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INTRODUCTION

High-Level Policy Sessions

Between July 20 and July 29, more than 1500 participants have joined us for the 11 High-Level Policy sessions of the WSIS Forum 2020.

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 were 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.

This year's sessions have covered a wide range of topics including Bridging digital Divides, ICT Applications and Services, Building confidence and security in the use of ICTs, Enabling Environment, Ethical Dimensions of the Information Society, e-Trade, Capacity building, e-Learning and Gender Mainstreaming and ICTs.

Many high-level participants emphasised on the importance of bridging the digital divide. Let's remember that 3.6 billion people around the world are still not connected to the Internet, mostly those living in rural areas and remote communities, our core mission must be to connect everyone everywhere.
The support shown for ITU's efforts in digital inclusion was highlighted and the much needed widescale international cooperation in this area to realize the vision of secured information and knowledge societies as envisaged in WSIS.

Throughout the sessions, some countries shared their efforts to respond to and cope with the impact of COVID-19. It was emphasised that we need to leverage the potential of ICTs towards combating the pandemic. It is now well recognized that ICTs are a key part of building back better, for more inclusive healthcare and education, more sustainable business practices, and for the implementation of the SDGs.

The WSIS Forum remains the platform to track the implementation of the WSIS Action Lines to achieve the Sustainable Development Goals, in collaboration with partner UN Agencies.

WSIS Forum 2020: Chairman

H.E. Mr. Gustavo Montalvo
Minister of the Presidency
DOMINICAN REPUBLIC

Opening Remarks from Chairman of WSIS Forum 2020

Distinguished Ambassadors and Excellencies, Ladies and Gentlemen: A warm welcome to all of you. It is a pleasure for me, representing the Dominican Republic, to address you to inaugurate this day in which the most outstanding results of the thematic workshops, which have been held within this Forum of the World Summit of the Information Society 2020, will be presented.

It is very gratifying for our nation to see the interest and enthusiasm that this Twelfth Forum of the World Information Society Summit has aroused around the world, the first to be held in virtual mode.

Some 4,000 attendees have participated in more than 45 virtual sessions, where important figures from the business and governmental sectors have gathered, as well as leading academics, scientists, entrepreneurs, experts in different fields related to information and communication technologies and representatives of the various related international organizations.

This forum has been held in very special circumstances, but the achievements in the exchange of information and knowledge generation have been notorious, which have led to an in-depth analysis of the components and technological advances within the framework of this space.

It should therefore be noted that celebrating this forum virtually has been an opportunity to widen access to an even wider community of participants, framed by a more inclusive vision.
Today, we gather to review these most important contributions from the various workshops that have been held in recent weeks.

Clearly, the disruptions and digital acceleration generated by the pandemic in our countries indicate that we could expect a whole different world, after overcoming COVID-19, and this particular topic has had a very relevant space in the agenda of these workshops.

Knowledge of digital health identity, post-COVID-19 business models, women's participation in ICT, emerging technologies in developing countries are just some of the important ideas discussed during these thematic workshops that also have a direct relationship with COVID-19 containment, treatment and prevention efforts, using the technology.

Also, we have had the opportunity to share with recognized figures in the areas of cybersecurity, e-government, smart cities, food security, climate change, e-learning, mental health, e-commerce, among other branches, who have inspired us with their innovative ideas on how to channel advances in this direction to help close the digital divide, promote the inclusion of our girls and women, improve the quality of life of our elderly and to protect the environment.

The Dominican Republic reiterates its strong commitment to the inclusive development of technologies. We invite the entire digital community to continue to participate, until 10 September, in all high-level sessions and explosions, which will continue to address key issues for holistic information and technology management globally.

Our country appreciates the trust and we look forward to continuing to consolidate a more united, strong and sustainable global information society for present and future generations.

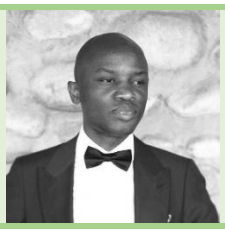
Thank you very much and welcome.

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		Mr. David Wright	Director	UK Safer Internet Center	Civil Society
Two Bridging Digital Divides		Ms. Supavadee Aramvith	Associate Professor, Department of Electrical Engineering	Chulalongkorn University, Thailand	Academia
Three ICT Applications and Services		Mr. Mina Hanna	Vice-Chair	Institute of Electrical and Electronic Engineers (IEEE)	Technical Community
Four Building Confidence and Security in the use of ICTs		Mr. Giacomo Mazzone	Head of Institutional Relations	European Broadcasting Union (EBU)	Civil Society
Five Building confidence and security in the use of ICTs		Dr. Abdulkarim Oloyede	Senior Lecturer	Department of Telecommunications Science University of Ilorin, NIGERIA	Academia

Six Inclusiveness, Access to Information and Knowledge for All		Ms. Denisse Salas	Master Scrum	Swiss Engineering Geneva	Civil Society
Seven Digital Economy and Trade/ Financing for Development and role of ICT		Mr. Juan Peirano	Policy Advisor, Global Policy Development	Internet Society (ISOC)	Technical Community
Eight WSIS Action Lines and 2030 Agenda / Enabling Environment		Ms. Merle Maigre	Executive Vice President	CybExer Technologies, ESTONIA	Civil Society
Nine Knowledge societies, Capacity building and e-Learning		Dr. Gurvirender Tejay	Associate Professor of Information Systems	College of Business University of Colorado	Academia
Ten Ethical Dimensions of Information and Knowledge Societies		Ms. Timea Suto	Knowledge Manager	ICC	Private Sector

Eleven Gender Mainstreaming and ICTs		Mr. Babusi Nyoni	CEO	Sila Health	Private Sector

High-Level Policy Sessions

Session One: Bridging Digital Divides

Recording: https://www.itu.int/net4/wsis/forum/2020/Agenda/Session/145

Moderated by High-level Track Facilitator:
Mr. David Wright, Director, UK Safer Internet Center

WSIS Action Line Facilitator ITU:
Mr. Yushi Torigoe, Chief of Strategic Planning and Membership Department

Speakers:

1. **India** - HE Mr. Anshu Prakash, Vice-Minister, Department of Telecommunications, Government of India
2. **China -** Ms. Liu Duo, President, China Academy of Information and Communications Technology
3. **Spain –** Ms. María Teresa Arcos, Director General of Telecommunications and Audiovisual Services, Ministry of Economic Affairs and Digital Transformation
4. **Poland** - Mr. Karol Krzywicki, Deputy President, Office of Electronic Communications (UKE)
5. **Estonia -** Mr. Marten Kaevats, National Digital Advisor, Government Office
6. **Access Space Alliance –** Ms. Betty Bonnardel, Director

Executive Summary by High-Level Track Facilitator

The High-Level Policy Session was opened with addresses from Mr. Houlin Zhao, Secretary-General, International Telecommunication Union and the WSIS chairman, H.E. Mr. Gustavo Montalvo, Minister of the Presidency, Dominican Republic

About half the world's people access and use the Internet. The other half do not. Many of the unconnected live in least developed countries, landlocked developing countries and small island developing states. Globally, over 1 billion new internet users have been added over the last 4 years, however substantial digital divides persist between more and less connected countries, communities, and people.

The challenge of connecting the 3.6 billion people disadvantaged by not having a connection is significant but is vital and one that the ITU is committed to. Setting the context and relevant WSIS Action Lines, Mr Yushi Torigoe highlighted a number of characteristics that influence connectivity, for example gender as across the world, men are more likely to be connected that women. He also highlighted that the "ITU is committed to connect the world".

Anita Praveen described the range of factors that influence the challenge of bridging digital divide in India, in particular the large, culturally diverse population, distributed across geographical terrains, remote rural and island areas as well as financial. With respect to these challenges, since 2014, access has been extended from 75.23% to 87.37% through the development of both fiber optic and wireless networks. Since 2018, a National Digital Communication Policy has been established to achieve a ubiquitous, resilient and affordable digital communication infrastructure and services.

We were reminded that networks have enabled countries to remain connected during the Covid19 pandemic and that this has only been possible through the tireless work of 'Covid19 Warriors'; those dedicated individuals who have been managing and maintaining our communication networks.

Turning to China, Ms Liu Duo, highlighted that bridging the digital divide would also have the effect of reducing poverty and was vital to support national educational ambitions. Working on the principle of 'leaving no one behind', connectivity has supported 217million students during Covid19 pandemic to maintain their learning.

It was highlighted by Ms Maria Teresa Arcos that achieving meaningful connectivity is only possible if citizens use these networks. That is why the digital divide is not only linked to the level of development of telecommunication networks, it is closely related to their productive use. It is important that the development of networks and digital infrastructure encompasses an improvement in the digital capabilities of users alongside adequate incentives to use them.

Covid19 has impacted all our lives and Mr Karol Krzywicki suggested that “connectivity has never been as important as it is now”. Regulators play a crucial role to maintain the functionality of the network quality and services at this time. In Poland, a number of such initiatives have been implemented by the regulator that bring together a range of stakeholders across to cope with the increased demand for network connectivity.

Looking back over the last 25 years in Estonia ‘Technology is not the protagonist’ and it is, Mr Marten Kaevats who highlighted that the main lessons learned from Estonia in building a digital society for the past 25 years is that “technology is not the protagonist”. Whilst networks are very important to kicking off the narrative of this digital transformation, the mindset and culture of people is more important. In order for people to use these services they need to trust these services alongside the capability to use them.

building a future proof government and governance requires a plan, however this is challenging as no one can predict the future, there is too many components and parameters that are changing in this equation. However, what we need is to build digital governance architecture in a way that actually can change its shape when necessary.

As we develop technologies and connectivity, Ms Betty Bonnardel offered the example of the small satellite sector who have worked together in developing new technologies
that provide economic internet connectivity.

Contributions from the distinguished panellists were followed by a series of questions and answers. The panel discussion extended beyond the allocated time, reflecting the depth and energy of the conversation and the appetite for delegates to challenge and learn from the panellists.

Bridging the digital divide is a vital objective and the examples of national initiatives and activities presented at WSIS can benefit other nations and regions in addressing this challenge.

INDIA

H.E. Mr. Anshu Prakash
Vice-Minister
Department of Telecommunications, Government of India

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. Gustavo Montalvo Minister of the Presidency of the Dominican Republic and Chairman of the WSIS Forum 2020, His Excellency Secretary General, ITU, Mr. Houlin Zhao.

Dignitaries who are fellow panelists, distinguished delegates from countries across the globe.

At the outset, I deem it a privilege to convey to you the greetings from the people of India.

The entire world, all countries and all people, are today engaged in the efforts to emerge victorious against Covid-19. This pandemic of corona virus has impacted all of us like never before. Our daily life, at work and home, our interactions with the people, the way we think and how we respond to situations has changed. One common link in our global action against Covid-19 has been, without doubt, leveraging information and communication technologies, robust reliable and pervasive communication. Networks have enabled the world to remain connected. Even within a country, reaching different parts including remote areas, has been made feasible by effective communication technologies.

A video meeting of such a high magnitude, as the World Summit on Information Society Forum, is being enabled by these networks. I salute all those whose relentless efforts have enabled the communications networks to keep us all connected. In fact, the field force and the managers of these networks are also the Covid-19 warriors. Without their support our health workers, doctors, administrators etc. could not have functioned effectively in these challenging times. In India, I am happy to share, our communications network did not fail us even once. The enhanced data consumption during this period was enabled and the communication sector remained the backbone of connectivity throughout the country.

Bridging the digital divide is certainly a challenge. In India, we have a population of nearly 1.35 billion. We have vast rural areas. Some areas are remote and also remain inaccessible for various reasons. Apart from the geography, population density and physical distances, the digital divide can also exist because of the reason of difference in income, access to technology and smart devices and digital literacy levels.

I am happy to share that we have made considerable progress in bridging the digital divide. Today, India has 1157 million number of mobile connections, an increase from 907 million in the year 2014.

The tele density in the rural areas has increased from 44% to 58.8% and overall teledensity from 75.23% to 87.37%. Most phenomenal has been the growth in data consumption and the price per GB of data. The average consumption per subscriber for mobile data in India today is 10 GB per month and the price at which it is offered is less than around 12 cents. The number of broadband subscribers in India is nearly 687 million and the total data consumption of mobile per day is nearly 270 peta bytes.

A number of programs and interventions are being made towards achieving the vision of the Prime Minister to transform India into a digitally inclusive and empowered society, where the benefits of digital connectivity are available to each and every citizen. In this regard, a National Digital Communication Policy is being implemented since the year 2018 to establish a ubiquitous, resilient and affordable digital communication infrastructure and services. We are also now focusing on wireline broadband. For rural connectivity, our flagship program called BharatNet where nearly 2,50,000 clusters of villages are being connected and 400,000 Kms. length of optical fibre cable has already been laid crisscrossing the country. We are also leveraging the opportunities of satellite communication services in reaching inaccessible areas.

We believe that most countries would be facing similar challenges in accelerating their digital infrastructure and an important issue which must be addressed is of Right of Way for laying optical fibre cable. Congested areas, problem in digging, high value of land etc. make it difficult for laying of OFC. There are also issues of optimal and efficient utilization of spectrum resources for mobile connectivity. Fiberisation of towers and providing sufficient backhaul capacities is yet another challenge. With 5G technologies on the horizon, there are also challenges of larger density of mobile tower infrastructure and for intensifying the fibre network especially, cities and congested areas.

Work from Home is another issue which will be impacting all countries and certainly in India. Due to the compulsions of pandemic, more and more workers, especially in IT based industries are being encouraged by their employers to Work from Home itself. This, however, require better connectivity, larger bandwidth along with other security issues which need to be addressed. In India, we are facilitating Work from Home. Equally important is Learn from Home. Online education and classes through video conferencing are now taking place and would, perhaps, become the norm for some time. Face to face meetings are being replaced by video meetings. In fact, proliferation and popularity of digital communication networks will remain a saviour for connecting the globe and within the country, different States, villages and people. This, however, underlines the need for our commitment and resolve for untiring efforts to enable the bridging of digital divide and enhancing the levels, capacities and delivery by a communication network.

The digital divide is not only within the country, it should also be viewed in a global context. Capacities must be built in every country for communication technologies including core networks, transport systems and access networks. We also need to focus on data storage capacities and technologies. The strength of various systems of mobile, wireless and satellite systems should be synergized for maximizing the benefit for citizens across from States. In this regard, ITU will continue to play an important and guiding role.

I would like to congratulate ITU for hosting this important session which draws attention on Bridging Digital Divide. The views from each Member State will be extremely valuable. We look forward to the interventions from other distinguished delegates and Member States.

CHINA

Ms. LIU Duo
President
China Academy of Information and Communications Technology

Question: ***Could you talk about the practices and achievements of China in narrowing the digital divide？***

Madam LIU Duo, President of China Academy of Information and Communications Technology, was invited to participate in the High-Level Policy session on July 20, 2020.

Madam LIU took up the question of "Could you talk about the practices and achievements of China in narrowing the digital divide？" from the Chairperson, Mr. David Wright

Madam LIU first extended her greetings to H.E. Mr ZHAO Houlin, Secretary General of ITU, and thanked Mr David Wright for the question. Madam LIU shared China's practice from three aspects.

China has a vast territory and unbalance of development exists between different regions and between urban and rural areas. Many people still cannot enjoy the benefits brought by ICT networks. The Chinese government attaches great importance to the sustainable development of ICT. "Promoting universal telecommunication services and narrowing the digital divide" is one of the major initiatives to win the battle against poverty

First, Improve network coverage.

The coverage and networks access are crucial roles in bridging the digital divide. Since 2015, China has implemented a compensation mechanism for universal services. The central government and the service providers jointly funded the construction and upgrade of optical fiber networks in 130,000 administrative villages, including 40,000 poor villages, supported the construction of 4G base stations in administrative

villages, and promoted the construction of broadband networks in rural and remote areas so as to unleash the potentials of broadband networks in promoting economic growth and improving people's livelihood.

Second, facilitate faster and more affordable Internet connection.

At same time, the government has continued to carry out the special action to increase the speed of broadband network and make sure that rural areas can have the same speed as urban areas on the same network. For the poor, the government has explored preferential tariff packages to provide affordable access and high quality of information services. Attainment for All people may share the fruits of Internet development."

Third, highlight the role of innovation and expand the space for Internet applications.

China has insisted on the principles of "helping the poor change the mindset first in the poverty alleviation work", "giving priority to disease prevention in the poverty prevention work", "helping people get rich through the Internet" and "promoting production through the Internet".

So, the policy focused on equalizing education and accelerating innovations in applications such as distance education, healthcare, e-commerce, agricultural production and other fields. During the COVID-19 epidemic, the online education helps 270 million Chinese students from elementary, secondary and higher-learning institutes keep learning.

Due to solid and effective work, the ICT infrastructure in China's rural and remote areas has been improved significantly. More than 98% administrative villages and poor villages have been connected with optical fiber broadband; more than 98% administrative villages have 4G coverage; the broadband speed in the pilot areas of universal telecommunication services exceeds 70 Mbps. Now the rural broadband users have reached nearly 140 million and enjoy the same quality and speed as urban areas.

In 2019, online retail sales in rural areas of China exceeded 1.7 trillion yuan, up 19% year-on-year. The online retail sales of agricultural products reached nearly 400 billion yuan. Benefiting from the broadband network, many farmers get out of poverty.

Telemedicine, distance education and other services, which is called "Internet +" remote services have become important vehicles to achieve the equalization of public services in poor areas. With the strong support of high-quality and wide-coverage ICT network and with the concerted efforts of all departments and industries, China has made pleasing achievements in narrowing the digital divide between urban and rural areas.

“Leaving No One Behind” is not only the principle of the 2030 Agenda for Sustainable Development, but also our shared responsibility. ITU has been contributing to poverty alleviation and has close cooperation with China. During the MIIT-ITU Seminar on Telecom Universal Service and ICT for Poverty Alleviation last year, Dunhuang Initiative is released.

Finally, Madam LIU thanked ITU and the WSIS team for giving CAICT the opportunity to share China's experience. CAICT is also ready to work with relevant institutions around the world to make the due contribution to bridging the digital divide, narrowing the development gap and sharing the fruits of development.

During the Q&A session, Madam took up a question from the audience online. The question was **Can we ask Ms. Liu Duo, President of CAICT, to talk about the roles that ICTs have played in the fight against the COVID-19 epidemic? Madam LIU answered that** China has made remarkable achievements in its response to COVID-19. One important reason is the wide application of ICTs such as AI, big data and 5G in epidemic monitoring and analysis, personnel control and medical treatment.

AI is used in every link of the epidemic response. In terms of epidemic detection, based on AI image recognition technology and infrared thermal imaging technology, rapid screening and early warning are carried out by monitoring the forehead temperature of multiple people in the crowd. The screening of mobile population and screening/return visits of local residents are realized through intelligent voice calls, and the efficiency of community screening, notification, and return visits is greatly improved. In terms of diagnosis, treatment and medication, AI technology can assist or accelerate the judgment of confirmed cases, and intelligent consultation can effectively reduce the pressure of diagnosis and treatment in medical institutions.

