bhutan. Individual mobile numbers are used to verify and only valid Bhutan phone numbers are accepted for registration. QR code for public places, transport, events, etc can be generated through this application and this app is also used to scan these QR codes which would help contact trace individuals in cases of community transmission.
- A Check Post Management System (CPMS) was developed to track movements of vehicles and people through formal point of entries/exists at check posts within the Dzongkhags/Districts during COVID-19 pandemic. Travellers are supposed to register their travel details in the system and these information are verified by the Royal Bhutan Police(RBP) at each entry and exit of the Districts.
- Health facility system is a map-based system used by flu clinics that were set up in 20 dzongkhags and 3 thromdes to record patients who have availed clinic services, and also helps in monitoring the requirement of health personnel at the site. The system also helped visitors in locating the nearest and the least busiest clinic near their location.



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- Entry & Exit system (also called GATE system) is a web based application system to manage and monitor travelers entering/exiting the country through the land border point of entry.
- Essential Good Monitoring System is also an online system used by the ministry of Economic affairs to monitor stock levels of essential commodities in various warehouses in the country, and make informed decisions for replenishment.
- Quarantine Management System: Has a mobile based apps as well as a web based application system to help people in quarantine centers to report their daily health conditions, and on the other hand the health personnel monitors and respond to health issues reported in addition to enforcing the quarantine standard operating procedures.
- Single Window contact Tracing system is a web based system to help the national contact surveillance team in faster tracing people who are suspected to have been in contact with covid-19 confirmed cases.
- Vaccine Rollout system: Is both mobile based as well as web-based system to register all eligible citizens for vaccination and to manage and monitor how the vaccination is going to be carried out.

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INDONESIA



Dr. Ismail Ismail
Director General of Frequency Management and Postal and ICT Devices
Ministry of Communication and Informatics of Republic

Questions:

What are the challenges faced by Indonesia to bridge its digital divide?

What is Indonesia's strategy to bridge its digital divide, in order to fulfill its national digital transformation agenda?

1. What are the challenges faced by Indonesia to bridge its digital divide?

Thank you for the question Ms. De Silva - Mitchell

First of all, I'd like to greet Ms. Doreen Bogdan-Martin, Director of Telecommunication Development Bureau ITU,

All distinguished panellists,

Ladies and Gentlemen,

Good Morning, Good Afternoon, and Good Evening!

I would like to express my gratitude to this panel that has enabled us to share our thoughts and ideas about bridging digital divides.



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I'll begin my explanation with the concept of digital divide itself. As we all have known, the digital divide refers to the gap between those who are able to benefit from the digital age and those who are not. The digital divide began with the introduction of telecommunications when technology was first developed to connect people. Therefore, bridging digital divide is essential to bring inclusivity for all.

Then, there is a difference between approaches in the late '90s and at this current time when we talk about bridging digital divide.

In the late 90s, the approach was gradual and partial. Currently, especially during the COVID-19 pandemic, the approach needs to be instant and focused on developing broadband connectivity.

In Indonesia, the focus has also shifted from simply the provision on infrastructure to a more comprehensive strategy, including the provision of infrastructure, improvement of digital literacy, and support for applications development.

The government's roles have also changed. Previously, the government only acted as a regulator that ensured fair competition between Mobile Network Operators or MNOs. In addition, most of the time government only waited for these MNOs to provide service. Currently, government acts more proactively. To accelerate the process of improving connectivity, the government not only acts as a regulator, but also as an investor by utilising the national budget.

Regarding the challenges, Indonesia is an archipelagic country where we face extremely difficult geographic challenges in developing infrastructure. With a large population of internet users, in terms of telecommunication infrastructure, there are still around 9,500 villages/sub-districts that have not been connected to 4G mobile broadband. On the other hand, poor digital literacy and a low number of local contents also hinder the efforts to reduce the digital gap.

2. What is Indonesia's strategy to bridge its digital divide in order to fulfil its national digital transformation agenda?

Several efforts have been undertaken by the Ministry of Communication and Informatics, such as: completing fibre optic backbone or Palapa Ring in 2019, building BTSs in 1,600 villages/sub-districts in 2020, providing internet access for 4,400 public services location including around 3,100 in the health centre to assist the vaccination programme. In total, we have provided 13,000 health centres with internet access last year, including those that are located in the frontier, outermost and least developed region.



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In the near future, the Ministry of Communications and Informatics also plans to resolve and improve connectivity issues in all areas and aspects. By 2022, it is expected that all villages/sub-districts will be connected to the internet. It is 10 years faster than the initial plan. In 2023, we also will launch the Satria Satellite that will be utilised to support all government services. And finally, starting from 2021 -2024, 5G service will be available in metropolitan cities and national strategic areas such as New Capital Cities and tourism areas.

To achieve what we have planned, the Ministry of Communications and Informatics have prepared strategies from six standpoints as follows:

Firstly, from a regulation standpoint, the Government of Indonesia has enacted Job Creation Law and its derivatives. In the telecommunication sector, this law regulates resources sharing between MNOs such as passive and active infrastructure to increase benefit for all operators and enable frequency sharing for new technology.

Secondly, in terms of frequency management, Indonesia still needs 1310 MHz to meet the spectrum demand. To resolve this particular issue, the Analog Switch Off (ASO) on 700 MHz that is also regulated in Job Creation Law require the process to be completed in November 2022. We are also looking forward to the Farming and Re-farming process to optimise frequency use.

Thirdly, regarding telecommunication infrastructure development, the local government has been encouraged to act more proactively by providing facilitation and convenience for business actors.

Fourthly, National Data Centre is currently being established to accelerate data that will be utilised as the main data source in public sector policymaking such as social aids, education, health, industry and trade.

Fifthly, the research by World Bank Group stated that Indonesia needs 9 million digital talents from 2015 to 2030 to accelerate its digital economy. To accommodate the development of human capital, the Ministry of Communications and Informatics provides Digital Talent Scholarships and Digital Leadership Academy. We also have a movement to increase national digital literacy named Siberkreasi. And recently, one of the universities in Indonesia cooperate with TIP Lab to prepare the application of Open RAN.

Lastly, we also need to support the flourishing of the local contents. For application, we always support local community-based developers in building the local applications in order to compete with the applications developed overseas. For equipment or devices, we have a law that



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regulates the local content requirement stating a minimum of 30% of components is domestic products.

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GERMANY



Dr. Wilhelm Eschweiler
Vice President
Bundesnetzagentur

Questions:

How do regulators support the information society?

What is Bundesnetzagentur's role in accelerating access to the digital world?

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

The nature of digitalisation is two-fold. On the one hand, digital technologies have become ubiquitous in our lives, this videoconference being but one of many examples. On the other hand, many people are still excluded from fully taking part in our digital everyday life.

So what is Bundesnetzagentur's role in accelerating access to the digital world?

As a regulator, our core business is shepherding the opening of telecommunication markets to competition.

These markets have evolved a great deal since the EU started liberalising its markets.



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Thanks to the opening markets, new players and services have come up and are still doing so. These new services often blur the boundaries between classic telecommunications and adjacent areas. With this market evolution, regulators are evolving as well.

As the role of data has become a crucial competitive parameter, the role of Bundesnetzagentur is being refined and upgraded with a view to numerous aspects of digitalization where Bundesnetzagentur's expertise can deliver added value.

This expertise applies to different dimensions of digitalisation and of potential digital divides. The WSIS Forum is of course first and foremost a venue in which to examine the global effects of digitalisation.

A key trend here is the use of "Artificial Intelligence."

The use of AI is of considerable importance in the digitization process. So, in order to be able to better grasp this multifaceted and extremely broad topic, Bundesnetzagentur has started work on developing a common understanding of the essential AI terms.

In order to do so, Bundesnetzagentur is launching a market consultation with regard to the use of AI in the network sectors, looking to identify its regulatory challenges.

Bundesnetzagentur is asking stakeholders to submit their views on the potential of AI, but also possible obstacles and regulatory challenges regarding AI.

Next to the market aspects of AI, Bundesnetzagentur is also flanking its work on Artificial Intelligence by engaging in standardization bodies like ETSI, ISO/IEC and ITU-T.

Our standardization work in the field of AI ranges from examining practical applications and data processing at the national level to working on fostering cybersecurity, sustainability and establishing trust.

Another way in which Bundesnetzagentur is promoting better and more widely available access is by supporting the digitalization in small and medium-sized enterprises. This is not only a key political issue, but also a major practical challenge.

Digital transformation is essential for innovative and competitive SMEs.

This transformation requires many things; among them a digitalization strategy, employing and upskilling digital specialists and making other corresponding investments. But at least as important as these factors are confidence in IT security and electronic data protection.

Bundesnetzagentur has new tasks to support SMEs in this area, in particular

- to support the digital transformation and networking of SME,



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- to support implementing specific digital programs for SME and
- to develop and disseminate information that are relevant for SME.

These are cross-cutting tasks where the longstanding and varied expertise of Bundesnetzagentur can be used to empower SMEs to unleash their full digital potential.

Bundesnetzagentur is also responsible for the implementation of a new funding programme regarding the GAIA-X-initiative, a project that will enable data to be made available, merged and shared in a trustworthy manner, and innovative applications and services to be developed. This engagement demonstrates another key dimension in which regulators like Bundesnetzagentur can help conquering digital divides.

They can use their comprehensive experience in the multi-faceted telecommunication markets and their resources to the advantage of all stakeholders by building and sharing knowledge. Just to give you one example: Bundesnetzagentur is taking part in the „EBSI“ project which is setting up a European Blockchain Services Infrastructure. To that end, Bundesnetzagentur is running our own blockchain node.

Given the great interest in blockchain technology in other network-based industries, Bundesnetzagentur can use the experiences we gather in this project to share with our stakeholders.

In this way, regulators like Bundesnetzagentur form an important building block in the multi stakeholder ecosystem that is shaping the information society in which we all live. Our contribution to this increasingly digital world is to champion everybody's opportunity to participate in it, in a fair and non-discriminatory way. I wish you'll have a successful conference with very fruitful discussions.

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INDIA



Dr. P.D Vaghela
Chairman
Telecom Regulatory Authority

Questions:

What are the initiatives taken by the Government of India in Bridging the Digital Divide?

How emerging technologies can reduce the digital divide?

Digital Divide and response by India

1. Digital divide can be defined as the gap that exist between those who have and those who do not have access to technology (telephone, computer, internet access) and related services. However, there is an additional requirement that the user must have or possess the ability to use to available resources properly. Bridging such divide which may be based on social, geographical, or geopolitical criteria or otherwise is critical for an inclusive and all-round development of all the citizens of a country.

2. In the past decade, India has taken a lot of initiatives to reduce the digital divide and to connect the unconnected.



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2.1 BharatNet, the biggest initiative to bridge rural urban and haves and haves not divide.

This project known as BharatNet to provide broadband connectivity to all the villages across India by an optimal mix of media like underground OFC, Aerial OFC, Radio and Satellite in which more 154,000 clusters of villages have been connected through optical fibre under.

- Using BharatNet fibre, more than 100,000 Common Service Centres Common Service Centres (CSC) have been established in villages for providing digital services. This project has helped in providing high quality and cost-effective video, voice and data content and services, in the areas of e-governance, education, health, telemedicine, agriculture, access to land records, rural banking & insurance, utility services, commercial services, entertainment as well as other private services.
- We are further establishing Additional 150,000 CSC.

2.2 Online Education

- With the social inequity in online education coming to the fore due to the COVID-19 pandemic, the Government of India and provincial governments have started distributing laptops or tablets to 40% of all college and university students. Access to Digital library has been provided to colleges and universities.
- Also, all government schools are equipped and further being equipped with information and communication technology.

2.3 Digital Literacy

- The National Digital Literacy Mission is focussing on introducing digital literacy at the primary school level in all government schools for basic content and in higher classes and colleges for advanced content.

3. A huge Telecommunication penetration has taken place in India in the last few years.

- Internet subscribers in India increased from 238.1 million in 2014 to 776.45 million in 2020, thereby showing an increase of 225%.
- During the same period, rural internet subscribers increased from 92.18 million to 302.35 million, showing a growth of 228% and urban Internet subscribers increased from 175.21 million to 474.11 million, showing a growth of 171%. It is noteworthy that the growth in rural internet subscribers has been much higher than the urban subscribers.



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- Annual Per Capita Data usage increased from 3 GB in 2014 to 90 GB in 2020, a seismic growth of 30 times since 2014.
- India is one of the biggest consumers of data worldwide. On an average, a mobile data user consumes about 12 GB data per month.
- Telecommunication tariffs in India are one of the lowest in the World. While global average cost per GB data is US Dollar 8.53, whereas in India it costs USD 0.14.

3.2 In 2016, Indian government launched **Unified Payments Interface (UPI)** that powers multiple bank accounts into a single mobile application, merging several banking features, seamless fund routing & merchant payments into one hood. In October 2020, Unified Payments Interface (UPI) recorded 2.07 billion transactions worth US\$ 52.10 billion making it possible to provide financial service online to farmers, artisans and informal sector.

3.3 COVID-19 pandemic has accelerated digital uptake in India to a greater level. India has the second-fastest rate of growth of digital adoption.

3.4 Some of the other key measures include:

- Funding through **Universal Service Obligation Fund (USOF)** for creation of telecom infrastructure in unconnected remote areas, islands, hilly areas, where most of the excluded people reside.
- TRAI is organizing **Consumer Outreach Programme** to make the consumers aware about the available services and how to use the services and to enhance digital literacy.
- **Implementation of Aadhaar -a project which gave unique identification number and card to every citizen-** has allowed government to transfer cash assistance, subsidies directly to their accounts.

How Emerging & Converging Technologies can be used in bridging digital divide.

With the emerging and converging technologies, the convergence of services is now possible. The single device -that is- mobile phone is now being used for voice, video and data. Mobile phones are becoming user friendly and cheaper. Even non-skilled and illiterate persons can use it easily. It is leading to proliferation of mobile use in rural and remote areas, reducing the digital divide.

- Price Reduction

The new technologies are leading to substantial price reduction of telecom services. With 4G-LTE technology, voice call is almost free and data prices have also come down substantially in India. This has led to affordability and adaptation of mobile services in rural areas. With upcoming 5G



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technology, the cost of per unit data is getting reduced further. This will lead to reduction in digital divide.

- Improved devices and applications

The mobile handset technology is also improving a lot. There are new applications for users, based on symbols, audio and video means. The rural area users including hawkers, farmers, artisans will have access to market pricing and can find out the buying / selling prices of various commodities with the help of mobile phones and applications. Many applications are possible through single device only.

- 5G Applications

Various use cases of 5G technology will also reach to rural areas, bringing rural population connected to the mainstream. The most desirable applications will come up in the Agriculture, Healthcare and Education sector. This will greatly pave the way for bridging the digital divide.

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SWEDEN



Mr. Dan Sjöblom
Director General
Swedish Post and Telecom Authority

Questions:

***What are the main challenges in relation to digital divide/digital inclusion?
What can regulators do to improve the situation?***

Statement Missing

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INTERNATIONAL TRADE CENTRE (ITC)



Mr. Robert Skidmore
Chief Sector and Enterprise Competitiveness

Questions:

How relevant is digital trade to driving the uptake of network connectivity to unconnected populations?

How can networks of partners help?

1. Online Trade is the fuel powering the digital economy

The crisis brought with it a step-jump in the demand for internet usage: for instance sales in many e-commerce platforms rose between 50% and 100% - with consequent impacts in network usage, as well as operations in companies positioned to serve the demand.

- African market leader Jumia saw sales of groceries and essentials grow four-fold during lockdown, and finished the year 50% up on 2019
- Even those supplying less-than-essentials saw a big jump in sales: Afrikrea, an e-commerce marketplace for African fashion designers saw a tripling of its sales during the crisis

The digital entrepreneurs we work with see a massive opportunity. One in four of those we have interviewed had started to sell on line as an early reaction to the crisis and the vast majority – nearly 90% - of those not selling online planned to do so imminently.

Our work in promoting trade, often anchored in trade shows and inward buyer visits, has suddenly gone on line. Virtual B2B is now driving conversations between buyers and sellers with all the opportunities and challenges that can present.



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The Covid-19 pandemic, however, quickly made obvious that half of the world's population is not online, with a substantial portion of the unconnected not having access to the internet and that those who can access the internet often do not because of cost and poor quality of service.

The standard view before the great confinement was that **usage drove connectivity**. Where demand justified it, the private sector would make connectivity available and price it more or less correctly.

With the advent of Covid-19, it appears a new normal is developing where connectivity is driving usage. Forced to use the internet more, and facing markets in which trust in on-line services and sales have suddenly and dramatically increased, many SMEs have found that connectivity challenges now limit their capacity to respond.

With the sudden imposition of remote working many of the SMEs and individual entrepreneurs ITC works with had to shift from reliable and affordable wi-fi access to expensive and not always well functioning mobile internet access often through a pay-as-you-go model. As a result, the cost of accessing the internet has gone up for a substantial part of the population and business community in the countries where ITC operates.

Consequently, ITC started to pilot the subsidy of mobile internet access for young digital entrepreneurs in Uganda, Zambia, Ethiopia and The Gambia across 3 projects: NTF IV, FastTrackTech and YEP Gambia.

- In Banjul, we are working with local entrepreneurs to set up “micro hubs”, small community based co-working spaces allowing local entrepreneurs to access connectivity within close range at subsidized rates.
- Support toward digital entrepreneurs such as **Beinday** in Dakar or **Moja by Brckr in Kenya** who innovate to address the connectivity challenge, through subsidized urban wifi.

In that regard, we support the innovations of network and digital service providers to enable connectivity can be brought to excluded populations. Applications in educational content and access to health care bring much needed services – but it is in bringing the potential of ecommerce that we can ensure economic sustainability to the investment.

2. Networks are essential to the response to build out connectivity and usage

Digital platforms offer the possibility to bring a vast array of individuals together who share a common interest in building solutions – and opening the potential for greater and more inclusive participation in online trade.



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Across sub-Saharan Africa ITC is innovating a network to support digital entrepreneurs and tech go international - with online and onsite training, advisory and coaching focused on building digital and business skills with a focus on regional & international business generation and investment promotion.

In 2020 ITC formally launched the “[ecomConnect platform](#)”: an e-commerce community with a particular focus on entrepreneurs from developing and least-developed countries. ecomConnect brings together MSMEs, start-ups, organizations and business experts in e-commerce to build-up connections, acquire digital expertise through free online courses, e-commerce tools for small business and live webinars.

The platform now has over 3,500 members from over 40 countries, with 62% women. The programme has ambitious long term goals: to have over 1 million members on the ecomConnect platform, enable 100,000 SMEs make their first e-commerce sales and ensure that E-commerce makes a positive economic contribution to the lives of > than 100 million otherwise excluded individuals.

Achieving such ambitions is only possible with partnerships. ITC works with private sector partners, such as the marketplaces ebay and etsy, payment solutions providers such as Paypal and Payoneer and transportation providers including DHL – as well as the entrepreneurial ecosystem of hubs and incubators.

ITC acts within a network of like-minded institutions and partners: from “eTrade for All” to the Broadband Commission, and at international fora – whether at the WTO or in regional bodies – we aim to ensure that connectivity is understood as a prerequisite for participation in the new normal for trade - digital.



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CMAI ASSOCIATION OF INDIA



Prof. NK Goyal
President & Chairman Emeritus

Questions:

What is India's experience during covid days of digital divide?

What do you think should be done to remove digital divide in terms of technology and implementation?

Statement Missing

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Session Four: ICT Applications and Services / e-Environment/ Climate Change

Recording: <https://www.itu.int/net4/wsis/forum/2021/Agenda/Session/160>



Moderated by High-level Track Facilitator:

Mr. William Njoroge, Head of Technology, OI Pejeta Conservancy

WSIS Action Line Facilitator:

Mr. Marco Obiso, Chief a.i. Digital Network and Society (DNS) Department, International Telecommunication Union (ITU)

Speakers:

1. **Barbados** - H.E. Ms. KAY McCONNAY, SENATOR THE HON. KAY McCONNAY, Minister, Ministry of Innovation, Science and Smart Technology



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2. **Portugal** - H.E. Ms. Alexandra Leitão, Minister, Ministry of Modernization of the State and Public Administration
3. **Poland** - H.E. Mr. Marek Zagórski, Secretary of State, Chancellery of the Prime Minister and Government Plenipotentiary for Cybersecurity
4. **Thailand** - H.E. Mr. Newin Chochaiyathip, Vice-Minister, Ministry of Digital Economy
5. **Cabo Verde** - Mr. Pedro Lopes, Secretary of State for Innovation and Professional Training, Government of the Republic of Cabo Verde
6. **Syrian Arab Republic** - Mr. Manhal JNEADY, Director General, Syrian Telecommunications & Post Regulatory Authority
7. **Global Coalition on Aging (GCOA)** - Mr. Michael Hodin, CEO
8. **Tarbiat Modares University** - Prof. Ahmad Reza Sharafat, Professor and Senior Advisor, Ministry of Communications and Information Technology
9. **Internet Society Foundation** - Ms. Sarah Armstrong, Executive Director
10. **Serianu Limited** - Mr. William Makatiani, Managing Director



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Executive Summary by High-Level Track Facilitator

Relevance with the WSIS Action Lines:

This relates to action line C7 - ICT applications: benefits in all aspects of life

- Disaster recovery
- E-applications
- E-agriculture
- E-business
- E-commerce
- E-employment
- E-environment
- E-government
- E-health
- E-publishing
- E-science
- ICT waste disposal
- Sustainable production and consumption
- Teleworking
- Transparency

Issues related to COVID-19

The session explored how governments are leveraging on ICTs to provide services in the context of Covid19.

For instance, Portugal is addressing the impact brought about by Covid19, where by there was limitation of how public services operate. Regardless of the pandemic, the state must continue to provide services. ICTs play a great role to enable this. Solid infrastructure already existed but the pandemic accelerated the digital transformation. Some interventions implemented are;

- Confidential SMS line for victims of domestic violence – simple measure that was necessary
- Deployment of a digital gateway to aggregate services
- Sustainable electronic services to facilitate interoperability of different ICT offerings



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Highlights of the main issues discussed and interactions with audience

Barbados has five strategic goals and objectives in achieving sustainable ICT Applications and Service for citizens;

- Accessible and affordable telecoms
- Strengthening skills and capacity – human development
- Economic goals and sustainable development using ICT
- Improvement of goods and services
- Creation of an enabling environment through legal framework – identified suite of regulations. Passed data protection act. Passed identity management act to support digital and mobile ID. Cyber-crime legislation.

In the same breadth the government of Barbados uses plans to utilize ICTs to Improve the Delivery of Services and provide Good Governance through;

- Government leading from the front and top. Cabinet is paperless.
- Citizen centric services
- Data Protection
- Digital inclusion and digital equity
- Running a 4 year program that addresses digital transformation, enhancement of human resource management

In exploring the role that local authorities play in providing neighbourhood public services in the digital era, the approach of Portugal is;

- A serious commitment to not leave anyone behind, ensure everyone is connected
- Recognizing that there are populations without access now and instituting measures to ensure connectivity
- Rollout of citizen spot network (742 spots) for digital inclusion that includes help to navigate/access services
- Plan to roll out 300 new spots in the next 3 years

The strategy of Cabo Verde to be a reference in West Africa for ICT was articulated in point form below and this may be useful for other countries as a point of reference.

- Building techpark with AfDB
- Connectivity through sea marine cable



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- 80% internet penetration
- Backing on human capital – all secondary schools have weblab
- Teach coding as a foreign language
- Bet a lot in private sector
- Cabo Verde capital – scholarship of startups; provide 3times the minimum salary for the first year.
- Relied on tourism and adapting accordingly
- Democratization of technology
- Remote working programs – very open to the world.

Climate change was also discussed and highlighted by Syria. With Agriculture being the backbone of the economy and water sources being neighbouring territories, there is need for collaboration to ensure water security and explore applications of telecommunications in this process.

Emerging trends and technologies shaping the future of ICT Applications and Services were also discussed.

There is a Paradigm shift in use of ICT in many diverse sectors;

- 5G & 6G networks provide humanity the ability to make virtual presence a reality with diverse applications like – remote surgery, distance learning etc. Privacy & protection of data is critical
- Artificial Intelligence – Network operators can optimize network and allocate resources, Gaining traction in ICT centric services – ehealth, smart cities & societies
- Big Data analytics – AI need big volumes of data

There was a discussion around considerations during digitization process and these were identified as;

- Usability and ease of use.
- Awareness and training
- Infrastructure
- Agile; Getting feedback
- Alignment of objectives



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Quotes

“The pandemic will eventually come to an end, but the approach for digital education and skills will last much longer, and will be of utmost importance to mitigate the long term effects that the outbreak of Covid19 is having on all aspects of economic and personal well-being” ~ Mr. Marek Zagórski, Secretary of State, Chancellery of the Prime Minister and Government Plenipotentiary for Cybersecurity, Poland

“Innovation and Technology is just a tool but it’s a tool that is being used by young people, to tell a new history. History, that is not from the past, so everyone is ready to build a new world” ~ Mr. Pedro Lopes, Secretary of State for Innovation and Professional Training, Government of the Republic of Cabo Verde

“Communications and information technology have always shaped the future but their impacts have become more profound in recent times.” Prof. Ahmad Reza Sharafat, Professor and Senior Advisor, Ministry of Communications and Information Technology, Tarbiat Modares University, Iran

Overall outcomes; Key messaging

- The need for multistakeholder collaborations – to tackle climate change, enhance ICTs etc
- Skills / Human capital and capacity building came out as critical
- Government policy and strategies are important catalysts for adoption of ICTs

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BARBADOS



H.E. Ms. KAY McCONNEY
SENATOR THE HON. KAY McCONNEY, Minister
Ministry of Innovation, Science and Smart Technology

Questions:

What are the strategic goals and objectives of Barbados in achieving sustainable ICT Applications and Service for citizens?

How will Barbados Utilize ICTs to Improve the Delivery of Services and provide Good Governance?

The Government of Barbados is pursuing several policy and legislative measures aimed at fostering the development of an information and knowledge society. Five (5) goals have been identified:

- i. Accessible and affordable telecommunications;
- ii. Strengthening ICT Skills and capacity in Barbados;
- iii. Economic growth and sustainable development through ICTs;
- iv. Improve the delivery of goods, services and good governance by leveraging ICTs; and
- v. Create an enabling ICT Environment through policy reform and improvements in legal frameworks.



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Goal 1: Accessible and Affordable Telecommunications

All citizens of Barbados will have equal access to affordable and secure information and communications technologies. Government will play a leading role in building a network society where organizations and individuals have equitable access to ICT-enabled resources through:

1. Establishing mechanisms for ensuring non-discriminatory access to ICT regardless of level of income, education, age, rural or urban, gender and people with special needs; and
2. Developing mechanisms for increasing access to ICT through shared use of facilities, subsidized ICT and decreasing the cost of ICT equipment and services for rural and underserved communities.

The Government of Barbados will be utilizing the Universal Service Fund as one such mechanism to provide universal access to the Internet in Barbados. This is even more critical as we combat the effects of COVID 19, where more persons are working from home and students are being taught online. Actions that will be taken include amending the relevant legislation to include Internet Access as a universal service and to recruit a Finance Administrator or Universal Service Commissioner to manage the Universal Service Fund.

Goal 2: Strengthening ICT Skills and Capacity in Barbados

The Government is committed to strengthening ICT skills and capacity to foster innovation and the digital transformation of Barbados. This will be achieved through:

1. Continuing to work at the regional level to definite digital skills for the region and to develop a framework for their implementation;
2. Putting in place an institutional ecosystem for the adoption and application of ICTs. This will include laws, regulations, policies, guidelines, and standards;
3. Ensuring that the upgrade of ICT skills and capacity take place within the public sector, through the provision of relevant ICT skills training and competencies building. Additionally, Government will ensure that the right human resources with the appropriate ICT skill sets and competencies are recruited to achieve its objective to transform the Public Sector; and
4. In collaboration with the private sector, civil society and other stakeholders, promote ICT skills training and use at all levels of the society.



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Goal 3: Economic Growth and Sustainable Development through ICT

Information and Communications Technologies will be utilized by Government and the Private Sector to maximize economic growth and sustainable development. This will be achieved through maximizing efforts in improving energy use, transportation, agriculture and food security by leveraging ICTs.

One of the initiatives Government will be implementing is the Tech Accelerator Programme, patterned on the CivTech Programme in Scotland. The objective of this initiative is to enable Government to adopt new ways of commissioning, designing, developing, deploying and managing an efficient digital public service. This will be achieved by engaging the private sector and individuals to provide solutions to public sector challenges. A limited liability company called the Barbados Technical Accelerator Company Limited will be created to implement the Barbados Tech Accelerator Programme. Over the long term, there is the potential for Government to save millions of dollars through efficiency gains, catalyse economic growth by supporting the creation of private sector jobs and investment, revolutionize the public sector and generally lift Barbados' global reputation, thus enhancing the Barbados Brand.

Another major initiative that Government is implementing is a National Digital Identity System which will see the replacement of the existing National ID card with a smart card. The National Digital Identity System will provide user authentication for online transactions and facilitate the signing of documents electronically. The System will also facilitate the secure electronic transfer of information for a range of activities such as e-commerce, internet banking and e-communications. It will use new smart card technology - plastic cards with embedded computer chips, as well as mobile phone technology to enhance the security and integrity of Barbados' National ID system and to support a wide range of public and private sector services.

Goal 4: Utilize ICTs to Improve the Delivery of Services and Good Governance

Every effort will be made to ensure that ICT systems and processes are used to enhance Government accountability, efficiency, effectiveness and transparency in delivering public services to all and proactively combat corruption. This will be achieved by modernizing the Public Sector. In this regard, the Government of Barbados has embarked on a four-year transformative Public Sector Modernization Programme that will see the implementation of a number of critical ICT systems that will improve the efficiency, service delivery and governance in the Public Service. The systems that will be implemented, include an E-services Platform and E-services, an Electronic Document and Records Management System and a Human Resource Management Information System.



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Goal 5: Create an Enabling ICT Environment through Policy Reform and Improvements in Legal Frameworks

Government will review and update existing legislation, establish new laws and develop a strong regulatory framework that supports a technology- neutral enabling environment, for economic growth and development. The Government has identified a suite of legislation critical to the digital transformation of the Public Sector and Barbados. This includes the recently enacted Data Protection Act, 2021, the Electronic Transaction Act, 2021 and the Telecommunications Act, 2021.

Single ICT Space

Barbados is also committed to the setting up of the CARICOM Single ICT Space in the Region. The CARICOM Single ICT Space is envisioned as an ICT- enabled borderless space that fosters economic, social and cultural integration for the betterment of Caribbean citizens. It will result in regionally harmonized ICT policy, legal and regulatory regimes, robust national and regional broadband infrastructure, common frameworks for Governments, ICT service providers and consumers, and effective, secure technology and management systems. When implemented, it will result in economic growth and development in the Region and create digital Caribbean citizens.

Summary of Measures

1. All citizens will have equitable access to affordable and secure ICTs. Government will play a leading role in building a networked society where organizations and individuals have equal access to ICT-enabled resources.
2. Government is committed to prioritizing ICT workforce development and strengthening the overall workforce knowledge skills and abilities by increasing human resource development opportunities.
3. ICTs will be utilized by the Government and the Private Sector to maximize economic growth and sustainable development.
4. Every effort will be made to ensure that ICT systems and processes are used to enhance Government accountability, efficiency, effectiveness and transparency in delivering public services to all and proactively combat corruption.
5. Government will update and establish new laws for ICT and develop a strong regulatory framework that supports a technology-neutral enabling environment.
6. The Government of Barbados will work with Governments in the Region to implement the Single ICT Space.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

PORTUGAL



H.E. Ms. Alexandra Leitão
Minister
Ministry of Modernization of the State and Public Administration

Questions:

The pandemic crisis brought several challenges, including in public services. How have technologies contributed to overcome or mitigate them?

Digital public services look highly convenient for people who have easy access to ICT and the digital literacy to use them, but marginalized our rural communities often lack the means to use them. What role do local authorities play in providing neighbourhood public services in the digital era?

Statement Missing

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

POLAND



H.E. Mr. Marek Zagórski
Secretary of State
Chancellery of the Prime Minister and Government Plenipotentiary for Cybersecurity

Questions:

Seeking for the most important area of ICTs in which the governments should support citizens – especially in context of the pandemic - what is the current approach of the Republic of Poland?

Following example of Poland given on WSIS 2018 – Mr. Zagórski, in 2018 Poland has promoted the project “Nationwide Educational Network”. Providing the infrastructure to schools to “connect the unconnected” that is certainly an important task for the Government, but it’s also the task of a policymaker to support our youth in taking the most out of the fact of being connected. How do you deal with developing digital skills and usage of ICTs applications and services by the youngest?

Thank you chair for giving me the floor and good morning to everyone.

I am always pleased to have a discussion on ICTs, especially in those difficult times. Polish Government recognizes the importance of ICTs and benefits that comes with it. There is an ongoing work to support those who were most affected by the Covid -19 pandemic and one of areas that should be highlighted is the education. We believe that the crucial role for the government in the current situation is to secure the access to education for students of all ages and social backgrounds, at any given geographical location in our country, and in broader perspective, in the world. We have achieved common access to education by stressing importance of access to the Internet right before first wave of COVID-19. The goal of connecting



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

the unconnected is still an objective we need to reach first, before we can speak about providing more specific ICT services for the citizens.

Education is crucial in raising broad awareness concerning these topics and therefore a foundation for changing the future attitudes to address the challenges we are facing right now. By educating today we are changing the tomorrow. The pandemic will eventually come to an end but the approach for digital-education and skills will last much longer and will be of utmost importance to mitigate the long term effects that the outbreak of Covid-19 is having on all aspects of economy and personal well- being.

I can proudly say that Poland has managed to introduce digital-education and extended the project. Providing access is just a first, crucial step, but it's not enough to reap all the fruits of connectivity. We are trying to adapt our campaign to the local needs and the specific challenges which may occur in our country. Regarding access of the schools we successfully introduced the Nationwide Education Network, which won 2018 WSIS Prizes award. This project, as some of you may already know is all about providing fast, save and free of charge Internet access to primary and secondary schools in Poland by internal network, dedicated specifically to schools. As of now we can proudly say that all schools in Poland are connected to the Internet.