Big data has fully supported the epidemic response efforts. The application of big data technology can provide the public with more complete, continuous, accurate and timely epidemic information, provide experts with methods to trace the source of diseases, and provide decision-makers with the development trend of infectious diseases. By integrating information from telecom operators, Internet companies, transportation departments and other entities, big data technology can help analyze the movement of the people related to the epidemic. Through scientific modeling of a large amount of data such as movement tracking information, social information, consumption data and exposure and contact history, the disease transmission path can be calculated, and the source of infectious diseases can be traced.

5G is playing a big role in the fight against the epidemic. In the shortest possible time, China completed 4G/5G base station construction, network activation and capacity expansion and upgrade for the two famous hospitals in Wuhan, Hubei - Huoshenshan Hospital and Leishenshan Hospital, delivering the coverage of gigabit network. 5G live video broadcasting is the most intuitive application of 5G. In the construction of Huoshenshan Hospital and Leishenshan Hospital, hundreds of millions of "cloud supervisors" across the country have witnessed this miracle.

SPAIN

Ms. María Teresa Arcos
Director General of Telecommunications and Audio-visual Services
Ministry of Economic Affairs and Digital Transformation

Question: ***The availability of networks is a basic element for connectivity, but what other aspects are necessary to ensure that digital divides are not generated?***

Excellences, dear colleagues, buenos días, good morning, first of all please let me express my gratitude to the ITU for inviting me to participate in this High-Level Panel.

Achieving effective connectivity need of at least two elements. Of course, telecommunication networks must exist; since without them connectivity is not possible. However, the existence of networks is a necessary but not sufficient condition. To achieve meaningful connectivity citizens should use these networks. That is why the digital divide is not only linked to the level of development of telecommunications networks. It is closely related to their productive use, too. In this sense, the development of networks and digital infrastructures needs to be encompassed by an improvement in the digital capabilities of users and adequate incentives to use them.
At the end, the ability of society to achieve a meaningful level of connectivity is what determines its level of digitization.

It is a fact that, usually, at the time telecommunication networks are deployed digital services either have not yet been developed or have not been massively taken up.
In practice, this implies that at the beginning there is idle network capacity.
This idle capacity is usually solved naturally by the market itself, as service innovation flourishes, and users have a wider range of choices to make and optimize the use and exploitation of the new broadband network capabilities.

However, attention and early detection of potential problems are needed to ensure that such development take place in society in a crosscutting and balanced manner.

Otherwise, progress in the use of new capabilities could grow unevenly and too slowly, especially regarding some vulnerable groups. They advance very fast in certain segments of companies/users or in some geographical areas and very slowly in others.
Since this lack of use tends to be concentrated in the layer of society most distant from innovation: vulnerable groups, remote areas of the country or small companies, public initiative is needed to tackle these imbalances.
The description of this conceptual framework applies fairly well to the Spanish case, which is the one I know best.

In recent years, the effort made in investing in high-capacity broadband networks has resulted in very significant coverage rates in Spain.

According to European indicators, the coverage of fixed networks with capacity above 30Mbps reaches 88% of the population, and the 4G technology mobile networks with cover 94% of the population.
With these figures Spain is placed at the top of the European ranking in terms of broadband network coverage.
However, when we look the use of these networks, data shows that only 30% of the population have actually taken up broadband services. In other words, in Spain there is 58% of the deployed broadband capacity remaining idle.
This is the rationale behind our Government's effort in the coming years focusing on:

- On one hand, to continue providing support to the deployment of high-capacity networks in unserved areas, which are often low-population density or rural areas.
- On the other hand, government programs will also include initiatives aimed at enhancing digital capabilities and the implementation of public services attractive to citizens.

For instance, in the wake of the COVID-19 pandemic many citizens have realized the great potential of teleworking, eLearning or eHealth services.
As we have to avoid physical mobility, that was restricted for health reasons, we have been able to maintain activities by digital means.

This is a good starting point, maybe we have to make a virtue of necessity, and we can promote more the use of such broadband networks and increase the use of that kind of services to help population to progress in digitalization.

And this is why in the coming years, Spanish public investment in connectivity will not be limited to strengthening telecommunications networks, but policies will extend to the various areas of digitization:

- **Education**. Strengthening of connectivity in schools and universities will coexist with programs to finance state-of-the-art equipment for students, remote learning platforms for educational entities and support to teachers in their adaptation to the digital environment.

- **Health.** Not only broadband connection of hospitals and health centers will be strengthened. eHealth services will be promoted, specially among users with limited resources and rural areas.

Besides, a number of programs will be carried out to improve the digital capabilities of professionals and users.

- **Public Administration**. Providing fiber and ultra-connectivity to government premises will likely improve public services. Thus, broadband investment will be encompassed by software and hardware procurement as well as capacity for regional and local government officials.

I hope the Spanish experience can be of valuable to other participants in the WSIS Forum. Thank you very much for your attention, muchas gracias.

POLAND

Mr. Karol Krzywicki
Deputy President
Office of Electronic Communications (UKE)

Question: ***In a post-COVID world we can expect higher levels of demand, increased customer demand for higher broadband speeds, more urgent need for connectivity to keep people safe and for new innovative services and applications. As we can see, broadband access is very important and meaningful. What actions should be taken by regulators to ensure the connectivity for all?***

Good afternoon everyone.

Thank you for inviting me. I would like to say that business is as usual, but in fact it is not. COVID-19 has impacted all the spheres of our life. Many of the activities have moved to the online world. We can meet and discuss today thanks to the connectivity and digital tools. Their role has never been more important than now. We could observe, especially in the beginning of the pandemic, an increased demand for network connectivity. That is why it is so critical to maintain functionality of systems and networks. Since the outbreak of the pandemic we have observed joint efforts of multiple stakeholders and many valuable initiatives in this area – at domestic, regional, and international level. One example of such an initiative is the activity of BEREC and the release of "Joint Statement from European Commission and BEREC on coping with the increased demand for network connectivity due to the Covid-19 pandemic". The Office of Electronic Communications (UKE) is also part of this initiative, being actively engaged in the monitoring exercise run by BEREC. Another relevant initiative is #REG4COVID, a platform launched by ITU where various stakeholders can share and exchange their views, best practices and propose possible solutions for coping with the COVID-19 situation.

The pandemic just confirms that engagement of all the stakeholders is needed and regulators play a crucial role to maintain functionality of the network, its quality and the services. In Poland, the regulator (UKE) has cooperated actively with the industry to guarantee service continuity and prevent or remove the effects of network congestion. The Polish regulator introduced the monitoring mechanism and asked the operators to take necessary actions pursuant to Regulation on open Internet to preserve integrity and security of the network, especially during increased demand cause by the COVID-19 pandemic outbreak.

Hence, we can see that in Poland, not only the regulator has taken actions but also operators have been applying exceptional measures (they increased data volume caps, extended invoice payment time for elderly people or improved electronic communications between providers and end-users). Moreover, at the national level, the Minister of Digital Affairs, the regulator and the industry players signed a joint special agreement on cooperation in the special protection of internet users against phishing sites, including for personal data, during the states of emergency, such as an epidemic. Additionally, UKE has launched customer awareness campaigns during the pandemic urging the use of digital services and informing about their potential risks. Regulatory measures, already taken or to be taken, have to ensure resilient connectivity, business continuity and service delivery.

The pandemic has clearly shown one aspect of the digital divide – only households that are connected to very high capacity networks are not digitally excluded. We could observe that these 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. We should also be aware that advanced fixed networks can be successfully complemented with mobile 4G and 5G technology. In some countries mobile networks are extensively used and they have proved to work efficiently during the pandemic.

Last but not least, I would like to mention that in Europe, the new European Electronic Communications Code is expected to be implemented in December this year. It could be a very good tool to make all the initiatives come true (to foster investment in very high capacity networks and as a consequence to enhance development of digital services). Looking at the past months during the pandemic, it was proven that high-speed connectivity is needed more than ever and national regulatory authorities, like UKE, have a role to play in shaping an enabling environment for that.

Thank you for your attention.

ESTONIA

Mr. Marten Kaevats
National Digital Advisor
Government Office

Question: ***How to make government / governance future proof?***

Missing Statement

ACCESS SPACE ALLIANCE

Ms. Betty Bonnardel
Director

Question: How can the small satellite sector enable an informed society in a cost-effective manner?

The small, cube and nano satellite sectors all contribute to novel opportunities and tools, as already highlighted by previous speakers. Together with other technologies, they will help to bridge the Internet divide we have discussed during the panel. ACCESS.SPACE counts 86 members, representing their respective organisations worldwide; they work together to develop new technologies and opportunities not only to permit connectivity, but also services and applications originating from those systems. Cost-effectiveness is considered paramount, as a strong business case focused on economical solutions will allow users to easily access the Internet and use connectivity.

To facilitate the achievement of that objective, ACCESS.SPACE members have been working together towards the creation of common standards and researching what could effectively reduce costs. Satellite technology may require some years of infrastructure development, which could not be compressed in shorter times. However, a lot of effort has been made to reduce that time and provide constellations of small satellites that could be ready to operate at a very short notice. Investment is needed for the system to be developed and we are seeing a remarkable number of investors who are interested in small satellite constellations. The system brings multiple advantages, both in terms of permanent Internet access and as a complement to mobility services and enabler of specific applications (ELT and remote teaching, remote working, e-commerce opportunities, etc.), all the more important during these challenging COVID times.

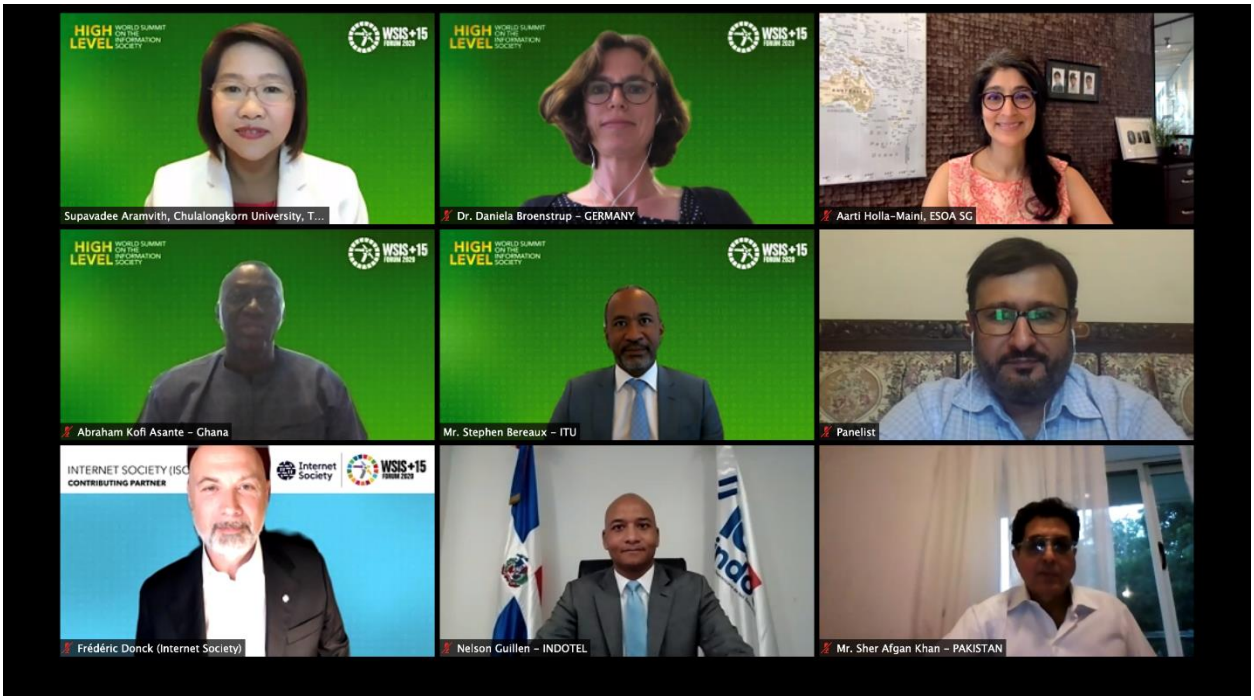
The satellite sector, however, is affected by a bias that governments and communities could help reduce. As an example, satellite landing rights imposed in some countries translate into higher access costs to market, which, in turn, cause increased user access costs. Another crucial feature regards the authorisation to the system utilisation in one's own country, which should be user-exempt, or consist in a blanket licence allowing the system to be deployed. The export/import measures involved when the system is transferred to someone's country are also very important, as sometimes they bear a cost that

is then transferred to the users or the operator. All those factors could make the business case unsustainable.

Betty thanked the ITU for its work and support to the small satellite sector during the World Radiocommunications Conference and beyond.

Session Two: Bridging Digital Divides

Recording: https://www.itu.int/net4/wsis/forum/2020/Agenda/Session/147



Moderated by High-level Track Facilitator:
Ms. Supavadee Aramvith, Associate Professor, Department of Electrical Engineering
Chulalongkorn University, Thailand

WSIS Action Line Facilitator ITU:
Mr. Stephen Bereaux, Deputy to the Director, Telecommunication Development Bureau (BDT)

Speakers:

1. **Germany** - Dr. Daniela Brönstrup, Deputy Director General for Digital and Innovation Policy, German Federal Ministry for Economic Affairs and Energy
2. **Dominican Republic -** Mr. Nelson Guillen, President of the Board, Dominican Institute of Telecommunications
3. **Pakistan –** Mr. Sher Afgan Khan, Additional Secretary, Ministry of Information Technology and Telecommunication, Government of Pakistan
4. **Ghana** - Mr. Abraham Kofi Asante, Administrator, Ghana Investment Fund for Electronic Communications
5. **Internet Society,** Mr. Frédéric Donck, Regional Vice President, Europe
6. **EMEA Satellite Operators Association (ESOA),** Ms. Aarti Holla-Maini, Secretary-General

Executive Summary by High-Level Track Facilitator

The statistics showed the global percentage of people using the internet was 54% which implies that 46% or 3.6 billion are still offline. The situations are worse for developing and Least Developed countries (LDCs). The digital divide is not necessarily a function of network and availability, but the issues of quality of connectivity, cost, education, cultural, demographic differences, and content availability serve to perpetuate the divide. New economic divide due to Covid-19 pandemic arises between the digital haves and have nots. Connectivity has become critical to social and economic participation.

Vision

- Everyone has access to the internet by 2030
- Meaningful connectivity: all global citizens are digital citizens who can fully integrate digital technologies safely and confidently into their lives
- Efforts of multi stakeholders: government, industry, community, and citizen to bridge digital divide and gender disparity

Fresh Priorities

- New economic divide due to Covid-19 pandemic arises between the digital haves and have nots
- The implementation of National Broadband funding plan or strategy of each country will extend the internet infrastructure for better connectivity

Emerging trends

- Tripartite cooperation model (TCM) in Ghana has been designed for connectivity in underserved and unserved communities. The model is based on revenue sharing concept encouraging greater participation and facilitates collaborative efforts with financial commitment from investors or private sectors.

Example of case studies

- Skills for girls in Germany, the initiative to promote digital skills for women and girl
- The strategic partnership between Germany and digital Africa with more than 150 companies. Projects in the field of education, energy, health, agriculture, and mobility are developed by partner companies from Africa and Germany
- Efforts to building digital infrastructure in Dominican Republic includes a 1200 kilometers nationwide fiber optic network and 1,000 free Wi-Fi access points all over country. Example of successful projects are ICT for education, online government services, government digital training program to entrepreneurs.
- The establishment of five national incubation centers in Pakistan to support innovation and entrepreneurship
- The Digi skills training program in Pakistan, a collaboration with Microsoft for 21st century skills training for teachers
- ICT for girls in Pakistan, establishment of computer lab in women in Parliament centers to target capacity building in underserved areas and to bridge digital divide and gender disparity
- Robust partnership between Ghana and telecommunication company for rural telephony project to connect over 1 million people in the most neglect rural communities nationwide in 2020

Opportunities

- The Dominican Republic government has recently approved the national policy for spectrum management which will be complemented by a spectrum use master plan. Managing digital dividend in the country's context helps bridge the digital divide.
- The use of universal service fund (USF) helps bridge digital divide
- There is an increase in investment capital in technologies especially mobile operators are to invest between 2020 and 2025 mostly in 5G network
- Community network can play a role to bring the internet into their communities
- Without terrestrial infrastructure, satellite is usually use as a backhaul solution for a local Wi-Fi network or for a mobile base station. Satellite is a viable option to bridging digital divide in addition to fiber and 5G especially to the unserved areas

- The new spectrum licenses given to mobile operators should focus on the increased coverage obligations on rural areas

Key challenges

- How to extend the internet access to those who are currently not covered by internet infrastructures
- How to attract online people who could have access to the internet but choose not to use it. The main factor that preventing people in developing countries from using internet is not affordability but poor literacy and digital skills
- How to remove regulatory barriers with satellite

Road ahead

- Government needs to strategize the national plan to establish projects and incentives that lead to reducing digital divide.
- Collaborative partnership with Industry is important, especially to extend the digital infrastructures (fiber, 5G, satellite) for better reach.
- Community could take part by brining internet to community and empower people in the community to use the internet. Citizen should be well aware of the benefits in using the internet and needs to be proactive to learn the new skill sets.
- Disparity of digital gender gap should be taken into consideration as well

GERMANY

Dr. Daniela Brönstrup
Deputy Director General for Digital and Innovation Policy
German Federal Ministry for Economic Affairs and Energy

Question: ***What is Germany doing to strengthen the Global South, i.e. to improve the digital infrastructure and to give more people access to the Internet?***

Germany hosted the Internet Governance Forum 2019. One World. One Net. One Vision. Could you elaborate on what the IGF is for and what you have been initiating since last year and what is on the horizon to come. One of the main goals of our international digital policy is to help ensure that everyone has access to the Internet by 2030. This is a common G20 goal that was agreed upon during the German G20 presidency in 2017.

Germany's Ministry for Economic Cooperation and Development is supporting approximately 500 projects in the Global South out of which 40 have a dedicated digital impact.

One – in my view – very important example is the project #eSkills4Girls – an initiative to promote digital skills for women and girls. The digital divide among man and women is still striking all over the world and especially in LDCs. We support courses for girls where they can learn how to use computer programs, how to work with the internet and also how to code.

Furthermore, we launched our strategic partnership "Digital Africa" in 2015. Currently, more than 150 companies are active in this network; large corporations such as SAP and Siemens as well as small and medium-sized companies. The partners – companies in Africa and German companies - develop projects in the fields of education, energy, health, agriculture and mobility.

This is an important network and partnership that helps both sides. And of course as the third largest contributor of the ITU Germany very much supports the work of ITU-D. WSIS Forum 20th of July 2020.

Last, not least, we sponsor the upcoming IGF process 2020-2022 with 1 Mio USD and support the intersessional activities organized by the IGF secretariat. That includes for example the educational digital training of young people in Africa. As last year's hosts, we placed special attention on ensuring that it's not just the "usual suspects" who take part in the Internet Governance Forum, but that, among others, more traditional SMEs get involved in the exchange of views. In order to enable as many people from the Global South as possible to participate in the IGF 2019 and the regional preparations, Germany provided the UN with 650,000 USD.

We also very strongly supported the idea of bringing in Parliamentarians from all over the world - including in particular the Global South. Discussions on how the international community could work together to optimize the use of digital technologies and mitigate the risks have gained momentum in recent years. The report of the High-Level Panel on Digital Cooperation has contributed to this: its recommendations have been intensively discussed in the community.

Germany, together with the United Arab Emirates and the UN Office for Strategic Planning, has the honour of being "co-champion" in the follow-up process to Recommendations 5A/B. This is about the future architecture of global digital cooperation. In a transparent process, we conducted extensive consultations with stakeholders around the world. We are compiling the results of this consultation process in an Options Paper which will be published soon. The Paper's intention is to take the discussion forward with the presentation of concrete ideas.

The Options Paper relates to the UN Secretary-General's Roadmap for Digital Cooperation which also aims at generating a holistic dialogue between diverse stakeholders with the overall aim "to connect, respect, and protect people in the digital age" as the SG underlined in his remarks on the publication of the Roadmap for Digital Cooperation in June . There is broad consensus that the existing digital cooperation architecture has become highly complex and diffused but not necessarily effective and global discussions and processes are often not inclusive enough. This situation is worsened by the lack of a common entry point into the global digital architecture, which makes it especially hard for developing countries, small and medium-sized enterprises, marginalized groups and other stakeholders with limited budgets and expertise to make their voices heard.

During the process we have become even more optimistic about the future of global digital cooperation. Not only have the consultations shown how actively stakeholders are engaged, but also that there is broad consensus not only regarding the gaps of current global digital cooperation but also in terms of the solutions suitable to address them [clear tendency towards IGF+, combined with elements of the other proposed models (Co-Governance-Model, Digital Commons Architecture].

Coming to an end, I would like to express my appreciation and gratitude for all those who have actively contributed to this process. I would also like to encourage everyone to remain committed and passionate. It is definitely worth it.

DOMINICAN REPUBLIC

Mr. Nelson Guillen
President of the Board
Dominican Institute of Telecommunications

Question: ***Digital dividend spectrum is a very important element in ensuring coverage in rural areas and closing the digital divide. We know that the Dominican Republic has not released these frequencies. How do countries in this situation meet the demand for radio spectrum for mobile services? What other policy measures are they developing to bridge the digital divide?***

The spectrum related to the digital dividend is a very important to ensure coverage in rural areas and close the digital gap.

Two years ago we took the initiative of inviting the ITU to join us on an effort to install an effective spectrum management capacity in our country. Understanding that the digital dividend was of utmost importance, but only one part of the effort necessary to defeat the digital divide.
As a result of this work, we have approved a National Policy for Spectrum, we advance in a Spectrum Use Master Plan and modify the National Frequency Attribution Plan, which has 951 MHz destinated for IMT. Along with the construction of this regulatory floor, we have advanced along with the government in the execution of the "República Digital" program, the most ambitious and systematic program to close the digital divide that the country has ever registered.

Under it, the Electric Transmission Company (ETED) has deployed a 1,200 kilometers nationwide fiber optic network, something very significant in our territory. It is a network that connects to the private facilities, advancing in the territorial capillarity that we require to ensure quality and speed in the transmission of voice and data. To this network there been incorporated a system of more than 1,000 free WiFi points in all departments of the country, covering public services and communities in which there is no private provision of digital services.

We have taken care to verify the effective use of these networks, installed in municipal offices, hospitals, universities, and public transportation.

The fight for inclusion has mobilized “República Digital” also in the world of education, with eleven projects ranging from digital literacy and the productive use of ICT, up to the allocation of more than 10 thousand devices for deserving teachers and students, among others.

The same has happened with implementation of 166 online government services, those that increase transparency in public management and promote the use of technologies among the population. As of the training exercise in productive use of technologies, digital economy and electronic commerce from which thousands of microentrepreneurs have benefited in these in the last two years, many of which have thus advanced to their formalization, a condition necessary to access credit and participate in government purchasing processes.

Any serious analysis of political economy would indicate that concentrating exclusively on it, without building the regulatory floor, to which I alluded to beginning and which we have shaped together with ITU, would have meant concentrating the always limited regulator energies in only one of the instruments necessary to attack the digital divide.

“República Digital” project has been the natural complement to this inclusion effort. The pandemic has highlighted the importance of digital technologies as an instrument not only for communication but also for creating wellness in the most diverse areas. It has also shown the weight of the digital gap and the need to take much more significant steps to overcome it.

PAKISTAN

Mr. Sher Afgan Khan
Additional Secretary
Ministry of Information Technology and Telecommunication, Government of Pakistan

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Question: ***What Policies and Initiatives Ministry of Information Technology and Telecommunication has taken to bridge the Digital Divide in your country?***

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GHANA

Abraham Kofi Asante
Administrator
Ghana Investment Fund for Electronic Communications

Question: How do you provide cost-effective connectivity for rural communities?

Distinguished colleagues, I thank the organizers for the opportunity to be part of this year's first-ever Virtual WSIS + 15 Forum and again for the opportunity to join other renowned speakers for the High-Level Policy Session to discuss the stakes of bridging the digital divide.

My name is Abraham Kofi Asante. I am the Chief Executive Officer of Ghana's Universal Access Fund, GIFEC, entrusted with the legal mandate to promote access and use of ICTs in the un-served and underserved rural communities in Ghana. I am also the Board Chairman of the Accra Digital Centre, a Technology Park initiative for digital innovation and entrepreneurial empowerment in Ghana.

Closing the connectivity gap in rural areas in Ghana remains one of the core functions of GIFEC. Over the period, a myriad of innovative and cost-effective models have been conceived out of strong partnership with Mobile Network Operators (MNOs) and Technology Solution Providers (TSPs) fuelling the extensive rural telecommunication in un-served and underserved communities.

We in Ghana have designed a model dubbed the Tripartite Cooperation Model (TCM), sculpted around a Revenue Sharing concept, as one of the novel and cost-effective innovative models adopted to close the void created by MNOs in our rural connectivity programme implementation. This model simply allows for greater participation and facilitates collaborative efforts with financial commitments from investors. The TCM model adopted the Rural Star solution which has proven to be cost effective than the traditional models in the deployment of rural telecommunication.

Our reliant on this model, strengthened with robust partnership arrangement with telecommunication giant like MTN and Technology Solution Providers (TSP) like Huawei, has resulted in the unprecedented 400 rural telephony sites constructed in most neglected rural communities nationwide, within a period of 15 months to provide connectivity to over 1 million people.

In 2020, we have adopted other more cost-effective solutions such as the parallel wireless technology and the TV White Space in our quest to ensure a greater number of the un-served and under-served communities are connected.

Again, we have also instituted the Smart Community Programme (SCP) which provides reliable and affordable broadband connectivity with Wi-Fi access points in schools, lorry parks, and chief's palaces, among others in most deprived communities.

As part of our programme for 2020, in terms of connectivity, we wish to connect 2000 communities through the same arrangement using government financial support to provide connectivity to over 2 million people within the rural areas.

INTERNET SOCIETY

Mr. Frédéric Donck
Regional Vice President, Europe

Question: ***Could you give us some ideas on how to drive digital transformation for inclusive connectivity?***

The next Billion to connect will be -admittedly- much more difficult to connect than the first 3.5 Billion. We're talking here about mountains, deserts, islands and remote areas including in developed countries. What's the situation today: some figures sound like very good news as indeed Capital investment in the global communications industry continues to rise: Capex growth is driven by increases in emerging countries which have rapidly increasing internet user bases and demand for data consumption.

Some USD 23.5 billion of investment occurred in low and middle-income economies, while capex actually dropped by USD 10 billion in high income countries. Mobile operators will invest around USD 1.3 trillion worldwide in mobile capex between 2019 and 2025. More than 75% of this will be spent on 5G networks.

Yet. About half the world still remains unconnected.

Let me take the analogy of the jar.

Imagine that the (entire) world to connect is like an empty jar. You would start by pulling big stones in it and this is exactly what happened, through macro-economic policies and huge investment at international level. That would reasonably fill the jar but not entirely. You would then advise to fill in smaller stones, between the bigger ones and that would fit with the overall recommendation of ITU that all countries in the world should have a funded National Broadband Plan or strategy.

Yet. This won't fill the entire jar. As the DG of UNESCO was recalling recently, traditional approaches to driving internet network roll-out and uptake are failing to reach the remaining half of the global population still lacking online access. This is where Community Networks come in to place. Think of this as the little grain of sand. A Community Network starts when a group of people wants to bring

communications to their local village or town. They work together, combine their resources, and learn-by-doing to build, operate and maintain the network to serve their needs.

Community Networks adopt a community-based bottom-up approach in that they are based on the needs and capacity of the communities, and where possible, technological solutions are based on locally available resources.
Community Networks can generate additional traffic, build demand for telecommunications services and grow the market—which benefit commercial operators.
Hence, CN are increasingly being recognised as one of the solutions to connect the unconnected.

Simply focusing on expanding access infrastructure is not sufficient. People need to get online in order to enjoy content and services and expand opportunities for development.
Surveys show that in many countries cost and availability are not the only barriers to going online. Rather, non-users often indicate that what stands in the way is a lack of online skills, and lack of trust-worthy environment.

As the DG of UNESCO recently recalled: Today, the main factor preventing people in developing countries from using internet is not affordability but poor literacy and digital skills.
Ensure the development of skilled, trained, and engaged people who can create, sustain, and maintain infrastructure and online content and services is critical to development of the Internet.
Here too, CN can provide a useful contribution to these objectives as Community networks need training to operate and use the network, and future trainers to promote local sustainable network management and operations and local community development

Conclusion

“Connecting the world's population to the Internet is about collaboration, collective approaches and partnerships – among different stakeholders, across different sectors and across borders .”

The above quote doesn’t come from the Internet Society although I could have used the exact same words. This is one of the conclusions of The Broadband Commission for Sustainable Development established by UNESCO and ITU which I’d like to endorse completely.

“[U]niversal connectivity”, to use the words of ITU Secretary-General Houlin Zhao will be achieved by many ways: we, at the Internet Society, believe that betting on the Communities themselves is a very safe bet.
Empowering people and communities to build their own Internet is indeed part of the winning strategy to complement and contribute to the overarching goal of connecting the world.

EMEA SATELLITE OPERATORS ASSOCIATION (ESOA)

Ms. Aarti Holla-Maini
Secretary-General

Question: ***Are satellites the solution to bridge the digital divide? If yes, could you give us some challenges you might face while implementing them?***

The Digital Divide is a long-standing reality that has been suffered for way too long on all continents. At 47% unconnected, it is a big challenge and big challenges require many solutions. With its global reach & immediate availability, satellite is arguably the most important solution to connect people quickly, but alone, it is not a complete answer. Connecting users directly with satellite broadband is important both for suburban, lower density and more isolated areas but often where other standalone solutions are not economically viable, satellite is used to backhaul mobile base stations and enable community WiFi. Ultimately, a multi-technology approach and cross-sector collaboration is key to enable broadband connectivity everywhere and all technologies have a role to play.

Various steps need to be taken to bridge the Digital Gap:

1. **Prioritise connectivity for all as an objective in itself**. More than 'just' an enabler, ICT is often the fundament for services like healthcare and primary education and an equaliser in bridging education, health and social divides. If we accept this, then the idea of national broadband budgets being put in place is also conceivable to drive sustainable connectivity, supporting different services from the start and ensuring projects can continue once donor funding is spent. There is no SDG on enabling connectivity but enabling connectivity for all should be treated like one with the same momentum behind it.

2. **Be bold about bridging the digital divide.** Connectivity objectives should not just be around fibre and enabling 5G just because the Digital Divide is perceived as a long-term stretch target. For many regions, fibre and 5G are the real long-term stretch targets that will likely never reach millions of people as there is no business case to support the investment. **Just like there is a race to be the first to implement 5G, governments should be bold and also race to bridge the digital divide by making it**

a priority. It does not have to be a long-term stretch target when broadband can be enabled within weeks and months leveraging the strengths of satellite as a standalone and hybrid solution.

3. **Avoid prescribing artificial speed and latency requirements in digital policymaking and tenders.** Just as FTTP, FTTH and Fixed Wireless access are often the best solutions for densely populated areas, satellite-based solutions are often the best for suburban, lower-density and more isolated areas. The reason is the viability of the economic model. Governments and regulators should strive for the best connectivity possible for any given area and should guard against prescribing speeds and latencies associated with terrestrial technologies for areas where those technologies are not economically viable. What is 'best' in one area may be 'worst' for another because it may inadvertently exclude technologies and result in no solution at all. Moreover, very high speeds and very low latency requirements are not required for the vast majority of applications people rely on. Low speeds and high latency are often offered as reasons to suggest that satellite is not an option while hundreds of examples exist across all continents that show how satellite connectivity is transforming lives. Studies also showed that during Covid the most popular application running over satellite globally was YouTube at almost 17% of total traffic share. Not far behind was full streaming on Netflix. Such examples would not be possible if speed and latency were valid concerns.

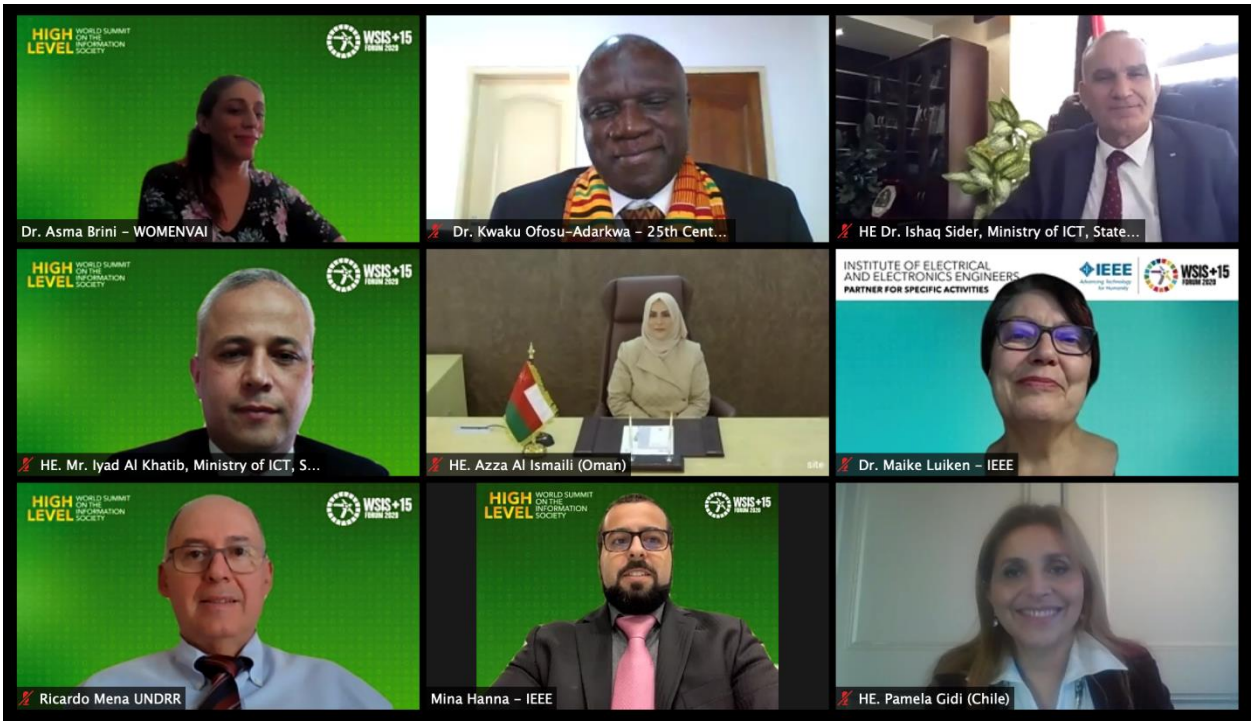
4. **Ensure regulatory frameworks are multi-technology friendly.** Some countries take a General Authorisation approach to licensing which allows for unlimited satellite installations on their territory. Others charge fees per individual installation. This latter approach and other fees and duties applied excessively can prevent satellite from being used to enable vital connectivity. Only countries that apply reasonable and proportionate license and other fees will benefit from the reach and immediacy of satellite broadband capabilities.

5. **Attaching rural coverage obligations and timeframes on new spectrum licenses given to mobile operators**. New spectrum licenses are already being given with increased coverage obligations. However, a specific focus on rural areas and a fixed timeframe during which to deliver connectivity can be a powerful incentive to adopting a multi-technology approach which is essential if digital divides are going to be bridged.

Albert Einstein said the "definition of insanity is doing the same thing over and over again but expecting different results." The Digital Divide is nothing new and yet it persists. It is time to do things differently – the digital ecosystem must breakdown silos and adopt a targeted approach to Bridge the Digital Divide and all other divides that result because of it.

Session Three: ICT Applications and Services

Recording: https://www.itu.int/net4/wsis/forum/2020/Agenda/Session/154



Moderated by High-level Track Facilitator:
Mr. Mina Hanna, Vice-Chair, Institute of Electrical and Electronic Engineers (IEEE)

WSIS Action Line Facilitator ITU:
Ms. Sylvia Poll Ahrens, Head, Digital Society Division, International Telecommunication Union (ITU)

Talking Points

• The ITU Telecommunication Development Bureau has recently created a new Digital Society Division recognizing the need to support countries seeking to achieve the Sustainable Development Goals (SDGs) in the next 10 years in their transition to digital societies by harnessing digital technologies to modernize how government delivers services and solves public problems.
• The Digital Services and Applications Thematic Priority which is part of this Digital Society Division and in line with the WSIS Action Line C7 ICT Applications and Services, aims at leveraging digital services and applications to change and "transform" citizen's experience and the way governments transform themselves and the way they do business, to improve how to operate, how to deliver services, and how

to provide impactful citizen centric solutions in a way that will lead to concrete improvements in their quality of life and wellbeing and the attainment of Sustainable Development Goals (SDGs).

• To achieve that, a change in mind-set is needed, away from a fragmented, duplicated, piece meal approach of operating in siloes and creating one-off digital solutions.

• Despite significant investments in the use of digital for SDG, we have not seen ubiquitous scaled impact of digital services. Maximizing the leverage that digital technologies can have on global development requires governments and their partners to take new holistic, and integrated approaches for digital investment for SDG.

• Government-wide or "Whole-of-Government" approaches to investing in shared digital infrastructure can lead to a more rapid scaling-up of development services, with strong focus on comprehensive citizens' needs at a fraction of the cost and a greater return on investment (ROI) taking advantage of economies of scale that are not available when delivering digital services in a piecemeal fashion.

• The Digital Services and Applications programme, in line with the WSIS Action Line C7 ICT Application, assists countries in developing Government or Sector-wide e.g., health, agriculture, learning, etc. digital transformation strategies and blueprints. It focuses on supporting countries to implement those strategies and deploy a portfolio of integrated high-priority digital services particularly in remote and rural areas leveraging and developing as possible Digital Public Goods.

• This is achieved by bundling broadband connectivity with a minimum set of core and transformational user-centric digital services that address, for example, primary healthcare, food security, learning, women and girls empowerment, jobs, digital skills, financial services, etc. but that can work and be scaled as a whole.

• The « Smart Villages » in Niger is an example of the projects led under this program as a Whole-of-Government and Whole-of-Society approach for rural digital transformation.

• The Programme is working closely with a number of lead UN agencies such as WHO, FAO, UNDP, UNESCO, etc. and others to create a platform for sharing and reusing resources and delivering together as one to leave no one behind.

• The ITU/BDT Digital Services and Applications programme is contributing to achieve the above by assisting countries to:

I. Develop digital government and sectoral transformation strategies and blueprints at a systemic level to use ICT to reengineer processes to improve efficiency, usability, and cost effectiveness.