Once connected, young people are not only given access to the great source of knowledge but may face some challenges and threats. In August 2019 we launched the campaign "Don't lose your child on-line". A campaign which is strongly related with "Child Online Protection Goals". Our main goal is to help parents in real and effective accompanying their children on the Internet. Since then, we have been systematically advising parents and guardians how to wisely - shoulder to shoulder - walk with their children through the virtual world.

Taking this opportunity, I would like to appreciate UN efforts on the Child Online Protection area and the new Guidelines that has been published as we are currently in the process of translation everything that International Telecommunication Union has provided. I'm convinced that our approach fits very well within their scope.

We need to recognize the potential of ICTs when it comes to e-learning and the opportunities that it gives to children. By the efforts we are undertaking know, we may come out of this situation stronger, better connected and well educated.

We are happy to share our experiences and know-how with all interested stakeholders, as I believe that especially now, we cannot solve global challenges without working together. I am most honoured that all I mentioned, and others of our efforts were appreciated by so many. But I am most pleased that The UN has accepted Poland as the host country of the 16th UN



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Internet Governance Forum in 2021 (IGF 2021). **It is one of the biggest and most important events, serving as a platform for discussion and making recommendations regarding such a wide range of topics surrounding the internet. Please make a good note of IGF 2021 taking place on December 2021 in Poland.**

Thank you again for giving me the floor, please accept my kindest regards.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

THAILAND



H.E. Mr. Newin Chochaiyathip
Vice-Minister
Ministry of Digital Economy

Questions:

What is Thailand’s policy on the promotion of ICT applications and services?

How does Thailand manage the COVID – 19 crisis with ICT application and services?

**Excellencies,
Distinguished delegates,
Ladies and gentlemen,**

Good evening from Bangkok. I am honored to be joining in this session again with the ITU’s WSIS Forum 2021.

Thailand has launched the 20 - year National Strategy to ensure the country achieves the vision of becoming “a developed country with security, prosperity and sustainability in accordance with the Sufficiency Economy Philosophy” To accomplish that, Thailand shares the common views with other members that the role of digital technologies will be a key catalyst for driving the implementation of the National Strategy.

I would also like to introduce a National Digital Economy Masterplan or called “Digital Thailand” to enable country to take full advantage of digital technology and all its potential to harness infrastructure, innovation, data, human capital, and other resources to drive national socio-economic development.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Under Digital Thailand, the **strategy 2: Drive the economy with digital technology** refers to the application of digital technology, enabling the business sector to reduce producing cost of goods and services, and increase business operation efficiency and laying a foundation for new business competition in the long run.

In term of operation, the government puts in place on a number of measures to promote the utilization of digital technology and data. The Digital Economy Promotion Agency or DEPA is one of organizations under the Ministry of Digital Economy and Society that plays significant role to drive digital transformation through the different support programs. For example, **Digital Transformation Fund** – to promote business transformation, **Digital Startup Fund** - to promote digital business including SMEs and individuals, **Digital Event and Marketing Fund** - to promote and raise awareness for development of digital industry and innovation such as business matching, pitch contest for startups and disseminate knowledge to the public to make use of digital technology in a safe, effective, and cost-saving manner.

So far, there have been many initiatives that Thai government has implemented to improve public services. For example, Thailand founded **Government Data Center and Cloud Service** that provides the central cloud system to be used by government agencies. This initiative can considerably save funds for infrastructural development and can increase the efficiency in providing ICT and digital services to Thai people. In addition, the **Government Big Data Institute** or GBDi, was established to analyze and support Big Data policy as well as to provide consultants in data analytics and management to maximize data utilization including enhancing the skills and specializations of government officers.

Distinguished participants,

As the world now is still combating and begin recovering from the COVID – 19 pandemic, we realize that ICTs are considered a management tool for responding and mitigating the global crisis.

Please allow me to draw your attention to a briefing of our digital application and services to response to COVID-19, **Mor Chana Mobile Application**. This application offers a contact tracing solution that enables smartphone device users to perform self - assessment and determine the risk level of COVID - 19 infection based on exposure and travel history. It is designed to identify individuals who have come into close contact with confirmed COVID – 19 patients using GPS and Bluetooth technology to trace their locations. The app was created by the public-private-people partnerships.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

All data collected on Mor Chana is stored and displayed in an anonymous form, and users will only be asked to share these records when contacted by the authorities as part of contact tracing investigations. According to privacy and data protection laws, we ensure that all logs and data will be deleted immediately after the COVID - 19 crisis ends.

For foreigners who wish to visit our country, we launched another mobile application called “**Thailand Plus**” to trace foreign tourists of their visited locations. The app is the evolution of Mor Chana. Their functions are rather the same, but Thailand Plus will link to the information of entry certification from the Ministry of Foreign Affairs. Recently, there have been more than 40,000 foreigners who registered to the app.

Ladies and gentlemen,

The Ministry continues to promote and support private sectors for their investment and development in ICT applications and services. In partnership with government, private technology companies and social entrepreneurs, we have developed digital applications and services to meet the needs of people and alleviate the COVID - 19 impact.

Distinguished Participants

ICT applications and services thematic is in line with the WSIS Action Lines. Therefore, ITU and Member States should continue to work together to harness the benefits of emerging technologies as an enabler to achieve the Sustainable Development Goals. The collaboration includes providing platforms to promote international or inter-regional partnerships, developing policies and regulatory guidelines, technical and training assistances and sharing best practices. Ultimately, these will bridge the digital and innovative gap between developing and developed countries.

In closing, I would like to congratulate ITU for another year of successfully organizing the online WSIS Forum and thank the ITU profoundly for serving as an essential mechanism to assist all member states across the world to share valuable experiences and best practices in these sessions.

Thank you.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

CABO VERDE



Mr. Pedro Lopes
Secretary of State for Innovation and Professional Training
Government of the Republic of Cabo Verde

Questions:

What is the strategy of Cabo Verde to be a reference in West Africa for ICT?

Cabo Verde recently entered the top 100 of the international rankings for the first time (WIPO Global Innovation Index and Startup Blink Startup Ecosystem Ranking). What contributed to this?

Statement Missing

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

SYRIAN ARAB REPUBLIC



Mr. Manhal JNEADY
Director General
Syrian Telecommunications & Post Regulatory Authority

Questions:

How does climate change affect the environmental and human conditions in Syria?

What are the steps taken to counter the impacts of climate change and other environmental conditions?

It is my pleasure to take this opportunity to express to you our gratitude for the thanked efforts that the ITU makes in order to achieve useful communication between the regulators and telecom. decision makers, and to overcome different difficulties and bridge the technological gap between developed and developing countries.

We believe that one of the most important causes of concern in developing countries, including Syria, is due to climate change, which has negatively affected agriculture (which is considered the backbone of the economy), as well as the situation of instability in some rural areas, especially that the main sources of water necessary for drinking and irrigation come from neighboring countries, in addition to the rain water, which is relatively little.

The Syrian government gives great care to the issue of citizens' stability and the investment of their agricultural lands; and it also looks forward to meet all the needs that ensure the adaptation of the Syrian farmer to climate change, and it is also working to increase awareness of such



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

changes, and to employ communication and information technology (ICT) in order to achieve this purpose.

There is continuous endeavor by the Syrian Telecommunications and Post Regulatory Authority to spread mobile and fixed communication networks in all regions, especially in the areas affected by climate change and the consequent humanitarian crises. We also have reached good proportions in this field and we are working on developing the necessary technologies in order to spread telecommunication services there, including the FIXED LTE project, and other projects. In fact, the Authority's endeavors come in two scopes:

First: To order the operators of telecom services to assist in conducting awareness campaigns, in coordination with the authorities concerned in supervising the agricultural and water sector for all citizens in rural areas, and to increase their awareness of climate change.

Second: Providing the applications necessary to access the instructions that help citizens increase their efficiency in facing climate change and provide the necessary access to the required information.

In fact, this matter requires assistance and support from the United Nations organizations, including the International Telecommunication Union (ITU), in order to facilitate the provision of telecommunication and information technology equipment necessary for operators and service providers in Syria, especially that Syria is suffering from an unjust and severe blockade that prevents the completion of the plans of the operators of telecommunication networks and providers of information and telecommunication technology services in Syria; which prevents the benefit from technological development in all fields in general, and not only in the field of confronting climate change.

The development of work fields for citizens in the countryside, in addition to attracting them to additional fields of work (which is considered as investment in human capital) may help in providing an additional assistance to encounter climate change and the continuation of the agricultural sector as required, by the provision of agricultural expertise and experience in information technology.

Syrian Telecommunications and Post Regulatory Authority promotes - among other things - the spread of electronic applications and encourages the young generation in innovation and creativity in this field and to achieve an added value that is beneficial to the public interest. We encountered some problems related to the issue of hosting of these applications, in addition to the issues related to security of networks and applications. We look forward to the International Telecommunication Union's support in overcoming such obstacles, especially that the



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

telecommunications and information technology sector is providing basic and human services to citizens, and such services cannot be dispensed with in any way.

Thank you.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

GLOBAL COALITION ON AGING (GCOA)



Mr. Michael Hodin
CEO

Questions:

If two of the 21st century mega trends are climate change and population aging, what is the connection between them and what are the supporting elements?

How can Healthy Longevity and Climate Change advocates provide supporting public policy reforms?

As leaders of the Older Persons Track, GCOA panels this year raised awareness of and broke ground on policy and market reforms aligning how older persons and ICTs contribute to economic growth and development, social value and healthier and more active aging for older persons themselves. During our panels we covered topics on Healthcare, Financial Wellness, Elder Caregiving, Fintech, and Digital Inclusion. We were able to link, moreover, to the UN/WHO launch of the Decade of Healthy Ageing; growing awareness of the health and economic challenges for older persons due to the particular Covid-19 risks; and the expanding use of ICTs by, with and for Older Persons.

To continue this progress, the Outcomes, therefore, could include the “Creation of a Voluntary WSIS ICTs and Older Persons Group – Chaired by GCOA and WSIS and to include representation from WHO, UN DESA, OECD, 3-5 identified Government Ministries” that would also bring in diverse stakeholders from across the generations. The initial work of the Voluntary Group would be to suggest policy and marketplace reforms that advance ICTS and Older persons to achieve



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

what is set out in the ITU Report, ***Aging in a Digital World: From Vulnerable to Valuable***, being launched at the May 17 High Level concluding Panel.

This years' WSIS-GCOA Older Persons Track launched the first ever Healthy Ageing Innovation Prize, the winner being announced on May 17 at the concluding High-Level Panel. A clear Outcome is that the Prize finalists (a dozen out of the 80+ global submissions) lead on further progress for ICTs to enable healthier and more active aging for older persons and that innovation itself is best built on co-creation and co-design. Multi and Inter-generational collaboration across all ages leading to innovations for healthy ageing will be built into 2022 WSIS.

The Older Persons Track realized value and progress between ICTs and Older persons through this years' innovative "Ageing Better-Hackathon where over a thousand global hackers produces ideas in four areas of huge need for healthier and more active aging: Alzheimer's and other Dementias; Frailty; Transportation and Mobility; Fintech. The Older persons Track will award the winners on May 17th and a powerful outcome will be the opportunity for winners to be paired with mentors from private sector GCOA companies.

Finally, an Outcome of this years' Older Persons Track was to place it at the top of our global agenda along with other mega-trends such as Climate Change. The Outcome is based on core facts that there will be 2 billion over 60 by mid-century; more old than young globally by the end of the SDG Decade, now incorporating The Decade of Healthy Ageing; and that ICTs are essential for progress for healthier lives as we grow older, economic systems growth and development built on the \$17 Trillion Global Silver Economy; and successful pathways out of the Covid-19 Pandemic

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

TARBIAT MODARES UNIVERSITY, IRAN



Prof. Ahmad Reza Sharafat
Professor and Senior Advisor
Ministry of Communications and Information Technology

Questions:

What are the emerging trends and technologies shaping the future of ICT Applications and Services?

What are the two vital elements that are absolutely critical for successful, meaningful, efficient, and effective deployment and use of ICT-centric future applications and services in other sectors of the economy?

Statement Missing

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

INTERNET SOCIETY FOUNDATION (ISOC)



Ms. Sarah Armstrong
Executive Director

Questions:

Why is environmental protection an area of focus for the Internet Society Foundation?

How is your Foundation addressing this issue

Excellencies, ladies and gentlemen, it is an honor to speak here today about this important topic. Thank you for including me. I'm Sarah Armstrong, Executive Director of the Internet Society Foundation.

Let me begin with an overview of the Internet Society Foundation:

- It was conceived as an initiative several years ago by the Internet Society to advance its work through philanthropy
- Officially launched in 2019, we are guided by our vision that The Internet for Everyone
- Our mission is to champion ideas and enable communities to unlock the Internet's potential to tackle the world's evolving challenges
- And we are committed to addressing the Sustainable Development Goals with today's discussion focusing on SDG 13 (Climate Action)



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

That is who we are: A caring organization that identifies challenges and gaps that exist in the arena in which we work, and we are devoted to funding organizations and individuals who are eager to help find solutions to address the world's evolving challenges, including those related to the environment and climate change.

The Challenges Identified:

1. The Internet takes energy

- While roughly 306.4 billion emails were sent and received each day in 2020, the figure continues to increase significantly
- As we know, the world is streaming more than ever
- The Internet is being accessed more than ever as a result of the way in which all of our lives have been impacted by the pandemic.

2. Currently there are no think tanks, no research centers, nor any research nonprofits dedicated to the study of the Internet and the environment.

3. In all of the ICT areas, we have learned that, when it comes to examining environmental impact of ICTs, the Internet is focused on the least.

4. Finally, there is a significant gap in more complex and nuanced understanding of:

- Toxins and waste generated by the use of the Internet and,
- The enabling effect the Internet has on greenhouse emissions of other sectors.

To address these challenges, the conversation and amount of action needs to be augmented. The Internet Society Foundation believes this can be done by supporting more researchers to study the issues.

A Solution: The Foundation's Research Programme

1. Anchored in philanthropy, the Foundation has committed to offering five programme funding areas. Information about all of these programmes is on our website at isocfoundation.org

2. Today, however, I will focus on the Research Programme. This programme was designed and launched this past year to improve the secure, global, open nature of the Internet with one of the primary focus areas being Greening the Internet.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

3. To address what I identified in the “Challenges” section of my remarks, the Foundation is now funding researchers who are looking at environmental protection in relation to the Internet.

4. They – and we – recognize that the Internet both impacts and is impacted by the environment and climate change.

5. This cohort of Internet Society Foundation-funded researchers are working on understanding and raising awareness of these impacts, focusing attention on initiatives such as:

- What is the average carbon footprint of a cable station, and what climate solutions might help to mitigate this footprint?
- How can we identify high-value, high-impact research on the energy and environmental impacts of the digital economy?

Clearly, it is time to promote thought leadership in this space.

In closing, again, thank you Your Excellency, fellow Panel Members and those of you who joined us today for this important conversation. The Internet Society Foundation is very much aware that energy is not unlimited.

We will therefore continue to find ways to play an important role in the ecological resiliency of the Internet and ensuring its utility for generations to come. And we encourage others to do the same.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

SERIANU LIMITED



Mr. William Makatiani
Managing Director

Questions:

The role and importance of e-government services in Africa.

Key considerations for African governments during their digitization process.

Statement Missing

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Session Five: Building Confidence and Security in the use of ICTs

Recording: <https://www.itu.int/net4/wsis/forum/2021/Agenda/Session/163>



Moderated by High-level Track Facilitator:

Mr. Nino Letteriello, President of DAMA Italy and Coordinator at MIT

WSIS Action Line Facilitator:

Mr. Preetam Maloor, Head, Emerging Technologies Division, International Telecommunication Union (ITU)

Speakers:

1. **São Tomé & Príncipe** - H.E. Mr. Wando Castro, Minister of the Presidency of the Council of Ministers, Social Communication and New Technologies, Government of São Tomé and Príncipe
2. **Slovenia** - H.E. Mr. Boštjan Koritnik, Minister, Ministry of Public Administration
3. **Cuba** - H.E. Mr. Wilfredo González Vidal, First Deputy-Minister, Ministry of Communications



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

4. **Cyprus** - Mr. George Michaelides, Commissioner of Communications, Office of the Commissioner of Communications
5. **Latvia** - Mr. Edmunds Belskis, Chairman of the Board, Latvia State Radio and Television Centre
6. **Serbia** - Dr. Vladimir Krstić, Member of the Managing Board, RATEL
7. **Zimbabwe** - Dr. Gift Kallisto Machengete, Director General, Postal and Telecommunications Regulatory Authority
8. **UNU-EGOV, UNU** - Ms. Delfina Soares, Head of UNU-EGOV, UNU – Operating Unit for Policy-Driven Electronic Governance in Guimarães, Portugal
9. **University of Lausanne** - Prof. Solange Ghernaoui, Director, Swiss Cybersecurity Advisory and Research Group Member of the Swiss Academy of Engineering Sciences
10. **Mobile World Capital** - Ms. Cristina Colom, Director Digital Future Society



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Executive Summary by High-Level Track Facilitator

Trust is everything, hard to build and to sustain and once damaged very difficult to be restored. With this opening remark, we started the 2021 High-Level Policy Session 5 on Building Confidence and Security in the use of ICTs.

Whilst studies and surveys are showing that trust in government, in both developed and developing nations, has been continuously declining for almost two decades, digitalisation, at personal, community and national level, provide strong and unique opportunities to change this trend.

At core we have data, personal and public, which will need to be protected while being harvested, analysed, interrogated and shared for the wider community benefit as the joint efforts in response to the COVID-19 pandemic has recently shown. COVID-19 forced many to work remotely and for governments and cities to deploy education, care and essential goods and services to the extent that is now impossible to imagine a return to a pre-pandemic. As consequence a surge in the number of cyber-threats and cyber-incidents was recorded and innovative ICT business model will be needed; however, as mentioned during the session, “while the office doors remain closed millions of digital doors are open, and we have to take those opportunities”.

Within this context, enhancing cybersecurity and protecting critical information infrastructures are a prerequisite for the development of a healthy and successful Information Society and for building confidence among users of ICTs. It is nevertheless a journey, with local challenges, strategies and governance requirements as well as global opportunities and collaborative solutions.

During the session, Panellists stressed the need for a global culture of cyber-security developed and implemented in cooperation with all stakeholders and international expert bodies to ensure the protection of data and privacy, while enhancing access and trade. In support of global efforts, common policies and regulations to ensure adequate and balanced governance would be required and to this extent cyber-security certifications were referred as an area of potential collaboration.

In discussing critical infrastructure assets and regulations, we need not to forget what at core of the digital and any era before that, people and the communities they live within and the risks which could lead to a sort of “technophobia”. The importance of citizens awareness,



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

transparency of information, ongoing education and familiarisation with the new technologies should not be underestimate and should be available to all. From mobile use and applications to digital identity and technologies, governments have the opportunity to establish a trustworthy ecosystem of digital platforms and solutions, to become more inclusive and accessible to the citizens providing equitable and efficient access to services otherwise inaccessible as well as to a more open and democratic interactions.

In the process to a more inclusive, a more sustainable and a fairer digital future, the need to more secure and protected digital infrastructure assets and tools will need to be coupled by joint and global ethical practices and policies with citizen-centric and humanistic approach at core of this journey.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

SÃO TOMÉ & PRINCIPÉ



H.E. Mr. Wando Castro

Minister of the Presidency of the Council of Ministers, Social Communication and New Technologies

Government of São Tomé and Príncipe

Questions:

Minister Castro, from your perspective what do you see as the main opportunities and challenges to the digital transformation of society globally and for São Tomé and Príncipe specifically?

What international initiatives do you see as important to help build peoples trust in technology? and what are you doing in São Tomé and Príncipe specifically to address security and trust issue?

In 1946, mankind witnessed the creation of the first computer - the ENIAC. Back then, we were far from imagining the challenges that this brilliant invention would pose, both in terms of the daily management of our personal tasks, as well as the planning and execution of work in all sectors and professional activities. The perception of these challenges became true with the invention and commercialisation of the internet in the late 80s and its subsequent massification.

Today, more than ever, we can consider ourselves digital people. In our identity, in our way of working, communicating, entertainment, leisure, and in all aspects of our life the digital is always present. If this digital invasion brings us ease, efficiency, effectiveness, and a world of opportunities, It poses enormous challenges to guarantee our privacy and security. The



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

technology that brings citizens closer also makes them more vulnerable, given its inherent possibility of accessing and manipulating data. The massive use of social networks as a privileged medium for communication and dissemination of information boosts new opportunities for people and organisations to advertise, sell and buy their products and services faster and cheaper. However, it also has boosted fake news, the violation of privacy and the proliferation of slander and defamation against people and organisations, which places their credibility at risk. The use of digital systems by public and private organisations to provide information and services to their customers has contributed to increasing the efficiency, effectiveness and transparency of these bodies, thus improving the provision of services for their customers.

However, access to data and services by digital means poses major challenges in terms of security and privacy for these organisations and their customers, who are faced with unauthorised attempts to access critical and confidential information vital to their operations.

The so-called cyber-attacks. These phenomena, which play with the privacy and security of us all, are global and cross-border. It is necessary to create legal, technological, and international cooperation mechanisms to counter and neutralise such threats. Although Sao Tomè and Príncipe is a small country, with many resources restrictions at all levels, and still with a fragile economy, it is not oblivious to such phenomena. In fact, the country approved in 2020 its National Digital Governance Strategy, aimed at digitising public services provided to its citizens. Naturally, this path towards the digitalisation of public administration brings with it a great challenge regarding privacy and security of data. And this has been a major concern for national authorities: how to find ways to mitigate these challenges.

From the outset, the National Plan itself points towards some structuring actions, namely the authentication platform as a way of guaranteeing the identification, privacy, and security of data in the system for the provision of public online services. Before the implementation of the digital strategy, motivated by the 2013 UN resolution, which advises Member States to create data protection and privacy laws, as well as the 2014 African Union convention on cybersecurity and data protection of personal data, the country had already launched concrete actions to combat cybercrime and protect personal data.

In 2016, the law on the protection of personal data was approved. In 2017, the creation of the Personal Data Protection Authority was approved. This agency started its work in 2018. Its mission is to control and supervise compliance with legal and regulatory provisions regarding the protection of personal data by strictly respecting human rights, and the freedoms and guarantees enshrined in the Constitution and the laws. Still in 2017, the cybercrime law was approved.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

On the other hand, the country is working hard towards ratifying the Budapest Convention on Cybercrime and the African Convention on Cybercrime and Protection of Personal Data.

Both conventions have already been signed by the country. These actions unmistakably show the commitment of Sao TomÉ and Príncipe regarding cybersecurity and the protection of personal data. However, we are aware that it is necessary to do more and better. We must invest in the infrastructures' security for the provision of digital services and in the training of human resources. This is our commitment and our desire for the coming years. But we must also understand that these challenges can only be overcome through a permanent and sustainable cooperation between all countries and international organisations that deal with this issue, since it is a global issue that also requires, on our part, a concerted global solution.

Thank you very much for your attention.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

SLOVENIA



H.E. Mr. Boštjan Koritnik
Minister
Ministry of Public Administration

Questions:

We can currently witness many important developments and processes being implemented at the European Union level related to cybersecurity and protection of critical information infrastructures. Since Slovenia is preparing to hold the presidency of the Council of the EU from 1st July on, I would kindly ask Minister Koritnik, Minister of Public Administration from the Republic of Slovenia, to tell us more about those developments and Slovenia's presidency priorities in the area of cybersecurity?

Secondly, I would kindly ask Minister Koritnik to reflect a bit on the role of Slovenia in the global international developments in the area of cybersecurity?

Excellencies, Distinguished Guests, Ladies and Gentlemen,

First of all, I would like to thank to the organisers for making this important event on trust and security in the use of ICT possible.

We should be aware that countries' economic and social well-being, democracy and human rights protection depend to a large extent on how well a country can protect itself against cyber-attacks. We have seen how the current COVID-19 crisis has accelerated digitalization and at the same time exposed some shortcomings and risks of digital infrastructure. For this reason, cybersecurity is, and will remain, one of Slovenia's main priorities, also during the Presidency of Council of the European Union, which Slovenia will hold in the second half of this year.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

By establishing a Joint Cyber Unit that will facilitate information exchange, coordinate cyber crisis management in various areas and bring together all interested stakeholders we will achieve important global objectives, such as:

- better harmonisation of minimum standards of cyber security across the Union,
- strengthening resilience to large-scale cyber security attacks,
- and better information exchange and trust between EU Member States and other countries.

Listed objectives could also be achieved through the revision of the Directive on Network and Information System Security ('the NIS Directive') which would ensure a high level of cybersecurity standards and through the implementation of the EU's Cyber Diplomacy Toolbox.

In addition to cooperation at EU level, Slovenia will continue to put efforts into strengthening cooperation with other countries, in particular the Western Balkans region, where cyber capacity building will be the focus. All these topics will also be discussed at the International conference on Cybersecurity which will be organised by Slovenia during our Presidency of EU Council in September this year.

Slovenia, with a long tradition of technical – operational capabilities in the field of cyber incident response, is a reliable international partner. Slovenian National Computer Security Incident Response Team currently chairs the EU's Network for the overall 18 months of the Trio Presidency and has also been very active in the cyber capacity building in the Western Balkans.

Slovenia is also a member of the EU, NATO, UN, OSCE and many other international and regional forums. This has helped our country significantly in strengthening our national resilience and responsiveness to cyber incidents. We have developed our policy and legal framework, set up our organizational structure, engaged in joint training and built the necessary capacities.

All these processes are ongoing and require continuous cooperation at all levels, political commitment, and close cooperation. Slovenia will strive to ensure that the cyberspace is regulated, with full respect for existing international law, in particular the United Nations Charter, International Humanitarian Law and Human Rights. As the country holding the Presidency of the EU Council in the second half of 2021, Slovenia will certainly be focused on ensuring a secure and efficient digital transformation of the Union.

Thank you for your attention.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

CUBA



H.E. Mr. Wilfredo González Vidal
First Deputy-Minister
Ministry of Communications

Questions:

How building confidence and security in the use of ICTs contributes to the development of the Information Society?

What is Cuba doing to mitigate the effects of COVID-19?

His Excellency Dr. Chaesub Lee, Director of Telecommunications Standardization Bureau of the International Union. Dear Ministers, Vice Ministers and government officials.

We welcome the holding of this Forum, which I am pleased to attend, to dialogue and share on the imperative need for the imperative need to build trust and confidence in the use of and security in the use of ICTs, and thus achieve universal, reliable and equitable access for all humanity.

Our country is advancing in its process of informatization of the society, in which cybersecurity and culture in the use of ICTs are one of its main pillars.

To this end, the Council of State, approved Decree 360 on ICTs Security and the Defense of National Cyberspace, whose main objective is to create a regulatory framework that establishes the principles and actions to be followed to determination, develop and improvement of the conditions of reliability, stability and security of ICTs, in support of the informatization of society and the sovereignty of the nation.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Cuba considers that in this digital era, it should be a high priority for everyone to promote the peaceful and legitimate use of ICTs, as well as to strengthen the multiple opportunities offered by cyberspace for the development and well-being of humanity, it is a high risk to use them for harmful purposes and not for the economic, cultural, political and social sustainability of nations.

Cuba is making every effort to strengthen and develop access to ICTs within our economic possibilities and under the limitations imposed on us by the inhuman and genocidal economic, commercial and financial blockade to which we have been subjected for more than 60 years,

aggravated at the present time, due to the global economic and health crisis generated by COVID-19.

At the end of 2020, the country reached 6.6 million mobile telephony users, of which 4.4 million accessed the Internet through this technology, of the more than 7 million that today access the network of networks. In addition, national IT platforms are being developed, with relevant content for the country, all of which is possible thanks to the valuable human resources that our nation.

In the midst of the effects of COVID-19, it is necessary to strengthen global unity, solidarity and international cooperation and to put aside political differences and eliminate unilateral coercive measures imposed by some countries, which violate international law and the United Nations Charter and limit the capacity of States to effectively confront this pandemic.

To achieve a world with access to ICTs for all and for the good of all, it is necessary to continue the struggle to eliminate the obstacles faced by developing countries, including insufficient resources to expand investment and connectivity, lack of infrastructure, limitations in access to education, and problems related to intellectual property and technology transfer.

Furthermore, in order to respond to existing threats, substantive efforts are needed to build capacity in developing countries to increase their coping capacity and resilience.

Ensuring an open, secure, stable, accessible and peaceful ICTs environment requires the joint cooperation of all states, the only way to prevent and confront these new threats and thus prevent cyberspace from becoming a theatre of military operations.

Excellencies:

We must be on the use of ICTs to promote social solidarity: sharing and cooperating values that should be associated should be associated with the economic, cultural and political sustainability of our nations, cultural and political sustainability of our nations. It is a



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

challenge to transit the information and knowledge highway in a serious and ethical manner.

We must promote and defend an increasingly responsible relationship between the citizen and cyberspace; a more competent citizen with a greater culture in the proper use of ICTs.

Cuba, even if blocked, will never remain on the sidelines of the evolution of ICTs, nor of the cultural changes that they entail for the information society. It strives to ensure that Cuban society continues to be one of the most peaceful and secure for its citizens, including in cyberspace.

We are confident that the discussions that will take place will result in several proposals for cooperation as an option to enhance the positive effects of ICTs, preventing their potential negative effects is the only way to promote the welfare and development of our peoples.

Thank you very much.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

CYPRUS



Mr. George Michaelides
Commissioner of Communications
Office of the Commissioner of Communications

Questions:

We are all witnessing a true paradigm shift in the digitalisation of the world, and the use of ICTs not just for business and communication but increasingly for all aspects of our lives. How can governments ensure the safety and security of their citizens and businesses when it comes to the use of ICTs?

What about citizens themselves, and even businesses, for example small and medium enterprises? How can we help to build their confidence and security in their own use of ICTs on a daily basis?

1. We are all witnessing a true paradigm shift in the digitalisation of the world, and the use of ICTs not just for business and communication but increasingly for all aspects of our lives. How can governments ensure the safety and security of their citizens and businesses when it comes to the use of ICTs?

At the governmental level, there is actually a great deal that can and should be done in this direction, especially given the very rapid deployment of an extremely wide range of digital services that can be found in every aspect of our daily lives.

I would say there are 5 important elements that need to exist at a state level in order to build a secure environment of the citizens: the first thing towards that direction is to have a National



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Cybersecurity Strategy, which should have a holistic approach. For example, in Cyprus we have followed a holistic approach to cybersecurity at the national strategy level since 2012.

The second important (which should be of course part of the National Cybersecurity strategy) is the protection of CIIs. CIIs are those where if they cease to work, it will create an issue to the citizens or to the economy of the state, e.g electricity provision, water supply etc.

Another important element is the creation of the necessary organizational structures at a state level e.g the creation of a National CSIRT and/or Digital Securities Authorities, which will be tasked for the protection of the CIIs and the state.

From what I have mentioned, nothing will have significance unless there are Comprehensive awareness-raising actions, performed across different levels, starting from Cyber professionals, to critical infrastructures through to targeted awareness sessions for children, educators and parents. No matter how well a state will perform in building strategies and organizations to provide security, if the state does not invest in awareness to the citizens I am afraid not much will be achieved. And needless to mention again that humans are always the weakest link...

And lastly is facilitate the enhancement of national and international cooperation

2. What about citizens themselves, and even businesses, for example small and medium enterprises? How can we help to build their confidence and security in their own use of ICTs on a daily basis?

This is a very good question, and one that touches upon the core of what we are trying to achieve with the cybersecurity activities already mentioned, i.e. the question of TRUST.

Citizens, and indeed businesses in every country need a high degree of confidence and a feeling of security in their own personal use of ICT products and services – in other words, they need to be able to TRUST the technology that they (and their children, parents and loved ones) are using regularly.

Beyond the types of actions that are covered by national cybersecurity strategies and the general focus on the cybersecurity and resilience of critical information infrastructures, there is another area which is gaining significant traction in the past few years, and which is set to grow rapidly – that of cybersecurity certification, which will be able to help towards addressing this very issue of TRUST.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Through the use of cybersecurity certification, companies doing business in the EU will benefit from (voluntarily) certifying their ICT products, processes and services only once, and seeing their certificates recognised across the European Union.

Cybersecurity certification requires the formal evaluation (of products, services and processes) by an independent and accredited body against a defined set of criteria, standards.

The issuing of a certificate indicating conformance to a defined level of security, thus increase the level of TRUST in making the use of these products, processes and services.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

LATVIA



Mr. Edmunds Belskis
Chairman of the Board
Latvia State Radio and Television Centre

Questions:

How trusted digital identity ensures citizens' right of secure access to the digital environment and supports implementation of SDG?

How the democratization of technology increases the importance of cybersecurity in all sectors of the economy?

The time of the pandemic has presented challenges for the whole world - to work differently, to think differently and to organize our life in new normal reality. While the office doors remain closed, millions of digital doors open.

Many of the 17 Sustainable Development Goals and 169 targets go hand in hand with trustable digital identity which ensures citizen's right to access education remotely, develop sustainable business, support the decrease of transport created emissions and to use all the opportunities and services provide by the government online.

The time of the pandemic has further accelerated this convergence of our physical and digital worlds and the ICT expert community has already made the conclusion that 2020 has been the year of digital identity. A secure identity has become a precondition for the world not to stop. Today there is no place, tool, integration or application what we can call risk free zone. The ICT sector must take on a level of social responsibility that has never been required of the sector before. I believe that there will be times when we find this excessive, but at the same time I



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

believe that it will be critical not only to the well-being of the industry but also of civil society as a whole.

The availability of digital identification tools to citizens now is clearly recognized as an important aspect of the economy development and social inclusion. In 2021 and upcoming years, the importance of digital identification will continue to grow. As it is the digital identity that can create economic incentives that could create a value equivalent to 3-13% of GDP by 2030. Trusted identity provides tools for secure e-commerce, helps to protect the consumer rights and ensures the availability of the most sensitive government services online.

Trusted identity tools are available in Latvia since 2006. Latvia has become the second country among Nordic Countries and Baltic States whose national electronic identification tools can be used to receive cross-border e-services in other European Union member states. In 2019, Latvia has become the first to develop an e-identity verification tool - a mobile solution completely independent from other data carriers.

Last year also showed the essential importance of trusted digital identity in business as well as private life, as the number of persons, who used trusted identity and qualified electronic identity tools have increased by 94%, but the number of people who have used digital notary services, available only by trusted tools, increased by 134%. It is possible to establish a business completely remotely, by using a trusted identity. Electronic identity tools support safe and secure communication channel between state and citizens via eAddress.

The COVID-19 pandemic has led to a significant increase in the use of electronic identity and signature tools in all industries since this helped as a universal pill for business not to stop but continue to work safe.

Today there is no place, tool, integration or application what we can call risk free zone.

The ICT sector must take on a level of social responsibility that has never been required of the sector before. I believe that there will be times when we find this excessive, but at the same time I believe that it will be critical not only to the well-being of the industry but also of civil society as a whole.

Therefore, today, common policies and governance can help industries to work together, and also to exchange information on potential risks.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

I believe that by working together, we can create a security chain without weak links, on the contrary, each link could be the strongest. We already have trustable tools, we have already promoted the contribution of new technologies, so it is important to focus this energy now on sustainable development, the protection of public interests and values and overcoming the economic crisis.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

SERBIA



Dr. Vladimir Krstić
Member of the Managing Board
RATEL

Questions:

What is the role of the Regulatory Agency for Electronic Communications and Postal Services (RATEL) in building confidence and awareness in the use of ICTs in the Republic of Serbia?

What are the main challenges faced by the National CERT during the COVID pandemics in terms of confidence and security in the use of ICTs?

1. What is the role of the Regulatory Agency for Electronic Communications and Postal Services (RATEL) in raising awareness and building confidence in the use of ICTs in the Republic of Serbia?

RATEL was entrusted with the activities of the National Computer Emergency Response Team (CERT) in charge of coordination of prevention and protection activities against security risks in ICT systems - the National CERT of the Republic of Serbia, which was established in 2016, in line with the Law on Information Security.

The National CERT collects and exchanges information on security risks in ICT systems, including the incidents threatening the safety of ICT systems, and it informs, warns and advises the entities managing the ICT systems and the general public in the Republic of Serbia about the incidents. Under the law, some of the main tasks of the National CERT are:



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

- to monitor incidents on the national level,
- to analyse risks and incidents and classify them according to their severity levels,
- to react upon reported or otherwise detected incidents, by providing advice based on the available information to the entities affected by the incident, and by taking other necessary measures within its competence,
- to cooperate with Special CERTs, autonomous incident handling teams, on a private-public partnership model,
- to cooperate on the international level with relevant and competent organizations and bodies in charge of information security,
- to inform the line ministry quarterly about the undertaken activities.
- and, in particular, to build confidence among citizens, companies and public administration bodies, as well as to the raise awareness of the importance of information security.

The National CERT is adequately staffed and equipped with IT systems and infrastructure to perform activities within its competence and to ensure availability at all times.

In 2019, the National CERT was accredited by the Trusted Introducer, established by European CERT community in 2000. Also, in 2019 National CERT won the FIRST Suguru Yamaguchi Fellowship award, and in 2020 the National CERT became the permanent member of the global Forum of Incident Response and Security Teams (FIRST), which is the premier organization and a recognized global leader in cyber-incident response.

2. What are the main challenges faced by the National CERT during the COVID pandemics in terms of confidence and security in the use of ICTs?

During 2020 and the first months of 2021, when the states and people all over the globe are coping with the COVID-19 pandemic and most people are forced to stay at home and complete online most of their social and business activities, including the health-related issues, Computer Emergency Response Teams are facing new challenges to ensure the security of information-communication systems on the national and international levels and protect them from malicious cyber-attacks. In the light of this new reality, the National CERT of the Republic of Serbia has intensified its efforts in keeping the security of both public and private information-communication systems and networks. The National CERT has introduced additional measures in



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

providing early warning and responding to reported and/or detected cyber-attacks. In the time of pandemic, the number of people forced to use online applications and services has rapidly increased, and so has their vulnerability to cyberattacks.

Additionally, in 2020 the Government of the Republic of Serbia has started an ambitious rollout of broadband infrastructure, thereby bringing applications and services to rural areas of Serbia. In that respect, we have got additional tasks to raise awareness of cyber security and to encourage and empower a new population of ICT customers to gain confidence in the use of ICTs.

More information about the National CERT activities is available at <https://www.cert.rs/en>

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

ZIMBABWE



Dr. Gift Kallisto Machengete
Director General
Postal and Telecommunications Regulatory Authority

Questions:

What are the most common fears for businesses, organisations and ordinary people that can be a barrier to the use of ICTS?

What should be done to allay or overcome these fears and deal with their cause?

The ITU Secretary-General - Mr Houlin Zhao

The WSIS 2021 Chairperson - His Excellency Maxim Parshin

Excellences

Ladies and Gentlemen:

The rate at which ICTs have advanced has resulted in increased cyber-attacks, computer and network security breaches. Cybercriminals hack economic institutions, government websites and power infrastructures, in order to steal or extort money or advance an ideological agenda. Reported intrusions on government computer systems, networks and websites for both developed and developing countries are enough to scare governments from adopting new telecommunications applications. A look at WikiLeaks releases of leaked sensitive information shows the gravity of cyber threats. Publicized attacks in entities that are well-versed in technology, such as Equifax, eBay, Adobe, yahoo, face book and Google, can make any ordinary person reluctant to connect to the internet or use cloud storage facilities, let alone adopt emerging technologies and applications.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

For governments, the greatest fears emanate from the threats of cyber terrorism, data breaches, espionage and human error by employees. Fear of Cyber-terrorism keeps every nation more alert than the possibility of an attack by a physical army, as the former can be executed at the click of a button, with consequential damage to organisations and individuals, while the latter can easily be spotted coming.

For corporate entities and businesses, the fears include competitor driven hackings designed to steal business secrets, sabotage and spying by competitors, in order to gain strategic advantage.

For individuals, the fears of identity theft, theft of passwords, fraud through access to bank accounts, breach of privacy, tracking of personal activity and information by tech giants and governments, technophobia, form a composite of fears.

Fears by older persons deserve special mention, as they form a psychological barrier to the adoption of ICTs. Some of them fear that they may not be skilled enough to use a particular technology and therefore steer clear of it. This explains the reluctance by some older persons to use social media.

Given these fears, we have seen Government Departments lagging behind in computerising their records and transaction systems, thereby continuing to use manual record systems to store data.

For businesses, the worry that data breaches may occur due to electronic data storage, as well as electronic transactions, is not taken lightly. This is in view of the heavy fines that are levied by regulators on institutions such as Banks, Hospitals, Schools and other businesses, when a data breach occurs. Damages that can be claimed by individuals against entities in whose hands their personal data is illegally accessed make things worse. Hearing that large entities were hacked at some point makes smaller entities and governments even more reluctant to embrace technology.

Stories about bank records and hospital records being dumped on the internet for all to see, would give any ordinary person, or individual, technophobia. Individuals also fear personal information tracking by their governments and employers, as well as artificial intelligence. In this regard they fear drones, robots and home surveillance technology. Public reports concerning the Cambridge data analytical scandal, the commonwealth Bank's loss of customer financial accounts for 20 million accounts and the running down of a pedestrian by a self-driven car in Arizona, also exacerbate these kind of fears.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

There are a number of ways and solutions that can be used to allay these fears and avert attacks, thereby building confidence and security in the use of ICTs.

For governments, training of Government Officials on how to protect their ICT systems can improve the situation. Such training includes training on password rules, as passwords are the first line of defense against breach. Use of secure and sophisticated hardware, as well as robust anti-virus solutions, can help not only allay fears of Cyber terrorism, data theft and any breach of privacy, but also provide real protection.

Overall, fears for both government and corporates can be reduced through monitoring of data assets, creating an effective risk plan, which is well known and owned by employees, enforcing security protocols, providing firewall security, securing Wi-Fi networks, limiting employee access to data and updating protective solutions, as technology improves and changes. These measures can help governments and commercial entities, as well as individuals

For individuals, the biggest measure other than technical measures that policymakers can take, to build trust and confidence in the use of ICTs, is to have a strong and robust legal framework that can protect users.

Perhaps the biggest confidence booster would be to ensure that the level of knowledge is synchronized from the current asymmetry between those that create and use emerging technologies and, those that regulate the technologies. Having a robust legal framework gives assurance to users that they are protected online, the same way they are protected offline.

As Zimbabwe, the draft Cyber Security Bill and a Data Protection bill, are essential for building trust in the use of ICTs. We have also commissioned a sizable local Data Centre and a Regional Internet Exchange Point, which gives assurance to users of telecommunication/ICTs that their personal data does not get exported. Furthermore, the country is in the process of setting up a National Computer Incidence Response Team.

This should go a long way in building confidence and security in the use of ICTs in Zimbabwe, and other administrations may be well advised to do the same.

I will leave you with one point of advice. It takes many years to build a business, a country, a customer base, a reputation and respect, but it can take just one cyber-incident, to destroy it all, if we do not take cyber security seriously.

Thank you for your attention.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

UNU-EGOV, UNU



Ms. Delfina Soares
Head of UNU-EGOV, UNU
Operating Unit for Policy-Driven Electronic Governance in Guimarães, Portugal

Questions:

How can ICT be an instrument to increase trust and confidence in governments?

Are governments building trust in the way they are providing digital services and using ICT to interact with citizens?

Two interesting points to consider when discussing **trust** and **ICTs** are: (i) if and how ICTs can be used to build trust in government and (ii) if and how are or can governments be able to build citizens trust in the digital services they are providing.

Trust is fundamental. Trust is a *must* for governments. No democratic government survives if it does not build and sustain the trust of its citizens. It is the central element of good governance, being simultaneously a precondition for, and a result of, good governance.

However, and paradoxically, despite its strong relevance and indispensability, the levels of trust in government are weak. A myriad of surveys undertaken by governmental and non-governmental organisations show that public trust in governments has been continuously declining, in both developing and developed nations, for almost two decades. This fact constitutes a huge challenge for governments since trust is not an easy issue to address. Trust has a set of nuances that make it very difficult to build and maintain.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

ICTs can be a remarkable **vehicle to generate and foster trust** in governments. ICTs are a key and cross-cutting tool in both streamlining and modernising public administrations and institutionalising open and democratic governance.

Digital technologies can make governments more efficient and effective in operating and delivering services and interacting with citizens. Digital technologies can also make governments more inclusive and accessible to the citizenry. Indeed, by congregating services into one conveniently accessible place, governments give citizens equitable access to services that are often inaccessible outside cyberspace.

ICTs also provide opportunities for the disabled to integrate into society in ways previously impossible or very difficult.

All these benefits contribute to developing good governance and effective public administrations, thus contributing to fostering trust in governments.

However, **ICTs** may have a **dual and paradoxical effect on trust** that needs to be carefully faced and managed. If the adoption of ICT may generate trust, it also may generate fears and distrust, as it can be seen as a source of risks.

People fear and distrust how governments are using ICTs. How is their personal data handled? How is their data shared among public entities? How technically robust are the platforms? Who trustworthy are the online counterparts with whom they interact? All these questions affect citizens' trust.

The fears felt are amplified by the incidents and reports on breaches and cyber-attacks, information leaks, information misuse, frequently published and announced. Also, they may gain an even bigger magnitude with some of the new trends, such as the adoption of emerging technologies like IoT, AI, Blockchain, to name a few. The fear and distrust generated by these technologies is not just because they are new, and there are still many aspects about the kind and deepen of the disruption they may introduce and the unintended consequences of their application. It is also because of the privacy perils that the combination of data from different and multiple sources, like citizen-produced data (data from social media and mobile phones), machine-generated data (data from IoT devices, CCTV cameras, drones, sensors, satellites), and government-produced data (internal data in government) may generate. These inconceivable volumes of data on the physical and social environment of citizens, combined and analysed through sophisticated data analytics techniques, although allowing the development of tailored context-aware and context-intelligent digital public services may, may expose citizens privacy.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Considering all this backdrop, the core message is: if the full potential of ICTs of digital transformation is to be reached, issues of distrust and lack of confidence must be very carefully addressed by governments. To succeed in this regard, governments should act on three main pillars.

First, governments have to ensure the establishment of a set of mechanisms, such as policies, strategies, processes, and practices around cybersecurity, personal data handling, and the ethical use of data.

Second, it is important that governments define a whole-of-government approach to protection, privacy and the ethical use of data by digital systems, platforms and solutions. This does not mean all digital platforms will have the same security measures but that they adopt a global consistent approach and process to address cybersecurity requirements and risks.

Third, governments must ensure that the digital systems, platforms and solutions are stable, available and resilient. In other words, that the systems and platforms have embedded the proper technological privacy and security mechanisms.

And, fourth, ensure that the digital systems, platforms and solutions support consistently high-quality experiences, no matter which device or channel users choose to access them.

The **second pillar** relates to the development of a set of actions that will **ensure that citizens perceive systems as trustworthy**. Four main actions are crucial at this level.

First, **engage citizens**. Empower them by providing the possibility of choice and control over their own information.

Second, **communicate with citizens**. Talk to citizens, explaining to them in plain language the processes, data policies, how personal information is accessed, shared and used and why. Create communications programs and give visibility of successes and lessons learned in this area.

Third, **educate citizens** in order to demystify the digital experience and the risks associated. Implement awareness campaigns and provide simple educative programmes to spread good practices.

Fourth, **be accountable and transparent**. Governments should assume ownership by breaches and failures.

Finally, the **third pillar** relates to **promoting trust in ICTs through international cooperation**.



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Create international coalitions with the purpose of promoting trust in ICT and discuss the best means of addressing this issue. At this level, the role of international organisations, such as the one that has been played by ITU is of paramount importance.

The ultimate goal is to foster a global culture of cybersecurity and to take cybersecurity, protection, privacy, personal data handling and ethical use of data from the margins to the mainstream.

The **first key pillar** relates to the **establishment of a trustworthy ecosystem of government digital platforms and solutions**. This requires four main actions.

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UNIVERSITY OF LAUSANNE



Prof. Solange Ghernaouti
Director
Swiss Cybersecurity Advisory and Research Group
Member of the Swiss Academy of Engineering Sciences

Questions:

Why Building Confidence and Security in the use of ICTs is still so important in 2021?

What are the obstacles, what types of approaches, what are the key success factors, why we must succeed ?

The context

All over the world, countries are pursuing their development through digital technologies.

The pandemic is a factor that amplifies digital uses and therefore interconnection of systems, data and information flows. The digital ecosystem and its main players have emerged stronger from the health crisis.

Societies are becoming more dependent on digital technology but also more fragile because of it.

Technical and procedural vulnerabilities still exist and constitute opportunities for malicious actors who know how to exploit them.



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The consequences of cyber risks and their impacts vary in intensity and can have systemic and potentially catastrophic effects.

Because of the dependency, and interdependencies of systems and networks, cyberthreats are structural and permanent. Cyber risks are very complex.

Moreover, it is no longer technical problems that cause security problems, but also the simple use of infrastructures that can pose a problem when it comes to disseminating information for the purposes for example of manipulation, cyber influence or psychological actions.

Insecurity by design will increase with the contribution of artificial intelligence able to attack systems, thwarting security solutions or even making fake news, deep fakes and feeding conversational robots, for example.

Needs for effective answers

All of this poses problems of confidence, trust and security to which it is necessary to provide effective answers.

All sectors of activity (health, finance, education, supply chain, etc.) depend on ICT.

For more than twenty years, the international community has been addressing the issue of standards for an open, secure, stable, accessible and peaceful cyberspace. Whether it is a question of technical standards or those relating to responsible behaviour, the basic problem has still not been resolved. The nuisance generated by abusive, criminal, terrorist or conflicting uses of the digital environment is a reality.

The more systems, objects, organisations and people are interconnected, the more security problems there will be. It is a vicious circle, there will always be a lack of skills, resources, security solutions.

The asymmetry that exists between the attackers and those who have to protect and defend their resources increases the difficulty of implementing effective security.

Providing answers to security flaws is good, but certainly not enough because cyberspace is a place where power, crime and conflicts are expressed.

We have built a digital ecosystem that does not produce trust and privacy by default and security by design.



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What has changed today is not only the increase in the criticality of the problems, but also their mediatisation and the awareness of the international community of the impacts of cyber risks.

Mastering the risks requires a global and coordinated response by addressing legal, organisational, technical and procedural issues, international cooperation and capacity building

In a more general and comprehensive sens, security involves to take into account the need to develop a digital ecology to protect our environment and for the benefit of all.

Difficulties

The main obstacles to cybersecurity are related to the nature of the Internet and of cyberspace, mainly because cyber-attacks can be motivated by economic, political or ideological purposes. Besides there is a lack of a common and internationally shared vision of what should be a common space to be shared and regulated. Additionally, some divergence of interests, culture and values exist and there is a plurality of actors and a great competition among them

It seems that one of the obstacles to solving the problems comes from the major contradiction that exists between complex and contradictory needs related to cybersecurity issues (as for examples surveillance, human right protection, anonymity, national security and international security, States sovereignty).

There is also many legal issues and the application of law in cyberspace but also issues related to hostile ICT use and to cyberweapons development

These are geostrategic issues that go far beyond the technical issues of security and the implementation of operational security measures.

Approaches and key success factors

It is important to recognize that technical issues are at the root of all the others. Mastering cyber risk through technological and procedural measures continues to be of prime importance.

Given the long-standing role played by ITU, as a UN specialized agency and a global Standards Development Organization (SDO), it is well positioned to be an essential global SDO actor in the field of security related standards and technical measures.

However, international cybersecurity standardization is challenging due to the range of technologies, the never ended evolution of technologies and services.



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It is important in this respect for ITU to continue to strengthen coordination and collaboration with the other SDOs, on the basis of reciprocity, so that end-to-end security, security and privacy by design, and interoperability throughout the lifecycle of the product are ensured.

As a professor and a researcher I think that the development and deployment of appropriate skills, and best practices among all stakeholders is always a crucial issue.

Every organisation, are faced with the need to have sufficient and necessary human resources and skills to:

- Implement strategic and operational cybersecurity measures,
- Control the risks,
- Managing crises related to the occurrence of security incidents (cyber-attacks);
- Strengthening the robustness and resilience of infrastructures.
- Develop consistent behaviours, practices and cybersecurity culture.
- Design and develop products without vulnerabilities

Since more than 10 years, the ITU GCA approach provide an interdisciplinary framework for developing capacities.

Civil society has also a significant role to play by refusing to adopt and to use products and services that are not offering security and privacy by design.

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MOBILE WORLD CAPITAL



Ms. Cristina Colom
Director Digital Future Society

Questions:

***What are the main impacts of cyberattacks for us as citizens?
How can we reduce the number of cybersecurity breaches and cyberattacks?***

Fostering a tech-humanism approach also in cybersecurity

We are experiencing a widespread of technology issues like security hacks, inappropriate or illegal surveillance, misuse of personal data, the spread of fake news and misinformation, algorithmic bias, and lack of transparency just to mention a few. Not only are they technology issues but also, they are everyone's problem that we need to solve out as society.

The resulting distrust these incidents breed in society can significantly damage the way we operate and interact. This is particularly relevant when we talk about sensitive areas for citizens like health, banking sector or public administration data. But the way organisations answer these attacks and make them public is key for long term trust.

The threat of cybersecurity and lack of digital privacy is immense. The tech ecosystem and governments have not been able to anticipate the social and economic challenges as consequences of the innovation and emerging technologies. We must create collective awareness, work with the different stakeholders, anticipate the impact of digital transformation and build an inclusive and equitable society together. An inclusive and equitable



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community is one in which all citizens can participate and prosper and feel empowered to take full advantage of the digital tools and economy in a secure manner.

The same tools and technologies that drive digital transformation can also help build trust among stakeholders and create benefits for society.

COVID-19 accelerates our digital advancements. Opportunities and risks are multiplying. The challenge is immense, transversal. No one is safe from the threat of cybersecurity and lack of digital privacy, which is immense. Examples are many. Last year, there were up to 50,000 harmful attacks against organizations in the health sector. This is particularly problematic given the current pandemic scenario. And if we leave Covid-19 aside, we can also identify that in 2019, over 43% of data breach victims were small businesses.

Urgent action must be taken, so we do not allow digital divides to create further inequality. We must create collective awareness, work with the different stakeholders, anticipate the impact of digital transformation and build an inclusive society together.

The good news is that the same tools and technologies that drive digital transformation – and whose careless use can sabotage trust – can also help build trust among stakeholders and create benefits for society.

At Digital Future Society, we believe that emerging technologies can be leveraged to enhance trust when used to improve transparency, reinforce ethical practices, boost data privacy, and harden security. But this can only be achieved by fostering a tech-humanism approach.

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Session Six: Digital Economy and Trade / Financing for Development and Role of ICT

Recording: <https://www.itu.int/net4/wsis/forum/2021/Agenda/Session/164>



Moderated by High-level Track Facilitator:

Ms. Rachel Sibande, Senior Director, Country Outreach, Digital Impact Alliance (DIAL) at the United Nations Foundation

WSIS Action Line Facilitator:



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Ms. Shamika N. Sirimanne, Director, Division on Technology and Logistics, UN Conference on Trade and Development (UNCTAD)

Speakers:

1. **Syrian Arab Republic** - H.E. Mr. Iyad Al Khatib, Minister, Ministry of Communication and Technology
2. **Bahrain** - Sh. Nasser bin Mohamed Al Khalifa, Acting General Director, Telecommunications Regulatory Authority (TRA)
3. **Cameroon** - Prof. Philemon Zoo Zame, Directeur General, Agence de Regulation des Telecommunications (ART)
4. **Portugal**, Mr. João Cadete de Matos, Chairman of the Board of Directors, Autoridade Nacional de Comunicações (ANACOM)
5. **Greece** - Prof. Konstantinos Masselos, President, Hellenic Telecommunications and Post Commission
6. **Jordan** - Dr. Nael Adwan, Director, Investment and Entrepreneurship, Ministry of Digital Economy and Entrepreneurship
7. **Pakistan** - Mr. Ajmal Anwar Awan, Director General, International Coordination, Ministry of Information Technology and Telecommunication
8. **Ghana** - Mr. Abraham Kofi Asante, Chief Executive Officer, Ghana Investment Fund for Electronic Communications (GIFEC)



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Executive Summary by High-Level Track Facilitator

The session Below is a summary of the key issues raised by each of the speakers during the HLP session. The session aligned with all WSIS action lines 1 to 11. There were a number of emerging themes around the Digital economy, trade, financing for development and the role of ICT, COVID19, challenges facing the attainment of vibrant digital economies and some examples of progress being made towards building digital economies.

We heard from ITU Elected Official Mr. Malcolm Johnson, Deputy Secretary-General, International Telecommunication Union (ITU) that despite the COVID-19 pandemic, businesses have leveraged digital platforms to adapt to new ways of trading and that there has been a surge in ecommerce. The pandemic has highlighted the importance of digital. Mr. Johnson also highlighted the role that the ITU plays in creating a global network resilience platform and setting standards that can drive competitiveness for the global economy. He emphasized on the importance of aligning the WSIS process with the SDGs and the focus on creating global financing frameworks at the service of humanity.

We later heard from **UN WSIS Action Line Facilitator:** Ms. Shamika N. Sirimanne, Director, Division on Technology and Logistics, UN Conference on Trade and Development (UNCTAD). She intimated on how digitalization has changed on how we produce and consume. She highlighted some findings from a recent UNCTAD report that among others suggests that digitalization has strengthened small businesses in developing countries to expand operations whereas small businesses in low economy countries, have struggled to digitalize due to lack of enabling environment, insufficient funds to scale, uncertainty of the future, and availability of required workforce. It is thus important to accelerate efforts to support developing countries to catch up on digitalization. Shamika however, emphasized that it will take more than connectivity for developing countries to flourish in the digital economy. Building Legal frameworks, Trust, digital skills, financing are among other aspects that need to be improved to enhance the digital economy. A Whole of Government approach is key to attaining smarter integrated outcomes. Shamika ended off by saying, “The pandemic is an opportunity to turn the digital economy into a more inclusive space.”

H.E. Mr. Iyad Al Khatib, Minister, Ministry of Communication and Technology, Syrian Arab Republic, shared about Syria’s focus in creating smart societies through the digital economy. He shared on the four main challenges that Syria is facing to develop the digital economy, which include: cyber security risk, management of data, conflict, instability and displacement of



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populations and poverty. The Minister indicated that there are more opportunities of Increased use of digital platforms e.g. contactless payments and remote services. He suggested a number of propositions to enhance the digital economy such as increasing the share of ICT services, improving broader broadband access, leverage use of ICTs by individuals and Government that enhance economic growth, support from ITU and other entities to promote digital economy.

From Barhain we heard from Sh. Nasser bin Mohamed Al Khalifa, Acting General Director, Telecommunications Regulatory Authority (TRA), Bahrain. He mentioned that Barhain is focused on becoming an ICT hub to produce, use and export innovation. He said that there is focus on enhancing accessible data connectivity and protection from cyber threats and the establishment of sector specific emergency and recovery plans. He also mentioned that Barhain has attracted global digital economy investors e.g Amazon web services. Barhain is also in the process of creating the national broadband network, levelling the play field for operators to drive low prices and stimulate innovative products and services. He further said that, 78% of households are connected in Barhain, increasing spectrum available to MNOs and 95% coverage in 5G services. He mentioned that, a consumer protection regulation is in place to enhance safe trade and the digital economy, and that Regulation of telecom towers to ensure mass sharing is also in place.

Prof. PHILEMON ZOO ZAME, Directeur General, AGENCE DE REGULATION DES TELECOMMUNICATIONS (ART) from Cameroon joined us. He mentioned that Cameroon has liberalized the telecommunication sector which has led to new market segments and the delivery of diverse value added services. He mentioned of Cameroon's commitment to enhancing affordable access and sufficient network coverage. In 2019, Cameroon registered 89.9% of mobile penetration. Average call, Internet and mobile services have significantly reduced in prices. Promotion of innovation and research is key in order to diversify provision of digital services. He further said that, there are more than 8 million mobile internet subscribers in Cameroon, more reason to develop mobile internet diversified services eg mobile money, mobile banking services. He also said, emphasis must be made on supporting innovation and tech hubs to support startups; promoting secure and resilient electronic communication infrastructure. Cameroon has invested in 4 optical fiber submarine cable landing points to improve international communication. Regulatory provisions on electronic commerce were strengthened in Cameroon in 2010. It is estimated that a mobile subscriber performs at least 4 digital commercial transactions a month. He concluded by saying, poor address systems are however affecting the development of SMEs specialized in delivery systems.

Prof. Konstantinos Masselos, President, Hellenic Telecommunications and Post Commission, Greece started by sharing that COVID-19 had a profound negative impact on Tourism, which is a



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big brand for Greece. The GDP of Greece shrank by 10% because of COVID-19. He emphasized that Communication is key to market Greece' brand hence the need to invest in Virtual museums, gamification and high internet connectivity for theatres and museums. He closed by intimating that digital nomadists must be supported with practical solutions such as high quality internet connectivity, short term medical coverage, address taxation issues and permits

Dr. Nael Adwan, Director, Investment and Entrepreneurship, Ministry of Digital Economy and Entrepreneurship, Jordan was next. He explained that the Ministry plays the role of an enabler and supporter of the Digital Economy. The Ministry partners with the private sector and other Government entities to overcome challenges faced by entrepreneurs. He articulated on the importance upskilling and reskilling of adults with digital skills. He anticipates more than 15,000 youths to be trained in digital skills.

Mr. Ajmal Anwar Awan, Director General, International Coordination, Ministry of Information Technology and Telecommunication, Pakistan. He mentioned that Pakistan is focused on improving quality of life and economic wellbeing of its citizens reaching accessible, reliable, universal, high quality, affordable, inclusive digital services. Pakistani is pursuing a multidimensional approach focused among others harmonized regulation, entrepreneurship, women empowerment, skills development. Some of the Policy interventions that are in motion are; Introduction of a rolling spectrum strategy roadmap, mobile device manufacturing policy, Personal data protection, and new tax regime for the telecom sector. He also said that, the National Cyber surety policy, National Broadband policy are in the process of being developed and the Digital Pakistani portal is under development. He mentioned that Startups are key in creating a knowledge economy, bridging the digital divide, and tht there is a program to build a network of national incubation centres. He concluded by saying that, there are 5 Incubation centres; One in every capital cities of the country's provinces; and More than 1,5million trainings on digital skills have been conducted.

Mr. Abraham Kofi Asante, Chief Executive Officer, Ghana Investment Fund for Electronic Communications (GIFEC), GHANA **shared on Ghana's efforts to** enhance trade amongst the marginalized communities. We learnt that 70% of Ghanaian businesses are categorized as MSMEs. GIFEC rolled out an ambitious Telephonic services project that yielded 600 rural telephonic sites and provided data to 1.2million people including MSMEs. In 2021, 2,016 rural sites will be connected to benefit 4 million beneficiaries. Currently there are 270 ICT centers across the country. He emphasized on providing ICT equipment to MSMEs in remote rural communities to facilitate and stimulate use of digital services, and Providing access to ICTs



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services and digital skills training to communities. He mentioned that, GIFEC provides continuous digital skills training and women empowerment programs to MSMEs.

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SYRIAN ARAB REPUBLIC



H.E. Mr. Iyad Al Khatib
Minister
Ministry of Communication and Technology

Questions:

What are the challenges and obstacles you are facing in developing countries regarding the implementation of the digital economy?

What are the solutions you propose to overcome these challenges?

Thanks Mr. Malcolm

Your Excellencies,

colleagues,

Ladies and gentlemen,

It gives me great pleasure to participate in this session

The digital economy describes the wide uses of ICT in social and economic, leading to expanded opportunities, economic growth, and improved public service delivery.

As you know the digital economy is critical issue to creating smart societies, public authorities, businesses, and citizens, especially youth and women whose use ICT tools and services to make decisions and participate in economic activities.



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Thus, the digital economy reduces the inequalities, achieves digital inclusion, and ensures prosperity for all the societies, which is the core of UN SDGs.

In my opinion, we are facing some challenges in developing my country, which are:

1. Management: These include the privacy and security risks affecting individuals and public data and infrastructure. These challenges point to the need for proper policy supervision to increase the positive impact of ICT and mitigate the risks.
2. The crisis in Syria, the conflict, the terrorism, the instability, sanctions, the displacement of populations
3. Third one: the poverty it's a master key to failure in many countries around the world and especially for Arabian countries like Syria; even we have a human potential, educated youth, and important central geographic position.
4. Forth one, COVID-19 outbreak affected all aspects of the global economy. During the pandemic, digital technologies have become a critical enabler of connectivity.

As countries have been asking their residents to stay at home, more people had turned to their computers and smartphones as a lifeline and tools to replace their in-person activities online. Hence, the need to access a reliable digital infrastructure has become increasingly important, and certain aspects of ICTs are critical in a period of isolation, such as increased ICT opportunities from telework, telemedicine, food delivery, online and contactless payments, remote learning

In fact, the supporting from ITU and the other friendly countries in promoting the infrastructures and digital economic strategies in these countries is very important to bridging the digital gap and achieving UN SDGs.

Gentlemen, the digital economy developing needed an assistance and supporting when preparing the policies and strategies related to cybersecurity, digital transformation, and e-payment, which represent the strong basis of the digital economy.

We believe that every human being in every country has the right to enjoy the benefits of technological progress and the outcomes of a knowledge-based digital economy. In facts, we see that reinforcement economic and social growth to attain the SDGs and to reach its full potential can be achieved by:



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- increasing the share of ICT products and services,
- deploying broadband access,
- leveraging the use of ICT by businesses, individuals, and governments to create services, products, and business models that enhance economic growth and social benefits.

I warmly thank you for your kind attention and consideration, with all my estimation and gratitude to ITU and all its members.

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BAHRAIN



Sh. Nasser bin Mohamed Al Khalifa
Acting General Director
Telecommunications Regulatory Authority (TRA)

Questions:

Due to the pandemic, the question to the digital economy became a hot topic, having said that, what have the TRA been doing in a reaction to the trend of general life transforming digital?

As our main topic today is Digital Economy and Trade, could you please shed some light on TRA's role in Digital Transformation?

Statement Missing

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CAMEROON



Prof. PHILEMON ZOO ZAME
Directeur General
AGENCE DE REGULATION DES TELECOMMUNICATIONS (ART)

Questions:

What are the preconditions for the development of a digital economy that is conducive to the emergence of electronic trade?

How can we ensure the development of digital economy and trade?

First of all, I wish to thank you for this opportunity to share with you Cameroon's experience and vision on these very important issues. Actually, ICTs have significantly enhanced the quality of life and consumption habits of citizens in terms of increased flexibility and reduced constraints and costs. Accordingly, ICTs have generated new ways of producing and consuming, which now expands to most industries. This new economy therefore constitutes an opening for Cameroon to rebuild its economic, commercial and social development model and to speed up its economic growth.

To the question of what are the prerequisites for the development of a digital economy that is conducive to the emergence of digital trade:

Three (03) major conditions emerge:

The first condition is to ensure the liberalization of activities in the telecommunications sector (supply). In Cameroon, the telecommunications sector was effectively opened up to competition in 1998, thereby allowing the entry into the market of two (02) mobile telephone concession holding operators and the creation of new market segments (network operation, provision of



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value-added services). This development led to increased range of telecommunications products and services and gradual decline in tariffs. To date, the telecommunications sector in Cameroon has four (04) concession holding operators including an operator which provides fixed telephony, mobile telephony and electronic communications transport; one hundred and eighty-nine (189) licence holding network operators; and providers of value-added electronic communications services, holders of declaration receipts.