II. Deploy high-priority portfolio of comprehensive and integrated citizen/user-centric solutions by deploying integrated digital platforms and services that leverage common digital services building blocks and digital public goods particularly in remote and rural areas

III. Sharing Knowledge and building capacities related to the use of ICT for SDG through sharing studies and research, awareness raising, connecting stakeholders and addressing emerging technology trends – such as big data, artificial intelligence, Blockchain, etc.

Speakers:

1. **Oman**, H.E. Ms. Azza Al Ismaili, Minister, Ministry of Technology & Communications
2. **State of Palestine**, H.E. Dr. Ishaq Sider, Minister, Ministry of Telecommunication and Information Technology
3. **Syrian Arab Republic**, HE Mr. Iyad Al Khatib, Minister, Ministry of Communications and Technology
4. **Chile**, H.E. Ms. Pamela Gidi, Vice Minister, Under secretariat of Telecommunications
5. **Russian Federation**, H.E. Mr. Maxim Parshin, Deputy Minister, Ministry of Digital Development, Communications and Mass Media
6. **United Nations Office for Disaster Risk Reduction (UNDRR)**, Mr. Ricardo Mena, Director, ad Interim
7. **IEEE,** Dr. Maike Luiken, Canada Past President, Institute of Electrical and Electronics Engineers (IEEE)
8. **25th Century Technology Limited, Ghana**, Dr. Kwaku Ofosu-Adarkwa, Managing Director, Managing Director
9. **WOMENVAI,** Dr. Asma Brini, Co-founder, President

Executive Summary by High-Level Track Facilitator

Missing summary

OMAN

H.E. Ms. Azza Al Ismaili
Minister
Ministry of Technology & Communications

***Question*: In modern societies, innovation and new technologies are key to growth and development. Can you highlight one prominent project using the new technology trends in achieving more social or economic inclusive?**

Oman is adopting the new innovation trends in some of our new citizen/ business centric eservices. In the beginning of this year, we established a center for 4th Industrial Revolution which aim to provide a robust environment that is supportive for research and development in 4IR technologies.

Also, recently during COVID-19 pandemic, a national committee headed by MTC been created to support all ICT/ AI projects to support Governments work against COVID 19. The committee worked closely with the Ministry of Health to develop an integrated platform called Tarassud (means follow up) to enhance the ministry monitoring system by diagnosing, following up, and tracking the medical condition of individuals infected with COVID-19, who are under quarantine, by using artificial intelligence technology and advanced tracking technologies.

The platform consists of two main systems – the medical test program and the registration and follow up system to check their medical condition on a daily basis. It also monitors the spread of the pandemic and sets priorities by using Artificial Intelligence technology to minimize the intervention of medical personnel in early quarantine stages.

The system is used during primary infection indicators by spotting only the cases that require medical care and directing them to medical institutions. Hence it supports the overall medical system by minimizing and scheduling visits to medical institutions, focusing only on cases that need a medical examination.
Also, the Omani Ministry of Health is using AI to diagnosis the breast cancer in the early detection. This project aimed at aiding the radiologist in Breast Cancer by analyzing mammograms using AI thereby saving the patient's life and reducing the costs associated with treatment of cancer.

Having like this project will help in achieving the goals for good health and well-being, as well as the industry, innovation, and infrastructure. Early detection of breast cancer can dramatically decrease the mortality rate resulted from this disease, while using an innovative platform like AI decreases cost, time and effort.

STATE OF PALESTINE

H.E. Dr. Ishaq Sider
Minister
Ministry of Telecommunication and Information Technology

Question: What are the limitations on telecommunication technologies available in Palestine?

Thank you very much,
Vice-Chair, Mr. Mina Hanna
Your Excellency, Ms. Azza Al Ismaili
Your Excellency, Mr. Iyad Al Khatib
Your Excellency, Ms. Pamela Gidi
Your Excellency, Mr. Maxim Parshin
Ad interim Director, Mr. Ricardo Mena
Canada Past President, Dr. Maike Luiken
Managing Director, Dr. Kwaku Ofosu-Adarkwa
President of "Womenvai", Ms. Yvette Ramos

Please allow me to express our deep appreciation to the ITU, to all United Nations organizations and the institutions concerned for this high-level event of the World Summit.
Therefore, communication and information technology plays a role as a development process, raising the scientific, knowledge and economic level of society, improving the quality of life and contributing to the communication of the Palestinian people and catching up with the digital revolution.

Despite the difficulties that surround the Palestinian telecom market and impede its development, however, our steps to open the market and promote positive competition enabled the two Palestinian mobile operators (Jawwal and Ooredoo) to reach approximately 3.9 Million lines, with a penetration rate of approximately 81%, with regard to the percentage of internet users in Palestine is 61%, as its fixed telephone subscriptions about 472 thousand, as well as fixed broadband subscriptions 357 thousand as the average speed of the internet line is about 13.5 Mbps.

We, the ministry of Telecom and Information Technology, have developed the government network in Palestine with the technology of VPN and Internet, and this serves 1000 H.Q institutions and branches as preparation to government e-services, and increase the G2G services to 38 e-services through the national data exchange called "X Road", we have transferred the "X-Road" to the internet with the aim of connecting all sectors, especially the business sector, to provide the government e-services to the citizens.

The SSO; single sign-on system and the mobile application called "Hokomaty", which means "My Government", have been approved for all government institutions and bodies to provide their services electronically and from a unified window. We are currently working on a launch, and it now contains the provision of 7 electronic services.

The Palestinian government is working to complete the electronic payment getaway for all government services, which are linked with the unified mobile application and the single sign on system so that all citizens and the rest of the sectors can benefit from it.

We are working with the rest of the partners to complete The Palestinian Interoperability (انتروبير ابيليتي) Portal called "ZINNAR", which is a set of specifications and standards that govern information exchanges between government and institutions.

We have adopted cloud computing and DRS for the Palestinian government to provide electronic services, and to maintain business continuity, and to provide many services without interruption.

We have developed some Palestinian post offices to be a one stop shop "OSS" to provide government electronic service, and other services. And the launch of a health system and electronic archiving in government hospitals and some primary care centers so that this is also useful for communicating with doctors outside Palestine to obtain medical consultations.

We worked to license electronic payment companies and electronic wallets through the Palestinian Monetary Authority in implementation of the electronic transactions law, which in turn provides many methods of payment that will facilitate and serve many citizens in obtaining and paying their services electronically.

We have created a Palestine Internet Exchange Point "PIX", and we have linked to it all the Internet .service providers, mobile phone companies and the fixed line company to achieve its goal.

My sincere thanks to everyone who helped Palestine for the advancement of its technological reality, especially in the introduction of 3G services and the entry of the second generation into the Gaza Strip for the second operator.
Without your support and follow-up, we would not be able to keep pace with the global developments.

Thank you so much

SYRIAN ARAB REPUBLIC

H.E. Mr. Iyad Al Khatib
Minister
Ministry of Communications and Technology

Questions:
1/ What are the strategies and policies of your country to leverage the power of ICT in achieving the SDGs?
2/ what are the challenges and obstacles do you face in implementing and fostering the digital transform in your country?

First of all, I am so glad to join you in WSIS 2020 as a representative of Syrian Arab Republic and thank you for allowing me to participate in this round table to discuss about ICT Applications and Services.

We all believe that the information and communication technologies are essential for the achievement of the UN 2030 agenda for sustainable development in order to promote economic growth, social inclusion, and environmental sustainability. In addition, we know the connectivity produces productivity and people everywhere can reach the benefits of connectivity.

As we know, the E-government and digital transformation are still in the core of our projects in the ministry of communication and technology in Syrian Arab Republic. As you also know, we are facing a destroyed war from 2011 till now against terrorism which destroyed our backbone networks, and the financial capabilities are limited due to Caesar's law, despite that, the internet and mobile networks in Syria didn't stop.

We are working on 4 directions:

1- We are working to rebuild the destroyed network especially between provinces and we have plans to develop the rural areas and the regions which were destroyed by the terrorism and war. We are trying to use the new technologies in rebuilding the networks by using fiber optic technologies to guarantee high-speed internet and E-government services and using IMS switches and Fixed LTE based IP and VOIP in the rural and destroyed areas In addition, we try to reach the underserved population in order to create a sustainable economic growth via the mobile facilities like applications and services related.

2- We put in our eyes a plan for broadband strategy until 2030 to the rural areas and poor villages to remain the sustain development we also focus in our projects on ICTs in health and education and we support the national universities with advanced laboratories in technologies. Moreover, we establish IT training centers in the university to motivate the students, males and females, in order to boost up the creativity and the innovation in society after graduate.

3- Of course, without forgetting the importance of the cyber security and E-Government and E- Payment which launched from few months previously, and for environmental sustainability, also founded in Syria the general organization for remote sensing, dedicated to achieve the UN goals related to the environment, the pollution, and the agriculture by using the satellite

4- Regarding the social inclusion, we aim at an ICT-based more inclusive society for all, by make opportunities to more people to get engaged giving women and girls for accessing ICTs and encourage them in all aspects of their lives. Actually, we believe that the power of broadband and mobile technology must be on demand to reach women, persons with disabilities, and injured soldiers and people in the war to open up to them endless opportunities to improve their quality of life and to promote their productivity

In spite of the war, that destructed most of the infrastructure of communication in Syria, and despite the bad economic situation resulted from this war that lasted 10 years, our country continued its progress in the projects of ICTs.

However, the unfair sanctions on Syria impeded its development and reconstruction. Nevertheless, with determination and perseverance we came up with new solutions and continued our projects with our own limited resources and capacities. However, at the end, we were completely overwhelmed by heavy burdens as the consequences of the virus Covid-19. In brief, the long war, the Covid-19 pandemic, and the sanctions, paralyzed all the sectors of communication in the country and consequently obstructed the progress towards the achievement of the UN 2030 agenda.

CHILE

H.E. Ms. Pamela Gidi
Vice Minister
Under secretariat of Telecommunications, CHILE

***Question:* How is Chile in terms of Information Communication Technology application? Which are the industries that have made the most progress on this subject? (ICTs)**

In Chile, we have a consolidated telecommunications industry with a total of 53 million services, which translates to 2.7 services per person. In this line, the massive use of data is a reality in the country and the SUBTEL statistics indicate this, showing how consumption grows exponentially. Therefore, the application of Information and Communication Technologies (ICT), a concept understood as the market of information and communication technology, is quite advanced in our country.

The development of ICTs in Chile has placed the country in a leadership position in the Latin American region. The ITU annual report *Measuring the Information Society 2017* put us in the position 56 globally and 7 regionally on the ranking corresponding to the ICT Development Index (IDI), numbers that are projected to go higher. This performance is due to the collaborative and coordinated work between the public and private world, and also the academia to promote the national digital ecosystem.

In this way, for instance, various industries in the country have registered important advances in ICT application such as retail, mining, health and agriculture stand out.

Nevertheless, ICTs undoubtedly represent a challenge for all the actors of the telecommunications sector, who have had and will have to increase their high-speed networks over time to allow more availability and resilience, above all considering that in Chile we are very close to the deployment of 5G, technology that will revolutionize the ICT market. For this reason, from the beginning of this Government, a comprehensive telecommunications program was created for Chile, which is called the “Digital Matrix”

and is made up of three axes that are “rights of digital citizens”, “investment and infrastructure ”and“ digital development ”.

RUSSIAN FEDERATION

H.E. Mr. Maxim Parshin
Deputy Minister
Ministry of Digital Development, Communications and Mass Media

Question: ***Which ICT Applications and Services are used in Russia and what is your vision of their development?***

Dear Mr. Chairman, Ladies and Gentlemen, it is an honor for me to speak at the World Summit on the Information Society Forum, which this year celebrates its fifteenth anniversary.
Along with other members of the global community, Russia acknowledges the key role of digital technologies as a catalyst of economic development and social growth, as a driver for achieving Sustainable Development Goals across all sectors of economy.

It wouldn't be an exaggeration to say that to date, digitalization has taken over the whole of Russia, including its most remote areas. Today, even in the Far North, in Yakutia, there is an IT-park covering around 20 thousand square meters.

Russian IT industry features over 55 thousand companies and over half a million specialists. We are proud of having one of the best educational and science and technology schools in the field of IT. Our talents are highly demanded specialists hunted by such digital giants as Google, Huawei and Apple.

Over the last five years, export of Russian software has doubled. Game development is one area that has seen remarkable progress – it is expected that in 2020, export earnings of Russian game studios will exceed 4 billion US Dollars. Russian search engine Yandex ranks in world top-5, while last year, social network «VKontakte» ranked in the top-20 of most visited web sites worldwide. Moreover, it is hard to find a country today that would not be using anti-virus protection developed by Kaspersky Laboratory.

Russian public services portal is reputed to be the most visited public web site in the world. Today, it is used by about 80% of the Russian population. On top of that, public services mobile app was granted Best m-Government Service Award, established by the United Arab Emirates' administration, in category "Accessible government".

Allow me also to highlight digital services for crisis management which were promptly developed in response to the challenges caused by the global pandemic. We have successfully deployed IT products that allowed to stimulate transition to remote work and to increase its efficiency, as well as to create conditions for quality online learning processes. The introduced digital solutions have also allowed to increase access to online employment; to develop communication services; to enhance diagnostic, health monitoring and vaccination systems; and to provide medical first aid through advancing telemedicine.

In general, the development of Russian IT industry is taking place in accordance with large-scale national programme “Digital Economy”, approved in 2017. The programme covers advanced hi-tech areas, such as Artificial Intelligence (AI), Internet of things (IoT), 5G, quantum technologies. A special emphasis is put on cybersecurity and protection of personal data.

Recognizing digital technology industry as one of national priorities, Russia has taken a course towards creating unprecedented conditions for IT companies. On June 23, 2020, President Vladimir Putin announced reduction of income tax from 20% to 3% and of insurance premium rates to 7,6% for IT companies. These support measures were developed jointly with Russian IT companies. As a result, in the nearest future, Russia will boast of having one of the most attractive jurisdictions for IT industry development in the whole world.

We are happy to invite specialists and companies to cooperate with us and to work in Russia! Thank you for your attention!

UNITED NATIONS OFFICE FOR DISASTER RISK REDUCTION (UNDRR)

Mr. Ricardo Mena
Director, ad Interim

Question: How important is bridging the digital divide to successful recovery from the Covid-19 pandemic and building resilience to other disasters?

SENDAI FRAMEWORK, ICTs & EARLY WARNING

• The global blueprint for reducing disaster losses, the Sendai Framework for Disaster Risk Reduction, recognizes the fundamental importance of telecommunications infrastructure to building resilience to disasters.

• Information and Communication Technologies (ICTs) are an important and integral component of Multi-Hazard Early Warning Systems that manage and deliver alerts to those in affected areas and wider at national or international level which allows them to take action to mitigate the impacts of the hazard. They have played a crucial part in reducing mortality and injury from disasters, two key targets of the Sendai Framework.

• ITU data shows that 97% of the world population now lives within reach of a mobile cellular signal and 93% within reach of a 3G (or higher) network and these networks are an integral part of reducing disaster risk and saving lives.

• ITU's Common Alerting Protocol (CAP) is a simple but general format for exchanging all-hazard emergency alerts and public warnings over all kinds of ICT networks, allowing a consistent warning message to be disseminated simultaneously over many different warning systems, thus increasing warning effectiveness while simplifying the warning task.

THE DIGITAL DIVIDE

• Despite the ubiquity of mobile phone signals, the digital divide is still enormous. ITU data confirm that 4.1 billion people now use the Internet, or 53.6% of the global population.

• However, an estimated 3.6 billion people remain offline, with most of the unconnected living in the Least Developed Countries where an average of just two out of every ten people are online. Affordability and lack of digital skills remain some of the key barriers to the uptake and effective use of the Internet, especially in the world's Least Developed Countries.

• ICT has become one of the main drivers of economic growth and the eradication of poverty. Poverty in turn is one of the main drivers of disaster risk. The importance of ICTs to achieving both economic and social development explains the priority of bridging the “digital divide”.

• Being disconnected or unable to use a computer means reduced capacity to access online learning, to participate in the modern economy and to deepen one’s understanding of many topics including disaster risk, climate change, disease outbreaks or even to access texts, such as the Sendai Framework, the Paris Agreement or the Sustainable Development Goals.

• People exposed to natural hazards in the poorest nations are generally more likely to die, suffer livelihood loss or displacement than in developed countries.

THE CORONAVIRUS & ICT

• ICTs have really come into their own as a tool to fight disaster impacts in countries which have been successful in flattening the curve on COVID-19.

Korea

• The Republic of Korea has recently published a report on how it used ICTs in several key areas to fight the pandemic which show what an important pillar this can be in a risk reduction strategy for a biological hazard.

o ICTs facilitated social distancing.

▪ A website was created identifying companies who could provide solutions for remote working and online education.

▪ AI played a significant role in in supporting health care professionals in the diagnosis and screening of patients with severe symptoms. Doctors could perform telemedicine from early in the pandemic.

o ICTs facilitated the gathering of data. Key information, such as the number of cases and tests performed, was summarized and provided as visualization data on the main page of the Korean Centre for Disease Control website.

o Research & Development environments based on big data and Artificial Intelligence facilitated the use of research resources available on the online platforms of WHO and others. This enabled Korea to rapidly develop diagnostic kits.

o ICTs also facilitated COVID-19 treatment. One Korean company used deep learning algorithms to predict the effect of a drug treatment and to propose candidate medicine to treat the coronavirus.

Switzerland

• Another example of the use of ICTs in the fight against COVID-19 can be found here in Switzerland.

o In late June, the Swiss Federal authorities launched the SwissCovid app. The contact tracing app registers when an individual comes into contact with other people.

o Contact is traced when one person with the app is less than two metres from another person with the app for more than 15 minutes in a 24-hour period and recorded anonymously on both devices.

o The app uses Bluetooth Low Energy technology and encryption to establish contact between two smartphones, ensuring both privacy and low power consumption.

o SwissCovid is the first app in Europe to use the programming interfaces of Google and Apple, allowing devices using these platforms to work together. This gives users “direct control of their own data from their own device”.

CONCLUSION

• While the coronavirus crisis has accelerated the uptake of digital solutions, it has also exposed the huge gap between the haves and the have nots when it comes to access to digital platforms. This lack of access is now impacting many aspects of life in low- and middle-income countries including commerce, education and health care, all of which are fundamental.

o Lack of Internet access at home limits students’ ability to keep up their education when schools and colleges are closed.

o Low broadband quality hampers the ability to use teleconferencing tools. Mobile data costs also remain expensive across the developing world.

• A key factor in the success of national and local strategies for disaster risk reduction - 86 have been developed so far to meet the 2020 deadline - will be how well these plans are able to exploit existing ICT infrastructure to educate and inform the general public on disaster risk and not simply to disseminate early warning messages over mobile phone networks.

• For COVID-19 response and recovery, as well as other development challenges, the world will need a coordinated multilateral response to deal with the challenge of digitalization in order to make progress on building a more resilient and safer world, especially for the most vulnerable.

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

Dr. Maike Luiken
Canada Past President

Question: What building blocks need to be in place in order to provide affordable, resilient and safe ICT services for all?

Your Excellencies, Honorable Ministers and Distinguished Guests and Attendees, I am honored to be here today and speak on behalf of IEEE as a Specific Activity Partner of the 2020 WSIS Forum.