The second condition is to ensure affordable access to electronic communications services and sufficient network coverage to bridge the digital divide. To achieve this, the regulator must ensure compliance with the modalities for the deployment of electronic communications networks open to the public and with the performance indicators of coverage and quality of service contained in the specifications of the concession holding operators; pursue regulatory goals such as the opening up to competition, promotion of access and connectivity, and support to innovation. The ultimate aim is namely to promote efficient investments in new, enhanced and innovative infrastructures in the interest of the users.

Over time, the development of ICTs, prompted by the convergence of electronic communications networks, services and technologies, the miniaturisation of terminals and reduction in their purchase prices, has contributed to the appropriation of electronic communication products and services by the different segments of the Cameroonian population.

As a result, in Cameroon, the penetration rate of SIM cards for mobile telephony increased from 1% to 43% between 2000 and 2010. In 2019, this rate was 89.92%. The average call and internet prices have experienced significant downward trends.

The third condition is the promotion of innovation and research by facilitating the entry into the market of new categories of stakeholders, the introduction of innovative services and the development of consumers' uses (Diversification of services). Following the development of basic electronic communications services (Voice, SMS, Internet), the consumers gradually embraced the innovative services provided by some operators, such as mobile financial services (Mobile Money, Mobile Banking, etc.) which emerged since 2011 and already have more than 7 million subscribers. In addition, mobile internet widely spread since 2014, propelled by the boom in social networks. Today, there are more than 8 million mobile internet subscribers. Therefore, the development of the above services is to some extent a crucial platform for achieving an enabling ecosystem for the development of digital economy and trade in Cameroon.



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Moreover, emphasis must be laid on the development of technology start-ups, through the creation of incubators and the putting in place of a structured framework for the funding of innovative projects.

All these are the targets set by Cameroon in the digital economy strategic development drawn up by the Government, which involves the contribution and involvement of the regulator.

To the question of how to ensure the development of digital economy and trade?

Without covering all the requirements, it is necessary to:

Firstly, promote the development of secure and resilient electronic communications infrastructures.

Access to international Internet connectivity was improved by the construction in Cameroon of four optical fiber submarine cable landing points (SAT3, WACS, NCSS and SAIL). The roll-out of broadband fixed and mobile electronic communications networks has accelerated, two (02) Internet exchange points (IXPs) was deployed (*Yaoundé and Douala*) and several datacenters built by public and private entities (05 so far). These achievements were instrumental to the consolidation of the infrastructural foundation for the emergence of the digital economy and trade in Cameroon.

Secondly, secure identity and digital transactions and facilitate urban addressing (security). In any digital transaction, the identity of the parties (*seller, buyer*) must be certified to build confidence in the market and ensure security of possible subsequent commercial transactions. Hence, the regulatory provisions on electronic commerce were strengthened in Cameroon since 2010. Thanks to the innovations brought about by mobile technologies, and with the advent of new forms of digital commercial transactions (*payment of bills, payment of taxes, purchase of products and services, etc.*), mobile financial services have developed to such an extent that it was estimated that in 2019, a mobile subscriber was performing an average of four (04) digital commercial transactions per month. Despite the advances, the development of digital commerce is adversely impacted by the poor addressing in cities and municipalities. This situation does not allow for the development of SMEs specialised in home delivery of digital commerce products.

Thirdly, support must be provided to all the stakeholders through a close collaboration between the regulators and the public authorities for the benefit of the development of the digital economy and trade. Achieving this goal mainly entails to:

1. setup collaboration platforms between regulators on collaborative regulation issues;



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2. implement tailored training programs for the various strata of the society;
3. apply a proactive E-GOV transition strategy, to accelerate the generalised digitisation of the Cameroonian society.

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GREECE



Prof. Konstantinos Masselos
President
Hellenic Telecommunications and Post Commission

Questions:

If you were asked to name just one potential enabling force, for the digital transformation in Greece, what would that be / what should be the priorities of a national strategy?

Does Covid-19 create further opportunities in this context?

The National Brand as the Enabling Force for the Digital Transformation of Greece: Some Thoughts on Strategic Priorities

For me the enabling force for deploying successful digital transformation strategies in Greece, as in any other country, is using our 'brand' as a tool to do so. Using one's 'brand' as a transformation tool is not new, actually it is the standard practice, we just haven't properly registered it as such (a tool) when we communicate national scale transformation efforts. Please notice how the telecom companies have been undergoing a continuous digital transforming during the last decade, and think about if that would be possible without utilizing their strong brands and logos.

The 'brand' of Greece is a mixture with cultural, historic, well-being and maritime components, deeply depending on tourism as a communication tool. The extent of this dependency manifests itself on the fact that tourism too, is broadly considered to be part of our 'brand'.



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“Covid-19” had a profound impact on tourism. Our GDP shrunk by almost 10%, but I believe that this approach is underestimating the damage, and that the impact of the pandemic on our ‘brand’ (and means to successfully undergo a digital transformation) is much bigger. Bigger than numbers prove for 2020 and predict for 2021.

Can a 10% shrinkage of the Greek economy be an underestimation? Unfortunately, I believe it can. This is because the 10% of our economy that was negatively affected also affects in many ways the 90% that appears not to be (affected). The ‘damage-control’ is also optimistic because it is only considering our income losses on the basis of 12-months results, overlooking the difficulties caused by the pandemic in communicating our brand and the ‘accumulation-oriented’ logic on which the value of a brand is constantly developing. The impact estimations are wrong because they try to specify a qualitative target with quantitative criteria.

Last summer we missed the opportunity to communicate our brand to about 27 million people and this cannot be recovered. 27 million people will have less accumulated exposure to the ‘Greek Brand’. For as long the Covid-19 pandemic continues, our national ‘brand’ will be gradually losing part of its value.

By no means, the ‘Greek Brand’ and all that represents will somehow be lost, because it is strongly linked with universal, timeless values. However modern economies ask for volume and that can only be achieved through communicating our Brand at scale and en masse to people of all socioeconomic backgrounds.

So how can we use our ‘brand’ as a digital transformation tool, within the pandemic environment?

[1] Cultural informatics applications should be our priority. Virtual and real time visits to museums and archaeological sites should be redefined as well as city tours and sightseeing. Gamification of wondering around a city needs to be seriously considered as a tool to support people flow timing, to avoid congestion.

Furthermore, promoting access to cultural events should be a target too. Only few years ago in Athens we enjoyed every year almost 1500 dramatic performances in about 130 theatres. Athens was one of the most theatrically productive cities in the world, and maybe only second to London in Europe, depending on the criteria used for the comparison. We should work on sharing our theatrical product, especially now that theatres need to remain closed because of the Pandemic. We need to work on high quality internet connectivity for the theatres and music scenes of Greece, to make their content accessible, at high definition, in every corner of the world.



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[2] Hybridization of our hospitality product to include the current trend of digital nomadism.

With global economy being digitally transformed the borders among remote work, freelance and digital nomadism will continuously blur, and eventually completely disappear, leaving a common, dynamic workforce tank that will mix working and travelling in a completely new and unique way.

Greece scores high on the Democracy Index of EIU (Economist Intelligence Unit) as well as on policies related to the protection of the environment, while it's been historically receptive to cultural diversity. These qualitative characteristics can make Greece an attractive destination for digital nomads.

We need to work towards proposing practical solutions in that direction. High quality internet connectivity is the necessary but not the sufficient condition for addressing the opportunity. We need to ensure that we can offer digital nomads short-term medical coverage with competitive/realistic costs, address taxation matters in a simple, transparent and fair manner, and work out friction from residence permits issues.

[3] Rebuilding our shipbuilding industry. Greece is Europe's global shipping powerhouse (according to Lloyd's list) and one of the cornerstones of the global economy through facilitating international trade.

The operation of modern ships can easily be seen as a big-data problem and the kind of automation that goes into shipping during the last decade clearly points towards a drone-ship future. Greece should not miss the chance to become a pioneer in building drone ships. Our 'Brand' can support us in doing so. In the same way that autonomous and electric cars change the status quo in automotive industry the same I believe will happen in maritime in a few years to come.

[4] We need to continue working on Digital Governance. We made significant progress during the pandemic (e.g. introduction of electronic medicine prescription), we need to keep the pace and continue addressing even bigger challenges such as remote working, education, and healthcare, securing online identification, protecting ICT infrastructure, making our networks more resilient.

The list is long, but this last part, the network and ICT related, is the part that we as the Telecommunications and Post Commission, are trying to contribute to this national scale effort. There is a lot to be done and it is 'just' hard work that is needed in order to successfully get Greece through the 'Covid-19' crisis.

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JORDAN



Dr. Nael Adwan
Director
Investment and Entrepreneurship
Ministry of Digital Economy and Entrepreneurship

Questions:

What is Jordan's plan for investing in educating, training and reskilling workers for the digital economy?

How is the Ministry of Digital Economy & Entrepreneurship working with the private sector to align education with workforce and labor trends?

Jordan is considered as one of the pioneers in developing environments conducive to youth and entrepreneurs. This stems from the country's strong belief that the future of Jordan's digital economy depends mainly and fundamentally on the digital competency of its youth.

Ministry of Digital Economy & Entrepreneurship (MoDEE) is working with other government institutions and the private sector partners to build more efficient and resilient ecosystem for all people of Jordan while paying particular care to youth through focusing on the skilling, reskilling, and upskilling of digital skills for schools students, university students, graduates and ordinary Jordanians.

As one of our most important resources is the great energies formed in our citizens, overcoming the challenges facing the entrepreneurs including: access to markets, access to funding, regulatory challenges and access to talents, is always our main interest and concern.



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With the support of our generous partners and donors, five years from now, we will be completing our diligent programme for Youth, Technology and Jobs one of its pillars is the skilling of 15000 youths (women and men) and sending them to the market, with well education and knowledge related to digital skills and entrepreneurship.

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PAKISTAN



Mr. Ajmal Anwar Awan
Director General
International Coordination
Ministry of Information Technology and Telecommunication

Questions:

What is Pakistan's Vision of Digital Transformation?

What steps are being taken in this regard?

The Government of Pakistan envisions to improve its citizens' quality of life and economic wellbeing through Digital Transformation, by ensuring availability of accessible, affordable, reliable, universal and high-quality ICT services. Pakistan strongly believes in mass adoption of emerging digital technologies and innovative applications to enable cross-sector socio-economic development and enabling governance models aimed at the achievement of sustainable development goals.

As part of our Digital Transformation Journey, we are pursuing a multi-dimensional implementation strategy ranging from Legislative and Policy Interventions for a Harmonised Regulatory Environment to e-Governance, Financial Inclusion, Digital Awareness, Entrepreneurship, Women empowerment and Skills Development.

In this regard, the major policy interventions include:

- a) Promulgation of Pakistan's First Right of Way Policy.
- b) Introduction of a Rolling Spectrum Strategy/Roadmap.
- c) Mobile Device Manufacturing Policy.



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d) New and more attractive tax regime for the telecom sector.

Moreover, to highlight our Digital Transformation Journey, we are in process of launching our Digital Pakistan Portal with relevant information regarding our Digital Initiatives.

The government is heavily investing in the enhancement of Digital Infrastructure in underserved areas nationwide, which has led to equitable sharing of opportunities and resources, paving the way for accelerated economic growth. In this regard, Universal Service Fund Company, an organization of the Ministry of IT & Telecom, has already spent Rs. 14 Billion PKR for the proliferation of Digital Infrastructure and Services in unserved and underserved areas of the country.

It is worth mentioning that Keeping in mind the critical role played by start-ups in economic growth, job creation, financial inclusion, reducing the income divide, and building a knowledge economy, the Ministry of IT & Telecom, launched a program to build a network of National Incubation Centers (NIC). IGNITE has successfully established 5 National Incubation Centers (NIC) in Federal Capital and all Provincial Capitals of the Country with a funding of over Rs. 2.5 Billion. Till date in five NICs (Islamabad, Lahore, Peshawar, Karachi & Quetta) hundreds of promising Start-ups have been inducted, generating more than 100,000 jobs and a combined revenue of Rs. 3 Billion.

Pakistan recognizes the significance of Digital Technologies and skills to enhance inclusion, encourage research and innovation and its contributions all over the world. Through our Digiskills Training Program more than 1.7 million trainings have been conducted. This Program was launched in 2018 aimed at equipping our youth, freelancers, students, professionals, etc. with knowledge, skills, tools & techniques necessary to seize the opportunities available internationally in online jobs market places and also locally to earn a decent living. Moreover, several Digital Solutions /citizen facilitation applications for better e-Governance have been launched by our Ministry's arm and an entity called, National IT Board, including but not limited to COVID-19, Excise and Taxation and Pakistan Citizen Portal (an integrated citizens grievance redressal system).

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GHANA



Mr. Abraham Kofi Asante
Chief Executive Officer
Ghana Investment Fund for Electronic Communications (GIFEC)

Questions:

Can you highlight broadly, the various financing modules adopted by GIFEC to facilitate trade particularly among the marginalized populations in Ghana?

What specific digital literacy intervention is being championed by GIFEC to facilitate trade in rural communities?

Distinguished colleagues, I would like to thank the organizers for the opportunity to be part of this year's WSIS Forum and also for an opportunity to join other renowned speakers across the globe for this High-Level Policy Session on Digital Economy and Trade/Financing for development and the role of ICT.

My name is Abraham Kofi Asante, the current Chief Executive Officer of Ghana's Universal Access Fund, GIFEC. GIFEC is a government organization in Ghana mandated to promote universal access to ICTs, bridging the digital literacy gap in remote communities and among marginalized populations in Ghana. I also serve as the Board Chairman of the Accra Digital Centre, a Technology Park established by the Government for digital innovation and entrepreneurial empowerment in Ghana.

1. Can you highlight broadly, the various financing modules adopted by GIFEC to facilitate trade particularly among the marginalized populations in Ghana?



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The government of Ghana since 2017 has rolled out an aggressive digitization agenda to digitize all aspects of the economy. The Ministry of Communications is playing a pivotal role in the development of robust frameworks and strategies through its agencies to support the digitization of the economy in a manner that captures and benefits every citizenry

Bringing connectivity to the marginalized sections of the population has remained one of the topmost priorities of GIFEC. As an organization, this is our main obligation as we are backed by law, the Electronic Communications Act 2008 and other enabling policies like the Ghana ICT for Accelerated Development (ICT4AD) Policy to perform this mandate.

Our quest to promote trade among the marginalized populations particularly those in the informal sector, hinges on two key module projects. These projects were identified through a detailed access gap analysis, which revealed huge connectivity gap constraints that prevailed in most deprived communities in Ghana. This negatively impacted business, particularly Micro, Small, Medium Enterprises (MSMEs), giving them less room to operate.

With about 70% of Ghanaian business categorized as MSMEs and a major contributor to the GDP of the national economy, this issue could not be overlooked, as failure to rectify this could derail the agenda of attaining universal digital inclusion and thwart the successes of business particularly MSMEs. To this end, we rolled out an ambitious Rural Telephony Project, through effective partnerships with Mobile Network Operators and Technology Service Providers to extend telecommunication service to remote communities in Ghana.

Today, this effort has yielded about 600 rural telephony sites, covering about 2,000 communities, providing voice and data services with about 1,200,000 beneficiaries of this project including MSMEs. Further expansion of this program is currently underway to provide 2,016 Rural Telephony sites to cover over 8,000 underserved communities which will provide voice and data services to about 4,000,000 beneficiaries

The Second module lies in the construction of Community ICT Centres (CICs) that seeks to provide community-wide access to full ICT services. Currently, these Centres remain as key access points created to provide access to ICT services and digital skills training among the marginalized population in our rural communities.

Having deployed this infrastructure, there was a need to provide tailor-made solutions to these MSMEs. These findings were backed by empirical studies conducted by the Research arm of our organization, which undertook a study on the Use of ICT among MSMEs. Preliminary findings revealed non - usage of digital technologies in their processes, products and communication. This



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was largely attributed to the absence of digital gadgets needed in their daily line of work. As an organization, we have since commissioned the Digital Solutions for MSMEs project as a pilot programme, providing ICT equipment such as laptops, POS devices and mobile phones to MSMEs particularly in remote rural communities in Ghana to facilitate and stimulate usage of digital services in their operation

2. What specific digital literacy intervention is being championed by GIFEC to facilitate trade in rural communities

A major finding from the Survey on ICT Use among MSMEs, again revealed the lack of basic digital skills among a vast majority of MSME operators. In collaboration with United Nations Educational, Scientific and Cultural Organization (UNESCO), we rolled out the ICT Skills for Entrepreneurial and Women Empowerment (ISEWE) Programme to expand the digital capabilities and benefits of Information and Communication Technologies (ICTs) particularly in women and girls. Women entrepreneurs consisting of hairdressers, seamstress, traders and market women selected from some deprived communities have been trained and equipped with Basic ICT Skills.

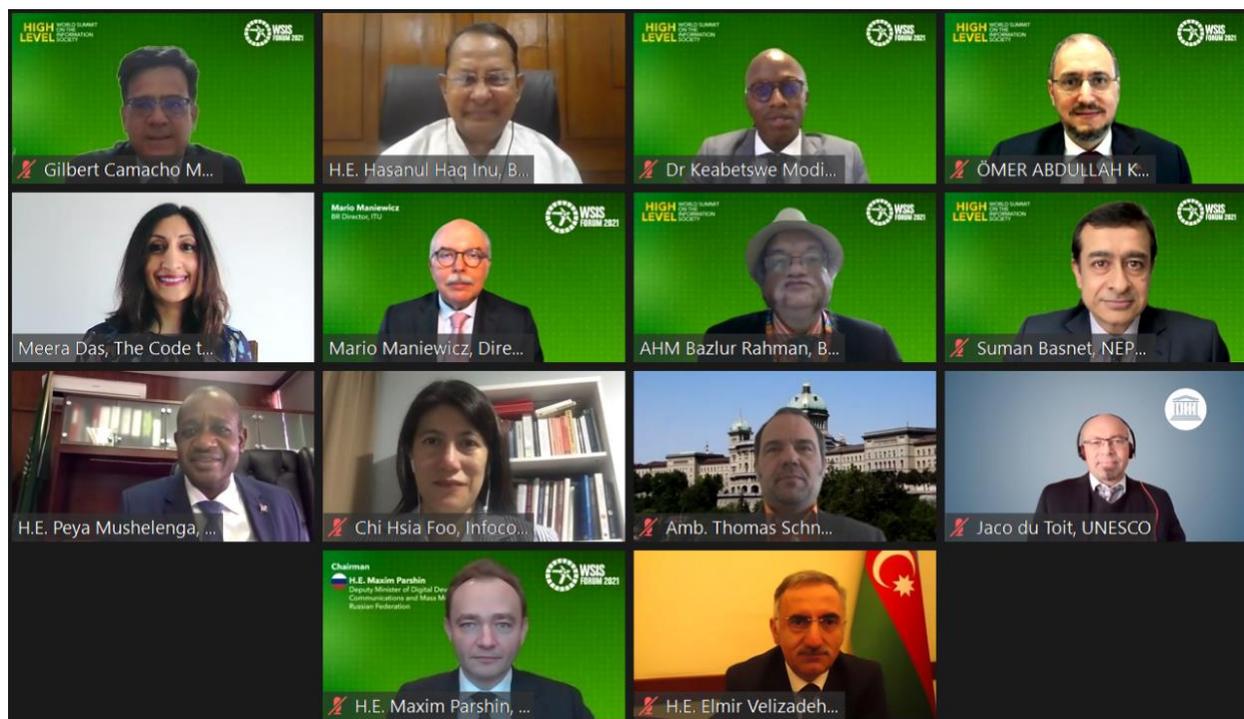
GIFEC through its CICs is providing continuous training to MSMEs as a complement to the ICT Skills for Entrepreneurial and Women Empowerment programme. This would ensure that more MSMEs are captured to avoid interruptions in the efforts to improve digital skills among MSMEs across the country.

Thank you for your attention.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Session Seven: Inclusiveness, Access to Information And Knowledge for All / Media

Recording: <https://www.itu.int/net4/wsis/forum/2021/Agenda/Session/166>



Moderated by High-level Track Facilitator:

Ms. Meera Das, Project Lead, The Code to Change

WSIS Action Line Facilitator:

Mr. Jaco du Toit, Chief of Section, Universal Access to Information, CI Sector, UNESCO

Speakers:

1. **Russian Federation** - Chairman of the WSIS Forum 2021, H.E. Mr. Maxim Parshin, Deputy-Minister, Ministry of Digital Development, Communications and Mass Media



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

2. **Ghana** - H.E. Ms. Ursula Owusu-Ekufu, Minister, Ministry of Communication and Digitalization
3. **Namibia** - H.E. Dr. Peya Mushelenga, Minister, Ministry of Information and Communication Technology
4. **Azerbaijan** - H.E. Mr. Elmir Velizadeh, Deputy-Minister, Ministry of Transport, Communications and High Technologies
5. **Bangladesh** - H.E. Mr. Hasanul Haq Inu, Chairman, Parliamentary Standing Committee for Ministry of Information
6. **South Africa** - Dr. Keabetswe Modimoeng, Chairperson, Independent Communications Authority
7. **Switzerland** - Mr. Thomas Schneider, Ambassador and Director, Federal Office of Communications (OFCOM)
8. **Turkey** - Mr. Ömer Abdullah Karagözoğlu, Chairman of the Board, Information and Communication Technologies Authority
9. **Costa Rica** - Mr. Gilbert Camacho Mora, Commissioner of the Board of Directors, Superintendencia de Telecomunicaciones
10. **Singapore** - Ms. Chi Hsia Foo, Assistant Chief Executive Officer (International), Infocomm Media Development Authority
11. **Nepal** - Mr. Suman Basnet, Asia-Pacific Regional Director, World Association of Community Radio Broadcasters (AMARC)
12. **Bangladesh** - Mr. AHM Bazlur Rahman, CEO, Bangladesh NGOs Network for Radio & Communication (BNNRC)



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Executive Summary by High-Level Track Facilitator

Introduction

The focus of this session was on the attainment of shared aspirations to become fully fledged members of the Information Society and the attainment of positive integration when it comes to inclusivity and knowledge sharing in line with the UN Sustainable Development Goals (SDGs) and UNESCO WSIS Action Lines C3 (Access to Information and Knowledge) and C9 (Media).

The panel discussed the achievements and challenges related to accessibility and affordability of Internet broadband and broadcasting services, TV and radio, particularly in underrepresented communities.

Speakers highlighted issues around the gender divide around the world as well as rural digital divide in developing countries, discussing policies and strategies to empower individuals, specifically women and people of all ages, through digital inclusion initiatives such as ICT literacy, advancement of sciences and employment. They also emphasised the equal importance of broadcast radio and the *essential* role it plays in the development of Information Society, being an important contributor to the freedom of expression and plurality of information.

Vision

Enabling all to access and contribute information, ideas and knowledge to foster an inclusive Information Society. Key views articulated by the panel include:

- Adoption of intergovernmental cooperation as an integral element in solving the digital divide through better governance and setup of a robust legal framework around freedom of information.
- Creation of effective integration mechanisms that allow developing countries to gain access to advanced digital solutions and technologies.
- Universal access and quality education for all, women, children and rural communities.



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Fresh Priorities

COVID19 has put the spotlight on the demand for continued safe and affordable digital content which has transformed the way people work and collaborate around the world. The panellists shared multiple significant priorities for digital inclusion which involve:

- Improved connectivity to mainstream communication, high speed internet and affordability of broadband and media.
- Countering digital disinformation whilst protecting freedom of information, creation of open forums to discuss concerns around digital technologies.
- Increase digital literacy skills at a grassroots level, enabling digital transformation and sustainability across all societies.

Emerging Trends

The common trend seemed to be Covid-19 and the need for a better digital economy serving as a catalyst for improved remote working, equality in digital education, managing personal safety online, creation of open forums to discuss new technologies, with the launch of AI in particular, making all this available to women and other rural communities.

Some example Case Studies

The panelists highlighted some strategic initiatives which underscore their impact on information societies:

Namibia

- Public access to information from the government, informing the nation on various programs and projects, effectively disseminating information on Covid-19. Aims to create open dialogue between citizens and the government.

Azerbaijan

- Access to ICT literacy in elementary schools, rollout of 4G mobile services and public WiFi hotspots with an adoption rate of 81% across the country. Focus on human capital - developing a digital ecosystem that simulates the creativity and innovation.



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Bangladesh

- Utilizing the power of Community radio. Empowering people, increasing political and cultural participation through multi-generational reach (women and youth events), broadcasting programmes in line with Covid-19 norms and educating the public. Using OTT and other social media platforms to bridge the gender divide. All the laws and policies for plural media networks are available to the four broadcasting networks but further laws are being commissioned to safeguard media and the issue of human rights.

South Africa

- Introduction of a universal telecommunications service for schools and rural areas to ensure everyone was connected onto the mainstream systems. Public Broadcaster offerings on radio platforms across all official indigenous languages.

Turkey

- Increased internet penetration with low price plans made available on high speed networks.

Costa Rica

- Directive of 14 indigenous territories to have better internet access, ensuring access to information and health care services and education to contribute to their inclusiveness and socio-economic development.

Singapore

- Rollout of the SGX programme which allows for continuous connectivity. Equipping communities, the aged population, with access to digital and lifelong learning initiatives. IT programmes in place to assist people with disabilities to empower them with resources to pursue their aspirations.

Ghana

- Widespread fiber optic infrastructure offering adequate bandwidth capacity to support the digitalization agenda. School connectivity project facilitating access to the internet and enhance learning. Rural Community ICT resource centres setup, providing business services, information hubs and training centres for women and youth.



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Opportunities

- Creating more open forums for people to discuss concerns around digital technologies, the use of personal information with the launch of AI in particular, educate them in managing their privacy online whilst staying protected from Cyber Criminals.
- In rural Bangladesh, ICT illiteracy still exists. The introduction of Cyber literacy programmes in local languages to individuals to bridge the digital divide in line with the Data Protection Act.
- Regular and large investment on infrastructural development of local broadcasters in radio communication.
- Capacity building of broadcasters working at the grassroots introduction of new and emerging technologies in a way that can benefit poor and marginalized communities.

Challenges

- Plenty of emerging cyber spaces, ushering in a new era of development threatened by cyber criminals as the digital economy is growing at a rapid pace.
- Technical standardization and governance for Internet Technology must be improved and agreed across the globe in line with the WSIS Action Lines.
- Media literacy, upskilling, reskilling, rescaling is required In Bangladesh. Big data analysis expertise is required to develop an inclusive media and requires technical and financial cooperation for media.
- Bridging the ICT illiteracy gap will require access to digital hubs which offer these services
- Provide everyone with an equal opportunity to gain access to technology. All people empowered and rights to use this for social and economic wellbeing for the benefit of society.
- Community radios operate under stringent policy regimes and are generally missing from high level policy discussions which needs to be rectified.



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Road Ahead

The predominant focus on Information Society outlines the changes already in place but there is still work to be done on a local and intergovernmental level whilst addressing issues around better education, affordable infrastructure, open dialogue among other points discussed.

Effective international mechanisms need to be in place to allow developing countries and communities to gain access to advanced digital solutions and technologies, employing the United Nations platform for multi stakeholder policy dialogue on emerging technologies.

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RUSSIAN FEDERATION



H.E. Mr. Maxim Parshin
Chairman of the WSIS Forum 2021
Deputy-Minister
Ministry of Digital Development, Communications and Mass Media

Questions:

What measures are being taken in Russia to support socio-economic processes and reduce the digital divide during pandemic?

What, in your opinion, are the key prospects in bridging the digital divide at the global level?

Q1: What measures are being taken in Russia to support socio-economic processes and reduce the digital divide during pandemic?

The pandemic has revealed the problem of digital divide even more sharply. If there is no access to a stable high-speed Internet connection, there is a kind of isolation from social and economic life.

To address this problem, the Russian government revised Digital Economy program. It is aimed at the digital transformation of public administration and the social sphere, providing modern communication services to people and key socially important facilities.

By the end of 2020, more than 41 thousand socially important facilities received access to the high-speed Internet. These are educational organizations as well as election commissions, culture facilities, district police stations and many others. Their connection to the Internet contributes to the development of communication in remote areas and small towns. When these facilities are



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connected, communication centers are created in each small settlement. Our goal is to connect more than 80 thousand socially important facilities to the Internet by the end of 2021.

The pandemic factor has made it possible to accelerate the digitalization processes in the Russian Federation many times over. 50 % of people have started to use digital services more often: now they are more actively using banking services and online shopping. In 2020, 234.6 million services were provided on the Public Services Portal. At the same time, the number of authorizations on the portal amounted to 3.59 billion in 2020, about 10.5 million per day, which means that users, on average, use it 2 times a day. The number of registered users on the portal reached 131 million people.

In the field of digital public services one of the main goals of 2021 is the launch of a new version of the Public Services Portal. It will become more technological and ready for the highest loads. Until January 1, 2023, all socially important services are planned to be transferred to electronic form.

Q2: What, in your opinion, are the key prospects in bridging the digital divide at the global level?

Digital technology has become a key component in all areas related to the pandemic – the vaccine development, online learning, distance working, e-commerce and others. In light of the current divide between those who have access to the Internet and those who do not have it, the digital divide could become the new face of inequality.

In such circumstances, the need for intergovernmental digital cooperation as an essential integral element of solving the problem of the digital divide at the global level becomes obvious. Therefore, the Russian Federation supports the initiative of the UN Secretary-General aimed at implementing digital cooperation between all governments of the world. His report on the Digital Cooperation Roadmap emphasizes that there are significant gaps in global digital cooperation. It also notes that "The United Nations is ready to serve as a platform for multi-stakeholder policy dialogue on the emerging technologies".

I would like to note separately that with the introduction of any new technology, the development of ICT by itself cannot equalize the opportunities of the population of developed and developing countries. Somewhere it even exacerbates inequality. We believe that international cooperation at the global level, increased investment and expansion of appropriate funding are becoming the most important elements of bridging the digital divide.

At the same time, we consider it necessary to create effective international interaction mechanisms that allow developing countries to gain access to advanced digital solutions and technologies.



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For our part, we are ready to share the accumulated experience and advanced digital solutions both within the framework of various integration associations, forums and platforms, and through bilateral cooperation.

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GHANA



H.E. Ms. Ursula Owusu-Ekufu
Minister
Ministry of Communication and Digitalization

Questions:

What measures has Ghana instituted to bridge the Digital Divide?

What are some of the initiatives Ghana has put in place to protect its Cyberspace?

Statement Missing



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NAMIBIA



H.E. Dr. Peya Mushelenga
Minister
Ministry of Information and Communication Technology

Panel Moderator

Delegates to the High-Level Policy Session 6 Fellow Participants

Distinguished Invited Guests

Ladies and Gentlemen

A very good afternoon to you all.

I consider it a very special honour for me to be invited to participate and address this important gathering of this nature at a time when the whole world is undergoing major economic shift and meltdown due to COVID-19 pandemic which devastated and disrupted millions of lives across the globe and brought about new-normal in our way of doing business.

At the onset, permit me to start by commending the organisers of this event; most importantly for giving participants space in introducing the subject matter which is cardinal to their daily lives and operations.

As the Minister of Information and Communication Technology of the Government of the Republic of Namibia, I submitted the topic: Inclusiveness, Access to Information and Knowledge for All / Media. I specifically chose this topic as it is closely linked to this year's United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Press Freedom Day (WPF) event that will be celebrated under the theme: "Information as a Public Good". This prestigious world event is going to take place right here in Windhoek, the Capital City of our Republic, as



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from 29 April to 3rd May 2021, and is meant to coincide with the 30th Anniversary of Windhoek Declaration on Press Freedom.

For the benefit of those who might not in the know, the Windhoek Declaration came about as a result of a UNESCO Seminar held in Windhoek from 29 April to 3rd May 1991, under the theme: “Promoting an Independent and Pluralistic African Press”.

This declaration was then formally adopted and approved by UNESCO Member States during the 28th Session of the General Conference in 1995, and subsequently declared as the World Press Freedom Day which is commemorated every year by the United Nations (UN) Member States and Governments.

Fellow Participants,

Article 19 of the Universal Declaration of Human Rights states: “Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers”.

This Article ties well with my topic: Inclusiveness, Access to Information and Knowledge for All / Media, as it seeks to galvanise our resolve to uphold the principle of press freedom, pluralistic and independent media as the fourth estate of governance architecture and also to reinforce the message for our governments to introduce liberal policies and regulations that are inclusive in creating conducive environment where all our citizens have unhindered access to public information critical in helping them advance and change their livelihood.

To achieve the above, there is a need to acknowledge that knowledge and information are the catalysts for change and have significant impact on people’s lives. The sharing of knowledge and information, particularly through Information and Communication Technologies (ICTs), has the power to transform economies and societies around the world. This assumption is premised on the conviction that universal access to information is key to building peace, sustainable economic development, intercultural dialogue and quality education for all our citizens irrespective of one’s social standing in society.

It is a common cause that information can change the way we see the world around us, our place in it, and how to adjust our lives in order to maximize the benefits available through our available resources.



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Therefore, it is important to recognize that the right to access information should be legislated and be made Governments' responsibilities around the world in ensuring that there are legal frameworks that support Freedom of Information and expression within the overall confines of Article 19 of the Universal Declaration of Human Rights of UN Member States.

In terms of encouraging the empowerment of citizens, it is further imperative to state that freedom of information is at the heart of a participatory democracy. Consider the consequences when information flows are curbed or manipulated in times of socio- economic crisis or ethnic strife or more so during this time of COVID-19 world pandemic. The result is very catastrophic and the consequence is hard to comprehend considering the advent of social media, which is often fueled by misinformation and disinformation usually at our finger-tips.

It is within the above background that during the outbreak of the COVID-19 world pandemic, the Government of the Republic of Namibia established the COVID-19 Communication Centre to act as a one-stop communications shop for all the media houses and the public. This centre has now been transformed into Government Information Centre (GIC) to continue communicating government programs, projects and activities so as to ensure that the public have access to Government information consistently.

This Centre has acted and continues to serve as information and communication hub, which accommodates discussions from various public and private sector and engage the public on various topical issues. The Purpose of the centre is to provide real time, reliable, accurate, authentic and factual information on government programs and projects. It acts as a catalyst against fake news and disinformation through social media platforms, debunking myths, theories and misconceptions about government services.