Today, ICTs, digital technologies, and associated services are recognized as fundamental enablers of economic and social development, that is the growth of smart connected societies, and, of course, for achieving the SDGs.

Although great strides have been made in the development of technology, applications and services and access to technology, - a range of challenges remain; one of them being the lack of 'access' for many people around the globe. Let us consider access to the Internet: over 40% of the world's population does not have access to the Internet. In some countries, less than 5 percent of the population has access; for instance, the Central African Republic, Eritrea, Guinea-Bissau, Madagascar, Niger, and Somalia, to name a few. And of course, internet-based business, education, healthcare, government services and other services are not available directly to the unconnected.

It will be challenging to meet the goal of universal access by 2030.

To get there - to realize affordable, resilient and safe ICT services for all - we need to take a systems, or better yet, a system of systems view of the current status, look at the gaps and determine which building blocks are not in place. There are many and, among others, they include technical, societal, financial and governance related building blocks.

Building Blocks include:

- Infrastructure: e.g. ICT, Power
- Standards

- Interoperable Devices
- Accessible Services, Applications and Content (language, user-interface …)
- Safe Use including Data Protection, Privacy & preventing Cyber Crime, Identity Theft
- User-Appropriateness of Services, Devices and Content; e.g. for Children
- Training for Users, Operators, Developers, Content Providers etc.
- Others like Financing

I will briefly address three building blocks: a strong infrastructure base, accessibility, and interoperability.

By infrastructure, I mean not only affordable, accessible, safe and resilient ICT infrastructure but also ubiquitous power infrastructure. Electrical power is a prerequisite. We need electricity to run the ICT systems. We need affordable, accessible, preferably clean energy available to everybody. Today, almost 1 billion people do not have access to electricity. Without electricity, we cannot operate a communications tower, computer, cell phone, many health care devices and so on. Without reliable, ubiquitous access to electricity we cannot realize the deployment and use of effective, scalable information and communication technology infrastructure and realize the benefit from related ICT–based services.

While the number of people with access to electricity has been increasing significantly, two thirds of the world's population without electricity lives in Sub-Saharan Africa, making the problem especially formidable in that region.

The next building block is the ubiquitous accessibility of ICT services and applications. It is not helpful if people have access to a computing device, have energy to power the device, but no way of understanding how to set it up and use various applications on the device, if there is no training available and/or if instructions in the local language are weak, poorly translated, not user-appropriate or not available, let alone training and/or accessible instructions/communications for special needs users.

Similarly, there must be timely, locally relevant content developed or locally needed services offered; otherwise, even if connectivity infrastructure improves, ICT adoption will lag.

Accessibility includes safety. ICT systems need to be safe, reliable and secure to use. Device labeling, for example, should call out risks, including, for instance, health risks. The user needs to know how to safely operate a system / device; how to safely use internet-based services. And we need to ensure people's data are protected and that the users have agency over their data.

Setting and using standards help. IEEE continues to contribute not only to the technology development itself but also to developing standards that aid in ensuring ICT systems are secure. IEEE has standardization activities in the network and information security space, as well as a Standard for an Architectural Framework for the Internet of Things (IoT) (P2413). IEEE is also working on a series of standards addressing

data and its use, including, IEEE P7002 for Data Privacy Process. IEEE P7002 essentially specifies how to manage privacy issues for systems or software that collect personal data.

Which brings me to the third building block: the importance of interoperability. All of these ICT systems need to work together, they need to work across borders, boundaries; safely and reliably. We are a connected world. Global adoption of standards for ICT enables the interoperability of systems. In the IEEE open standards building process anyone from around the world can contribute: industry representatives, academics, associations, non-profits, or other organizations and individuals. It is a process to work together, to collaborate, to create multi-stakeholder-owned solutions; and we know that multi-stakeholder-owned solutions have a much better rate of success for adoption.

This kind of collective engagement makes it possible to build "best in class standards" and lay the groundwork for interoperability. We have all become so interconnected that no solution can live within a single silo or a single nation. Governments, international organizations, the private sector, NGOs, and civil society need to work together to create multi-stakeholder owned solutions.

To summarize; success, that is, whether or not we can reach universal connectivity, and see the benefits of that achievement reflected in greater progress toward the SDGs depends on how well we work together to address and implement the building blocks: Power and ICT infrastructure deployment, including financing, interoperability, standards, accessibility to the user, training for digital literacy, policies and regulations to name a few.

I'd like to conclude with UN Secretary-General Antonio Guterres' recent statements:

"Digital technology is shaping history. But there is also the sense that it is running away with us. Where will it take us? Will our dignity and rights be enhanced or diminished? Will our societies become more equal or less equal? Will we become more, or less, secure and safe? The answers to these questions depend on our ability to work together across disciplines and actors, across nations and political divides."

"We have a collective responsibility to give direction to these technologies so that we maximize benefits and curtail unintended consequences and malicious use."

I fully agree, we have a collective responsibility to give direction to these technologies and their uses.

Thank you very much for the opportunity to share my thoughts with you.

25th CENTURY TECHNOLOGY LIMITED, GHANA

Dr. Kwaku Ofosu-Adarkwa
Managing Director

Question: ***Are issues of Smart City volatility real; how should developing economies strategize to overcome this tendency?What are the key volatile issues militating against Smart City Development? How should developing economies strategies to overcome them?***

1.0 Introduction

1.1 The Smart City Concept is here now as a major sustainable developmental concern. Countries, developed and developing alike, are faced with the urgency to embrace it to enable them digitally respond to the rapid global urbanisation challenges which require responsive municipal services provision through the deployment of Internet of Things (IoT).

1.2 The ITU, since 2015, has brought to bear the sustainable perspective to the concept. Accordingly, under Goal 11 of the 17 Sustainable Development Goals (SDG's), it is expected of countries to *"Make cities and human settlements inclusive, safe, resilient and sustainable"*. The Smart Africa Secretariat equally advocates the development of effective strategies on the African continent towards the attainment of the goal of sustainable safe and smarter cities.[1] To this end, the urgent need for developing economies to implement the Smart City concept requires that volatility issues associated are tackled with diligence so that suitable as well as resilient responses would be found to them.

2.0 Smart City cannot be a copy and paste Concept. It has to be scoped Bottom up

2.1 As a key volatility issue, Smart City development cannot be treated as a copy and paste concept. This is because the differences in the underlying infrastructure and interoperability ecosystems of different cities would not permit the wholesale importation of Smart City end products from one city to another. It is therefore required of developing economies, while modelling their smart city concepts to have full understanding of their contingent situation ahead of their design and roll out. That done, global standards may be benchmarked as appropriate. On account that underlying ICT leveraging loop of a city has a direct relationship to the quality of the content of the bottom up layers, Smart City development is

[1] https://smartafrica.org/IMG/pdf/smart_africa_sustainable-cities_a_blueprint_for_africa.pdf.pdf at page 15

more of a bottom up approach as opposed to a top down approach and should be scoped as such to gain interoperability effectiveness and robust synergies in the final outputs.

3.0 There should be avoidance of Proliferation of Infrastructure Silos which are not Interoperable with Systems and Software

3.1 The need for infrastructural architectural layer designs of each Smart City to be interoperable so as to ensure that all Operating Software and secondary applications are capable of being accessed, inputted, and used without disruptions is a key volatility factor. This challenge has become enormous in developing economies where the ICT infrastructure development is foreign company led. Additionally developing economies whose e-Government ICT infrastructure is based on proprietary software face challenges of high financial costs and are thus unable to afford wide scale software applications towards infrastructure roll out. This turns to have a direct impact on the elasticity of the end features of the Smart City thus constraining Governments capability to expand the scope of infrastructure design. Emphasis should be placed on infrastructure sharing and Open Source software development to prevent silos development so as to support wide scale software applications towards infrastructure roll out

4.0 The absence of Robust and Meaningful Broadband Connectivity to aid inclusive access

4.1 The lack of robust broadband connectivity and uninterrupted access to the Internet, coupled with the high cost of broadband in many a developing economy create volatility situations. There should always be connectivity which should be top-notch irrespective of geographic location. The Covid-19 pandemic has exposed this limitation. Thankfully, the Alliance for Affordable Internet (A4AI) has issued guidelines towards unlocking the full power of Internet connectivity and access which are worth benchmarking (https://a4ai.org/meaningful-connectivity). Additionally, the lack of inclusiveness in Smart City Policy formulation, culminating in inadequate consideration for gender parity and inclusiveness involving persons with disability considerations, also constitute a major drawback that need to be addressed.

5.0 Absence of Data Protection Regulations to protect end user's privacy

5.1 As new opportunities are created for the technology usage to tackle urban challenges, the end usage of ICT potentially and endlessly also becomes high, pervasive and intrusive bringing in their wake heightened security and data privacy challenges. The rapid demand for innovations in systems and solutions development to tackle the negative impact on the lives and safety of the citizenry as a result of the Covid-19 pandemic, has also brought to bear the need for a balance to be maintained between innovation and public interest with the view to equally ensuring balance between data protection and safeguarding data privacy as not to sacrifice individuals' trust. These challenges could be addressed by developing economies if they put in place Data Protection Regulations to support the implementation Data Protection Acts in their respective economies. It is worth noting that two years into the implementation of the EU Data Protection Regulations it has received review consideration in 2020 to meet the test of time.

What steps should Developing Economies take to enable their governments facilitate the development of Smart Cities?

6.0 Need for Governments to facilitate the performance of Technical, Infrastructural, Security and Legal Gap Analysis to impact on innovation

6.1 The performance of GAP analysis that should of necessity, focus on linkages to the attainment of the SDGs, should help governments provide feedback inputs to the private sector, academia and other stakeholders to back innovation founded on research to inure to the following improvements among others:

- Ascertaining the hardware and software regimes underlining the country's e-Government infrastructure, their levels of interoperability and suitability for citizenry usage.
- Migration from high proportion of proprietary to open source software which will underline the various layers of the Smart Cities Operating Systems (OS).
- The development of the requisite skills-set at Secondary and Tertiary levels of education to enable the wholesale development and absorption of Open Source software so as to propel Open Source Operating System usage; and venturing also into ICT hardware parts creation and development, data analytics, algorisms etc.
- Consciously inculcating local content development into ICT growth and education at the community level so the rural citizenry while in cities would appreciate the usage of ICT solutions and their deployment.
- Develop competency in the building of the capacity for centres of excellence in certification regime for software ecosystem currently dominated by developed economies.

7.0 Technology Designs should be Simple for Universal application

7.1 The collaboration between all sectors including the civil society should lead to simple technology designs which "dummies can use with pride". The desired technology which drives the Smart City concept should be seen and treated as a servant and not a master. This means that it should be entirely and inclusively user friendly without specialised training or skills. Efforts also have to be made to make Smart City Apps available on multiple devises and interfaces at all levels in metropolis.

8.0 Partnership of Governments with the Private sector

8.1 Smart City development must not be seen as a Government driven. It should be Government facilitated through the creation of the enabling environment. To this end developing economies must promote partnership with the private sector to operate governments e-government platforms, financial services banking switches in the FINTECH space which is also emerging. In the process of the collaboration it is expected that the desired output would generate artificial intelligence type of output which should of interest guide the Government to support the private sector to develop its innovative capacity in next generation smart technological designs.

9.0 Conclusion

9.1 It is indeed challenging to integrate digital and electronic technologies to improve and uplift life and environmental sustainability in the city and community at large. Notwithstanding, moving towards that direction is inevitable as the world strive to build an environment that will ensure responsiveness and

be resilient to the demands of growing urban population. The facilitation by Governments of shared and co-created cities that is participatory enough to involve the citizenry and other stakeholders, including the private sector in all aspects of urban life is thus inevitable. Importantly therefore the facilitation of partnerships by governments between the municipality, citizens, and the private sector to deploy technology to improve upon the entire life of the citizenry is indeed important to achieve the SDGs by 2030.

WOMENVAI

Dr. Asma Brini
Co-founder & President

***Question**: what are the key benefits of taking part in WOMENVAI, who are the beneficiaries of your projects and what added-value does the WSIS forum bring to you?*

Statement missing

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

Recording: https://www.itu.int/net4/wsis/forum/2020/Agenda/Session/159

Moderated by High-level Track Facilitator:
Mr. Giacomo Mazzone, Head of Institutional Relations, European Broadcasting Union (EBU)

WSIS Action Line Facilitator ITU:
Ms. Xiaoya Yang, Group Counsellor, International Telecommunication Union (ITU)

Speakers:

1. **Azerbaijan**, H.E. Mr. Elmir Velizadeh, Deputy minister, Ministry of Transport, Communications and High Technologies
2. **Qatar**, Mr. Mohammed Al-Mannai, President, Communications Regulatory Authority (CRA)
3. **Turkey,** Mr. Ömer Abdullah KARAGÖZOĞLU, Chairman of the Board, President, Information and Communication Technologies Authority (ICTA)
4. **Oman**, Dr. Salim Al Ruzaiqi, Chief Executive Officer, Ministry of Technology and Communication,
5. **Indonesia**, Dr. Josua Sitompul, Deputy Director of Legal and Cooperation, Ministry of Communications and Informatics
6. **Cyber Peace Foundation**, Mr. Vineet Kumar, President and CEO
7. **International Commission on Cyber Security Law**, Dr. Pavan Duggal, Chairman

Executive Summary by High-Level Track Facilitator

Introduction

COVID19 crisis has stressed all over the world the importance and the unavoidability to use the internet and ICT's to interact with the external world. During the months of lock-down world citizens have been divided between the connected and the unconnected. The first have been able to continue to work, follow schools' lessons, make online shopping and keep alive their communities using virtual conferencing systems. The others not.

But even among the lucky ones (the "connected"), many perplexities, dubious and some of them fears circulated. Can we trust the internet transactions? car we trust the news we access? can we transmit our data without risk of losing controls? This session tried to answer to some of these main interrogatives through best practices and sharing possible solutions and the Chairperson, Ms. Xiaoa Yang, of ITU-TSB, mentioned in the opening the 5 pillars on which cybersecurity is based, that are also the priorities of the ITU Global Cybersecurity Agenda.

The rich kaleidoscope of experiences shared during the session, offered many concrete and successful examples of how to create trust and avoid the main risks.

Vision

Azeri Deputy Minister for Communications and Technologies, Elmir Velizadeh, mentioned the work of control that authorities need to ensure to create the conditions not only for guaranteeing access to the whole population, but also to control and prevent most of the risks that could come with the access, through actions such as: "special websites a mobile application has been developed to instruct and inform the population"

For the Qatari Mohammed Al-Mannai, President, Communications Regulatory Authority (CRA), the COVID19 crisis has been the occasion to put consumer protection at the center of the action of the governments. The only way to build confidence among the population is to implement in each citizen its digital skills and to launch "smart nation initiatives" all over the country.

The same approach was shared by the Turkish speaker Ömer Abdullah KARAGÖZOĞLU, Chairman of the Board, President, Information and Communication Technologies Authority (ICTA), that stressed "capacity building" among citizens as the first priority to ensure cybersecurity. But it will not be enough. Governments also need to remain vigilant and fight against misinformation and manipulation. ICTA- the Turkish authority- has inflicted many fines during the COVID 19 to try to counter this dangerous trend.

Fresh priorities

According to Mr. Al-Mannai (Qatar) there is an urgent need to enhance protection against out-of-the-borders cyberattacks and announced that Qatar will support the fast implementation of the 73rd UN General Assembly decision for a global action to enhance cybersecurity.

On the same line, Professor Pavan Duggal, Chairman of the International Commission on Cyber Security Law, stressed the importance- in this contest- to go towards a regulation of A.I. and of its implications. A request that complement the proposal of a Cybersecurity Treaty launched at WSIS Forum 2015. The growing importance of I.o.T. networks that innervate our digital society, impose to establish some rules

globally applicable to guarantee the security of citizens when they use a network or access to a service. Common opinion among many speakers was that lessons learned during the COVID 19 crisis can only reinforce this evidence.

Emerging trends & opportunities

The contribution of Vineet Kumar, President and CEO of the Cyber Peace Foundation bring into the debate a new vision that gave many fresh ideas to the debate. This vision is based on the concept that cybersecurity cannot be successful unless is human-centric based. Iron-cyber-curtains are not enough if citizens are not involved and messages are not bringing at their level and their attention. He mentioned the successful experiences of "Global cybersecurity hackathons" and of the "Children netiquette handbook" conducted and produced by his organization (CPF) in the schools of India first and now in Africa as possible best practices to be replicated on a global scale.

Josua Sitompul, Deputy Director of Legal and Cooperation at the Directorate General of Applications Informatics of Indonesia, contributed to the debate bringing the experience of the newly implemented legislation on cybersecurity of his country. A legislation that has been established through a direct involvement of all the stakeholders (industry, governments and CSO), but also through a direct consultation and involvement of the users. A process that put the full respect of privacy of personal data at the center. If users continue to misuse or to use ICT's devices and technology irresponsibly, there will be no legislation that could protect them from attacks, traps and interference.

Example of case studies

Mr. Salim Al Ruzaiqi, Chief Executive Officer of the Oman's Ministry of Technology and Communication, mentioned the creation of a National Defence center against cyberattacks, that has been created in his country, but that serve the needs of the whole region and has signed cooperation agreements with 23 entities of the region. The center has secured in the last year 5 regional cybersecurity seminars, has provided technical assistance and services to all region's countries CERT (with more than 100 cases of assistance) and has been key to implement Child-on-line protection strategies in two countries.

According to the chairperson of the session, Ms. Yang, the recently published guidelines for industry, educators, parents and policy makers published by ITU about Child on Line Safety are one of the best example of how industry, governments, international institutions and civils society could work , hand in hands, to ensure the best possible results.

Key challenges

Strange enough to report from the discussion, nobody mentioned strong resistance or counterarguments. All panellists and participants were convinced that is urgent to act, that is important to act now and that the endeavour to guarantee a safe cyberspace is absolutely needed to create a digital world where the promised of the global connection could fully be implemented and express their potentiality. Nobody in the session thought that global consensus will be easy to reach, but everybody stressed that there is no alternative. If this will not happen, the risk is the opposite and the fragmentation of the internet into many different and isolated spaces could become the norm.

Road ahead

Cybersecurity will also be one of the focus of the final WSIS 2020 Forum in September.

In the next month the COP guidelines will be spread and promoted worldwide by ITU, UNICEF and the other partners, as a first concrete example of how to tackle cybersecurity issues, while, finally, professor Pavan Duggal from India, invited all panellists and interested participants to discuss this idea at the virtual Delhi Conference on cybersecurity that shall take place on November 25 to 27.

AZERBAIJAN

H.E. Mr. Elmir Velizadeh
Deputy Minister
Ministry of Transport, Communications and High Technologies, AZERBAIJAN (REPUBLIC OF)

Excellencies,
Dear Colleagues!
I am pleased to greet all of you and have the opportunity to be with you here on this High-Level Policy Session.
Today we all live in a unique time. Unfortunately, we are experiencing the first pandemic of the XXI century and still seeing its increase. The uniqueness of this period is that modern information and communication technologies are playing vital role in fighting against this pandemic, by serving people, businesses and government agencies as the main tool to organize their lives and activities.
In this context, we observe significant growth in the demand and usage of ICT and Internet technologies. The main reasons of that is not only the serious need for these tools, but also the reliance on these technologies and their security.
We are seeing considerable increase in e-services, the expansion of remote work, video-conferencing and distance learning. These technologies are also widely used for medical purposes within the fight against coronavirus. Since this is the first time such situation has occurred and the pandemic situation is different, countries are trying to learn from each other's experience and apply solutions that suit their conditions.
While preparing for this event, I came across a report on the Internet on Preventing the Spread of Epidemics using ICTs, prepared in 2018 by the Working Group of the ITU, UNESCO Broadband Commission. This timely report examines various solutions that we can use today. I do not know whether the participants here had ever chance to see this report or not, but the analysis of the current situation shows that almost all of these solutions have been applied in different countries. The report recognizes ICT as a Game Changer in Fighting Epidemics.

I must note that the measures taken in Azerbaijan to use ICT in the fight against the pandemic are fully consistent with international practice. First of all, the sustainability of the telecommunications infrastructure has been increased, bringing it into line with growing demand. Telecommunications operators, mobile operators, and Internet service providers have switched to shifted and online working mode to protect their staff from infection while improving the quality of services. New information

systems have been created by government agencies, and the services needed in the pandemic period have been introduced on the basis of existing systems. The existing systems have allowed to provide economic support to the businesses and social assistance to the population in a short period of time. Along with the special websites, a mobile application has been created to educate and inform the population. This mobile application is also used as an Information Notification System for Citizens and as a tracking system for infected people.

An inter-clinical video conferencing system has been established to support doctors for the consultations and exchange of experiences. The video conferencing platform created has even made it possible to hold meetings at the level of head of States. Through this system, summits of the Cooperation Council of Turkic Speaking States and the Non-Aligned Movement, chaired by Azerbaijan, dedicated to the pandemic were held. At present, at the initiative of Azerbaijan and with the support of 130 countries, it has been decided to hold a special UN session on the pandemic.

Even holding such high-level meetings is the best example of trust in technology and its security.
In general, I would like to note that ICT has entered our lives so widely that we have no way back. Our main task is to develop these technologies and tools, increase security and confidence in their use. I wish success to all of us on this activity.
Thanks for your attention.

Question: ***We see more use of ICT by the population in the context of coronavirus. How can this be related to confidence and security?***

Of course, there is a direct link between usage, trust and security. The more people know about technology, its purpose and usefulness, the more they trust and use it.
However, it is unfortunate that even in such situation, during a pandemic, the actions of some criminals reduce confidence in these technologies and lead to cybercrime. We also observed attempts to commit cybercrime through social media platforms by exploiting the population's interest on the global pandemic. There are calls to link 5G technologies to the pandemic and even attempts to prevent it.
In this context, I attach great importance to the development of standards in the field of artificial intelligence, machine learning, big data, etc. by the ITU Standardization Bureau for confidence building in ICT. This activity has a direct impact on increasing confidence and security.
I would like to take this opportunity to appeal to the ITU leadership that it is important to provide a professional opinion on the association of 5G with the coronavirus. It is true that the ITU's position on this issue has been stated before, but it cannot be considered sufficient. There is a need for a more complete and sound opinion.
I believe that through our joint efforts, we will be able to develop technologies, strengthen confidence-building and security, as well as expand their use. These technologies will also help prevent such epidemics from happening again.
Thanks for your attention.

QATAR

Mr. Mohammed Al-Mannai
President
Communications Regulatory Authority (CRA)

Question: ***What policy and regulatory measures are needed to be implemented in order to ensure trust as a key principle of the sustainable ICT sector, growing digital economy and prosperous future for the world?***

Trust is a core value that governments and policy makers around the globe must build for ICT to fulfill its potential and the promise for a better and brighter future. It is also a strategic choice to be made and supported with relevant efforts and resources.

With ever-increasing ICT adoption worldwide, exponential growth of data, advancing take-up of emerging technologies and connected environments, concerns grow at a fast pace around the disruptions they create for countries, economies and individuals. People, businesses and governments must trust technology and believe it can deliver abundant benefits. They must know that the potential risks and issues can be mitigated and resolved, and that their concerns are heard and taken care of.

Sustainable growth can be achieved. It requires measures and mechanisms to ensure users will feel secure and protected online, and that their personal data and sensitive information is safeguarded. The COVID-19 pandemic proved how technology can be powerful and helpful in times of crisis. Now it is time for governments to demonstrate also they can take care of people online, along with their physical health.

Enhanced consumer protection and privacy frameworks must be given key priority, as much as innovation and digital transformation are set as targets for the ICT and economic development. Indeed, developing digital skills and culture for individuals, businesses and government sector are also instrumental in building confidence and enhancing trust.

In addition, transparency and accountability are essential to support, engage and educate all stakeholders to overcome existing issues. Clear frameworks detailing rules, standards and requirements for the

businesses and service providers need to be implemented. Highlighting roles and responsibilities among stakeholders is required too.

The government of Qatar is keen to embracing digital trust. Already, the Ministry of Transport and Communications and the Communications Regulatory Authority have been taking steps in that direction. In the past decade, Qatar has been committed to deliver ambitious projects such as the Smart Nation initiative. Targets are set to grow the local economy through digital innovation, attracting investments and establishing the country as a regional digital hub. In line with Qatar National Vision 2030 and CRA's Strategy for the sector for the next 5 years, we are progressing on establishing the roadmap for adoption of advanced technologies such as AI, IoT, 5G, and cloud computing in a sustainable way. We are open to discussion and work together with all our international partners and national stakeholders to achieve these objectives.

As a Facilitator of Action Line C5 focused on "Building confidence and security in the use of ICTs", in 2007 the ITU formed the Global Cybersecurity Agenda and assembled a High-Level Experts Group to develop its framework. Their 2008 report outlines a platform for enhancing global cybersecurity detailed in Legal Measures, Technical and Procedural Measures, Organizational Structures, Capacity Building, and International Cooperation. Thanks to further efforts and initiatives, significant improvements in most framework pillars and enhanced cross-country cooperation have been seen. Proud to mention that in the 2018 edition of the Global Cybersecurity Index, Qatar ranked in the top among Arab States across all GCA pillars.

Despite GCA and all efforts to achieve "a framework for international cooperation to promote cybersecurity and enhance confidence and security in the information society", there is a lack of enacted multilateral framework for effective punishment of cross-border cyberattacks. This is preventing progress towards achieving the essential mandate: creating trust.

In today's world, accessing data across borders is crucial to enable cybercrime investigations. With data transmitted across jurisdictions, responses to data requests may surpass the retention period, resulting at times in electronic evidence being destroyed. Cross-border hacking has also been used in investigations, raising red flags around transparency and cooperation.

Cybersecurity has been considered during the 73rd UN General Assembly, still no consensus has been reached on the need for a UN agreement on cybercrime. The Budapest Convention is viewed by some as a starting point, others demand a new instrument based on global inputs. States and regions have still taken steps towards establishing own legislative frameworks, but others, have been reluctant in supporting coordinated efforts to fight cybercrimes.

We propose to use the Budapest Convention as basis for law-enforcement cooperation and the UN Convention against Transnational Organized Crime at regional and bilateral level, while negotiating a new global instrument on cybercrime.

In simple to achieve the trust as a principle for sustainable ICT sector we encourage policy makers and regulators across the globe to strengthen their local cybersecurity framework and commit themselves to agree on a global cybersecurity framework.

TURKEY

Mr. Ömer Abdullah KARAGÖZOĞLU
Chairman of the Board, President
Information and Communication Technologies Authority (ICTA)

***Question:* Could you share with us the ICTA's approach regarding the key working areas and regulations on building confidence and security in the use of ICTs?**

Thank you, Mr. Chairman. I would like to take this opportunity to thank you and to everybody who put their efforts for the organization of this virtual WSIS Forum 2020 under these challenging circumstances. I wish a very fruitful session to all colleagues.

We believe that capacity building is one of the most important working areas for building confidence and security in the use of ICTs. Providing cyber security relies heavily on qualified human resources, which is a scarce resource all over the world. Due to the interdisciplinary nature of cybersecurity issues, today's cyber security experts are expected to have both legal and social perspectives as well as technical skills. Building this kind of skillset and providing sustainable developments, considering the new needs of the cyber world, is not an easy task. Therefore, it is an inevitable fact that capacity-building activities on cyber security must be one of the main working areas of all countries and relevant international organizations as it has been in recent years.

Another vital factor in cyber security is international cooperation. There is a terminology that is used in the navy. A chain is only as strong as its weakest link. It is similar in cyber security. All governments, security and law enforcement bodies and international organizations have critical roles. So enhancing and promoting international cooperation is another key working area for building confidence and security.

Cyber security exercises are very beneficial activities that give opportunities to develop both capacity building and international cooperation. We attend and organize these events at international level. Recently, the national CERT (Computer Emergency Response Team) of Turkey, namely TR-CERT held an international cyber security exercise on 19th – 20th December 2019. The Cyber Shield 2019 Exercise was co-organized by the Ministry of Transport and Infrastructure and ICTA. International Telecommunication Union (ITU) and Cyber Security Alliance for Mutual Progress (CAMP) were the supporting organizations of

the exercise, which hosted nearly 90 participants from 17 different countries. During the exercise, the information on the measures to be taken against possible cyber-attacks was shared while participants were provided an applied cyber security experience with technical infrastructure and scenarios developed by TR-CERT. We are looking forward to continuing close cooperation with Turkey's international partners in the future and highly recommend the participation and organization of this kind of events.

In Turkey, ICTA is charged with responsibilities to take or ensure all necessary measures in order to protect governmental organizations, public and private entities and providing deterrence against cyber-attacks with the amendment made by the Law (numbered 6757) to the Electronic Communications Law (Numbered 5809,) dated 9th of November 2016. Furthermore, ICTA has been empowered to impose sanctions to related parties including governmental organizations. The Ministry of Transport and Infrastructure sets the policy, strategy and targets regarding cyber security and prepares action plans.

Our regulations are made based on international information security standards in the field of cyber security. The main regulation in this field is the By-Law on Network and Information Security in the Electronic Communications Sector. Operators are obliged to take necessary measures in order to provide the security of their network infrastructure and continuity of the services they provide. They are audited by ICTA in accordance to this By-Law, and sanctions and penalties are applied by ICTA in case of violations to the regulation.

As a candidate country to the EU, we continue our efforts for alignment with the relevant EU legislation. We have recently received technical assistance from the European Commission for harmonisation of our network and information security legislation with the relevant EU Directive. The main purpose of the study was to contribute to Turkey's regulatory framework and institutional capacity. Within the scope of this technical assistance and in order to review the compliance of the current regulations in Turkey with the EU's Network and Information Security Directive, workshops were held and the gathered information was shared with the relevant parties.

Before concluding, I would like to emphasize that our regulatory approach is based on the international standardization activities in the field of cyber security. In this context, we closely follow the work of international standardization organizations such as ITU, ENISA and ISO, and regularly update our regulations and practices in this field.

Thank you, Mr. Chairman.

OMAN

Dr. Salim Al Ruzaiqi
Chief Executive Officer
Ministry of Technology and Communication

***Question*: On a Regional level, Oman was selected by ITU to manage and operate the 1st ITU regional cyber security center for the Arab region in 2013 Due to the leading role played by Oman Cybersecurity Center in cybersecurity. Can you highlight the center support to the Arab region countries?**

The ITU Arab Regional Cyber Secueity center in Oman Adopts the global cyber security agenda issued by ITU and support ITUs member countries in addressing their cyber security needs and challenges
The services offered by the ITU Regional cyber security center (ITU-ARCC) are categorized into four main types :
First , cybersecurity strategies and governance where ARCC participated in running 5 regional cyber security strategy workshops for Europe , Asia and Africa regions and developed more than four cyber security frameworks for six countries. Additionally, developed two child online protection strategies for 2 countries.

Second type of services is the cyber security Technical and assurance services where ARCC has developed a number of applications that are offered For the CERT implementations for member countries that did not establish their national CERTs , this includes cyber security incident ticketing and management systems , cyber security drills management platform additionally the center has effectively worked with Arab countries to alert on potential threats and vulnerabilities and actualize required controls and tools to prevent these attacks.

Third type of services is cyber security Incident management: Where ARCC conducted and run more than 15 CERT implementation, Assessments, and Cyber drill exercise for national CERT teams in Europe , Asia , Africa and Arab regions

Fourth type of services is cyber security capacity Building where ARCC have conducted more than 74 trainings, workshops, and seminars in more than 16 countries and more than 8000 cyber security professionals and senior management have benefited from.

Finally and in order to maximize the value that ARCC bring to ITU member states , the center signed more than 23 MOUs and partnership agreements with cyber security private industries and international organizations related to cybersecurity and availing its Services through the regional center to member states to collaboratively address the cyber security needs and concerns of each region.

INDONESIA

Dr. Josua Sitompul
Deputy Director of Legal and Cooperation
Ministry of Communications and Informatics

Question: ***To what extent should users be responsible, under Indonesian law, regarding what they disseminate over the internet?"***

The internet was initially developed in a trusted environment because it was a closed environment. However, after the internet was introduced to the public, trust has become a major issue. In many circumstances, users know nothing about the other users who are communicating with them. There is a famous cartoon says, "On the internet, nobody knows you're a dog." The problem of trust in communication over the internet increases when parties are dealing with a financial transaction.

What is trust in government cyberspace? What does it mean that we should have a trusted network? They are difficult questions to answer. On the one hand, in general, trust refers to the expectation that could be fulfilled or provided. On the other hand, however, trust refers to risks that someone has to deal with in encountering the expectation.

The internet has created a virtual realm, namely, cyberspace. Governments around the world have tried to solve the problem: how should the cyberspace be governed? Although it is an unresolved problem, governments have seen essential notions, that:

- trust is needed in governing cyberspace;
- both technologies and law are important instruments in regulating cyberspace;
- governments cannot govern cyberspace themselves; Then, the question is, how should cyberspace be governed?

First, standardization of protocols and infrastructures has an important role in establishing an environment that is conducive for developing trust.
Second, in building a reliable global network for all, safeguards should be implemented: law (regulation and enforcement) and security (available technologies) are two fundamental safeguards.
Third cooperation is fundamental in building secured cyberspace, through multi-stakeholder and public-private partnerships.

Finally, the participation of users is needed to build a responsible culture, awareness, code of conduct.
Indonesia has two main legislations as a foundation to build **a reliable** network. They are Act 11/2008 on Electronic Information (Amended by Act 19/2016) and Transaction and Government Regulation 71/2019 as the implementation regulation of the Act.
The Act stipulates three important goals that are relevant to our discussion today. The Act was promulgated to develop the national trade and economy in order to improve public welfare; improve the effectiveness and efficiency of public services; and provide security, justice, and legal certainty for Information Technology users and providers.
The lawmakers realized that to a strong national cybersecurity environment is build through the participation of electronic system providers (ESPs) and users. The Indonesian government alone cannot build the expected environment in cyberspace: safe and conducive. The participation of ESPs and users is a form of a bottom-up approach in building confidence. In other words, multi-stakeholder approach is a necessary.

Thus, the Act contains the paradigm that responsibilities should be shared to the stakeholders: government, ESPs and users:
• Government has the role not only to regulate but also to facilitate the use of IT, supervise and enforce the law consistently and prudently.

On the other hand, Electronic system providers have to run and maintain the reliability and security of their systems.

Furthermore, users use electronic systems responsibly

In daily practice ESPs run their electronic systems to provide services for users. In this regard, the shared role means that ESPs should have flexibilities in processing and storing the data. However, building a trusted environment requires that the Indonesian government have a certain level of trust of ESPs. However, the shared role also means shared responsibilities.
• ESPs may process and store data outside Indonesia but maintain the effectiveness of Indonesian supervision and law enforcement.

• ESPs provide information that is required for supervision and law enforcement;

• Certain ESPs have obligations to take down illegal content or make it inaccessible;

Building a trusted environment requires parties to know each other. It is easier for ESPs to know users because ESPs collect information of and about their users (traffic data, subscriber information, a financial transaction). However, in many circumstances, users face difficulties in knowing the reliability of electronic system providers. Thus, the Indonesian government should play its role in ensuring the reliability of ESPs that provide services for Indonesian subjects.
Government Regulation 71/2019 prescribes a registration approach. Registration is a mechanism to build the trust between users and ESPs. Based on this approach:
 ESPs that provide services to Indonesian subjects must register themselves.

 ESPs also must provide necessary information for users that they can access easily: their terms of condition, privacy policy, community guidelines, their identity.

 Furthermore, the government maintains a record of the ESPs. Thus, users may check whether the ESPs whose services they use are registered or not. The government will revoke the registration proof if a registered ESP breach its role and responsibilities.

Building a trusted environment requires protection of users' personal data. To ensure the success of every communication over the internet, users, to some extent, have to provide their personal data that will be processed by ESPs. There must be a comprehensive regime on personal data protection in regulating the processing of personal data to ensure the rights of data subjects are protected.

Personal data protection in Indonesia has been regulated-on-sector basis. This approach will be changed. The government is preparing a bill on personal data protection that is meant to build a comprehensive regime on personal data protection. The Bill recognizes that the right to personal data protection as a constitutional right. It also provides several legal bases for processing personal data. Furthermore, the Bill regulates rights of data Subject and responsibilities of the data controller and data processor.
Regarding the legal basis, the Bill stipulates that consent is not the only legal basis to process personal data. Other legal bases that regulated in the Bill are:

• ensuring the *performance of a contract*;

• fulfilling legal obligation;

• protecting the vital interests of data subjects;

• protecting the public interest;

• Preserving the legitimate interests of data controllers;

Expectedly, the parliament will discuss and promulgated the Bill this year.

Many states have encountered technical and legal problems in dealing with the new development of technologies, such as IPv6, the Internet of Things (IoT), 5G, various kinds of malware, and cryptocurrencies. As mentioned earlier, no state can work alone to solve those problems. Thus, Indonesia has tried to use international fora to contribute globally in building a trusted environment for all through international cooperation:

- In dealing with new technologies (IPv6, the Internet of Things (IoT), 5G, various kinds of malware, and cryptocurrencies)
- In establishing standards and protocols and international norms. Indonesia has involved in ITU, IGF, IEEE, ASEAN, APEC, G20, Interpol, and Aseanapol.
- In strengthening trade, protecting personal data and maintaining the free flow of data. Indonesia joins for example, Comprehensive Economic Partnership Agreement, ASEAN Framework on Personal Data Protection
- In enforcing law, such as cybercrime or encountering cyber-attacks (for example on Automatic Exchange of Information (AEOI), Mutual Legal Assistance (MLA), and Computer Emergency Response Team (CERT)

CYBER PEACE FOUNDATION

Mr. Vineet Kumar
President and CEO

***Question**: Misinformation and How Cyber Peace Corps (Volunteers) are countering it?*

Statement missing

INTERNATIONAL COMISSION ON CYBER SECURITY LAW

Dr. Pavan Duggal
Chairman

Question: ***What are the key trends emerging across the world concerning Cyber Security Law, both pre and during Covid-19 times, which could help building confidence and security in the use of ICTs?***

Statement missing

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

Recording: https://www.itu.int/net4/wsis/forum/2020/Agenda/Session/211

Moderated by High-level Track Facilitator:
Dr. Abdulkarim Oloyede, Senior Lecturer, Department of Telecommunications Science University of Ilorin, NIGERIA

WSIS Action Line Facilitator ITU:
Ms. Xiaoya Yang, Study Group Counsellor, International Telecommunication Union (ITU)

Speakers:

1. **Dominican Republic**, Ms. Zoraima Cuello, Executive Director, The National, Council of Competitiveness
2. **Networld2020 European Technology Platform**, Mr. Rui L Aguiar, Chair of the Steering Board
3. **Cyber Future Foundation**, Mr. Valmiki Mukherjee, Chairman and Founder
4. **EC MEDICI Framework**, Prof. Alfredo Ronchi, Secretary General
5. **E-Seniors**, Ms. Monique Epstein, Founder

Executive Summary by High-Level Track Facilitator

The panellist discussed issues about Cybersecurity, it challenges and various ways the different stakeholders are tackling it. The session also addressed concerns about child online protection, especially as children are turning to online teaching and learning in the face of COVID-19 lockdown. The session featured efforts to help seniors to use ICT, especially as they isolate during the COVID-19 pandemic.