The establishment of the centre is based on the premise that information belongs to the people, hence the need for continuous information dissemination. The main objective is to inform the public, explain and support decisions; defend values and facilitate dialogue between Government and citizenry.

Therefore, as Governments and Agencies around the world, we are called upon to create and establish institutions that can empower our people to freely express themselves as free citizens and assuring them of remedies available to dispel the adverse effect of disinformation and misinformation advanced by those who wish to create anarchy and uncertainty among our citizens. We all know that assured and empowered citizens always strive forward, and that freedom of information promotes a true sense of ownership within society and therefore gives meaning to the concept of citizenship.



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Furthermore, Namibia, as a members of the UN family, is in a forefront and in the process of enacting the Access to Information Legislation. This process is at an advanced stage and sooner than later, our citizens will have a public tool in accessing information that are in public domain.

With this said, I should however, point out that even if the Access to Information legislation is passed by Parliament, ahead, there lay a myriad of challenges. For example, lack of access to modern facilities such as internet connectivity and IT equipment by most of our citizens due to socio-economic inequalities and historical exclusions, may render such efforts futile. Hence, the call for our governments and agencies to intensify efforts in ensuring that our people across the broader spectrum have access to reliable, modern, effective and efficient IT infrastructure and facilities in order to catch up with the rest of the world.

In conclusion, Ladies and Gentlemen, allow me to quote the then UN Secretary General, Ban Ki-moon in his message for the World Press Freedom Day, 3 May 2008: From the education of the youngest members of society to the full public engagement of citizens with their political leadership, access to information empowers each one of us to transform our lives and our communities. Just as water is essential for life to grow, knowledge sustains our capacity to imagine and to change. When information flows freely, people are equipped with tools to take control of their lives. When the flow of information is hindered whether for political or technological reasons our capacity to function is stunted.

I thank you for your attention.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

AZERBAIJAN



H.E. Mr. Elmir Velizadeh
Deputy-Minister
Ministry of Transport, Communications and High Technologies

Questions:

ICT services has become even more important during the pandemic. What measures has been taken in Azerbaijan in this regard? How does the Azerbaijani experience differ from the international one?

What kind of opportunities will the application of the concept of "smart city", "smart village" create for the people living in that areas?

**Dear Ladies and gentlemen,
Distinguished colleagues,**

I'd like to greet all of you. I am very pleased to be with you at this outstanding event.

These days, Azerbaijan and some countries in the region celebrate the Nowruz - Spring Holiday. Nowruz is an ancestral festivity marking the first day of spring and the renewal of nature. Since the United Nations declared 21st March, as the International Day of Nowruz in 2010, I congratulate all of us on this occasion.

Some participants may remember that a few years ago, the ladies of the Azerbaijani delegation celebrated this holiday together with the WSIS participants with kalaghai (traditional head scarf) on their heads and "Samani"- a symbol of first sprouting seeds in front of them on their table. I



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brought this issue to your attention because it is relevant to the topic of today - "Inclusiveness, Access to Information and Knowledge for All".

In general sense, we are here, at this session today, because we understand the vital importance of information and knowledge in our lives and our responsibilities in this regard. Access to information is not only a basic human right, but also an essential entity for the development of individuals, society, and economy.

Hereof, we need to emphasize the role of technology, especially the Internet.

Today, the Internet is not only a place to access information, but also a digital environment that provides opportunities for new activities and employment for people, enables e-learning, e-health, e-commerce and much more various e-services, as well as continuously increasing new applications and new values.

In Azerbaijan, the relevant conditions have been provided for everyone to access the Internet at affordable prices using various technologies, such as fixed, mobile and wireless. According statistics of 2019 – 81% of the population is Internet users, 79.1% of households have access to the Internet. In the mobile sector, 4G services are provided throughout the country. There are free Wi-Fi zones in public places.

Digital literacy of the population is quite high. For more than 10 years, computer classes have been held starting from the first year of elementary schools. The information centers for people with disabilities operate within the country to help them for using digital technologies.

People benefit from these opportunities to access public services, e-commerce, social media, education and other information and services that is necessary for their daily activities and development. Favorable conditions for safe Internet use have been provided.

Azerbaijan closely cooperates with UNESCO's Information for All (IFAP) program to access information and acquire knowledge. The National Committee of Azerbaijan of this Program has been operating under the Ministry of Transport, Communications and High Technologies. Many projects are being implemented along with other agencies in the areas of "Information accessibility", "Information literacy" and so forth.

Recently, the President of the Republic of Azerbaijan approved the conceptual document for socio-economic development - "Azerbaijan 2030: National priorities". I would like to focus on two of the five key priorities related to the topic we are discussing.

One of them is the priority of "Competitive human capital and the environment for modern innovations." It envisages the transformation of the digital society into a major force for development, the creation of an ecosystem that stimulates the creativity and innovation of



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society to increase the country's competitiveness, and enhance the technological capacity of the economy.

At present, the State Program on Digital Development for the period from 2021 to 2025 and the Innovative Development Strategy are being prepared to achieve these goals.

Additionally, it is planned to improve the education system in accordance with the requirements of the XXI century. One of the main tasks of the education system is to prepare the younger generation for the future period of digital technologies.

The second priority is the reconstruction of the territories that completely destroyed during the almost three-decade-long occupation by Armenia, which were liberated by the Azerbaijani Army after 44-day war, launched back in September last year. Along with the construction of settlements, villages and cities to ensure the right of residence of the people to return to these lands, which cover nearly 20% of the country, great importance is being attached to the use of modern technological advancements to ensure their other rights and freedoms, including access to information and services.

In order to fulfill these tasks, modern telecommunication infrastructure, "smart" residential and public buildings, digital public and private services will be provided in the whole region.

Currently, first of all, the liberated territories are being cleared of mines, and thereafter, these cities will be built following the smart city, smart village concept.

To summarize, we are all well aware that access to information, expanding use of knowledge is unavoidable demand of the time and an essential foundation for development. For this reason, I believe, we should enhance our efforts and further expand the collaboration. I wish much success to all of us on these activities.

Thank you for your attention!

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BANGLADESH



H.E. Mr. Hasanul Haq Inu
Chairman
Parliamentary Standing Committee for Ministry of Information

Questions:

What are the legislations that guarantees the independence and plurality of the media in Bangladesh?

What are the major challenges and way forward about the print and broadcast media sector during COVID time?

Statement Missing

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

SOUTH AFRICA



Dr. Keabetswe Modimoeng
Chairperson
Independent Communications Authority

Questions:

How can inclusiveness, bridging the digital divide, embracing OTTs etc. be achieved in a manner that does not compromise local content?

How should regulators such as ICASA contribute towards building an inclusive digital or information society, considering that in most African countries (SA included), there is a slow uptake of new technologies?

With social media having grown so much in recent years, how has this affected news reporting and basic journalism principles related to objective reporting?

Statement Missing

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SWITZERLAND



Mr. Thomas Schneider
Ambassador and Director
Federal Office of Communications (OFCOM)

Questions:

Why is it important that all people in a society are able to access and contribute information, ideas and knowledge and what are elements that are essential in this regard?

What role do media have in our increasingly digitized societies and what is essential that media are able to perform their functions?

The digital transformation is creating opportunities and challenges to us all – but these are not spread evenly across our societies – there are “winners” and “losers”

If we are serious about achieving the SDGs, then we need to make sure that all people have equal chances to benefit from the opportunities and avoid risks, - so that everybody can become a “winner” and no one is left behind, i.e. becoming a “loser”.

Access for all to technology, data and information is necessary but not sufficient. It is also necessary that all people are empowered and have the rights to use these for their social and economic well-being. At the same time, we need to make sure that we use digital tools for the benefit of our societies as a whole.

It is even more important in the digital sphere than in the analogue world that all actors come together and all people’s voices are heard when it comes to defining the rules about who is allowed to do what online – at national as well as international level.

In democratic societies that deserve this name, there need to be spaces where people can discuss, how they want digital technologies to be used, how much freedom individuals should



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

have and how and by whom they want to be protected from abuse. People need a space to discuss how much power they are willing to give their governments or to private companies when it comes to using new technologies like AI. We need inclusive public debates about where we want to go as a society.

Media play an important role in creating such spaces where people can receive and impart information and opinions on how to regulate our digital sphere.

Media can act as “watchdogs” which help people to understand what is going on in our societies, and to provide information about what important actors – be it politicians or companies – do. Over the past decades, we have developed a system of rights and obligations, but also ethical codes for media that allow them to act as trustworthy watchdogs.

In the past decade, new actors have created new spaces in the media ecosystem and have challenged traditional actors, their business models as well as their ethical codes.

New communication tools can lead to more diversity of opinions, but also to more control and censorship by governments or companies. As the pandemic crisis shows, they can lead to better quality information or to more disinformation or manipulation.

It is therefore of utmost importance for a peaceful coexistence of diverse peoples and interests within and between our societies that our citizens can not only trust the media and the information disseminated, but also that they can trust our political and economic institutions. Therefore, we need to build on existing standards for free, independent, diverse and quality media, based on the principles of human rights, democracy and rule of law, – but we have to adapt these existing standards so that the media can perform their watchdog function also in the 21st century.

This is fundamental for the future development of our societies as a whole, if we are serious about the UN Sustainable Development Goals and their claim that no one should be left behind.

I would like to conclude by commending institutions like UNESCO and the Council of Europe on their standard setting and awareness raising activities in this regard. In addition, I would also like to thank all private actors, NGOs etc. that work hard in the field to defend and strengthen a media system that helps to empower and not to manipulate people. And I encourage all actors with a rather technical expertise, like ITU and others, to further enhance their cooperation with the named actors so that, together, we make sure that technologies are used to strengthen the media ecosystem in performing their watchdog function.

Thank you for your attention.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

TURKEY



Mr. Ömer Abdullah Karagözoğlu
Chairman of the Board
Information and Communication Technologies Authority

Questions:

In your opinion, what are the most important factors of inclusive access to information and knowledge? Could you share examples from Turkey that targets improved access to information?

Do you have inclusive regulations for disadvantaged groups of your society?

In the “Inclusiveness, Access to Information and Knowledge for All / Media” session, Mr. Ömer Abdullah Karagözoğlu, Chairman of the Board and President of the Information and Communication Technologies Authority (ICTA) of Turkey, gave information about ICTA’s perspective regarding inclusive access to information and shared their studies and experiences.

Digital technologies have changed our lives in almost all aspects. We witness that, the number and quality of digital services have increased globally, however, this digital transformation has not enabled everyone to benefit equally from the opportunities. Lack of access to information not only impairs one’s economic, social or cultural life but also leaves behind in utilizing the opportunities brought by information age.

Physical access to ICTs is essential in accessing information. Therefore, supply and demand side strategies should complement each other. With other factors, the affordability of services is of utmost importance in accessing information. I would like to share an initiative from Turkey to increase internet penetration and enable more people to access and utilize ICT services.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

The “Internet on Us” plans offered by Türk Telekom, the incumbent operator, were approved by ICTA Board in 2017 and subsequent years. The goal of the offer is to increase penetration with low priced plans for the target group those who never had an internet subscription. At the beginning, the operator offered these plans free of charge at the wholesale level to enable retail ISPs keep their retail prices very low compared to other offers. The “Internet on Us” offers are available on ADSL, FTTH, and FTTC networks so that the type of networks would not hinder those within the target group to benefit. The speed and data allowances were diversified in the course of time while keeping prices still affordable to provide more alternatives to consumers.

The results of “Internet on Us” offers are encouraging. From April 2017 to July 2020, almost 1 out of every 5 new internet subscription was by virtue of “Internet on Us” offers. With a total number of 2 million new subscribers, the “Internet on Us” campaign has accelerated fixed broadband household penetration growth in Turkey.

Coming to our inclusive regulations for disadvantaged groups of our society, it should be underlined that inclusive access to information and knowledge requires removing any kind of barrier regardless they are related to physical access, affordability, relevance, or lack of digital skills. Therefore, measures to increase inclusiveness should be targeted to marginalized or vulnerable groups among the society focusing on their special needs. Inclusiveness may shape societies in a way to recognize the differences, opportunities and the challenges.

Spreading “inclusive” policies, ensuring disadvantaged groups to benefit from education, employment and social rights equally and fully, are of great importance. With this perspective, we have been actively working towards the goal of “Accessibility for the Disabled Users in the electronic communications sector in Turkey” since 2011. Main aim of these studies is to protect the rights of disabled users, to ensure that they benefit from the services in the sector equally, and to receive opinions and suggestions from all relevant segments.

On this basis, our regulations target wide range of opportunities and facilities for disabled users, such as special campaigns with affordable prices, priority for receiving call center services, accessible operator web pages and call centers, video and telecommunication relay services, provision of specific smart phone applications, etc.

Additionally, “Procedures and Principles” which includes measures for users to be supported socially was put it into force in 2019. As a practical outcome, a special tariff package that offers 25% additional discount for persons with disabilities, war veterans and the widows and orphans of the martyrs is in place.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

We continue our regulations for protecting the rights and interests of all consumers, especially those who have special needs, with the perspective of facilitating their lives and increasing the accessibility of ICTs.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

COSTA RICA



Mr. Gilbert Camacho Mora
Commissioner of the Board of Directors
Superintendencia de Telecomunicaciones

Questions:

What is the importance to provide telecommunications services in Costa Rican Indigenous Territories?

Which challenges has faced the Sutel to develop this project with Costa Rican Indigenous Territories?

Universal Access to Telecommunications Services in Costa Rican Indigenous Territories

With the enactment of the General Law of Telecommunications N°8642 in 2008, one of the functions assigned to the Superintendence of Telecommunications of Costa Rica (SUTEL), as sectorial regulatory body, is effective compliance with the universal service and access system, contributing so that the most vulnerable populations in the country, for geographic, social or economic reasons, can have quality telecommunications services.

The road for SUTEL regarding universal service and access is set out in the National Telecommunications Development Plan (PNDT), a public policy instrument created by the Ministry of Science, Technology and Telecommunications (MICITT), as governing body in the area of telecommunications.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

To provide connectivity to vulnerable populations and to contribute to bridge the digital divide in the country, four programs related to universal service and access are currently under way, with resources from the National Telecommunications Fund (FONATEL) – managed by SUTEL-, which operates through a working partnership with the digital ecosystem (state institutions, non-governmental organizations, and telecommunications operators) to extend the scope of projects executed.

Thus, the Universal Access and Service Program N°1: Connected Communities serves to subsidize the deployment of infrastructure for telephony and Internet services in areas where the provision of such services is not profitable for telecommunications operators. This same program strives to serve shelters for children, senior citizens, persons with disabilities, indigenous populations, public primary and secondary schools, as well as public health care centers.

Within this framework of action, and through the universal service and access system, SUTEL promotes the existence of an inclusive society which recognizes each person with the same value and possibility of receiving telecommunications services without any type of discrimination.

In this sense, SUTEL has contributed to comply with the United Nations Sustainable Development Goals (SDGs) by considering inclusiveness, particularly regarding universal access to telecommunications services from the perspective of indigenous territories, as a goal in its projects under the Connected Communities Program.

Inclusiveness, Access to Information and Knowledge for Everyone

In a process of building relationships while fully respecting their autonomy and idiosyncrasy, and applying a model of participatory governance and free choice, a contract was launched in 2020 to take fixed and mobile Internet and telephony services to households and Public Service Provision Centers (CPSP), such as primary and secondary schools and health care centers, in 14 indigenous territories in the Atlantic and the Southern Areas of the country. The contract was awarded to the state-owned telecommunications operator, Instituto Costarricense de Electricidad (ICE), with an investment of US\$ 47.9 million.

This project will contribute to bridge the connectivity divide and to provide better Internet access in the national indigenous territories, and strengthen local development since their inhabitants will have better access to information and communications, health care services, and virtual education, and better use of the Internet for socioeconomic activities.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Making telecommunications services available will benefit 105 settlements, 87 schools and 32 health care centers in Cabécar Tayní, Talamanca, Bajo de Chirripó, Altos de Chirripó, and the communities of Bribri de Talamanca and Keköldi in the Atlantic Area, as well as in Guaymí de Conteburica, Altos de San Antonio, Abrojos-Montezuma, Brunca de Curré (Rey Curré), Térraba, Cabécar de Ujarrás, Bribri de Salitre and Cabagra in the Southern Area.

The project also anticipates a series of awareness and training activities, with theoretical and practical content, so that the beneficiaries can better use and take advantage of the telecommunications services in all those indigenous territories. These activities will be coordinated with community organizations as the project advances, and will be aimed at children and adults observing the measures in force established by the Ministry of Health due to the COVID-19 pandemic.

It should be noted that telecommunications services had already been made available in three indigenous territories (Matambú, Maleku and Quitirrisí); therefore, during 2021 infrastructure (construction of towers and posts) will continue to be deployed in the Atlantic and Southern Areas, with the aim to provide full maintenance and support to the project in 2023, and provide services to the CPSPs.

Inclusive and Participatory Process: Respect for Indigenous Autonomy

It is worth highlighting that the project is developed following national and international regulations, and in compliance with the right to free, prior and informed consent provided in International Labor Organization (ILO) Convention N°169, and in Executive Decree 40932-MP-MJP of Costa Rica, which sets out the general indigenous population consultation mechanism.

In this context, the process to strengthen relationships with the indigenous territories started between 2016 and 2017, and called for prior coordination with the Integrated Development Associations (ADI) or similar representative bodies, to build and operate the necessary works in each territory to enable the installation of infrastructure (60 radio base stations) to provide Internet and telephony services.

Visits were arranged with land owners in indigenous territories where infrastructure would be deployed, in order to get their permission or authorization and to find new locations for telecommunications towers that might have been initially planned in archaeological sites. The objective was for the awarded operator to develop the project without difficulties.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Agreements were reached and the sites selected to erect the radio base stations were validated with community representatives, following the guidelines of, and under the supervision of, the Indigenous Consultation Technical Unit (UTCI) of the Ministry of Justice and Peace of Costa Rica.

Together with the MICITT, ICE, the Ministry of the Presidency, and SUTEL, a multi-sectorial working group was formed to help developing the project and define actions to better manage issues related to archaeological sites, obtain permits from the ADIs and owners of land located in indigenous territories.

In our view, as regulators, universal service and access is an assertive mechanism to facilitate the inclusion of vulnerable populations in the use of telecommunications services and new technologies. In this sense, all 14 indigenous territories in Costa Rica that are taking part in this process will, no doubt, be an example of this directive.

So, from our scope of action, we concur with, and contribute to, the objective of promoting inclusion as a pillar to access information and knowledge and push forward millennium goals.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

SINGAPORE



Ms. Chi Hsia Foo
Assistant Chief Executive Officer (International)
Infocomm Media Development Authority

Questions:

What is the government's role in ensuring inclusiveness in the digital society?

What are the areas that the international community can collaborate on with regard to promoting inclusiveness - access to information and knowledge for all?

Honourable Ministers

Excellencies

Ladies and Gentlemen,

A very good morning, afternoon and evening to everyone, wherever you may be.

It is my pleasure to be able to participate in today's high-level multi-stakeholder conversations amid the ongoing challenging times, keeping with the spirit of WSIS Forum to foster ICT for sustainable development.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

While digital technologies have enabled us to stay connected and well-adapted to this new normal of working, learning and interacting online, the COVID-19 pandemic has also exposed and deepened the digital divide in our society. There are many who remained cut off from access to internet connectivity, affordable devices and/or digital skills and tools. They are in risk of becoming “digital outcasts” as the society and the world move ahead. Given so, ensuring the participation of everyone in the digital economy, especially amid the pandemic and post-pandemic recovery must be an urgent priority for governments.

Inclusiveness is about empowering individuals, businesses and communities to effectively use ICT, enabling them to contribute to and benefit from today’s digitalised economies and societies. Do allow me to elaborate briefly on three key aspects on what governments can do to nurture an inclusive digital society:

First, ensuring ready access to affordable, inclusive and trustworthy infrastructure. This refers to having devices, and connectivity that is not limited to fixed home broadband access, but also mobile broadband and nationwide wireless connectivity. In Singapore, we have implemented the **Wireless@SGx** programme since Dec 2006, where there are over 30,000 hotspots islandwide to provide free and secured internet connections (with secure authentication and traffic encryption) for all. There are also government initiatives, in partnership with the industry, to provide low-income households, students and senior citizens with subsidised broadband connectivity and devices/tools¹.

Second, equipping our people with the skills to use digital technologies with confidence, as access is not just about having devices and connectivity but also having the ability to transact in the digitally-connected world today on a daily basis meaningfully. It is important that we take into account the specific needs of vulnerable segments such as low-income households and individuals, senior citizens, and persons with disabilities, who generally face more challenges in embracing technology. For example, Singapore has curated learning programmes to assist our senior citizens to pick up basic digital skills according to their personal needs through the **Seniors Go Digital** initiative. There are Digital Ambassadors located at designated community hubs to provide personalised 1-on-1 guidance for our seniors so that they can learn at their own pace and they are empowered with resources to continue learning on their own. We also have the **Enable IT programme**, to assist persons with disabilities to adopt Infocomm and Assistive

¹ IMDA’s Home Access, NEU PC Plus, Mobile Access for Seniors programmes



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Technologies and build skillsets that would enable them to improve the quality of their daily living and enhance their capabilities to pursue their aspirations.

Third, instilling life-long learning attitude and motivation among people to embrace technology to enrich their lives. This can be achieved by activating the corporate sector, community groups, individuals and the government to promote the opportunities offered by technology/digital platforms that bring about better social and economic outcomes. Singapore has recently launched the **Digital for Life Movement** that will look to bring collective efforts nationwide to help all Singaporeans to have the necessary digital tools, skills and habits to thrive in the digital future. This includes the setting up of the **Digital for Life Fund** to support projects initiated by the community for the community, through to 2023.

Besides these three key aspects, there is a pressing need to raise levels of digital literacy collectively. Governments must work together with the public, private and people sectors, to cultivate digital users' critical-thinking skills and understanding of issues such as cyber safety, online falsehoods, cyber bullying and uncivil online behaviour, so that they are empowered to be safe, smart and kind in the digital world that is dynamic and borderless in nature. I am happy to share that Singapore has been a supporter for several international and regional initiatives such as our **"Better Internet Campaign"**, that leverages on the annual global event "Safer Internet Day" to promote the safe and positive use of digital technology; as well as the **"Core Values on Digital Literacy for ASEAN"** that would help foster an inclusive online community in the Southeast Asian region, where individuals practise respectful and socially responsible behaviour online.

Let me conclude by expressing my appreciation to be part of this important discussion and that I look forward to continuing engagement with the international community to build a more inclusive digital society for all. Thank you.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

NEPAL



Mr. Suman Basnet
Asia-Pacific Regional Director
World Association of Community Radio Broadcasters (AMARC)

Questions:

What is the role of community radio broadcasters for taking appropriate measures - consistent with freedom of expression - to combat illegal and harmful content for the rural people?

What are the major challenges of community media sector in line with infrastructure, technical resources and the development of community broadcasters' skills, taking full advantage of ICT tools and how Government further support to the community media sector?

Statement Missing

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

BANGLADESH



Mr. AHM Bazlur Rahman
CEO
Bangladesh NGOs Network for Radio & Communication (BNNRC)

Questions:

What is the role of Community radio in Bangladesh for Promoting balanced and diverse portrayals of women and men?

What is the role of Community Radio for bridging the knowledge divide and to facilitate the flow of cultural content, particularly in rural areas?

Utilizes the Power of Community Radio for amplifying Voices of Rural Disadvantaged Community in Bangladesh

Bangladesh NGOs Network for Radio and Communication (BNNRC) has been addressing the community radio access to information issue for the last two decades, helping to bridge the information gap of rural Bangladesh. Community Radio is playing a significant role in empowering local communities, giving a platform to amplifying rural voices, and influencing the power groups such as represent local government departments and elected members, civil society-based organizations, etc. Community Radio has now become part of the life of the rural disadvantaged communities.

The Community Radio Stations are currently covering more than 9 million listeners in the country, aiming to ensure empowerment and the right to information for the rural communities. They are



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

broadcasting an altogether 165 hours program per day through localization and harmonizing of SDGs, information, education, local entertainment, and development motivation activities. Around 1000 Youth (46% female) are now working in those CR stations throughout the country as rural broadcasters.

Community Radio programs are quite supportive of the activities reflected in the 8th 5-year plan of the Government of Bangladesh, UN World Summit on the Information Society (UN WSIS) Action Plan, and UN Sustainable Development Goals (UN SDGs) and UN Convention Against Corruption (UN CAC) to ensure leverage their free opinion in respect of social, economic, political, cultural and environmental issues including Disaster Risk Reduction (DRR) and Climate Change & Adaptation (CCA).

BNNRC is Utilizing the Power of Community Radio for Inclusiveness, Access to Information & Knowledge for all in understanding their rights as well as raise their voices

In the broader aspects, the potentials of Community Radios in Bangladesh are:

Empowers People- More Trusted Inclusive & Independent Content providing by Community Radio Station. Increasing effective political participation through Multi-Generation Reach by influencing knowledge & understanding discussion, efficacy & motivation skills, and changing of attitude, beliefs, norms, and behavior.

Creates Space-Developing a more inclusive public space through Multi-Platform Presence & Multi-Generation Reach that supports the mediation of state-market-society relations, Re-imagining of social relations, connectedness & bridging, and collective problem-solving.

Influencing Power- Improving the responsiveness from Power Holders by demanding issue-based solutions, supporting people to ask questions to locally elected bodies and others for Setting community agenda.

BNNRC believes in enabling access to "on-demand" knowledge for all, using appropriate media to foster public debate for shaping their development agenda and assume responsibilities as citizens in the era of the Fourth Industrial Revolution. It also enables a media literate, informed, and participatory society so that the underserved societies can shape their lives and livelihoods through the following:

- Fostering public debate, media pluralism, and democracy using the power of information and communication



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- Amplifying the voices of vulnerable, marginalized, and excluded people in development debates
- Working with media and other information stakeholders to support people and communities to bring about positive changes in their lives and livelihoods

BNNRC contributes to achieving SDGs-1, 2, 3, 4, 5, 9, 10, 13, and 16 through its various interventions. It Enhances the capabilities of rural communities through an equity lens for adapting to the new normal situation. BNNRC focuses to enhance capabilities for building resilience and accelerating ICT applications for benefitting community people in all aspects of life. Public access to reliable and timely information through ICT and media for countering misinformation, disinformation, and mal-information and keeping lives & livelihood easy for community people is very significant.

- **Promoting human rights and inclusiveness** is the priority area of BNNRC, which is covering and contributing to empowering women and girls.
- **Economic growth** has been a central focus of development which eventually contributes to breaking the social discrimination and facilitating youth employment as well as the economic empowerment process.
- **Political inclusion:** BNNRC supported disadvantaged communities to drawing the attention of the policy and decision-makers of the state for improving their life and livelihood.
- **Digital inclusion:** In the last two decades, digital applications have come to affect almost every aspect of our daily lives as well as our plans for the future. The youths are getting the opportunity to use the computer in different ways - browsing the internet, websites, news portals, social media (YouTube, Facebook, etc.)
- **Inclusive culture:** BNNRC supports the community people learned about the diversified culture of which helping to reduce the social taboo and gradually increasing inclusive culture.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Session Eight: Knowledge Societies, Capacity Building and e-Learning

Recording: <https://www.itu.int/net4/wsis/forum/2021/Agenda/Session/171>



Moderated by High-level Track Facilitator:

Dr. Asan Gani Bin Abdul Muthalif, Associate Professor, Dept of Mechanical and Industrial Engineering, Qatar University

WSIS Action Line Facilitator:

Dr. Marielza Oliveira, Director, Partnerships and Operational Programme Monitoring, Communication and Information Sector, UNESCO

Speakers:

1. **Mauritius** - Mr. Zafroullah Noor Mohamed, Programme Manager, Central Informatics Bureau, Ministry of Information Technology, Communication and Innovation
2. **International Islamic University, Malaysia** - Prof. Dzulkifli Abdul Razak, Rector
3. **ISOC** - Ms. Jane Coffin, Senior Vice President, Internet Growth



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

4. **Iran University of Science and Technology** - Dr. Hadi Shahriar Shahhoseini, IUST Vice Chancellor for International Affairs and Director of Research Center for ICT Strategic and International Studies (ICT-SIS)
5. **South School on Internet Governance** - Dr. Olga Cavalli, Co-founder and Director
6. **E-Seniors** - Ms. Monique Epstein, Founder
7. **MedRet Healthcare Ltd** - Dr. Naila Siddiqui Kamal, CEO
8. **Association of Scientists Developers and Faculties** - Dr. Kokula Krishna Hari Kunasekaran, International Secretary



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

UNESCO



Dr. Marielza Oliveira
WSIS Action Line Facilitator
Director
Partnerships and Operational Programme Monitoring
Communication and Information Sector, UNESCO

Hello everyone! I'm Marielza Oliveira, co-Director in UNESCO's Communications and Information Sector. I'm really happy to welcome all of you to the **High-Level Policy Session on Knowledge societies, Capacity building and e-Learning**.

This, to me, is "the" most important topic nowadays, and one in which UNESCO is a thought leader. In fact, UNESCO is the organization that worked with the WSIS community to develop the concept of "Knowledge Societies". We are firm believers that having access to information is essential but not enough: people must be able to *transform* information into actual *knowledge*, actual *understanding*. Knowledge is what empowers people, by providing us with the tools to effectively participate in our communities, to strengthen our livelihoods, and to contribute to our societies.

Our ability to derive knowledge from information depends on a lot of factors. Of course, it starts with access. UNESCO works in several fronts: we work with the ITU and Broadband Commission partners to connect people to information sources. We work to enhance the quantity, quality and local relevance of the information people have access to, for example, by protecting media and languages so that the information they convey does not disappear. We support countries in designing and adopting access to information laws, which, since 2001, have been enacted in around 90 countries. We work to ensure persons with disabilities have equal access to information as those without disabilities. Since 2015, every year we celebrate the International Day for Universal Access to Information, to highlight that information should be accessible by and



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

benefitting everyone. Over 100 national and international commemorations have been organized since 2015. I hope you all organize events in the next years.

But our most important work is ensuring that everyone has the capacity to transform information into knowledge. Education is key for that. This is why that work is about, for example, expanding Media & Information Literacy so that people can access, analyze, use and distribute credible information. It is about increasing the availability of Open Educational Resources (“OER”), to increase opportunities for learning. It’s about fostering ICT innovation that enhances our ability to learn in and outside of schools, all our lives.

Our policy session today will address e-Learning, which is among five WSIS Action Lines that UNESCO facilitates.

Last year UNESCO launched the Global Education Coalition, to ensure that learning would not stop during the pandemic, when 1.5 billion learners were suddenly cut off from classroom learning environments. We created a Global Skills Academy, facilitated by UNESCO Technical and Vocational Education and Training (UNEVOC) centres, which provides learners in more than 160 countries with free access to opportunities for development of online digital and employment skills, and other competences. We keep track of education around the world through our annual flagship Global Education Monitoring Report.

I am really interested in the insights our panelists will share, and in reflecting with you on the questions our audience will pose. So, let’s have a great discussion today! Thank you, and over to our Moderator.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Executive Summary by High-Level Track Facilitator

Introduction

In this section, we discussed one of the most important topics related to human development and progress. E-learning is a highly debated and sought-after educational tool since the Covid19 pandemic. Education and knowledge are correlated, and one leads to another. While education is acquired through a formal institution, knowledge can be informal and gained through informal experiences. Good education gives a strong foundation and systematic approach to acquire knowledge.

An English philosopher Herbert Spencer once said, 'The great aim of education is not knowledge, but action'. If Isaac Newton, the Wright brothers, and many more had never acted on what they know, we might not have what we enjoy today. Hence, acting on what we have, sharing what we know is vital to develop a sustainable and progressive society.

We had nine distinguished high-level panels shared their experiences and expert views on issues related to knowledge societies, capacity building and e-learning.

Vision

Key views articulated by the panel include:

- Role of governments in ensuring people are equipped with the use of technology to operate online.
- Impact of capacity building on creating on e-Learning / e-Sciences ecosystems, due to current pandemic.
- Importance of learning the use of ICT for senior citizens and children.
- Impact of Covid-19 on healthcare, especially on delivery and training of front liners.

Fresh Priorities

The HL panellists discussed several priorities for knowledge societies, capacity building and e-learning. The impact of Covid19 pandemic on the above was strongly emphasized. The priorities highlighted by the panellist are:



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- Enhancing the concept of society, transforming into actual knowledge/understanding to empower people.
- Engagement of vulnerable young children and senior citizens in ICT.
- Implementation of IR4 focussing on digital talents and digital economy.
- Identifying skills to bridge the digital divide, including technical literacy skills and competencies.
- Collaborative regulatory approach to create a conducive ecosystem for digital transformation.

Examples of Case Studies

The panellists highlighted few strategic initiatives from across the world to underscore their impact on knowledge societies. We should emphasize the following initiatives:

- Mauritius- Ministry of Information Technology, communication and Innovation
 - Integration of ICT in primary and secondary schools' curriculums.
- Malaysia- International Islamic University Malaysia
 - Adaptation of 4th Industrial Revolution strategy at National level.
- ISOC- Internet Growth
 - Promote a strong local Internet ecosystem and build Internet infrastructure and content and services human capacity building.
- IUST
 - Aims to achieve widespread digital transformation in Universities.
- SSIG
 - Aims to enhance the relevant participation of regional representatives to this multi-stakeholder spaces that read Latin America's ideas and the region's needs to those spaces.
- E-SENIORS
 - Inclusion of senior citizens in learning to use ICT.
- MedRet



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- Aims to find new ways for delivery of healthcare and provide training of E-doctors to support the frontline workforce.
- ASDF
 - Aims to map the unconnected communities for future interventions to ensure e-learning benefits for all children.

Opportunities

The panellists stressed the importance of ICT in connecting communities, extending digital skills to senior citizens and vulnerable young children, workforce development through E-learning, and creating society 5.0.