The panellist highlighted that ICT has been very vital to in keeping the economy running more, especially during the COVID- 19 lockdowns. In addition, to keep users on the internet safe, there is a need for collaboration between all stakeholders. ITU also has an important role to play in bringing the stakeholder together. There is a need for the ITU to continue to bring stakeholders together, and help countries access the risk and best practice while adopting and the use of various ICT tools. ITU should also help nations to develop strategies around the use of ICT such as Cybersecurity laws and strategy, child online protection laws while putting in place the necessary support for seniors especially as it is now a companion to them. ITU should continue to manage the global cybersecurity index while helping with other issues related to the use and adoption of ICT tools by member states. ITU should be ready to play as leading panther for safer and inclusive cyberspace. The 2020 Child online security platform has been launched by the ITU to support children as they learn online during the COVID period.

Vision

The vision is to have an ICT space free of cyber threats where every legitimate user would be free to use ICT to aid their businesses, education, social life, health and every other aspect of the human daily lives as found applicable.

Fresh Priorities

COVID 19 has shown that we now new priorities in making sure that we keep everyone safe and secured both in the physical and cyber world. It is not enough to keep only the younger ones safe online, but it is now more important than ever to also make the elderly ones feel comfortable online. The use of the telecommunication services has become the new reality to the older generation in the face of COVID 19. They now see it a lifeline and an important means to communicate with their friends and family, especially during the lockdown and while keeping themselves and others safe.

Emerging Trends

As a result of most activities moving online in the face of COVID 19, there has been an increase in the number of cyber threats noticed and recorded around the world. Cybercriminals are now more than ever seeking to take advantage of internet users. However, there is a severe need to tackle this problem.

Examples of Case Studies

Dominican Republic like many other countries around the world has seen that ICT is an important and a door opener to its economy and wellbeing of its people. They have developed a national strategy on Cybersecurity. This they expect that it should key into the global cybersecurity strategy. This was done because there is a need to respond to both the local and global challenges and threats as a result of using ICT to aid different sectors. The Dominican Republic also created a national cybersecurity framework. In

the Latin American region, Dominican Republic happens to be one of the about ten other countries in the region to have a comprehensive document on national cybersecurity framework which include a Cyber incident response team was also created in to respond to cyber threats.

Opportunities

Cybersecurity issues are not a problem that would be solved easily. Therefore, there are lots of opportunities to explore different solutions. All stakeholders need to find common ground and then assign different responsibility for each of the stakeholder. In addition, there has to be cooperation among international originations as there is a need to define and agree on a standardized framework on Cybersecurity. The action plan requires more action and less talk.

Covid-19 has also brought about a unique opportunity to get the Seniors acquitted with the use of ICT tools as it can be a useful source of keeping in touch with friend and family and a source of getting information. However, we need to make them aware of issues like romance fraud, identity theft, data exploitation which are threats to the use of the internet as they can be more vulnerable if not rightly guided. There has to be a trust framework with use and misuse guidance for seniors to keep them safe.

The COVID-19 Pandemic is a test for ICT networks around the world, and it has shown the need to provide affordable and easy access for all. The world needs to think out of the box as this is a time for action; we need to lead the change if not, we would miss the golden opportunity that the pandemic has provided us in showing the world that ICT can help before during and after a any disaster.

Key Challenges

Ensuring that people, their data, information and also the transmission medium used for ICT infrastructure are safe and secured to use has been challenging. This poses a problem to the use and wide adoption of ICT. However, ICT is critical to any economy and its development, and it has proven to be a key enabler of human life. The key challenge here is how to effectively and securely balance or mitigate the threats posed by the use of ICT. The panellists recognize this, and unanimously agreed that all stakeholders must be ready to take responsibilities to ensure the safety of all while going online.

Road Ahead

The use of ICT is now more important than ever, especially with the recent COVID 19. However, there is a need for various stakeholders to come together to fashion out a way forward to threats and issues such as cybercrime, child online protection while boosting the confidence that everyone including the elderly ones would have in the use of ICTs.

DOMINICAN REPUBLIC

Ms. Zoraima Cuello
Executive Director
The National Council of Competitiveness

Question: ***What actions has the Dominican Republic taken due to an eventual increase in cyber threats which puts the digital ecosystem at risk?***

Statement missing

NETWORLD2020 EUROPEAN TECHNOLOGY PLATFORM

Mr. Rui L Aguiar
Chair of the Steering Board

Question: ***After covid, it is clear that ICT is now essential for the operation of society in general, requiring users and industries to have increasing levels of confidence and security in the technology itself. How can we overcome this roadblock to an open, global, ICT market, facilitating the industry digital transition worldwide?***

We have organized a session "Cyber security standards norms and approach" at WSIS Forum 2020, which included the representatives of leading industrial companies, academic and standardization bodies. Rough consensus was achieved along key lines in a session followed by a large audience.

The COVID-19 pandemic moved us towards an increasingly globalized connected society. We are relying all our technical infrastructure, and the society itself, increasingly on ICT. But we cannot progress towards a globalized ICT society without addressing the cybersecurity challenges.

It is clear that we need enhance the trust and security of ICT. This is not a problem easy to solve. But this is a problem that definitely will require the participation of everybody. Cybersecurity is a shared challenge. All stakeholders have responsibilities in developing it: government, business, academia, and civil society. We need to find common grounds between all these stakeholders, in order to develop an effective articulation. All the stakeholders need to understand what their respective responsibilities are and where each stakeholder can contribute.

From a technical point of view, we need to define a common technical ground to address both trust and cyber security challenges. We need to have standards that protect the society, that decouple the reality of the cybersecurity problem from the multiple media exploitations of the problem: levels of cybersecurity should exist, which should be mapped to the requirements of different scenarios.

Globally recognized Testing and Certification Regimes may overcome many of the challenges that are perceived currently. This approach is currently being considered in multiple places. New mobile-industry specific approaches are being developed by 3GPP (SECAM/SCAS) and GSMA (NESAS) to provide 5G-

specific evaluation processes. A universally-agreed baseline level, e.g. as might be provided by SCAS/NESAS, would be helpful for the future.

CYBER FUTURE FOUNDATION

Mr. Valmiki Mukherjee
Chairman and Founder

Question: ***What are essential cybersecurity hygiene measures that users, especially the elderly and senior citizens can take to be safe in the internet? What are lessons learnt from the past and anticipated challenges that these users would be thinking about in future?***

From our recent research in this area towards WSIS Summit's workshop on 'Cybersecurity for Seniors and our Social Responsibility' we uncovered a significant risk within cyber security apparatus and ecosystem for the seniors. While this may be specifically true for seniors, the underlying issues is very much applicable to everyone that Is involved in the use of ICTs. What I believe is that from our research is that, seniors are specifically vulnerable to the cyber threats, some deliberately targeted towards them, and the information and resources available on the Internet in general do not yet adequately protect them.

Seniors are one of the largest segments of population and growing. They are getting a lot of information and services directly from the internet into their mobile devices. With this increasing use, there is a significant increase on the online fishing telephone phishing scams confidence and romance fraud and identity theft. As the population of the segment of older population grows, exposure of the ICT users to the multitude of cyber threats such as identity theft and opportunities that cyber criminals can take to exploit them, and exploit the data associated with them grows.

Several cyber threats of plague the seniors in the cyberspace. This includes but is not limited to, purchase tricking, fraudulent charging, coercing of Personally Identifiable Information (PII), proxy accounts develop their false offers many unscrupulous service providers and pyramid scams. The dependency of the seniors on the ICT usage and their exposure, put together forms a vicious circle in a very exploitable nexus that seniors.

To address this situation, the WSIS community and the industry needs to work on increasing awareness in the cyber security community on the specific needs of cybersecurity challenges threatening the seniors, so that they can protect themselves. We also need to work on advancing the cyber protection mechanisms for seniors through technology.

We recommend that the seniors can take a lot of actions themselves by staying informed and vigilant about cyber threats and taking positive steps towards cyber hygiene. This includes password protecting digital devices, install tools to protect devices, learn to recognize Fair vs. Fake in the digital world.
The industry can take specific and holistic action to protect seniors in cyberspace support with some serious innovation - Cybersecurity is complicated and confusing for the elderly, this should be addressed. We can also raise awareness amongst care givers and law enforcement of the various issues related to cyberthreats against the elderly. With this we can increase the confidence and trust in the use of ICTs amongst one of the most vulnerable but significantly large user base of users, the seniors.

EC MEDICI FRAMEWORK

Prof. Alfredo Ronchi
Secretary-General

Question: ***How the perceived utility of the services offered by ICT has changed after the lockdown imposed by the pandemic?***

Excellences, distinguished delegates, stakeholders, ladies and gentlemen, good afternoon/morning/evening, it is a great honour and pleasure to be here today to contribute to the WSIS Forum.
Cyber technology is pervasive, and its key role is growing up every day, citizens consider cyber technology as a commodity. Mobile devices represent the most recent revolution in both technology and society, they are perceived as something different from computers even if they play, among the others, the same role, and immediately they became part of our daily life, a wearable accessory as our wallet or wristwatch. Mobile devices are nowadays used by formerly digital divided citizens having no idea about potential drawbacks. As a side effect of globalisation and massive use of cyber services the number of crimes both perpetrated at local and global level is growing up.

Dealing with perceived utility today we will mainly focus on the role of ICTs on the occasion of the crisis generated by the pandemic, but we could extend the discussion even to natural or human disasters, warfare, criminal events and more.

On the occasion of the 2015 WSIS Forum His Excellence Mr Yasuo Sakamoto, Vice-Minister for Policy Coordination, Ministry of Internal Affairs and Communications (Japan), said – "on the occasion of natural disasters ICT is the lifeblood to ensure citizen's safety" and Mr. Sunil Bahadur Malla, Secretary, Ministry of Information and Communications in Nepal, said "ICTs were crucial in recovering the territory during and after the recent earthquake".

In case of crisis one of the aspects to be carefully considered is an affordable and easy access to the network infrastructures both wired or wireless. Strictly connected to this we find, in general, a significant market penetration of ICT due to smart phones, tablets, and laptops. Of course, a good network

infrastructure and diffuse computational resources are not enough, a key role is played by human factors, digital-media literacy as well as, more in general, “digital awareness” of citizens.

The pandemic was surely a significant stress test for the network infrastructure all-over the world, major part of the business activities was turned into on-line activities, as well as on-line education and, last but not less relevant, on-line entertainment & social relations.
A relevant part of the activities within companies & enterprises, when and where possible, were turned on-line. This, as it happened in other sectors, outlined the existent gap between digitally savvy and old-fashioned structures. The key problem was mainly related to human capital more than technology.

In the educational environment the pandemic impacted pupils and young people from kindergarten to university including hospitalised and disabled guys. Last but not less relevant, education sector faced some problems far before the pandemic due to the existent gap between traditional courses and new generations’ interests and abilities.

We must not forget the key role played by social media, they were already a powerful tool among students both as information providers and social life active means, but on the occasion of the lockdown they became much more relevant to empower cooperative learning.

ICTs and particularly audio/video connections based on smart phones and tablets were the key solution to alleviate the sense of loneliness and segregation that affected COVID-19 hospitalised citizens.

Analysing the impact of the “switch to digital” due to the pandemic we explored different key aspects ranging between cybercrime, privacy and ethics. Security issues were mainly related to cheaters and typical scams boosted by the sudden on-line appearance of “newcomers”. As Mr Hans-Wilhelm Dünn, President, Cyber-Security Council Germany e.V. said on the occasion of WSIS: “During the current corona crisis, we see an increasement of cyberattacks. Therefore, everyone and especially older people should raise their awareness for such attacks”.

Anyway, as a positive follow-up of the present crisis we can envisage different benefits: first of all, the acceleration of the switch to distant working and learning on the way to an improved resilience of the overall system but even an empowered knowledge transmission and acquisition from the end of the crisis onward.

Now is the time to think about the future organization by taking advantage from the experience gained and adopting the best solutions to achieve a resilient society.

To conclude the global lockdown represents a unique opportunity to bridge a number of gaps and reshape our future, thinking out of the box, identifying what is useless, deleting biases due to custom, rethinking processes and protocols.

This is the time for action, the question is “Leading the change or missing the opportunity?

E-SENIORS

Ms. Monique Epstein
Founder

Question: ***How do we persuade seniors not to be afraid of ICT? How to live safely with Internet and what are your digital rights?***

In 15 years no real rejection.
We try to demystify the subject

❖ explain with simple words, with a lot of patience and nearly F2F (one2one) conditions
❖ show how life can be better with Internet and online communication
The new online openings:

• online learning, banking, buying and comparing prices,
• talking to people on Skype + video - social networks -> fighting isolation
• e-administration
• finding a job or training
• information about cultural events
❖ for people staying at home
• remote assistance = medical and social follow-up care
• prevention = smoke and fall detectors
• cognitive stimulation = warding off depression and memory loss / online games

General Data Protection Regulation (GDPR) has applied in 28 European countries since May 25, 2018.
Let us all be active, attentive and responsible cyber citizens

Our data is used for advertising purposes, to better target potential customers
for example, companies will display on our browser or our Facebook page products that we want to buy: this after and by comparison to a previous following purchase on Amazon

Our data is a PRODUCT that sells

While browsing the Internet, we are tracked and it shows our tastes and preferences

There are tools which are at the service of Internet users. Unfortunately, many of these tools are created or diverted for tracking purposes

- info backup cookies = no need to retype BUT pub sites use it to collect info

- geolocation by wifi by telephone and by IP

- IP allows to see the navigation = the preferences of the Internet user

WhatsApp, which belongs to Facebook, gives access to all your phone numbers and to the metadata of your exchanges

WIFI public networks = danger: many Wifi networks, free of charge, are available in exchange for the collection of navigation data.

Risks:

Very violent content, inciting hatred and disinformation campaigns are frequently broadcast on social networks. Always keep in mind that there is no global content regulatory authority.

Computer hacking following click on malicious link

Harassment: on Skype calls from strangers

Fakenews on sites / blogs

Phishing: a hacker pretends to be a company, an administration or a loved one to ask for passwords or account numbers.

Solutions:

Install a reliable antivirus +

Eseniors can explain you the risks and teach you how to be VIGILANT

Session Six: Inclusiveness, Access to Information and Knowledge for All

Recording: https://www.itu.int/net4/wsis/forum/2020/Agenda/Session/170

Moderated by High-level Track Facilitator:
Ms. Denisse Salas, Master Scrum, Swiss Engineering Geneva

WSIS Action Line Facilitator ITU:
Mr. Guy Berger, Director of Strategy and Policy, Communication and Information Sector, UNESCO

The presentation focused on the constitutional, statutory and/or policy guarantees for public access to information (SDG 16.10.2) and its possible impact on vulnerable groups, especially in the digital world. The linkage is also made with other SDGs such as SDG 4, where UNESCO emphasizes and affirms the importance of access to information and open technologies to ensure inclusive and equitable education for the vulnerable. The organization also mainstreams SDG 5 in advancing inclusive access to information policies that guarantee access to information to all women. Digital inclusion is also advanced in relation to SDG 9 in insisting on resilience through open science and open solutions to eliminate disparities.

In advancing these SDGs, UNESCO is engaged in a variety of modalities to assist stakeholders to achieve universal access to information. UNESCO promoted norms and standards for universal design such as the

Recommendation Concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace. It is also convening stakeholders across constituencies through international engagements such as the International Decade for Indigenous Languages (2022 – 2032) and the celebration of the International Day for Universal Access to Information. Integrated policy advice is also provided by using publications such as the UNESCO Learning for All: Guidelines on the Inclusion of Learners with Disabilities in Open & Distance Learning. Finally, capacity development initiatives are spearheaded to report and monitors all activities relevant to SDG 16.10.2 while taking into considerations top priorities, such as access for persons with disabilities and gender.

As a result of these engagements, UNESCO would formulate the following recommendations as strategies to leave no one behind:

- Create national legislation for digital accessibility. Nations should develop laws to meet the ICT accessibility requirements, including as it relates to language survival in cyberspace.
- Implement Universal Design to Learning to reduce the barriers in education by providing appropriate accommodations, supports and challenges while maintaining high achievement expectations for all learners.
- Raise awareness about the benefits of open access to scientific information among policy makers, researchers and knowledge managers to foster partnerships and collaborations; open access to scientific information is also an essential tool to build resilience to climate change and health crises.
- Encourage and support capacity-building to produce local and indigenous content on the Internet.

These recommendations will make headways in addressing digital exclusion and addressing the specific needs of vulnerable groups.

Speakers:

1. **Bulgaria**, H.E. Ms. Andreana Atanasova, Deputy Minister, Ministry of Transport, Information Technology and Communications
2. **Thailand**, H.E. Mr. Newin Chochaiyathip, Vice-Minister, Ministry of Digital Economy and Society
3. **Lesotho**, Ms. Mamarame Matela, Chief Executive Officer, Lesotho Communications Authority
4. **Portugal**, Mr. João Cadete de Matos, Chairman of the Board of Directors, Autoridade Nacional de Comunicações (ANACOM)
5. **International Chamber of Commerce (ICC)**, Mr. Crispin Conroy, Ambassador, Representative Director and Permanent, Observer to the UNOG
6. **Bangladesh**, Mr. AHM Bazlur Rahman, Chief Executive Officer, Bangladesh NGOs, Network for Radio & Communication
7. **Global Initiative for Inclusive ICTs (G3ict)**, Mr. Axel Leblois, President

Executive Summary by High-Level Track Facilitator

Due to COVID-19 pandemic, more than ever the importance of connectivity, inclusiveness, access to information and knowledge for all is a necessity and is a right under the Universal Declaration of Human Rights as explained the panellist of UNESCO. Countries around the world are suffering with problems of misinformation and disinformation during this crisis. The necessity of regulatory policies and international cooperation in policy making is fundamental to increase security, to access accurate information, and to protect people's privacy.
The panellists represent public and private sector, international organizations, academia, technical community and civil society. They shared projects and initiatives designed to help their respective countries and communities to face this pandemic.
Vision

• Creation of International cooperation in policy making and regulatory policies to ensure access to information, reduce disinformation and misinformation and ensure privacy and security for civil society.
• Internet Universality: The Internet should be for everybody everywhere, it should be open, it should be accessible, and it should be governed with multi stakeholder participation. That is what UNESCO call ROAM, Right Openness Accessibility Multi stakeholder.
• Universal Knowledge, international cooperation, open solutions have to be shared, especially in covid-19 crisis for global development.
Inclusiveness, Access to Information and Knowledge for all taking into account the level of development of countries, language diversity, creation of local content, people with disabilities and disadvantaged population.
• Private sector plays an important role in helping to bridge connectivity and adoption gap, to address digital skills deficiencies and capacity building because digital adoption can boost sustainable development and economic growth.
ICC highlighted that meaningful and inclusive connectivity, campuses broadband that is not just available, accessible and affordable but also safe and trusted, empowers users and has a positive impact in their lives.
• Reduce barriers to digital transformation.
• Global Internet access requires and effective multi stakeholder government model.
• Mr. AHM Bazlur Rahman, CEO of Bangladesh NGOs Network for Radio & Communication, highlighted the role that community radio stations is playing during covid-19 pandemic. The use of local languages and dialects, creation of local content, use of social media for broadcasting, mobile journalism in order to raise awareness, build trust and reinforcing behaviour change, build resilience in the community.
• Mr. Axel Leblois, president of G3ict, highlighted the importance of including and involving persons with disabilities in policy making processes for digital accessibility in order to meet their needs related to access to information and inclusiveness. He also highlighted that countries are not putting enough efforts to coordinate digital accessing policies for persons with disabilities.
Fresh priorities

UNESCO: Improve Internet Universality, gender equality, and the development of the African continent.