Road Ahead

Knowledge society, capacity building and e-learning are vital for empowering individuals whilst building a progressive community. Covid19 pandemic has further emphasized the importance of technology towards sustaining learning and knowledge acquisition. Governments, NGOs, and stakeholders from all sectors should work together and synergise a sustainable learning ecosystem at all educational levels. With a collective effort, we can speed up the holistic realization of 'knowledge society'.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

MAURITIUS



Mr. Zafroullah Noor Mohamed
Programme Manager
Central Informatics Bureau
Ministry of Information Technology, Communication and Innovation

Questions:

In this time of COVID-19, technology has emerged as the lifeblood for addressing the challenges of doing business, learning, and even spending leisure time.

What is Mauritius doing besides bridging the digital divide to ensure that its people are equipped to use technology to operate online?

What is your country also doing to ensure that you have the resources to be not just users of technology, but also producers of technological solutions that can be used in the economy?

ICT literacy is key for operating online. The National Computer Board, which operates under the aegis of the Ministry of Information Technology, Communication and Innovation has been running IC3 courses – which is about ICT literacy – for many years now and targeting people at work and those who remain at home, including women and young girls. As for our children, we have integrated IC3 courses in the **Computer Science** school curriculum for primary and secondary school students.

The National Computer Board is also reaching out to our senior citizens so that they can use communication tools like Whatsapp, or email to call their sons and daughters or even grandchildren working or studying abroad. Surfing the web is another topic covered in the programmes. This opens up the gates to the world knowledge to our retired people.



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Such programmes are also offered to disabled people in line with SDG 10 - Reduce inequality within and among countries

Besides ensuring that people of all ages can operate online, we need to ensure that they have the means – i.e. devices and affordable access. Children of vulnerable groups are to be provided with tablets and free access to Broadband Internet – taking them at par with other students accessing e-learning materials on the web.

By properly regulating the market and ensuring a very dynamic and competitive market, our people have the opportunity of accessing online resources at very affordable prices. Mobile Internet costs have fallen recently thanks to the forces of competition.

All these interventions aim at accompanying our citizens online experience.

The ICT sector in Mauritius is the 3rd pillar of the economy. Being producers of technological solutions is very much at the heart of our Government's vision for the country.

And realizing this vision requires **skills, skills and skills**.

In view of supplying sufficient ICT resources in the market, Government lays emphasis on democratizing tertiary education through the provision of **free** tertiary education and promoting the delivery of a wide variety of ICT courses at university level. The courses range from software engineering, cyber forensics to artificial intelligence and robotics.

Recognising that emerging technologies, which include artificial intelligence and blockchain technologies, will shape the future of ICTs, Government is offering scholarships to young ICT graduates wishing to specialise in these areas. We - are - investing in our people's skills.

We are also thinking of the young generation. The National Computer Board runs coding classes for upper primary and lower secondary students – giving them a feel of coding as they think of their future careers which will be shaped by ICTs.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

INTERNATIONAL ISLAMIC UNIVERSITY, MALAYSIA



Prof. Dzulkifli Abdul Razak
Rector

Questions:

Malaysia has recently adopted a National 4IR Strategy. Can you briefly share some of the strategies?

How has the pandemic outbreak affected the use of ICT in Malaysian education ecosystem?

The Malaysian government has set up the Digital Economy and Fourth Industrial Revolution (4IR) Council in November 2020. The main aim is to improve the country's capability in optimising 4IR technological advancements, and to ensure growth of the digital economy, in line with the country's Shared Prosperity Vision 2030, and the United Nations Sustainable Development Agenda 2030.

The Council is the highest administrative body in establishing policies, implementation and monitoring of the nation's strategies and initiatives for the digital economy and 4IR. It is chaired by the Prime Minister with a governance structure consisting of a steering committee and covers six clusters of thrusts. The former is chaired by the Minister in the Prime Minister's Department (Economy). The latter by Minister of the relevant portfolio, for example, the cluster on Digital Talent is chaired by Minister of Human Resource, cluster on Digital Infrastructure and Data by Minister of Communication and Multimedia, and so on. The other clusters include the Emerging Technology cluster, Economy, Society, and Government clusters. Similarly, the Secretariat for each of the clusters. Representatives from the private sector, academic sector and civil society organisations make up the membership of all the clusters. The clusters span cyber security, agile



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

regulation, inclusivity and sustainability to ensure clarity of focus and to enable multi-agency collaboration.

A joint secretariat is also formed to act as a Strategic Change Management Office to roll out change management programmes as a way to drive and increase acceptance of digitalisation across all levels.

Based on this, Malaysia in 2030 envisage the following:

(a) Society. Creation of 500,000 new jobs; 100 percent household with access to the internet; and all students to have access to online learning

(b) Government. By 2022, all ministries and agencies are to provide cashless payment option, and 80 percent usage of cloud storage across the government; 100 percent civil servants to possess digital literacy; and 80 percent end-to-end online government services.

Lastly, (c) Business. Attract two unicorns (home-grown or foreign); increase the number of start-ups to 5,000; RM70 billion investment in digitalisation; 875,000 micro, small and medium enterprises adopt e-commerce; 22.6 percent of digital economy to GDP of Malaysia; and 30 percent uplift in productivity across all sectors by 2030.

The Council will implement the above in three phases over nine years from 2021 to 2030.

Under the first phase (2021 - 2022), the focus is on strengthening the digital foundation with the government taking the lead to create a conducive regulatory framework that can expedite digital infrastructure development. This is to increase confidence in the use of technology across all levels of society and make data and digital intelligence the core of the digital economy in the country.

Phase Two (2023 - 2025) is to drive digital transformation and inclusion. This phase will see a faster and increased rollout of broadband infrastructure projects, equitable access to opportunities and agile regulations for the gig economy through unhindered business innovation.

The final phase, from 2026 to 2030, is to position Malaysia as a regional market producer for digital products and digital solutions providers.

By then, the government will be data driven, processes digitised and data will be at the centre of its administration. The government will provide a conducive environment as a delivery-driven governance structure to implement the blueprint for businesses and society.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

ISOC



Ms. Jane Coffin
Senior Vice President
Internet Growth

Questions:

Why are capacity building efforts key to Growing the Internet?

What is ISOC doing to support capacity building in order to Grow the Internet?

I would like to thank Dr. Asan for hosting this session, as well as ITU, UNESCO, and all UN agencies involved in the WSS follow-up. My name is Jane Coffin, I am Senior Vice President of Internet Growth at the Internet Society.

We believe that capacity building efforts are critical to growing the Internet. First of all, it fosters benefits related to those of connectivity, such as:

- High quality and sustainable jobs that bring wider prosperity and stability.
- The chance for people to be creators and not only consumers in the global digital economy.

Investing in human networks to grow the Internet

We say that human networks built the network of networks, so in order to grow the Internet we need to invest in capacity building to strengthen human and technical networks. For communities to have access and content infrastructure, they need an environment with:

- Network operators and carriers with advanced technical training and skills to deploy and operate networks.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

- Trained technical experts who understand network architecture, routing, networking and interconnection to ensure efficient and effective traffic exchange.
- All providers using an IXP trained to understand both technical and economic aspects of interconnection and traffic exchange.
- Data center staff who can meet and anticipate market demands in competition with low-cost, state of the art international data centers, and provide 24/7 professional services.
- Hosting-providers who provide up-to-date services, including email, that prevent or mitigate both incoming spam and outgoing spam.
- Trainings on community networks for people to be able to operate and use the network, and future trainers to promote local sustainable network management and operations and local community development.
- Training for local experts to better understand policy and regulatory environments and how to work with Government officials.

The next generation of Internet Champions

It is also essential that the next generation of Internet champions are able to understand and embrace the open Internet model in order to ensure the future growth of the Internet, and to extend its benefits to everyone.

The work we have done with our community shows that these champions are more effective when they master a hybrid expertise, such as a mix of policy and technology skills, and are embedded in an interdisciplinary network gathering policy, technology, academic and technical profiles.

Our support

Some of the ways the Internet Society supports capacity building efforts to grow the Internet through the world are working with partners for free or low- cost training and fostering the next generation of Internet champions.

Free or low-cost training: regional and local network operator groups (NOGs), Regional Internet Registries, the Internet Society, and other bodies provide free or very low-cost training in countries or regions, in place of or supplementing more formal training programs.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

These organisations and their events can also promote broader community discussions about developing the ecosystem and promoting local or regional interconnection and traffic exchange.

These trainings also need to ensure the development of skilled, trained, and engaged people who can create, sustain, and maintain infrastructure, online content and services.

Fostering the next generation of Internet champions: the Internet Society has also launched a ground-breaking program this year to empower the Internet Champions of tomorrow who will bridge the gap between technology and policy – and become advocates for a bigger and stronger Internet: the Early Career Fellowship.

Fellows will be able to develop their knowledge and skills through seminars, events, courses, discussion sessions and project work. They will also have networking, mentoring, and collaboration opportunities. The program culminates in a final project presentation by each fellow at a closing symposium.

Conclusion

We believe capacity building is essential. We have learned over the last few 10-12 years how important capacity building is, and how we can work to ensure it.

For capacity building efforts to be successful in growing the Internet, the human networks have to talk to each other while the technical networks do the same. This includes governments taking an interdisciplinary approach to connectivity and infrastructure at a global, regional and local level, collaborating to foster an environment where communities can thrive.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

IRAN UNIVERSITY OF SCIENCE AND TECHNOLOGY



Dr. Hadi Shahriar Shahhoseini

IUST Vice Chancellor for International Affairs

Director of Research Center for ICT Strategic and International Studies (ICT-SIS)

Questions:

How has Covid-19 Pandemic changed e-learning and e-science ecosystem in universities?

What technology-based capacities have been created or will be built in the above ecosystems, due to the pandemic?

Thank you Mr. Chairman

Good afternoon to high level panelists and good time to all participants from different part of the world. It's my pleasure to attend in WSIS Forum 2021 through the web, and have opportunity to address about e-learning and e-science ecosystems.

First of all I would like to appreciate ITU and all who made it possible for this Forum to take place through the web, in the last two terms during the pandemic. My university, Iran University of Science and Technology (IUST), with more than 15000 students and about 450 faculty members, is a member of UT5 (the Alliance of 5 Leading Iranian Universities of Technology). IUST ranked in 2021 by Times Higher Education university ranking system, in Top 600 universities in the world and 87 in Asia.

Last year and in the first weeks of the pandemic, my university was among the first universities in Iran that managed to continue the classes virtually. Then other scientific activities were also



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

turned in to remote environment. More than 98% of our classes continued without any interruption through web-based systems; while before the pandemic, only 10% of classes used e-learning. This is the same for all major universities in Iran. There has been more or less the same growth in using e-learning in the universities all over the world.

Last year in this high-level-session, I emphasized on the use of emerging technologies which have shown a suitable response in the crisis; and on the collaborative scientific networks that may accelerate the implementation of knowledge Societies.

Today we passed a year with Covid-19 pandemic; and our working environments and our daily life are changing. Social distancing has modified our habits, while the Internet and ICTs play a major role in supporting remote working in the e-science ecosystem, from e-teaching and e-learning to online scientific collaboration and holding remote scientific conferences.

Although all the above sudden changes put unprecedented stress on universities and in general on the science ecosystem, but it has also pushed the digital transformation in E-Science ecosystem. So we can accelerate the transition towards our preset goals such as Open Science, Massive Open Online Course (MOOC), blended learning and Lifelong Learning as well as developing more and more local contents, and reducing digital divide especially in learning systems.

On the other hand some new opportunities have been emerged and we should facilitate these capacities. I would like to raise one of the most important ones in this speech. It is virtual exchange programs which may change the future of scientific cooperation by universities. These programs can be employed in two levels. The first one is virtual student exchange in which students will attend in courses offered in the other universities. The second one is researcher and professor's virtual exchange which means a group of researchers from their home university cooperates in a research project through the web hosted by one university or research center. Actually while the world has been in a hard situation in past year, but I believe that the combined efforts and initiatives by virtual and real activities in e-science ecosystems will accelerate the implementation of knowledge Societies.

At the end I would like to say that here in my country, we are in the New Year holiday we called it NOROOZ; that means new day in the beginning of Spring. This year according to Iranian calendar we are on the verge of a new century; so I wish you all health, prosperity and success in this New Year.

Thank you for your attention.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

SOUTH SCHOOL ON INTERNET GOVERNANCE



Dr. Olga Cavalli
Co-founder and Director

Questions:

One of the pillars of the information society is the multistakeholder model. How can capacity building activities have an impact in the reinforcement of the multistakeholder model, especially focusing on the diversity of stakeholders from developing economies?

The travel restrictions and social gathering limitations have a great impact in several meetings for capacity building. It seems that in the future there might be less travelling for capacity building meetings. How can these training activities be redesigned to make them visually attractive for the audiences and at the same time relevant in relation to content and participation?

The multistakeholder model is one of the most important achievements of the international relations focused on the Internet and ICTs, as it enables a constructive and equal footing dialogue among the different actors of the Internet ecosystem.

For it to have a real impact and achieve relevant outcomes, and to allow innovative ideas to reach the different regulatory bodies in different countries, it is very important that it includes all different stakeholders: governments, civil society, private sector, academia, and technical community. To achieve real relevance there must be a strong representation of all regions of the world.

Among the most successful and long lasting multistakeholder dialogue spaces we find the WSIS Forum and WSIS process and the Internet Governance Forum.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

In relation with the Internet Governance Forum, in its early years (2006 and on) based on statistics provided by the IGF, the participation of Latin America and the Caribbean was low when compared with other regions of the world.

Latin America, like each other region of the world, has its own reality which must be taken in consideration during all dialogues involving the use of ICT and development, its impact in the environment, digital divide, gender divide, efficient use, and spectrum coordination, among many others.

To enhance the relevant representation of Latin America and the Caribbean in the different multistakeholder dialogue spaces, including IGF, ICANN, WSIS, among other global and regional forums and meetings, the South School on Internet Governance was created.

The main objective of the South School on Internet Governance is to enhance the relevant participation of the regional representatives to these multistakeholder spaces. The school provides an intensive training from the technical side up to social, economic, security and privacy issues, for those who are interested in an open, secure, and resilient Internet, and who believe that the Internet and ICTs are fundamental for the development of the region. The attendees of the school are the ones to represent our region in the different multistakeholder dialogue spaces.

The School started in 2009 and has been organized since then in several different countries of the Americas, granting fellowships to thousands of participants, including training, hotel, meals, with simultaneous translation in Spanish and English and Portuguese when organized in Brazil. The SSIG allows also for remote participation and has always a full gender balance among fellows.

Many of the fellows of the South School on Internet Governance are now highly involved in different organizations and governments, dealing with the use of the Internet for development, or as regulators, as board members of different organizations, staff members or dedicated researchers in Internet and development.

In 2017 the Argentina School on Internet Governance was founded, with the same spirit and guiding principles, this one focused in Argentina.

This is a clear example of how capacity building activity can reinforce the multistakeholder model enhancing the relevant participation of representatives from Latin America and the Caribbean in international multistakeholder dialogue spaces.

In 2020 the COVID-19 pandemic brought new challenges to the capacity building activities. The social interaction in face-to-face meetings makes them more reach in relation with the exchange of ideas, dialogues, and knowledge.

The needed for social distancing changed the format of this activities into virtual. In this context, the first virtual edition of the South School on Internet Governance was organized in October



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

2020, with a tv show style format, using a tv studio including high-definition cameras and several video and audio features. All panelists and fellows were participating from remote.

These technical elements created a brand-new visual experience for both the audience and the experts who participated. The number of virtual fellows were more than 500 from 34 countries, and there were 130 experts participating from all over the world in a five-day intensive training program, which included simultaneous translation and transmission in social networks for all the community. All the content is available in the SSIG LAC YouTube channel including the 45 sessions in two languages.

Perhaps in the future we can meet face to face again, but for sure this experience with virtual environments will remain as an important part of the meetings, allowing a blended format with face to face and virtual participation, with many more experts and fellows to attend.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

E-SENIORS



Ms. Monique Epstein
Founder

Questions:

***Your aim is the inclusion of seniors: how do you succeed to achieve this goal in COVID times?
What is the importance and impact for seniors of learning the use of ICTs?***

This session about “Knowledge societies, Capacity building and e-Learning” on the 25th of March 26, 2021, gave me the opportunity to talk about subjects concerning ICT and seniors (the target group of most of my activities with E-SENIORS association):

Seniors nowadays understand that they have no choice but entering the WORLD of INTERNET. So that they come from themselves to our workshops in order to learn the first steps for using a computer, a tablet or even a smartphone.

Sometimes, of course, their children send them to us. But, in any case, they understand the need: First, if they want to communicate with their friends and families, grandchildren and specifically in these times of pandemic. If they do not want to be isolated.

But also, because they need to go online for certain administrative procedures (declare income taxes, look up your bank account), e-commerce and interesting sales, or even have food delivered to your home when stores are closed

Take an appointment for vaccination or online with your doctor.

There are plenty of examples!



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

One question: how to we teach them nowadays when cultural centers, schools, townhalls are closed!

We went over to online teaching (with ZOOM) in most cases. Of course, for beginners this does not work. So, we had to begin with a face-to face learning for a n hour or 2 and then, eventually distant help with TeamViewer. And then ZOOM!

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

MEDRET HEALTHCARE LTD



Dr. Naila Siddiqui Kamal
CEO

Questions:

How covid19 pandemic has disrupted delivery of healthcare with reference to telehealth

The need for online training programs for healthcare workforce not just in their specialty but also in relevant health informatics case study MedRet academy training of Edoctors to support frontline healthcare workforce in Yemen

This panel discussion highlighted the crucial need of using ICT based disruptive technologies in today's current pandemic-stricken populations globally. Acknowledging this fact, the next essential need is the training of frontline healthcare workforce in the use of innovative ways of using health technology to continue the vital function of continued medical education as well as delivery of healthcare. I presented the case study where MedRet Academy trained 100 frontline clinicians in Women's health issues to deliver much needed support in mother and child health in Yemen using telehealth technology.

MedRet Academy is the educational virtual hub that is facilitated by experienced clinically active clinicians working in prestigious world known healthcare institutions and are the faculty to deliver highly relevant educational content virtually. We aim to meet the United Nations Sustainable goals in capacity building, reducing maternal morbidity and mortality, gender equality and using ICT based disruptive technologies in delivery of medical education and healthcare.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

The task is massive, and it needs collaboration. We aim to develop meaningful sustainable collaborative ties with global partners where we can mutually benefit in meeting our long- and short-term goals. We are proud to have already established such ties with similar minded stakeholders but recognise that we really do need a much wider collaborative network. We hope that by bringing the MedRet workstreams on the WSIS platform, we are successful in capturing the attention of such collaborators who may be representing the populations that need assistance in establishing the service deliverable of MedRet Academy (capacity building in healthcare, telehealth, consultancy to identify the needs and deliver strategy solutions) or are large stake holders who would like to fund such projects in much needed regions.

As an example of how MedRet can assist the global stake holders, we were requested by the high-level representatives from Dominican Republic to put together a proposal for use of technology enabled capacity building for maternal health as the region had the highest perinatal mortality in the region. We in collaboration with our US partner put together a robust strategy document for their attention. Similarly, upon commission by an NGO based in Pakistan, we trained 100 clinicians in TeleOBGYN virtually to deliver frontline healthcare in this area in telehealth camps in war torn areas in Yemen. For this project we had Stanford University collaboration as well.

MedRet Academy has developed a self-directed learning module in the use of telehealth covering the fundamentals of relevant health informatics, the ethical and legal pre-requisites that all telehealth users should know and comply to avoid quackery which may threaten the wider acceptance of peers and patients.

The panel discussion highlighted these aspects and acceptance by a wide range of populations across age, gender and ethnicity boundaries.

We look forward to secure partnerships and collaborations by presenting the case for the much-needed health needs globally that we can contribute in mitigating them through collaboration.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

ASSOCIATION OF SCIENTISTS DEVELOPERS AND FACULTIES (ASDF)



Dr. Kokula Krishna Hari Kunasekaran
International Secretary

Questions:

Do you think the Knowledge Societies are making impact in Capacity Building?

How do you see the future comparing to the past?

Your Excellencies, Honourable Ministers, The Secretary-General of UN, The Secretary-General of the ITU, Distinguished delegates, Ladies and Gentleman. In a broader capacity as the International Secretary of The ASDF International, I am highly privileged to address at this event and to have an opportunity to bring ASDF in line to achieve the United Nations Sustainable Development Goals.

The Association of Scientists, Developers and Faculties (ASDF) is doing a massive job creating a solid community of knowledge growth by providing the International platform for various Professional associations between Countries across the world. With a strong network of associates in almost 106+ countries, ASDF is growing every day with seer leadership by enhancing the international cooperation between national and international organisations, universities, research bodies and individuals in all aspects of Research and Development. The year 2021 marks the 5th consecutive year for ASDF to be a part of this WSIS Forum.

Amid this pandemic, the knowledge and resources are highly utilised by organisations and institutions worldwide, inducing the e-learning mechanisms. Capacity building remains one of the most challenging functions of development. A clearly defined aim leads to a clear strategy,



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

or more simply, the activities that the organisations must deliver to achieve their purpose. Earlier, there was a considerable gap between the plan and the direction in which organisations were proceeding. The strategy focuses on decision-making and a benchmark for judging whether a project or new idea aligns with the design. Many organisations lose their direction through working on new ideas that aren't aligned with their strategy.

This has captivated leaders with the ability to guide, inspire and take people to achieve the aims of your organisation. Good leaders focus and motivate a group to enable them to achieve their purposes. It also involves being accountable and responsible for the whole organisation. Research shows that talent can be nurtured by increasing responsibility, degree of autonomy and span of control.

Specific capacity building projects, such as identifying a communications strategy, improving volunteer recruitment, ensuring thoughtful leadership succession, updating a knowledge society's technology, and improving how it measures its outcomes, all build the capacity of a charitable organisation to deliver its mission effectively. When capacity building is successful, **it strengthens a society's ability to fulfil its mission over time, thereby positively impacting society's ability to impact lives and communities.**

While frequently invisible and often overlooked, capacity building is the all-important "infrastructure" supporting and shapes charitable nonprofits into forces for good. The capacity building enables nonprofit organisations and their leaders to develop competencies and skills that can make them more effective and sustainable, thus increasing the potential for charitable nonprofits to enrich lives and solve society's most intractable problems.

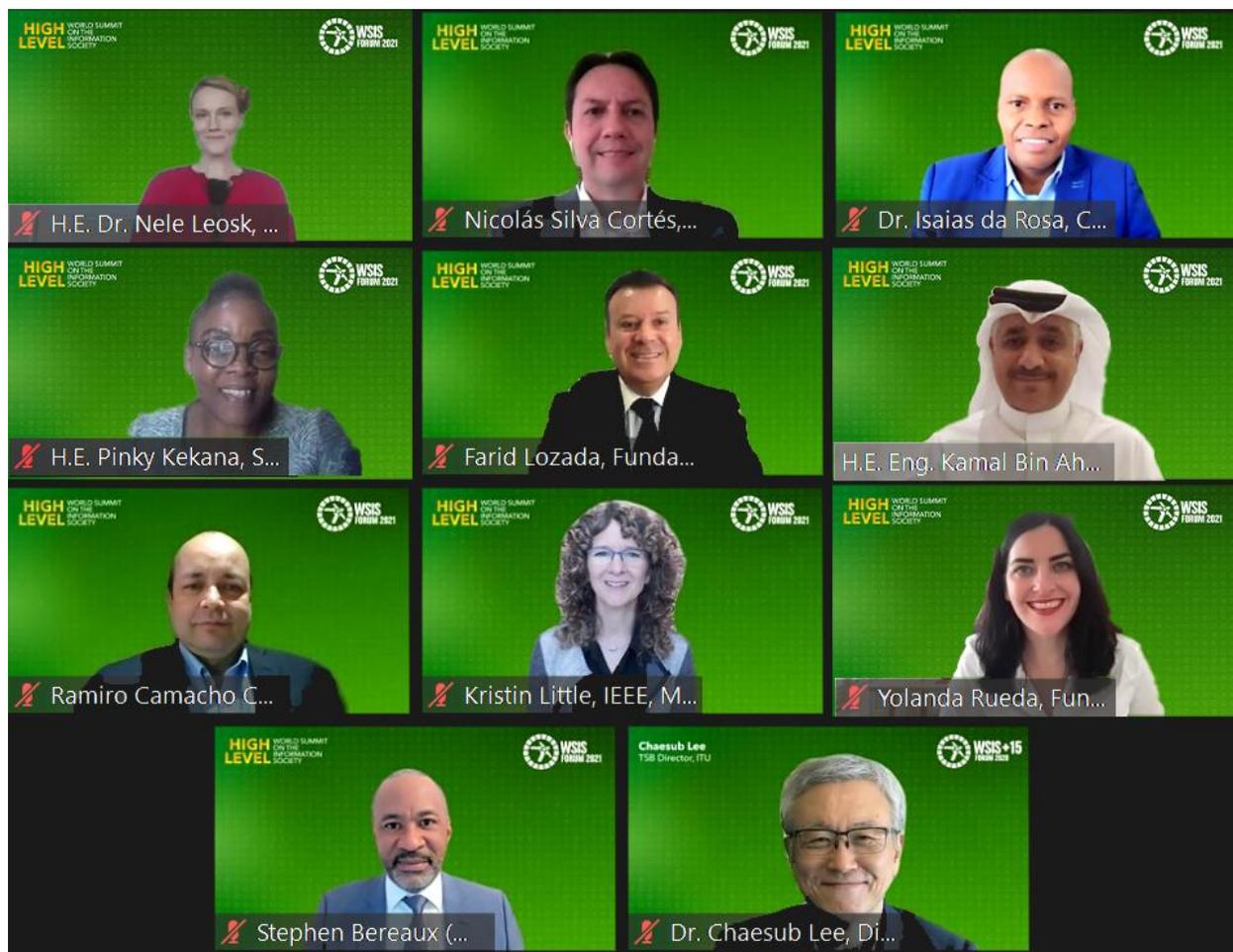
The organisations are forced to increase their potential in three verticals, including the Organizational Infrastructure, Governing & Managing Team, and Staff Capacity. ASDF has invested heavily in the past for digitalising the verticals of its operation. The frequent daily word of Zoom, Google Meet were heavily used by ASDF to facilitate the digital learning platform.

The eLearning part has increased in this pandemic period enabling people to expand the horizons beyond the limited classroom learning. At the outset of providing space for the other speakers, I would like to reiterate that we at The Association of Scientists, Developers and Faculties (ASDF) take this opportunity to thank all the Member States and Stake Holders for their efforts towards finalisation of the Outcome Document to be adopted by this high-level discussion of WSIS 2021 and recommit for future participation from ASDF into this WSIS.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Session Nine: WSIS Action Lines and 2030 Agenda / Enabling Environment

Recording: <https://www.itu.int/net4/wsis/forum/2021/Agenda/Session/172>



Moderated by High-level Track Facilitator:
Ms. Kristin Little, Senior Manager, Public Affairs, IEEE



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

WSIS Action Line Facilitator:

Mr. Stephen Bereaux, Deputy Director, Telecommunication Development Bureau, International Telecommunication Union (ITU)

Speakers:

1. **Bahrain** - H.E. Eng. Kamal Bin Ahmed Mohamed, Minister, Ministry of Transportation & Telecommunications
2. **Estonia** - H.E. Dr. Nele Leosk, Ambassador-at-Large for Digital Affairs, Ministry of Foreign Affairs
3. **South Africa** - H.E. Ms. Pinky Kekana, Deputy-Minister, Department of Communications and Digital Technologies
4. **Cabo Verde** - Dr. Isaias da Rosa, President, Multisectoral Regulatory Agency of the Economy
5. **Colombia** - Mr. Nicolás Silva Cortés, Commissioner, Communications Regulation Commission (CRC)
6. **Mexico** - Mr. Ramiro Camacho Castillo, Commissioner, Federal Telecommunications Institute (IFT)
7. **Fundacion Abba Colombia** - Dr. Farid Lozada, CEO
8. **Fundación Cibervoluntarios** - Ms. Yolanda Rueda, Founder and President of Fundación Cibervoluntarios



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Executive Summary by High-Level Track Facilitator

ICTs hold the potential to help accelerate our progress toward all the SDGs. They enable productivity, and with that productivity comes growth. To help ensure this happens, ICTs need an enabling environment at the national and international levels. The rule of law, together with a technologically neutral policy and regulatory framework is essential to this. This session explored what it takes to create that enabling environment.

Mr. Chaesub Lee, Director of the ITU Telecommunication Standardization Bureau, in his opening remarks noted that rather than focusing on single technologies or one element of sustainability, we are now looking at building entire ecosystems and rethinking value chains. The topics discussed by the panel reflect the current technological evolution and its increasingly broad reach as it begins to occupy whole ecosystems, cross borders, and involve many more stakeholders.

As the WSIS Action Line Facilitator, Mr. Stephen Bereaux, Deputy Director of the ITU Telecommunication Development Bureau, provided context for the session. “ICTs are by their very nature global. They cannot be developed and will not thrive in isolation,” remarked Mr. Bereaux. He pointed out the critical need of an enabling environment for people to benefit from ICTs.

Several common threads emerged from the panel discussion:

Partnerships--Bringing Stakeholders Together and Building Trust

To be able to build the new ecosystems required, many stakeholders need to come together. The panelists explored the ideas of how to create the partnerships needed and how the private and public sectors are working to coordinate their efforts and learn together. Innovative partnerships to ensure that every city has access to the Internet, especially where private providers do not see the potential for profits, were mentioned in the case of Bahrain, Estonia, South Africa, Cabo Verde, and Mexico. “We need to make sure we join hands with our sister and brother countries,” stated H.E. Pinky Kekana, Deputy Minister of the Department of Communications and Digital Technologies, South Africa, noting that while COVID-19 has shown us how connectivity can help speed recovery and protect health and livelihoods, it has also widened the digital divide. Joining hands with communities and government, *Fundacion Abbacol* is working with communities and government to provide humanitarian assistance to populations who do not have access to the benefits of technology through the pandemic. Similarly, we learned about the work of *Cibervoluntarios*, an organization that has expanded the rights and the opportunities



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

for thousands of digitally vulnerable people, through training in technological tools and digital competencies.

Bold Steps Have Paid off

One constant is that these governments are taking leading edge steps in the face of some difficult circumstances and have been largely successful as evidenced by the numbers. The overarching message has been that we need to be creative and take leaps. Estonia made a bold leap 25 years ago with its Tiigrihüpe (Tiger Leap) program, and today it is at the forefront of digital governance globally. Bahrain has taken bold steps and made a commitment to its people to guarantee the availability and accessibility of high speed fiberoptic network and services to all businesses and consumers. His Excellency, Engineer Kamal Bin Ahmed Mohamed, Minister of Transportation and Telecommunications of Bahrain pointed out that Bahrain took this step because we are all relying more and more on digital infrastructure for economic growth. South Africa's national broadband rollout strategy, the SA Connect Program, similarly, plans to ensure universal service and access to reliable and affordable and secure broadband services to all South Africans.

Mr. Nicolás Silva Cortés, Commissioner of the Communications Regulation Commission of Colombia. "The COVID-19 crisis is teaching as many things, but probably the main thing is that we must take the leap, the jump, without fear, because the structure of our economies, not only the Latin American countries but also around the world, is changing. Only the digital economy will allow us to recover quickly."

Standardization processes are helping us move forward together.

Mr. Bereaux, in his opening remarks pointed out that standards hold the potential to help ensure seamless communication between countries. Effective management of radio frequency spectrum, with public interest in mind, will also play a key role, he noted. This provides a clear technical environment for the effective development of ICT services. H.E. Nele Leosk, the Estonian Ambassador-at-Large for Digital Affairs from the Estonian Ministry of Foreign Affairs, underscored the importance of *open* standards saying "It has always been clear that standards need to be open, so that we know how the data is being collected, maintained, shared, reused, and this has assisted us in the provision of services that often need data from very different resources."

Working together to make regulation smarter and more flexible.

This topic emerged several times in the discussion. Important through the whole discussion of creating an enabling environment for the development of ICTs in all this has been learning about regulatory needs. Several speakers pointed out the need to be flexible with regulation and to work closely with the private sector. In the case of Cabo Verde, we heard from Dr. Isaias da Rosa,



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

the President of the Multisectoral Regulatory Agency of the Economy how they are creatively and effectively tackling their own set of unique connectivity challenges, with infrastructure spread across many islands and a small population.

Mr. Nicolás Silva Cortés, Commissioner of the Communications Regulation Commission of Colombia commented that COVID has revealed a need for regulatory innovation and flexibility. The CRC is implementing the concept of smart regulation, including simplification, regulatory burden reduction, the exploration of self regulation scenarios and finally, the development of innovative regulatory models.

Mr. Ramiro Camacho Castillo, Commissioner of the Federal Telecommunications Institute (IFT), Mexico explained that the IFT believes in regulating only when it is necessary and justified to facilitate innovation and business development by the private sector.

Scaling up: Sharing Building Blocks to Accelerate Global Progress toward the SDGs

Some partners had begun to take their own successes and offer help and resources to others in the form of digital public goods. H.E. Leosk, noted that her country, Estonia, with its 25-year experience with digital governance and ICTs, is working together with the ITU, Germany, and DIAL to pass along the components of a “Reference Digital Government Platform,” for other countries to use as building blocks in their own digitization efforts.

With a similar aim of reaching across borders, Ms. Yolanda Rueda, the founder of *Cibervoluntarios*, is working with the UN Institute for Training and Research to broadly share the organization’s model of citizen engagement for innovation Empodera.org. This ecosystem of social innovation is being used to help create initiatives and concrete actions to achieve the Sustainable Development Goals (SDGs).

Together, these panelists presented a full gamut of dynamic and successful approaches to creating an enabling environment for achieving the WSIS Action Lines and the UN SDGs through ICTs.

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BAHRAIN



H.E. Eng. Kamal Bin Ahmed Mohamed
Minister
Ministry of Transportation & Telecommunications

Questions:

A supportive, transparent, pro-competitive, technologically neutral and predictable policy and regulatory framework reflecting national realities, is essential for building a people-centred Information Society. How did the government of Bahrain – through its policy framework - proactively ensure the readiness of ICT infrastructure and encourage investments for the overall benefit of the industry through a multi-stakeholder collaborative effort?

The Kingdom of Bahrain is one of the first nations globally to achieve nationwide 5G rollout. What does the achievement mean for Bahrain and how will this achievement enable and support key economic sectors in Bahrain?

- 1) A supportive, transparent, pro-competitive, technologically neutral and predictable policy and regulatory framework reflecting national realities, is essential for building a people-centred Information Society. How did the government of Bahrain – through its policy framework - proactively ensure the readiness of ICT infrastructure and encourage investments for the overall benefit of the industry through a multi-stakeholder collaborative effort?**
- 2) The Kingdom of Bahrain is one of the first nations globally to achieve nationwide 5G rollout. What does the achievement mean for Bahrain and how will this achievement enable and support key economic sectors in Bahrain?**



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I would like to start by saying it is a great pleasure to be with you here today in this session.

The telecommunications and ICT sector has always been a crucial sector globally, and even more now as we embark on Industrial Revolution 4.0 and its new applications.

Goods and services that people use on a daily basis are increasingly connected to the internet and this means that every day we move towards greater reliance on telecommunications networks as a tool for economic growth and social cohesion.

It is because of these economic and social considerations; Bahrain has identified ensuring ICT readiness in terms of infrastructure and services as a national priority.

A recurrent objective of government policy since liberalization 20 years ago was that the telecommunications and ICT sector will support the Kingdom's economy and information society. The aim of the industry's development was always to ensure that the consumer can rely on sustainable and competitive markets delivering high quality data connectivity at reasonable prices.

On this basis, we have introduced competition in both the fixed and mobile telecommunications markets, by licensing new entrants to compete with the incumbent operator and allow the consumers to reap the benefits of having more choices and better prices.

Today we have a fully liberalized sector with private operators working under transparent regulations set by our Telecommunications Regulatory Authority.

As a result, we have seen a lot of positive trends in terms of access and affordability of services. Data usage increased by 847% between 2016 and 2020, and the increase continues rapidly as we have seen 93% increase between 2019 and 2020 alone.

We have also seen increased fixed broadband and mobile broadband uptake: Bahrain ranks among the world's highest mobile broadband penetration (126% in Q4 2020).

In terms of the infrastructure policy, Bahrain's Government has worked to guarantee availability and accessibility of a world class telecommunications infrastructure and services to all Bahraini businesses and consumers for both fixed and mobile.



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To this end, we created a single national broadband network. In 2019 we established a new legal entity Bahrain Network BSC(c) (BNet) to separate the wholesale unit of the incumbent operator to rollout the fixed broadband infrastructure and supply wholesale products and services to all licensed operators in the Kingdom on a non-discriminatory basis.

BNet operations started in 2019 and currently covers 100% to businesses and 83% of homes according to the latest audits. Our latest numbers are a reflection of the success of these policy directions: within one year (from 2019 to 2020) fixed broadband prices decreased 47% and we currently have the lowest fixed broadband prices regionally.

Deployment of latest mobile infrastructure by licensed private companies has been also been facilitated by government policy aimed at introducing competition in the mobile telecommunications market and appropriate spectrum policies.

We are pleased that Bahrain is one of the first countries in the world, to roll out fully comprehensive nationwide 5G network, and we are proud to be a leading nation in offering the high-speed technology to all citizens and residents. Our nationwide roll-out of 5G not only demonstrates a clear government commitment to empowering next-generation technologies, but also in working closely with the private sector to enable major tech advancements. In fact in Bahrain we adopt a national multi-stakeholder partnership approach for all projects as Team Bahrain, making business smooth and transparent and troubleshooting any issues together.

We have seen all sectors make a rapid shift towards digitalization and this has been accelerated by the pandemic. Therefore, I believe, with speeds up to 100 times faster than existing technologies, 5G will make it much easier for individuals and businesses to stay connected when it matters the most.

It is expected that the initial focus of operators providing 5G services will be offering consumers enhanced mobile broadband services. However, in the following years, we expect that 5G network will support a series of new use cases, including significant deployments of M2M (Machine to Machine) communications, Internet of Things (IoT) and specialized low latency services using these 5G networks.

We also hope that the availability of this technology will allow global companies to test their products in Bahrain's innovative environment, making full use of next-generation technologies across a wide variety of applications. This includes, for example, artificial intelligence and machine-to-machine communications. We are pleased that leading cloud service providers such as AWS and Tencent have set up in Bahrain to take advantage of the opportunities here.



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Our telecoms sector attracted more than 2 billion US dollars between 2009 and 2019. Our analysis suggests that nationwide 5G, coupled with the National Broadband Network Policy and Government's 'Cloud First' Policy will further catalyze this growth into 2021 and beyond. This will bring increased benefits to Bahrain's economy and people.

Thank you.

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ESTONIA



H.E. Dr. Nele Leosk
Ambassador-at-Large for Digital Affairs
Ministry of Foreign Affairs

Questions:

What makes for a fully functional digital society ready to adopt to changes we are currently facing?

What will be the role of an enabling environment in the future digital societies?

Statement Missing

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SOUTH AFRICA



H.E. Ms. Pinky Kekana
Deputy-Minister
Department of Communications and Digital Technologies

Questions:

Connectivity lies at the heart of the world’s capability to harness new technologies today. What are some of the concrete ways in which South Africa is leveraging new technologies to drive progress in this regard?

How new and emerging digital technologies and trends are enablers of the global transition to the digital economy taking into account digital inclusion?

Distinguished Chairperson, Excellencies,
Ladies and
Gentlemen

The Republic of South Africa acknowledges and appreciates the International Telecommunication Union’s (ITU’s) continued commitment to the Agency’s worldwide contribution on information and communication infrastructure issues and building confidence and security in the use of ICTs, according to Action Line C2 and C5, respectively, from the World Summit on the Information Society (WSIS).

The ten-year review of the WSIS acknowledges that *“the fostering of competition, the creation of transparent, predictable, independent and non-discriminatory regulatory and legal systems, proportionate taxation and licensing fees, access to finance, facilitation of public-private partnerships, multi-stakeholder cooperation, national and regional broadband strategies, efficient allocation of the radio-frequency spectrum, infrastructure-sharing models, community-*



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

based approaches and public access facilities have in many countries facilitated significant gains in connectivity and sustainable development”²

Telecommunications/ICTs have become the central foundation for every economic sector and a catalyst for social inclusion, decent employment, and inclusive growth. The new paradigm shift in ICT policy requires SMEs play a significant role in ICT innovation and job creation.

The SMEs’ inclusion requires a global response to maintain an optimal environment for their businesses’ proper development, thereby enhancing the impact of addressing and hopefully eliminating the triple threat posed by poverty, inequality, and unemployment.

Chairperson,

Existing and anticipated future inequalities remain a grave concern. They continue to widen the universal access gap in the use of data and digital ICT technologies, including the lack of sufficient ICT skills between regions, between and within countries, and between women and men. New and emerging digital technologies threaten to amplify current inequalities. The technology developments may further concentrate benefits and value in the wealthy’s hands and those with insignificant universal access gap. A coherent global response based on a multilateral system is crucial when seeking to harness and democratise the benefits of the data-based digital revolution while mitigating its risks.

A technology development issue of great importance but currently attract controversy is the subject of artificial intelligence. Globally governments are experimenting with the matter of human-centric artificial intelligence policy. Ideally, artificial intelligence’s policy principles are mainly altruistic, such as maximising the technologies’ many benefits to address socioeconomic issues highlighted in the UN’s SDGs whilst striving to minimise its adverse risks. Therefore, we note:

- the importance, to sustainable development, of mobilising for the continued and expedited establishment of an enabling environment for investment in critical infrastructure such as including artificial intelligence; the Internet of Things (IoT); 5G; Big Data and Over-The-Top (OTT) services;

² United Nations General Assembly, Seventy-first Agenda item 16, Resolution adopted by the General Assembly on 21 December 2016, Information and communications technologies for development, A/RES/71/212, https://www.itu.int/en/ITU-D/Regional-Presence/UN/Documents/GA_Resolutions_ICTs/ares71d212_en.pdf



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- that collaborative, transparent, predictable, independent, and non-discriminatory regulatory and legal systems are critical to promoting an enabling environment for investment;
- that investment in infrastructure, particularly in broadband and 5G infrastructure, plays a fundamental role in promoting affordable connectivity and in mobilising new and emerging telecommunications/ICTs for sustainable development

Subsequently, it is no longer only about connecting the unconnected but also about ensuring the reduction in the digital access gap, that is partly the challenge facing the international ICT community. We also need to upgrade ICT services with new technologies, such as 5G, cloud computing, artificial intelligence, and many more, to support the Fourth Industrial Revolution (4IR). This would require a coherent global policy approach.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

CABO VERDE



Dr. Isaias da Rosa
President
Multisectoral Regulatory Agency of the Economy

Questions:

The Cape Verdean Regulator has recently implemented an open access policy over the existing International fiber-optic landing stations. Kindly share with us your experience in implementing such a decision and its potential impact in promoting competition?

As a small island country that needs to connect all its remote islands, what are your key learnings about promoting infrastructure sharing?

The Director of Telecommunication Standardization Bureau
Honorable Ministers,
Distinguished Panelists
Ladies and gentlemen

Digital technologies are truly revolutionizing our way of life and all areas of our societies. Today, there is no single field of economic development where digital technologies are not a key element for success.

In this context, creating an enabling environment is of paramount importance to promote investments, bridge the digital divide, and promote economic development. This need is exacerbated by the current context of the COVID-19 pandemic, which has brought tremendous pressure over the Telecoms/ICT sector.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Creating an enabling environment in a small island developing country such as Cabo Verde is critical and requires taking into account several important aspects. As mentioned by ISOC's 2017 Global Review of Internet Infrastructure, many Small Island Developing Countries face serious challenges in Internet connectivity due to their remote location and very high cost of bringing fiber across open sea, combined with "small populations, low population density and consequent low economies which leads to higher connectivity costs."

In Cabo Verde we have implemented open access to all the international submarine fiber optic landing stations. We are also strongly committed to broadening infrastructure sharing with a specific regulation and with a development of a platform that contains georeferenced data of all sharable infrastructure that exists in the country. With a small market of only half a million people spread over 9 populated islands, 80% of the population is connected to the internet, while the African average is around 43%. Redundant submarine fiber optic cables connect all the 9 populated islands of the archipelago, and 90% population has access to 4G and 95% to 3G.

By the end of this year, we should have 3 international submarine fiber optic cables connecting the country to Europe, South America, and Africa. We are committed to establishing a regional connectivity hub in the country.

In conclusion, I would say that creating an enabling environment is particularly critical for bringing meaningful and affordable connectivity into a small island developing country due to its small population, low economies of scale, which often lead to higher connectivity costs. In this context, Open Access to International connectivity and infrastructure sharing is key.

Thank you for your kind attention!

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

COLOMBIA



Mr. Nicolás Silva Cortés
Commissioner
Communications Regulation Commission (CRC)

Questions:

The COVID-19 pandemic left regulators with several challenges. Does digitization, innovation and/or regulatory flexibility helped address these challenges at the CRC?

We understand you are in process of implementing the first regulatory sandbox for the ICT sector in the world. Could you tell us what it is and how the implementation is happening?

The COVID-19 crisis still teaching us many things. First, we must take the leap without fear, because the structure of our economies is changing, and only the digital economy will allow us to recover quickly. During the post-pandemic, as policy makers and regulators, we could improve the effectiveness of information, digitize processes, and accelerate digital transformation and connectivity. Also, COVID-19 pandemic shows us other lessons, such as the positive aspects of digitization, and the need of regulatory innovation and flexibility.

About digital transformation, acquiring and managing data enable CRC to keep updates, and then make informed decisions, being at the same time flexible and innovative to leverage digital change. For this reason, Colombian Communications Regulation Commission - CRC has been implementing the concept of “*Smart Regulation*”, which includes regulatory simplification, reducing regulatory burdens, exploring self-regulation scenarios, and finally trying to develop innovative models.



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Based on these principles, the following lessons showed us how to accelerate both internal and external processes, to enhance CRC performance and keep transforming for be a “smarter regulator”:

- CRC must still regulate based on evidence. For example, monitoring Internet traffic in a daily basis, to avoid possible bottlenecks and significant quality decreases. Based on this data, during 2020 we evidenced that there were no problems into the telecommunications networks, especially during the first months of strict lockdown.
- Under a digital economy environment, it is convenient to work in a more coordinated way with multiple stakeholders. As a result, we saw that OTTs voluntarily took steps to avoid network congestion, lowering video quality during the first weeks of strict lockdown in Colombia. Also, network operators managed their traffic and enhanced their infrastructure for support all the services and applications user’s demand.
- Regulators only will improve their performance if use digital tools in their internal processes; it means to evolve to a regulator that adapts and makes regulatory decisions based on more evidence, incorporating emerging technologies such as Artificial Intelligence or Big Data in future activities.
- COVID 19 pandemic strengthened the importance of intelligent regulation not only for operators, but also as a response to technological evolution and changes in consumer habits. In that sense, in addition to promote competition, improve prices and make progress in quality of service, regulation should also encourage that customer satisfaction becomes a differentiating factor.

During the past years, CRC has been designing and implementing innovative and flexible regulation with projects such as: (i) regulatory simplification, (ii) implementation of the first regulatory sandbox for ICT sector, and the (iii) digitization of the User Protection Regime. About this last project, it’s important to remark that their objective has been facilitate the adoption of digital tools for interactions between operators and users of communications services. At the same time, CRC has been exploring techniques such as *web scraping* and *Robotic Process Automation (RPA)* in different internal processes, as well as using data analytics, not only for support our regulatory decisions, but also for create industry reports, available in our open data platform *Postdata* (www.postdata.gov.co).

About *Regulatory Sandbox for ICT sector* in Colombia, it will be an alternative mechanism of temporary exceptions of compliance with regulatory rules, in order to promote that the future



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

regulatory framework issued by the CRC will be aligned in a better way to changes in economic, social, and technical conditions. This is highly relevant, considering the permanent technological advance that characterizes the communications sector.

The rules for this sandbox were issued by CRC in May 2020, defining the guidelines for their implementation, and having 4 stages: *(i) application, (ii) evaluation, (iii) experimentation, and (iv) exit*. In 2021Q1, CRC started the first stage, publishing an open call for any stakeholder interested. Experimentation authorizations will be granted in a temporary basis, allowing participants to test products, services, and solutions under the monitoring of the Commission. By 2021Q3, CRC will inform all the accepted projects and define success indicators for each one, and by 2021Q4, is expected that authorized projects start to operate.

In brief, global COVID-19 pandemic has implied difficulties for both operators and users and has been a challenge for telecom regulators. Nevertheless, at the same time has open the opportunity to take advantage of the lessons learned, and have a leap in terms of digitization, innovation, and regulatory flexibility.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

MEXICO



Mr. Ramiro Camacho Castillo
Commissioner
Federal Telecommunications Institute (IFT)

Questions:

What are the current challenges for Mexico to bridge the digital divide and what actions is the Federal Telecommunications Institute undertaking to bridge the digital gap?

How is Mexico promoting competition, investment and innovation to enhance the development of broadband?

1. What are the current challenges for Mexico to bridge the digital divide and what actions is the Federal Telecommunications Institute undertaking to bridge the digital gap?

Good afternoon. First, I would like to thank the organizers for inviting me. I am glad to share this forum with these distinguished panelists.

In Mexico, more people than ever are connected to the Internet, but gaps persist. We are still in the adolescence in our development characterized by high growth rates of adoption and a high potential for improvement. From June 2013 to June 2020, mobile connectivity almost tripled: for every 100 inhabitants, mobile broadband penetration increased from 23% to 77%. In the same period, fixed broadband penetration increased from 38% to 58%, which means an increase of 64% of the total fixed broadband accesses.

In order to address these challenges, the Federal Telecommunications Institute (IFT) has consolidated itself as a strong, technical regulator and competition policy enforcer in the



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

telecommunications and broadcasting sectors. We regulate only where it is necessary and only if it is justified, facilitating innovation and business development by the private sector.

In this regard, the IFT has:

- Facilitated in the deployment of the wholesale-shared network by granting to Altan Redes a wholesale license over the 700 MHz band. This network is a public-private partnership project that provides capacity, infrastructure and wholesale telecom services to communications service providers. It aims at reaching 92.2% of the Mexican population by 2024 and, as of January 2020, it had achieved a milestone of 50% of the national population.
- Granted a noncommercial license to CFE Telecommunications & Internet for all, which is a subsidiary of the Mexican public electricity company (the Federal Electricity Commission), aiming to provide telecommunication services to unserved and remote areas, where commercial providers are not present;
- Allocated more spectrum for mobile telecommunication from 222 MHz in 2013 to 700 MHz in 2020;
- Established coverage obligations with new spectrum licenses in rural areas.
- Issued guidelines for developing the National Infrastructure's Information System which sets a database of telecom infrastructure owned by operators and government agencies; and,
- Issued guidelines for sharing existing telecom infrastructure and for deploying new one on a shared basis.

2. How is Mexico promoting competition, investment and innovation to enhance the development of broadband?

By protecting the process of free entry and competition in the telecom and broadcasting sectors, the IFT is committed to creating an environment that promotes investments, the expansion of networks and the supply and quality of services. We have imposed asymmetric measures to the preponderant agent in telecom, which are reviewed every two years, and we have enforced competition policy and the elimination of entry barriers through merger control, dominance determinations, and anticompetitive conduct investigations.

In December 2020, the IFT published its 2021-2025 Regulatory Roadmap, which establishes our mission and strategic objectives for the next 5 years. Among the regulatory actions set for the achievement of these objectives are:



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

- i. Promoting a regulatory framework that encourages the development of joint investment plans between operators and other industry participants to install and deploy new networks and infrastructure;
- ii. Promoting development of voluntary agreements for the sharing of existing telecommunications and broadcasting infrastructure;
- iii. Promoting availability of spectrum for the provision of different telecommunication services and applications, in both traditional and new technologies (such as TV white spaces, Wi-Fi6, LEO constellations to mention but a few);
- iv. Identifying alternative schemes for the allocation of spectrum in a flexible, efficient, competitive and non-discriminatory way;
- v. Continuously evaluating best international practices and recommendations of international organizations for the efficient use of spectrum, such as coexistence, secondary market, sharing and dynamic access that can allow the development of new technologies such as 5G and WiFi6 networks;
- vi. Enforcing competition policy, taking into account the dynamics of new business models and possible barriers, bottlenecks or essential inputs for the provision of digital services;
- vii. Evaluating best international practices and recommendations in cybersecurity data protection and privacy.

We understand that policies and regulatory frameworks should facilitate the achievement of the Sustainable Development Goals to improve the well-being and bring new social inclusion opportunities.

Thank you so much for having me here in this very important forum!

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FUNDACION ABBA COLOMBIA



Dr. Farid Lozada
CEO

Questions:

Can you tell us more about the recent nomination Fundacion AbbaCol received at WSIS forum, and in which action lines does the project focus on?

Which goals of the 2030 agenda is Fundacion AbbaCol implementing in order to achieve its objectives?

GREETINGS FROM COLOMBIA FIRST OF ALL, THANK YOU VERY MUCH FOR THE INVITATION TO PARTICIPATE AT THE HIGH-LEVEL SESSION OF WSIS FORUM. THANKS TO ITU AND WSIS TEAM AND THE DISTIGUISHED SPEAKERS AND FACILITATORS.

1. Can you tell us more about the recent nomination Fundacion AbbaCol received at WSIS forum, and in which action lines does the project focus on?

Fundacion AbbaCol has been nominated to WSIS prize 2021 with our project: COVID19 EMERGENCY REPSONSE TO VENEZUELAN MIGRANTS, this project focussed on 4 action lines of the WSIS forum: Digital inclusion, online education, digital solidarity agenda, and the main action line under we are nominated is: ACTION LINE C10: ETHICAL DIMENSIONS OF THE INFORMATION SOCIETY.

With this action line we want to highlight how we are impacting in a positive way society with ethical and social responsibility as well integrating the communities we are reaching out and transforming them with ethical principles based on our work. We are providing humanitarian



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

support during this covid19 pandemic to population who do not have access to technology; we want our work to enter into a new dimension of technological inclusion to transformed our society and developed social responsibility among the most vulnerable. The importance of connecting technology and different ICTs in this time is essential to develop our work more effective in educational, humanitarian and social area.

The project focussed on the digital inclusion for migrants, displaced population affected by the war in Colombia and those who do not have access to technology. Connecting technology with our humanitarian work by using different ICTs, as well implementing new ways to reach out the rural areas and zones that don't have access to technology in Colombia. The implementation of technology on our project has been key to develop a more effective way of reaching out to the affected population during this covid19 pandemic, the use of different ICTs like mobiles, computers, etc has been essential especially when we go into the field and help the target population.

2. Which goals of the 2030 agenda is Fundacion AbbaCol implementing in order to achieve its objectives?

Fundacion AbbaCol is focusing on four objectives of the sustainable development goals 2030:

Objective 1: NO POVERTY: With the help of different ICTs we combating poverty with the support of different United Nations agencies in Colombia, this by creating a platform so those in need can access to it.

Objective 4: QUALITY EDUCATION: We are providing quality education to the rural areas of Colombia to children and youth who don't have access to formal education.

Objective 8: DECENT WORK AND ECONOMIC GROWTH: With have created the "Business and development centre" to provide tools and connections with national at international companies so people can have access to decent work and economic growth.

Objective 16: PEACE, JUSTICE AND STRONG INSTITUTIONS: As we accomplished the 3 objectives mention before, we are reaching step by step that Colombia is a territory of peace, justice and strong institutions.

Something we also want to highlight is that our main focussed as a non-profit organization is the agenda 2030 of the United Nations, and with this agenda we are developing our projects; As well we want to highlight our recent accreditation we received as official members of the



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International Humanitarian City in Dubai-United Arabs Emirates as it is important to develop all the work we are currently doing with United Nations.

We are facing two big challenges:

1. The internet net in rural areas
2. Computers for all in rural areas



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

FUNDACIÓN CIBERVOLUNTARIOS



Ms. Yolanda Rueda
Founder and President
Fundación Cibervoluntarios

Questions:

Cibervoluntarios.org celebrates 20 years helping thousands to improve their lives with technology: How do you promote citizen participation through Digital Transformation?

Your flagship program in Citizen participation EMPODERA.ORG, celebrates 15 years involved in the WSIS process to foster the future of innovation with social impact: What new actions are you undertaking to engage Civil society to overcome global challenges?

FUNDACIÓN CIBERVOLUNTARIOS 20 YEARS GENERATING DIGITAL TRANSFORMATION WITH SOCIAL IMPACT

This year, Cibervoluntarios Foundation celebrates 20 years generating digital transformation with social impact. We have expanded the rights and opportunities of thousands of people in situation of digital vulnerability through training them, in technological tools and Digital Competences.

We have been pioneers the only technological volunteering network in the world helping out 60.000 people a year, thanks to the collaboration of 1.800 cybervolunteers and the alliances with more than 1.000 organizations. In these 20 years we have helped people like Elena to promote her business of local and ecological products to go online, promoting, this way, the economy in rural areas. Or giving confidence and autonomy to thousands of seniors like María, helping her to make video calls with her family.



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That little help can make a huge difference for many. Thanks to technology, we, the citizens, have passed from being beneficiaries, to being active agents

Because it is in our DNA to attend to real needs, to solve social problems with replicable solutions and to engage the new generations in this process. We have a commitment, we have a responsibility, we have an opportunity and the SDGs are in the centre of our actions

It's time, more than ever, to re-think, to co-create, in an open, ethical, replicable, scalable and inclusive way in order to engage the Civil Society to be part of the process

That is why, Cibervoluntarios created and developed Empodera.org Platform. It is supported by United Nations which is interested in scaling our methodology to other countries. Empodera is an ecosystem of Social Innovation to facilitate citizen participation to get Agenda 2030. Empodera was born to foster the WSIS process action lines in 2 ways:

- Showcasing Digital solutions that improve people's lives worldwide
- Cultivating an online Network of citizens and organizations

Contributing with collaborative solutions to achieve the Agenda 2030

With success stories like the case of Luis, a student from Oviedo and his solution to fight against forest fires by using open source Drones. Or the Initiative "Stop words of hate" created by Beatriz, a gamer who wants to raise awareness and educate to stop online comments that might be sexually degrading against other female players.

In short, Empodera.org helps to act together on real needs Technology as the lever to generate not only business but social impact as well. But in order to get citizens and organizations worldwide to participate, we cannot forget that there is still a lot to do.

But in order to get citizens and organizations worldwide to participate, we cannot forget that there is still a lot to do.

One strategic point: access and appropriation of technology. 30 years of Internet and yet, according to ITU three thousand, six hundred million people almost fifty per cent of the population, do not have access to Internet. This half are the forgotten, the voiceless ones.

It is vital to guarantee BOTH access and appropriation of technological tools, far beyond digital literacy. Only this way will citizens become active agents of change in their communities Internet



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access is vital to accelerate the progress of humanity, as the United Nations recognized in twenty-eleven (2011)

This is that we have been doing in Cibervoluntarios since two thousand and one (2001), 20 years now. Now, and more than ever after COVID-19 these rights have become a universal right. It is our goal and duty as an organisation. Because, nowadays, technology is the lever that guarantees our human rights.

In short, in Cibervoluntarios Foundation as civil society we are fully committed to achieving our common goals, we at last have the tools to build today the society of tomorrow.

Our axes are: technology, human rights and the future of the planet.

Our goal: Making internet access and technological appropriation an universal right.

Our commitment: Working for citizens to become active agents in achieving the SDGs

And this speech, is our open call, to work together

Thank you very much.

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Session Ten: Ethical Dimensions of Information and Knowledge Societies

Recording: <https://www.itu.int/net4/wsis/forum/2021/Agenda/Session/175>



Moderated by High-level Track Facilitator:

Ms. Kirthi Jayakumar, Founder, The Gender Security Project

WSIS Action Line Facilitator:

Ms. Dafna Feinhloz, Chief of Bioethics and Ethics of Science and Technology, UNESCO



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Speakers:

1. **Mali** - H.E. Dr. Hamadoun I. Touré, Minister, Ministry of Communication and Digital Economy
2. **Mauritius** - Mr. Dick Christophe Ng Sui Wa, Chairperson, Information and Communication Technologies Authority
3. **Indonesia** - Mr. Donny Budi Utoyo, Expert Staff to the Minister, Ministry of Communication and Informatics
4. **International Federation for Information Processing (IFIP)** - Ms. Moira de Roche, IFIP IP3, IFIP Board member
5. **Iron Lakes** - Mr. Nishan Chelvachandran, Founder



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Executive Summary by High-Level Track Facilitator

Introduction

The High-Level Policy Session on Ethical Dimensions of Information and Knowledge Societies took place on March 26, 2021. It focused on the importance of ethics for the Information and Knowledge Society to respect peace and uphold the fundamental values of freedom, equality, solidarity, tolerance, shared responsibility, and respect for nature.

The one-hour session saw a lively discussion with distinguished representatives of:

- UNESCO;
- International Telecommunication Union
- Information and Communication Technologies Authority, Mauritius
- IEEE Standards Association
- IFIP IP3
- Ministry of Communication and Digital Economy, Mali

The session began with the opening statements of the Secretary General, Mr Houlin Zhao, who set the tone for the conversation around prioritizing and centring ethics, unprecedented collaboration, and building peace in an information and knowledge society. This was particularly historic given that both the current and the ex-Secretary General, Dr Hamadoun Touré, were present and in attendance, and participated actively in the conversation through their insights and valuable inputs.

Vision

The session focused dedicatedly on the need for both collaboration and security. By acknowledging the unprecedented focus on the Internet and Communications technology against the COVID-19 pandemic, the session also addressed the immediate and pressing need for large-scale collaboration and enhanced focus on security for all stakeholders who use the internet, through multistakeholder dialogue and action. The participants specifically impressed upon the need for upholding and actioning shared values, information sharing, and raising awareness, protecting privacy, and using ICTs for peacebuilding.



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Fresh priorities

Participants specifically focused on the need for unprecedented collaboration and prioritized security and safety as part of the ethical standards for information and knowledge societies in the contemporary era.

Emerging trends

In sharing their own projects, initiatives and lessons learned, participants noted several valuable points.

The session began with Mr Houlin Zhao, the Secretary-General of the ITU establishing the fact that the information and knowledge societies have emerged as one of the main lines of defence against the COVID-19 pandemic, which has also reaffirmed the importance of ICT in people's lives in the face of the many challenges that affect their lives. The Secretary General also acknowledged how many people have not been able to access digital technologies and services that have been very critical given the pandemic. This, he established, makes clear that the task before us ahead is to drive the development of emerging technologies and to address allied security challenges that they bring forth. He also established that no one nation can sufficiently meet these challenges.

Ms Dafna Feinholz spoke about the heavy reliance on digital technologies as more people stayed indoors - for everything from education and tele health to work and tracking and tracing the pandemic. She acknowledged that there are numerous risks that an ethical lens needs to be applied to, in order to address. She specifically spoke of acute gender disparities in emerging technologies, particularly with respect to women engaged in its development, proliferation, and advancement, and how the gaps continue to widen. To address this gap, Ms Feinholz spoke about the need to draw from data and use data toward facilitating change.

Dr Hamadoun Toure spoke about the key strategies that have been laid down and implemented in Mali, which is in the middle of a transition time. He spoke about how democratic governments are confronted by the need to take tough decisions in the face of security, social, and economic crises, as well as gender imbalance in the use of ICT. By focusing on both capacity building and sensitization of people on ground, the strategic approach is to rely on international cooperation to enhance ICT access and use.

Mr Sui Wa spoke about the need to examine the rise of fake news and its impact on life - he spoke of the particular need for how the platform and as users, we, should put up a system that can constantly monitor the proliferation of fake news. It is also important to draw a line between the



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freedom of expression and censorship, because as a full-fledged democracy, it is important not to trample on the people's freedom of expression - criticizing a government is welcome, but not a community or a race or people.

Mr. Donny Budy Utoyo spoke to the strategy in place in Indonesia, where they collaborate with multiple stakeholders, run massive digital literacy and education campaigns, and even help protect data and privacy online. By focusing on the rapid rise in digital technology use in Indonesia, he impressed upon the need for constant support through education and capacity building for community use of the internet.

Ms Moira de Roche spoke about the need for a code of ethics that everyone understands, and abides by. She spoke of how this should be embedded into every organization's culture and enhance appropriate disciplinary processes when ethics failures emerge.

Mr Nishan Chelvachandran spoke about keeping children safe in the digital space, and made a case for the need to design social platforms bearing children's rights and wellbeing in mind, while also ensuring that real dangers and threats associated with children using these spaces are appropriately addressed.

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MALI



H.E. Dr. Hamadoun I. Touré
Minister
Ministry of Communication and Digital Economy

Questions:

Tell us about the Ethical dimension of the Information and Knowledge society in a crisis situation such as the Sahel region (West African countries) particularly in Mali during the Transition period.

Can you please specify some key actions that you are taking at national and international level?

Statement Missing

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MAURITIUS



Mr. Dick Christophe Ng Sui Wa
Chairperson
Information and Communication Technologies Authority

Questions:

Should the ICT regulator be dealing with illegal and harmful content, especially with respect to social media content?

How is the ICT regulator dealing with this issue in Mauritius?

Statement Missing

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INDONESIA



Mr. Donny Budi Utoyo
Expert Staff to the Minister
Ministry of Communication and Informatics

Questions:

What is Indonesia's internet governance policy related to personal data protection? Considering Indonesia's diverse society consisting of many races, tribes, and religions, and considering its high digital application growth. What is the role of your government to protect its citizens' personal data?

What are the digital transformation challenges faced by Indonesia? Will the massive use of ICTs due to the COVID-19 pandemic open new opportunities for some societal issues to emerge? Such as racism, racial discrimination, xenophobia, intolerance, hatred, violence, forms of child abuse including pedophilia and child pornography, human trafficking and exploitation of human beings.

1. What is Indonesia's internet governance policy related to personal data protection?

Ladies and Gentlemen, greeting from Indonesia. It's an honor to be on the a panel with Mr Zhaou, ITU Secretary General. We have met several times in Geneva for the WSIS Meeting and WSIS Prizes Award Ceremony, before the pandemic came. I hope we are always in good health. And thank you Kirthi for the question and I will try to answer quickly and briefly.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

To answer the questions that have been delivered, I would like to use a hill or mountain as a description. Indonesia is currently taking an “upstream, middle and downstream” approach in protecting the personal data of the Indonesian people.

From the upstream side, we collaborate with multistakeholders to encourage massive digital literacy education and campaign. One of the programs we run together with Indonesian stakeholders is the Digital Literacy National Movement SIBERKREASI. Siberkreasi movement acknowledge by ITU/UN as one of the WSIS Prizes 2020 Winner under the category of Action Lines C4 for Capacity Building. We believe that an understanding of privacy and how to protect the personal data of oneself and others, is a fundamental and essential skill to conduct ethical activities on the Internet as member of global knowledge society.

Then on the middle side, we ensure regulatory collaboration and support for sectoral authorities to enact their specific laws. For example, those that have been running well in certain sectors, under the coordination of the Financial Services Authority, the Ministry of Health, the Ministry of Trade, and so on.

As for the downstream side, Indonesia is strengthening efforts to have more specific regulation approach by preparing the draft of Personal Data Protection Bill. The draft has now been included in the 2021 National Legislative Program to be scheduled for further priority discussions between the executive and the legislative. With the availability of the law in the very near future, Indonesia certainly will have comprehensive governance of personal data protection.

However while waiting for the law to be passed, a number of legal enforcement actions against violations or breach of personal data in Indonesia are still can being carried out using a number of existing legal instruments. Through the Information and Electronic Transaction Act, which although not a specific law regulates the protection of personal data, still a number of articles in it provide adequate direction on the protection of personal data in general.

2. What are the digital transformation challenges faced by Indonesia?

Of course, the challenge of carrying out digital transformation is adequate telecommunications infrastructure. As an archipelagic country, Indonesia's current challenge is the need to continue to increase equitable distribution of telecommunications and Internet infrastructure in order to fulfil basic human rights in the context of communication and access to knowledge. With the wide and spread of the border, remote and rural area, one of the specific efforts that the Indonesian government continues intensively develop is the availability and accessibility of telecommunications infrastructure using the USO financing scheme.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Another challenge is that the level of digital literacy in society is still need to be improved more to ensure digital transformation can be accelerated in such a way, especially with the needs to adapt of communication and human interaction styles related to COVID-19 pandemic conditions. Without having an understanding of how to use Internet in the positive and productive manner, of course the telecommunications infrastructure deployed will not optimally use to achieve the goals of national development. For this reason, the Indonesian government then provides strong resources for strengthening digital literacy programs, with a human-centred approached.

3. Will the massive use of ICTs due to the COVID-19 pandemic open new opportunities for some societal issues to emerge?

There are several things that can be noted regarding the increasing use of ICT in Indonesia in the past year. During the COVID-19 pandemic, there must have been an increase in Indonesian Internet users by 15.5 percent or an additional 27 million people compared to last January 2020. The current total population of Indonesia is around 274,9. (two thousand and seventy four point nine million). This means that internet penetration in Indonesia in early 2021 has reached 73.7 percent.

In terms of COVID-19 pandemic handling, one thing that can be highlighted is the increase in the use of telemedicine services by 600%. Then information and communication technology in Indonesia becomes the backbone of the process of monitoring public health protocols as well as the implementation of covid-19 vaccination in Indonesia. This then becomes part of the data-driven policy making mechanism. In fact, based on data, Indonesia is in the top 10 countries in the world with the highest number of COVID-19 vaccinations per 100 population.

In terms of economic recovery, it can be noted that transaction on e-commerce platforms increased by 25 percent during the pandemic. According to Central Bank of Indonesia, Indonesia's e-commerce transactions in 2021 are projected to reach IDR 337 trillion (three hundred and thirty seven trillion IDR) (USD 23 billion USD) , or increase 33.2 percent from the 2020. This increase is related to government policies that encourage digital acceptance, accelerate fintech, and expand digital financial services. This potential is then utilized by the Indonesian government by building the capacity of MSMEs actors so that they can adapt the new normal, shifting their work culture to the digital world and then together help the nation's economy rise.

That is the answer from me, hopefully it can be understood and useful for all of us.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

INTERNATIONAL FEDERATION FOR INFORMATION PROCESSING (IFIP)



Ms. Moira de Roche
IFIP IP3
IFIP Board member

Questions:

What is IFIPs view on Ethics as a governance issue – corporate and governmental?

The Information Society, and particularly IT Professionals and vendor organisations have been talking about Ethics for some time. What actions can be taken to ensure that Ethical decision-making is embedded in the organisation’s culture, whether it is a public, private or government organisation?

Ethics is a governance issue in any organization. We talk about the “tone from the top” – Leadership must set the ethical standards. In South African Company law, based on KING IV, organizations are mandated to have a board Social & Ethics Committee for oversight of Ethical Issues. Decision-making is included in leadership training; this must be expanded to include ethical decision-making. Leadership is part of both the ethics problem and the solution, because of their influence and power over people and processes.

It’s worth remembering that business is built on Trust, which goes hand in hand with Ethics. “Good governance never depends upon laws, but upon the personal qualities of those who govern.”- Frank Herbert (Science Fiction author).



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

IT Organizations – whether a vendor or IT department in business or government – need a Code of Ethics that everyone understands. This will guide leadership and employees when there is a dilemma between company and individual interests. Everyone must learn about the Code, and how it is used for ethical decision-making. To properly embed ethics into an organization’s culture, or I like to call it their DNA, ongoing refresher and remedial training to remind employees of the principles and the process for ethical decision-making is essential. Remember the goal is to change habits, and this cannot be done if an individual attends a course once. Everyone in the organization must be taught how to recognise when they have an ethical quandary.

Discussions amongst employees about whether a decision is ethical or not should be encouraged. Some member societies have an Ethics exam which professional grade members must pass. It does not guarantee ethical decision making, but at least gets the individual thinking about it.

Ethics must not be a “read and sign” activity or “tick-box” compliance as it is in many organizations. Often it is aligned to disciplinary processes, but when it gets this far, the Ethics failure is already history – this is reactive, not proactive.

Together with the recently launched IFIP Code of Ethics, which we believe should be a benchmark or exemplar for all Codes of Ethics, we have a CARE process, which is a step process for deciding whether something is ethical.

Clearly, one cannot always consult the Code, and then the process, every time a decision is made. Therefore, it must become second nature, especially when developing IT products. As with other Professions, we must consider “Who could be harmed” by this technology or digital product. There is a need for a conscience in the ICT profession. This is already intuitively understood by practitioners and the “man on the street,” but it needs to be acknowledged and voiced at every opportunity. Conscience speaks to everyone’s unspoken uneasiness.

Quoting from the COMEST report to UNESCO, “Finally, engineers and software developers should be appropriately trained to ensure responsible design and implementation of AI.” IFIP could not agree more, although we believe that the same issues face those who develop systems and produce digital products, irrespective of the technology used.

How can IFIP help? IFIP IP3 are ready to assist UNESCO and all the UN bodies to ensure ethical training. We have published the IFIP Code of Ethics, which we believe should be the standard and starting point for all ICT Codes. We can help any organization with the change process required to embed Ethics into the culture and to make sure that all ethics knowledge can be applied on the job and “on the fly”, because we can’t stop everything and say, “Wait, is this ethical?”. We



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

can't just hope for the best. Recent examples of major ethics failures such as Boeing Max and Volkswagen Dieseldate come to mind, but there are many more. Call IFIP IP3 – we'd be pleased to go on the Ethical journey with you.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

IRON LAKES



Mr. Nishan Chelvachandran
Founder

Questions:

The nature of privacy is increasingly under scrutiny in the digital age. Can you outline why you believe the intersection between children and technology is an area of particularly high impact?

How can standardization or certification help ensure appropriate technology experiences for children?

Your Excellencies, Honourable Ministers, Distinguished Guests and Attendees, thank you for joining, and warm greetings from Helsinki, Finland. ICTs, digital technologies, and associated services are recognised as a fundamental enabler of economic and social development, that is the growth of smart connected and sustainable society, and of course, to achieve the SDGs.

I would like to call attention to an area of growing and utmost importance – the interrelationship between children and technology. More than ever, Children and Young People are utilising, engaging, and inhabiting the digital space. For several years social networking and gaming platforms have brought children online for recreation, and now the COVID- 19 pandemic has brought many of them online for school and remote learning. Children’s contact with technology is not confined to the traditional IT space, however, as physical toys are now connected, generating, and capturing data, even when it is not obvious to children and parents.

The very nature of privacy is increasingly under scrutiny in the digital age, as the technologies that mediate communication, information and data of all kinds is globally networked, commercially valuable, and algorithmically analysed. Everyday actions generate data, whether given by digital actors, observable from digital traces, or inferred by others, either human or



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

algorithmic.

The intersection of technology and children is an area of high impact.

Many social platforms used by children are not designed with children's rights and well-being in mind. As a result, they often fail to consider the vulnerabilities and unique capacities that children have. Children must be able to explore, learn and develop in trustworthy, safe environments, that enable them to fulfil their curiosities at an age-appropriate level, and within the context of their familial societies.

The current landscape is unmanaged and unregulated. High-level principles have emerged, but they lack technical specificity and standardisation/certification, to govern and promote better practice. As such, there is a real danger that innovative technologies could be used in invasive and exploitative ways.

As the Founder of Iron Lakes, a consultancy based in Finland that empowers businesses and civil society to address and solve their biggest challenges through deployed technological innovations in data interoperability and portability that take into account ethical, security, privacy, and sustainability concerns, by design. Together, with our partner, Future Memory, Inc., in Canada, we are undertaking research examining how the quantified play experienced in gaming might influence children's sense of identity and their interaction with the world.

Being in Finland, I should also mention that Finland has expanded its support to the UN's work in child-centricity. Finland supports UNICEF's two-year Artificial Intelligence and Children Project; its goal, to establish policy guidance on how AI strategies and practices can best promote child rights

and children's development. Finland also supports the ITU and UNICEF's Giga project for connecting all schools to the Internet. At a municipal level, the City of Imatra in Eastern Finland is leading the Nesttec Project, in collaboration with a school in St Petersburg, Russia, focusing on engagement and education in STEAM subjects for children either side of the Finnish – Russian Border.

Looking beyond the borders of Europe, the UK has adopted the next generation of child-centric data protection policies, which will be coming into force in September. Indeed, moves are afoot by civil society actors in Australia to push for similar upgrades in the law. As we speak, the Sri Lankan Government is moving towards Cabinet Approval for their National Response to Online Child Sexual Exploitation and abuse. Fiji is also making some bold and innovative moves, including



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

the introduction of an eSafety Commissioner. And further afield, in Cambodia, the National Council for Children is developing and implementing a comprehensive action plan around Child Online Protection.

We must acknowledge the sheer scale and breadth of this undertaking; and that technological constructs and ontological concepts vary between the global north and south; and as such, the acceptability, experiences, and priorities in the child-centric sphere are as diverse as our children. We should not assume that a successful model made in the Global North and deployed in the Global North would govern the same level of success for those in areas of deployment in the Global South.

Community-forged ecosystems are needed to lower the barriers of engagement and enable a collaborative, global, and inclusive community to build, develop, and continually iterate better practices for products and services intended for children, such as connected toys, social platforms, or online games.

This is why I have started the IEEE Trustworthy Technical Implementations of Children's Online/Offline Experiences Program, the aim of which is to collaboratively develop a market-based framework to define and enable transparent, accountable operations of children's products and services – with the benefit of this being lowered barriers to engagement, the cultivation and influencing of key stakeholders and groups in a newly defined child-centric arena.

IEEE has a strong open process and technical community working on ICT, gaming, AI, and other technologies, and has standards projects focused on age-appropriate design, nudging, (disruptive) behaviour in gaming, and ethical considerations around affective computing. Furthermore, IEEE compiled a report on applied case studies on children's data governance, being released next week, and will compile more such case studies.

Now is the time for creativity, innovation, and open collaboration to forge new paths. We need to work together to promote the generation of novel standards that will better shape industry, intersectional engagement, and representation to support the ecosystem for solutions that contribute to children's wellbeing and flourishing.

Thank you.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Session Eleven: ICTs and Gender Mainstreaming

Recording: <https://www.itu.int/net4/wsis/forum/2021/Agenda/Session/178>



Moderated by High-level Track Facilitator:

Mr. Clifford Schmidt, Founder and Executive Director, AMPLIO

WSIS Action Line Facilitator:

Ms. Sylvia Poll Ahrens, Head, Digital Society Division, International Telecommunication Union (ITU)

Speakers:

1. **Republic of Bulgaria** - H.E. Ms. Andreana Atanasova, Deputy-Minister, Ministry of Transport, Information Technology and Communications
2. **Jamaica** - Dr. Maria Myers-Hamilton, Managing Director, Spectrum Management Authority
3. **United Arab Emirates** - Ms. Ghalia Ali Al-Mannai, Director of the Information Technology Department, General Women's Union



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

4. **Serbia** - Ms. Marta Arsovska Tomovska, Executive Advisor, Digital innovation in Government, Government of the Republic of Serbia
5. **United Nations University Institute, Macau** - Dr. Serge Stinckwich, Head of Research
6. **University of Nigeria and Fudan University, Shanghai, China** - Mr. Felix O. Dike, Lecturer and Researcher
7. **The UN Brief** - Ms. Maya Plentz, Editor in Chief
8. **World Pulse** - Ms. Jensine Larsen, Founder and CEO



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

Executive Summary by High-Level Track Facilitator

The high-level policy session on ICTs and Gender Mainstreaming included conversation that referenced SDG 5, “Achieve gender equality and empower all women and girls”. The discussion was also relevant to all WSIS Action Lines. And given that the discussion took place a year after COVID-19 was declared a pandemic, several panelists referenced how that has impacted the relationship between gender and ICTs.

For some contexts, moving many of our activities online during the pandemic provided more opportunities for women and girls. In some locations, the gender gap related to having the opportunity to travel to a physical location is bigger than the gap to access ICTs.

However, we know that 300 million fewer women than men had Internet access; so, for those women, the reliance on Internet left them further behind. When planning to deploy an ICT solution, we must consider whether women and girls will be getting the same access as men and boys. If not, would the selected ICT platform actually *widen* the gender gap?

Women who do get online disproportionately have to face the endemic issue of online harassment and technology-enabled violence. COVID-19 increased the impact of this as more physical gatherings moved online. Beyond creating access to ICTs, we need to think about how we create safe spaces, where everyone can feel safe to speak in their own voice.

“Training should not be just how a particular app works. Women need training on how to establish themselves online, how to assume leadership roles online, how to handle harassment...” – Ms. Jensine Larsen, founder and CEO, World Pulse

So, COVID-19 accelerated access and exposure to ICTs while it also highlighted the extra barriers that women and girls face when services are moved online.

Our panel not only addressed how ICTs impact gender, but also how gender impacts ICTs. When men compose 85-90 percent of coders and artificial intelligence (AI) researchers, the software that they create will mostly likely carry their gender biases in their algorithms and in the datasets that they choose to train AI models. This leads to discrimination, exclusion, and proliferation of gender stereotypes (such as language translation that turns genderless pronouns into “he reads”, “he builds”, but “she sews”, “she cleans”).



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

With more women working in ICT, and in particular, working within leadership positions in ICT, we are more likely to have software that shuts down online harassment and that doesn't amplify gender stereotypes—a benefit to our entire society. And when women CEOs of software startups are provided with funding, the financially successful ones will then invest in other women-led startups.

“Women led startups had received just over 2% of funding...When men-led tech companies go public or are acquired for billions the founders, and the first hires also become instant millionaires or even billionaires, they in turn invest again in technology companies. This is how wealth is created and shared in Silicon Valley. If more women would be funded, they, in turn, will likely be funding other women-led companies.” –Ms. Maya Plentz, Editor in Chief, The UN Brief

We need to get more girls involved in ICTs. Science, technology, engineering, and math (STEM) programs should be offered to girls at an early age. Several of our panelists have offered hackathons, coding clubs, and trainings on general digital skills as well as cybersecurity. One panelist emphasized how inspirational it can be for a girl to meet women leaders in senior ICT roles.

For women looking for ICT jobs, employers should consider how to make the work environment more welcoming. Allowing employees to work from home might increase the participation of women in some countries, and COVID may have led to more work-from-home opportunities. To attract and retain women at tech companies, women leaders already there are encouraged to serve as mentors.

ICTs and Gender Mainstreaming will be a more important topic than ever at WSIS 2022. The high-level session should continue to invite women to the panel who are transforming ICTs to inspire others, and so we can learn more about how to accelerate the participation of women in ICTs. We should highlight the best ICTs for reducing gender gaps and discuss how to address the latest threats that ICTs can present to gender equity.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

REPUBLIC OF BULGARIA



H.E. Ms. Andreana Atanasova
Deputy-Minister
Ministry of Transport, Information Technology and Communications

Questions:

Bulgaria is among the leading countries when it comes to gender equality and the presence of women in ICT. Can you share the reasons behind this success?

What do you think should be the future steps in attracting more women in ICT?

1. Bulgaria is among the leading countries when it comes to gender equality and the presence of women in ICT. Can you share the reasons behind this success?

First of all, it is both pleasure and honour for me to be once again a part of World Summit on Information Society.

Although my whole professional life has been focused on the ICT sector, I do not consider this as something exceptional or special, but as a completely normal life choice of education and career. And so, it should be everywhere in the world. Coming from the region of Eastern Europe, where the political system of the countries for almost 5 decades has taken equality of men and women for granted, for us the topic of gender inequality is not so acute on the agenda as in other parts of the world, as we already have achieved significant success.

According to a recent study of Reboot Online on women's success in the workplace in Europe. Bulgaria is the best European country for women to work, with a combined total of 236.6 points



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

out of a possible 300 in the Women in Work Index. Aspects considered in the Index were: Economic opportunity, Women in leadership roles, and Maternity leave packages.

Although a major contribution to the leading position of Bulgaria in this study is due to the one of Europe's best maternity packages, allowing mothers to take a minimum of 58.6 weeks off with some 90% of their full salary during leave, we are proud of our third place in women in leadership aspect of the Index, with 90 points out of 100, which in practice reflects in 22.1% of women in leadership roles in the country.

In the ICT sector specifically Bulgaria ranks first in Europe in the relative number of women in the ICT field. According to Eurostat data, about 1/3 of those employed in this field in Bulgaria are women, which is twice as much as the average in the European Union.

I would like to specifically mention the opportunities for women's development in the digital area. Home office or distant working, which until recently was characteristic only to ICT and outsourcing, but in these new COVID times has become a widely used option in all areas of services, allows women to be more flexible in combining work and home commitments. As you know, one of the global reasons for lower pay for women and the inability to develop professionally is the lack of the so-called supportive social network, which often forces women to choose between working and caring for their families and children. It is also a reason for them to work part-time, low-skilled work or to interrupt their careers for long periods of time, which expectedly leads to difficult professional realization and very limited opportunities for career development. The digital sector, where working from home is a common practice, is attracting more and more young women who see this as an opportunity not to have to choose between family and career.

2. What do you think should be the future steps in attracting more women in ICT?

Bulgaria as many other countries in the world has focused on promoting the ICT sector among girls, and this is not only a state policy at the administrative level, but also a recognized interest of business. ICT professionals are a scarce human resource everywhere, and attracting women to the sector almost doubles the potential for new professionals. I am also pleased to see that the growing number of women in the digital field is helping to overcome prejudice about girls' STEM abilities. But also to positively assess their creativity, organizational skills and responsibility, which makes them successful leaders.

Technological developments, technology in general, are gender neutral and contribute to the gradual overcoming of inequalities. The penetration of technology in virtually every aspect of our



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

lives no longer makes it a kind of reserved area for professionals (traditionally still predominantly men). On the contrary, access to them from an early age allows the development of interest in them, abilities and opportunities for girls and boys to benefit from them equally. And I believe that we will soon see the positive result of this. Businesses and NGOs have been very active in attracting young people from an early age to the digital sector. I can share that in Bulgaria there are a number of initiatives aimed at the youngest, and both girls and boys participate in them equally. Moreover, parents often see their child's development in the STEM field as a good opportunity for future careers and lifestyles and encourage their children - regardless of gender - to develop in this sector. This is a very positive step in the right direction.

Of course, we must bear in mind that the process of overcoming inequality is uneven in different parts of the world. The very fact that we still have to talk about gender equality, the value of women as professionals, even their perfectly equal ability to be managers and leaders is sad evidence that the process is far from over and we should continue to work tirelessly on the issue.

Thank you for your attention and for the opportunity to participate in this event on a topic to which I strongly relate.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

JAMAICA



Dr. Maria Myers-Hamilton
Managing Director
Spectrum Management Authority

Questions:

***What initiative has your organization done to support gender equality?
What advise could you offer to our young women in tech?***

**Technological Transformation in the 21st Century – The New Normal, A Caribbean Perspective
- Jamaica**

“You never change your life until you step out of your comfort zone; change begins at the end of your comfort zone.” - Roy T. Bennett

At the turn of 2020, the World looked on as the citizenry in Wuhan City, China commenced their battle with the SARS-CoV-2, alias Covid-19. In retrospect, there were many of us who just glazed over the news report in December 2019, having no idea that this was indeed the start of the pandemic of the 21st century that would have caused major disruption to everyday life as we know it. As of November 13, 2020, the Centre for Systems Science and Engineering at Johns Hopkins University is reporting over 53 million confirmed cases of Covid-19 and over 1.3 million deaths globally. As countries shut down in an effort to control exposure to the virus, economic peril continues to increase – as observed in our sphere. Nonetheless, the strategy to implement coping protocols such as social distancing, sanitization, testing and the race to develop a vaccine. Coupled with rapid adoption of requirements lead to the rapid adoption of existing technologies



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

and human resource work regimes: flextime, work from home utilizing Virtual Private Network (VPN) and Cloud-based applications, virtual meetings via video conferencing, online teaching and learning. The ability to connect to virtual spaces is a challenge for many individuals across the world and within our space:

- Over 300,000 Jamaican households in rural and inner city communities lack access to the internet.
- Covid-19 pandemic and resulting restrictions have further exposed the digital divide between urban and rural poor communities.
- Connectivity with internet access, residents, students and businesses experience improved ability to communicate, improved access to educational opportunities and to the modern / digital economy.

Over the last six (6) months we have witnessed the expansion of virtual communities and the greater acceptance of technological intrusion in our daily lives. In many respects, we have become more productive since we are able to commence our workweek in the comfort of our personal space rather than loose time in commuting traffic. Additionally, having the ability to pull all individuals in virtual spaces to collaborate and in some instances, shorten the decision-making process across all entities including government – who would have thought that we would be having virtual parties and international communities across all sectors meeting virtually?

Local organizations across all sectors have implemented varied a digital strategy i.e., some degree of technological / automation solutions from accounting applications, to Point-of-Sale, to simple applications like Microsoft suite – Word, Excel, Publisher, Access, to the more complex applications – SharePoint and virtual/web-spaces. Pre-pandemic, we would have seen the deployment of webservices, online presence whether active or passive in configuration. Likewise, the utilization of webservices such as video conferencing applications - GoToMeeting, Zoom, Microsoft Teams. On the side of the Education sector, few schools had implemented Learning Management Systems (LMS) such as Moodle, Blackboard albeit there was a relative low adoption rate of these applications by individuals (Myers-Hamilton, 2018). Nonetheless, 2020 has put a new meaning to the word “Disruption”. Many of us have been forced out of our comfort zone. Covid-19 impacted Jamaica and the rest of the world in ways no one could have predicted.

Likewise, institutions have been forced to pivot and strategize, adapt and change in new ways – it is either sink or swim. And, as we continue to respond to the challenges and explore new ways to operate and drive growth, we will weather this pandemic and possibility embrace

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

opportunities that may not have been acknowledged. Noteworthy, these strategic technology trends do not operate independently of each other, but rather they build on and reinforce each other – as cited by Brian Burke at Gartner.

“The unprecedented socioeconomic challenges of 2020 demand the organizational plasticity to transform and compose the future.” Brian Burke, Gartner (2020).



Gartner (2020) has identified three (3) classifications for technological innovation – People centricity, location independence and resilient delivery. Covid-19 has shaped how we work and interact with business, albeit people are still at the centre of enterprise – the only transition is that individuals require digitalized processes to operate effectively in today’s environment (Gardner, 2020).

Location independence – there is now more than ever the need for enterprise to connect to their suppliers, customers, employees and physical plant anywhere and on demand. Digitalization is required for this reality. Finally, being able to deliver a commodity virtual or physically also requires organizations to automate a number of their key processes – utilizing tools like Artificial Intelligence (AI), machine learning and many other decision processing / task automation tools – this process is referred to as hyperautomation.

Figure 1: Gartner’ Classification of 2020 Trends

In 2008 when the US experienced the great financial crisis, the former mayor of Chicago Rahm Emanuel is often credited with the coined phrase, “never let a crisis go to waste.” The time is now for all of us to embrace the various

As we are all aware, this pandemic will continue to impact the world at large, forcing us as leaders in our respective organizations, communities and groups to evolve our thinking and operations; ensuring that no citizen is left behind. To compliment this effort, high levels of public-private partnerships is required to ensure that the socio-economic environment is rebuilt expeditiously. These partnerships are critical to ensure that the digital divide is bridged and all stakeholders of our nation – education, health *et cetera*; receive the necessary support to facilitate optimal



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

growth. With this being said, it is the desired impact of this article, to sensitize and heighten the awareness of the vital role each and everyone plays in ensuring that as a society we emerge from this pandemic more resilient and stronger as an international community.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

UNITED ARAB EMIRATES



Ms. Ghalia Ali Al-Mannai
Director of the Information Technology Department
General Women's Union

Questions:

Could you please tell us more about the General Women's Union and its role in achieving gender equality using the ICTs Tools?

Taking into account the UAE initiative for empowering African girls using the ICTs, could you please give us more details about it?

Statement Missing

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

SERBIA



Ms. Marta Arsovska Tomovska
Executive Advisor
Digital innovation in Government
Government of the Republic of Serbia

Questions:

Why do we need more women in ICT?

Ideas to motivate girls and young women in ICT and achieve gender balance.

Statement Missing

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

UNITED NATIONS UNIVERSITY INSTITUTE, MACAU



Dr. Serge Stinckwich
Head of Research at the

Questions:

What is gender bias in Artificial Intelligence (AI) and how can we address it?

Why gender diversity is important in the development of AI?

Statement Missing



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

UNIVERSITY OF NIGERIA AND FUDAN UNIVERSITY, SHANGHAI, CHINA



Mr. Felix O. Dike
Lecturer and Researcher

Questions:

How can ICT be used to promote inclusive quality education with respect to gender?

Do you think ICT can be used to transform the education sector and should governments invest more in ICT for education?

I appreciate the organizers of the WSIS forum 2021 for their efforts in organizing and sustaining this important global conversation in which experts and High-level stakeholders in education discuss on how ICT are being deployed in various countries and continents to solve educational problems and contribute towards ESD goals and targets for 2030. I also appreciate contributors, speakers and facilitators who participate and contributed during the event.

Despite the numerous gains discussed during the sessions, I believe there are still much that ICT can offer in advancing global education especially in meeting the SDG targets.

Lots of works have been advanced in innovating mediums and platforms which helped educational stakeholders and teachers to be connected to their learners despite the proximity challenges and stay-at home policies being adopted by various governments to cushion the effects of the Covid19 pandemic in various countries. These mediums and platforms ranges from online learning spaces to advanced radio learning. Other newer and effective methodologies that has improved the quality of education that can be offered using these learning spaces have also being developed.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

However, most of these innovations are being offered by private organizations and in fewer cases governments that adopted some of the mediums to meet some specific educational needs in certain regions in their countries. This I believe leaves the global efforts towards meeting the ESDG target with some serious challenges especially with respect to; i) inclusive access to (both online and offline) quality education for all especially learners in rural areas and ii) mainstreaming the needed pedagogical skills and contents for effective teaching using the various online teaching mediums into school curriculum for wider accessibility at regional and national levels.

In recognition of the importance of mainstreaming ICT pedagogical skills into school curriculum for wider access across nations, the UNESCO International Bureau of Education (IBE-UNESCO) hosted an online conference on November 8, 2020 titled [Curriculum and Textbooks in the AI Era](#) which focused how ICT pedagogical skills can be mainstreamed into school curriculum and textbooks and made available for teachers across nations. While this is a positive effort at global level towards ESDG 2030, more efforts are needed in ensuring wider access to quality education despite the covid19 pandemic.

During the WSIS Forum 2021 - High-Level Policy Session 11 : ICTs and Gender Mainstreaming, I recommended that governments should consider adopting synchronous teaching methodology in which offline teaching can be simultaneously supported by online teaching methods. Countries can adapt this methodology to suit context. With this I believe various governments can build more resilient educational sectors that will not be greatly affected in event the globe suffers another challenge similar to the challenges posed by the Covid19 pandemic.

Another area of special interest is in the area of quality educational assessment for learning outcomes. While many innovations have been advanced in providing online teaching and learning spaces for the global educational community, very little has been done in the area of optimizing ICT capabilities for quality educational assessment.

I will recommend that educational organizations, ministries and stakeholders should consider taking advantage of ICT skills to improve educational assessment in both 'teacher-made tests' and 'standardized public tests' administered to learners. For example, organizations and stakeholders can consider developing quality item banks containing standardized educational tests items for various specific instructional objectives at various educational levels which teachers can access easily for formative and summative assessment purposes. This will reduce stress for teachers and school administrations during testing periods and especially during transition periods for schools. I will also like to recommend 'Computer adaptive testing technique' for schools to help reduce the cognitive and psychological stress that educational tests pose to various test takers especially the vulnerable students during this post covid19 era.

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

THE UN BRIEF



Ms. Maya Plentz
Editor in Chief

Questions:

What is the current state of venture capital funding for women?

How can we encourage more women to go into venture capital?

Statement Missing

WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

WORLD PULSE



Ms. Jensine Larsen
Founder and CEO

Questions:

Given that World Pulse, the organization you're the founder and CEO of, is a global social network connecting women worldwide for a greater global voice, what can you tell us about what women at the grassroots are saying about the problems they face, the needs and concerns they have, the recommendations they can provide, and even the actions they're taking themselves in regards to technology and ICTs?

In order to achieve SDG 5 through ICTs and digital technology, what should policymakers, decision-makers and relevant stakeholders take into account for the creation and implementation of action lines in order to see positive outcomes and change? What is missing?

"We need to follow the lead of the women and girls who are most impacted and look at what they're already doing to bridge the gender digital divide, and to lift up leadership of others."

As I share my statement, I carry the stories and wisdom of the World Pulse community on my shoulders. World Pulse is a safe social networking platform comprised of tens of thousands of women and gender non-conforming community leaders. These leaders are logging on from rural areas, cities, and conflict zones across 200+ countries to tell their stories in their own words, exchange resources, find support, and gain digital skills. As a result, they report having gone on to impact 17.6 million lives through new movements, businesses, and social norm change.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

My remarks come from having a decade or experience with how online spaces can activate offline change and uniquely support women and underrepresented voices. The good news is we can say it can be done.

I share with you the preliminary findings from a crowdsourcing campaign World Pulse conducted last year called She Transforms Tech. Alongside 26 coalition partners in the women's rights and digital rights space, World Pulse put out a call to understand what a global tech agenda could be that truly enables women's leadership across all sectors of society.

Responses came in from over 60 countries and the full report will be available in April 2021. Today, I share with you the top three barriers we heard, the top three recommendations, and the top three opportunities.

The top three barriers are no surprise to many of us in the industry.

The top concerns were: 1) Privacy and data concerns; 2) Misinformation; 3) Online harassment and technology enabled violence. It is truly a war zone for women online today. A staggering three out of four of our respondents said that they themselves experienced this violence with 33% stating that it had caused them to become silenced and to no longer speak out or post online.

We've seen from COVID-19 that these barriers have only been exacerbated. At the same time, we acknowledge the heroism of frontline community leaders who have stepped forward to become digital lifelines. They're connecting their communities to digital government services, knowledge, information, and organizing.

The top three recommendations we heard for making tech more equitable include one that is resounding: More digital skills training, particularly notable because the gender digital skills gap is unfortunately widening. But hand in hand with skills training, we heard that in order to support meaningful access it is important that those trainers are themselves women or gender transformative trainers. Representation matters.

One of our respondents said, "For more women to be online, we need much more training for women in women-only spaces, if possible. Training should not be just how a particular App

works. Women need training on how to establish themselves online and how to assume leadership roles online. How to handle harassment, how to present themselves professionally, how to be an activist online, how to recognize misinformation, how to promote online civility,



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

how to know when you're being manipulated online, how to recognize when a young person is being radicalized.”

In addition to digital skills training, we heard that we need more women in decision-making in the tech sector. Not just as coders—though that is important—but across the industry and to begin at the earliest ages to introduce tech.

Third is stronger laws against online harassment and abuse. There is a call for not just laws, but consequences for platforms that do not defend our security and our rights on the Internet. We also heard a call to consider a “gender safe seal” — a visible standard that platforms could display if they adhere to specific requirements, to let their users know that they are a verifiably safe place for women and girls, primarily.

In terms of the top three opportunities, we heard loud and clear that technology can significantly enable the process of women and girls empowerment. In the right conditions, tech can be a tool of liberation, of leadership, and collective action that leaders use to lift up themselves and their communities. Participants shared a call to invest in tech to support women to 1) power movements, 2) learn about and secure their rights, and 3) advocate for marginalized groups.

Across the World Pulse community, we see examples of community members who are using technology to lift up their communities: We have seen women in the Democratic Republic of Congo who have launched women-led cyber centers that train women and girls, indigenous women, and those with disabilities to benefit from technology. Young women educators who are conducting online schooling under tarps in Pakistan, providing university level education through a single laptop to students who are at risk of honor crimes and acid attacks. World Pulse members share they are also using online spaces as a tool for mental health and social entrepreneurship. They are launching legal clinics to support those who are on the brink of suicide because of cyber harassment. They are training others in their communities to benefit from digital tools.

Finally, I will state where I see gaps and what we can do from a wider ecosystem view. Clearly, we need to follow the lead of the women and girls who are most impacted and look at what they're already doing to bridge the gender digital divide, and to lift up leadership of others.

With this in mind, my main recommendation is in the area of connected infrastructure – connecting both online and offline infrastructure. We must link the offline community leaders who are conducting outreach to bridge the digital divide to safe online spaces.



WSIS Forum 2021: High-Level Track Outcomes and Executive Brief

What I mean by online infrastructure is digital pathways that enable the voice, participation, networking, and agency for women and girls in all their diversity as well as all underrepresented voices. I'm talking about digital forums and communities that are trusted and support those most impacted by oppression, and ideally built and owned by women and girls. These are spaces for those who cannot get a visa to travel to forums and conferences, who cannot travel outside of the home due to a disability – online is the primary way their voices can be heard.

By offline infrastructure I stress that the road to the last mile for digital connectivity runs through local women community-based leaders. They are saying we want to be the bridges, we understand the most vulnerable in our communities, we can be the ambassadors and trainers. We have a saying among women who are training others on World Pulse—they say, "Our hands may be on the keyboard but our feet are on the ground." At World Pulse there are 120 digital ambassadors across 30 countries who have reached 1.2 million more people with awareness and training. They are supporting vulnerable communities and the healthy adaptation of technology.

In conclusion, we must invest in a safe, strong supportive online ecosystem for womankind. We must enable the full and equal participation of half of humanity that is today too excluded—the future hinges on it.

That is no exaggeration: We need bold and assertive action on the part of all of the stakeholders to bring safe and equitable technology to women and girls, through women and girls. Thank you.