Bulgaria: As a new country of the EU, Bulgaria has a national strategy to prevent the consequences of digital divisions for 2020-2030: Digital infrastructure, cyber security, R&D, education, transport, economy, health, education and training are the key areas of intervention.

Thailand: Ensure accessibility to Internet service as a basic utility, especially in this time of crisis (Covid-19). The Royal Thai Government collaborates with Internet service providers ensuring that Internet is readily available and accessible for all.

Lesotho: Ensure that information found in Internet is accurate specially when dealing with the covid-19 pandemic. Lesotho is in the process of developing legislative provisions to ensure access to information that is accurate for their citizens specially in relation with health.

Portugal: Telecommunications and Internet access for the entire population of Portugal is the priority. Currently Portugal is working in a project in rural areas without good Internet access to maintain the TV broadcasting service, thus ensuring that students can continue school classes and guarantee information and knowledge access to all population.

Bangladesh: Focus in Covid-19 adaptation plan to respond to the crisis impacting radio broadcasting community, enhancing capabilities of affected communities through an equity lens. Acceleration of ICT applications that benefit the community (e-education, e-health, e-business). Effective access to information and Communication Technology for countering info-demic.
Emerging trends

Many panellists highlighted the importance of having and sharing universal knowledge, specially during covid-19 crisis; developed countries can share information with developing countries and vice versa. Mr. Guy Berger representative from UNESCO mentioned as an example the case of Rwanda that had developed an effective algorithm to do Covid-19 testing.
Many panellist highlighted the importance to work with Multi-stakeholder model in the ICT policy development in order to use the existing potential in the best possible way and share good practices and the need to fight against info-demic (misinformation and disinformation) so that the population have access to reliable and accurate information.
Example of case studies

1. ICC, has launched a collaborative action project to assist SMEs, which have been disproportionally affected by the crisis; this campaign has saved the concerned SMEs and consist in a number of tools and training around digitalization that are published and available in the ICC web site.

2. Thailand explained that during the Covid-19 crisis the government worked closely with Internet service providers and Thai regulators in order to ensure availability and accessibility of Internet, taking the following measures:

• Higher quality Internet with speeds up to one gigabyte was provided for medical personnel to be able to access information via Internet.
• Connecting CCTV system for patient monitoring to minimize direct contact with patients.
• The Ministry of Digital economy and society worked with the Thai regulator and service providers to lessen the burden on people who now have to work from home by providing extra 10 gigabyte of data for mobile phone users and offering hundred minutes voice calling for 45 days free of charge.
• For the government sector, unlimited free access data to video conferencing and emitting tools has been provided in order to ensure that people get accurate information from reliable sources.
• The anti-fake news centre of Thailand has been set up with the primary objective of monitoring and inspecting information on social media to analyse and identify fake news.
• Collected data related to covid-19 is reported daily to the government centre of Covid-19 situation administration.

3. G3ict is concerned about the poor progress that the governments are making to improve the ICT accessibility for persons with disabilities, knowing that 90% of the countries have a law that protect them. G3ict conducted a study in order to identify the key factors of this problem. They found that the first factor is the absence of an entity in governments dedicated to ICT accessibility. Only 39% of countries have it. The second factor is the absence of persons with disabilities participating in policy making and monitoring digital accessibility, only 26% of countries involved persons with disabilities for that subject. The last factor is training and capacity building as explained by Mr. Alex Leblois president of G3ict.

Opportunities

H.E. Mr. Crispin Conroy, ICC Representative highlighted that before covid-19 crisis the rapid shift to digitalization was evident and this pandemic has increased this momentum, in addition more investment is needed in capacity building programs that increase digital literacy and skills.

Key challenges

• According the UNESCO's panellist only 126 countries in the world have a law that guarantee access to information for their citizens. Political progress is necessary in order to ensure access to information in all countries.
• The importance of universal broadband access to enable essential services and social cohesion.
• The panellist from ICC strongly encourages governments to expedite the conclusion of a new global framework of rules governing e-commerce under the World Trade Organisation, that will be a significant outcome for SMEs in all countries.

Road ahead

• The importance of including persons with disabilities in the process of policy making in order to cover all their needs.

• The importance of a clear and concise legal framework to reduce disinformation and misinformation and ensure access to accurate information and at the same time ensure people's privacy.
Key achievements, announcements, launches, agreements, and commitments

• Deciphering COVID-19 disinformation Policy brief 1 and 2 https://en.unesco.org/covid19/disinfodemic

• UNESCO website with stories of disabled people that succeed
https://story4development.org/home-page
https://en.unesco.org/LT4All

• Recommendation for promoting the use of multilingualism and universal access to cyberspace
https://en.unesco.org/themes/linguistic-diversity-and-multilingualism-internet/recommendation
https://en.unesco.org/internet-universality-indicators

• UNESCO will launch in 2020 the World Atlas and languages

Main links with Sustainable Development Goals

• Goal 1. End poverty in all its forms everywhere
• Goal 3. Ensure healthy lives and promote well-being for all at all ages
• Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
• Goal 5. Achieve gender equality and empower all women and girls
• Goal 6. Ensure availability and sustainable management of water and sanitation for all
• Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all
• Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
• Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
• Goal 10. Reduce inequality within and among countries
• Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable
• Goal 12. Ensure sustainable consumption and production patterns
• Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

BULGARIA

H.E. Ms. Andreana Atanasova
Deputy Minister
Ministry of Transport, Information Technology and Communications

***Question*: What is and is to be done for sustainable development?**

Dear Mrs Salas,

Dear Colleagues,

Ladies and Gentlemen,

It is a pleasure for me to take part in the Panel dedicated to the inclusiveness.

I would like to share with you the Bulgaria views on this issue.

Internet usage has kept growing over the last 15 years, to reach a level of connectivity that is transforming almost every sector of the economy and accelerating social and economic advancement.

The COVID-19 pandemic shines a spotlight on the vital importance of digital technologies and services, but also on startling (стартлинг) digital disparities. 3.6 billions people worldwide still have no connectivity at all - these people have been deprived (дипрайвд) of the digital lifeline that has been instrument in keeping economies and societies going during this crisis. In a world that has never been so dependent on the power of digital technologies, we must redouble our efforts to make sure that all people regardless of gender, ability, age and location enjoy equal access to digital platforms and services.

The importance of universal broadband access to enable essential services and social cohesion must bring a new urgency to eradicating (ерадикейтинг) the digital divide globally and promoting digital inclusion. We have to ensure that the digital infrastructure, services, and applications, fundamental in this crisis, are accessible to all and that everyone's right to communicate and be part of the digital world is fulfilled.

The aim to develop and deploy communications technologies that are 'born accessible' is a key pillar of the **European Commission's Accessibility Act**. But the pandemic has highlighted the need for a multi-stakeholder collaborative effort to plug some gaps.

Bulgaria, as most EU countries, has taken various measures to prevent the consequences of the digital divides:

- We have a **National strategic document called "Digital Transformation of Bulgaria for the period 2020-2030"**. It takes into account the Unated Nations Sustainable Development objectives and the use of digital technologies to achieve them. The goals and priorities included in the document are in strategic areas such as digital infrastructure, cybersecurity, R&D, education and training, economy, transport, healthcare, and digital governance. Bulgaria can build on the strengths in advanced digital technologies to take advantage of the opportunities offered by 5G networks, IoT, big data, robotics, blockchain, 3D printing and artificial intelligence. Education and training are identified as key areas of intervention.

- Our Ministry is currently working on an update of the **National Broadband Infrastructure Plan for Next Generation Access** focused on deploying high-speed networks in rural areas; efficient provision of radio spectrum for wireless broadband and 5G; and accelerated development and use of broadband services. The COVID-19 pandemic has slowed down some of the spectrum delivery processes for 5G. The activity of the operators became more difficult, especially in the practical preparation for the construction of 5G networks and in supplying the equipment for them. Under these conditions, in Bulgaria we plane the provision of radio spectrum for 5G to start before the end of this year with award for available spectrum in the 2.6 GHz and 3.6 GHz bands. Currently in Bulgaria, the mobile broadband internet access take-up reaches 103 subscriptions per 100 people wich it above the EU average. The coverage with next generation high-speed broadband access in Bulgaria increased to 77% in 2019, compared to 75% in 2018 and is close to the EU average - 86%. Bulgaria ranks 10th place in EU concerning the index of the price of broadband Internet access, as prices are lower than the EU average, mainly for fixed services.

- The **National program "Digital Bulgaria 2025"** identifies measures to improve competencies in the field of ICT and increase the number of qualified ICT professionals.

The COVID-19 pandemic highlighted an already set priority for ensuring a stronger and more sustainable digital transformation. The use of advanced digital technologies will increase productivity, improve efficiency and open up new opportunities for the business in all sectors. And that is valid not only for Bulgaria but for every country in the world. Therefore we support the multistakeholder model in the ICT policy development in order to utilise the existing potential in the best way. And the ITU activities, and WSIS forum in particular, provide the right opportunity for the much needed widescale international cooperation in this area.

THAILAND

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

Question: What are the Thailand's key policies on information and knowledge access during the COVID-19 pandemic?

Excellencies,
Distinguished Participants,
Ladies and Gentlemen,
It is my great honor to attend this online session of the WSIS (วีซิส) 2020 and I would like to thank ITU for making today's event possible during this worldwide health crisis.

Before I respond to your question, let me begin with the last successful year, Thailand was immensely appreciative of being recognized as a winner of the WSIS (วีซิส) Prizes 2019 in the category of "information and communication infrastructure" for our Village Broadband Internet project or "Net Pracharat". This project aims to reduce inequalities of Internet access and provides greater opportunities for all, particularly the rural people across the country.

Currently, 24,700 villages have already been provided with the fiber optic network, the number of Net Pracharat registered users, up until now, amounts to nearly 8.5 million, and increases on average 2 hundred thousand users per month.

This successful project keeps expanding and leads to another initiative called "Digital Volunteer". We formed a volunteer network, recruited locally, to help and teach people in the community on how to harness digital technologies in the most effective and efficient way such as learning about credibility of information and knowledge, suggesting basic data analytic and raising awareness of online threats.
Excellencies,
Ladies and Gentlemen,

During the COVID-19 situation, Thailand is aware of the importance of access to information and knowledge, to ensure accountability as well as to develop implementation of Government's policies on solving the crisis.
/provided…

First priority, we shall ensure the accessibility of internet. It proves that the internet service should be important like a public basic utility, especially in a world crisis that we are facing today. The Royal Thai Government collaborates with Internet service providers, ensuring that the Internet is readily available and accessible during the pandemic. For example, high quality internet with the speed up to 1 Gbps was provided for medical personnel to be able to access information via Internet, and to connect CCTV system for patient monitoring to minimize direct contact with patients.
Second, the affordability for all is one among the other policies. The Ministry worked with the Thai regulator and service providers to lessen the burden on people who now have to work from home. By providing an extra 10 GB of data to mobile phone users and offering 100 minutes of voice calls, for 45 days with free of charge. For the government sector, we also provided unlimited free data access to video conferencing and e-meeting tools.

Third, to ensure that people get an accurate information from reliable sources, the Anti-Fake News Center Thailand has been set up to primarily monitor and inspect information published on social media, as well as to analyze and identify fake news. All the collected data related to COVID-19 is reported daily to the Government's Center of COVID-19 Situation Administration.
Lastly, the word "All" is the most important policy, we could not have done this without the support and strong cooperation from all stakeholders including government, private sector, medical staff and the Thai people.

Today the COVID – 19 in Thailand is under control, and I am glad to say that zero new domestic cases declared since the fourth May. However, we must not let down our guard and continue actively fight against it by leveraging digital technologies.
Thailand stands the commitment to work with the ITU Members and ITU, providing access to information, sharing knowledge and best practices, and always putting our best efforts to achieve the SDGs as well as to uplift the standards of living of our people.
In closing, I wish you all the best and we shall overcome this together and hope that everyone will stay safe and healthy.
Thank you.

LESOTHO

Ms. Mamarame Matela
Chief Executive Officer
Lesotho Communications Authority

Question: ***The role of a sound legislative framework in balancing the right to access to information and the right to privacy in the fourth industrial revolution?***

Statement missing

PORTUGAL

Mr. João Cadete de Matos
Chairman of the Board of Directors
Autoridade Nacional de Comunicações (ANACOM)

Question: ***When we speak of inclusiveness and access to information, what first comes to mind is access to modern communications means and in particular to the internet. But other forms of access to information are also very relevant in some situations.***

That is the case of access to the basic broadcasting television service by people that are not able or willing to use the internet, be it for absence of material means (equipment, infrastructure) but mostly for lack of digital literacy.

I hear that ANACOM has been involved in quite an interesting project related to giving access to information for disadvantaged population groups in the context of your digital terrestrial television migration. Can you share your experience with us?

Access to information and knowledge is one of the goals of ANACOM. So, we strive to combine all possible ways to guarantee access to good communications means to all the population in the country, telecommunications and internet access being one of the priorities.

This year, in preparation for the launching of 5G, we have to migrate the transmission of the digital terrestrial TV to a new band. This migration requires our authority to carry out several actions to guarantee that all the population is able to access the TV broadcasting service, namely to students that were following school lessons on TV during the pandemic crisis.

In fact, there are some regions, mainly in the rural areas, and groups of population (socially disadvantaged), where people do not have access to the internet in good conditions to follow remote classes. So, a program dedicated to the transmission of school lessons by teachers on public broadcast TV service was launched, to reach those students.

It was particularly relevant to maintain the broadcasting TV service fully accessible in the context of the pandemic crisis, for disadvantaged populations in general and for students in particular, who could continue to have the contact with the schools through this TV service.

ANACOM's action in the TV migration process involved the operation of a call center to help the population solve the problems that might occur in this process, but also to have our own staff dedicated to directly help the affected people, with teams going to the families houses whenever the problems could not be solved remotely. This process was working well before we had to interrupt it due to the COVID pandemic.

We will continue this process next month and we hope that this provides a good service in guaranteeing access to information and knowledge for all the population.

INTERNATIONAL CHAMBER OF COMMERCE (ICC)

Mr. Crispin Conroy
Ambassador, Representative Director and Permanent Observer to the UNOG

Question: ***What is the role of the private sector in creating inclusive information and knowledge societies for all?***

ICC's mission is to make business work for everyone, every day, everywhere. We cannot fulfill that mission if people are not connected, able to reach services or equipped to use the latest technologies.

We believe that meaningful and inclusive connectivity encompasses broadband adoption that is not just available, accessible, and affordable, but that is also safe, trusted, empowering users and leading to positive impact.

To achieve that, non-technology and non-economic issues play a central role in decisions to participate online or not, such as lack of digital skills, linguistic and literacy barriers, social norms, and cultural attitudes.

The COVID-19 crisis has also exposed and exacerbated gaps between those who have access to digital technologies and the opportunities that they bring – and those who do not. The sad truth is that those often without meaningful access – women and girls, migrants, refugees displaced persons, citizens of rural and remote communities – are the very people who would benefit most in relative terms from the gains in development that digitization can bring.

Today 3.6 billion people are still without access to high-speed internet. We cannot allow the world to fragment between the haves and have-nots. And to be sure, business recognizes the absolute imperative – in both moral and economic terms – to play a full part in enabling an inclusive digital future.

As we are looking to build back better from the pandemic, it is still uncertain, what the new normal will look like. But one thing is clear: achieving meaningful, universal connectivity will be a vital component of a post-COVID recovery.

Business has a key role to play to bridge the connectivity and adoption gap, and to address digital skills and capacity building. Digital adoption can boost the economic growth and sustainable development.

Businesses invest in infrastructure: In 2016 the Broadband Commission estimated that connecting a further 1.5 billion people by 2020 would require US$450 billion in high-level infrastructure investment.

They propose creative strategies around commercially viable models for providing coverage to rural communities. Coverage remains a challenge and connecting the remaining unconnected populations will become increasingly complex and costly with current technologies and business models

Businesses also invest in local digital content, firms, and services to increase demand, which will speed up digital development and increase adoption.

On top of that, further significant investment is needed in capacity-building programmes that increase digital literacy and skills among world populations. We also need to make sure to provide relevant content, services and applications that are available in local languages and that serve the needs of local communities.

Businesses alone cannot meet all the investment needs. In order to continue and up-scale business investment, it is important that policy makers understand the means by which the private sector makes investment decisions, as well as how political and regulatory decisions impact the technical functioning of the infrastructure or service.

For example, in the context of the COVID-19 crisis, at ICC we launched a campaign called Save Our SMEs (SOS) that is based on such collaborative action and information sharing. We worked with partners from international organizations like WHO, ILO and UNICEF, with companies like Amazon or Facebook, with non-profits like the Cyber Readiness Insititute and with local chambers of commerce from the Gambia to Canada to gather and offer resources, support, policy advice and training for MSMEs as they are battling this crisis. With our partners offer tools and training on cybersecurity, digital rapid response measures by banks or making use of digital to make sure trade finance, supply chains, dispute resolution or brand protection continues in this current unprecedented context and support the backbones of our economies, the MSMEs.

As all stakeholders and communities across the globe came together in the face of this cirisis, it is the same spirit of cooperation we need to embrace to build back better, bring the other half of the world online and bridge the existing divides.

It is imperative for us that all businesses have equal opportunities to reach their providers, buyers, consumers, to be able to deliver their services and in turn benefit from technology to upscale their operations, provide jobs and help expand national economies. For this, we need put in place an enabling environment for innovation and investment in digital technologies. “Enabling environment” is not a catch-phrase or a euphemism for deregulation or relaxing of tax systems or consumer safeguard rules.

It is vital that we get the fundamentals right from a public policy and ecosystems perspective.

We need to reduce barriers to digital transformation and unlock the development gains, most fundamentally by creating a stable and enabling policy and regulatory environment that enables innovation, welcomes new entrants into our digital ecosystem and values new forms of competition.

On a related note, it is imperative that we maintain open markets and ensure the free flow of data across borders. Digital innovations can be crippled without the fluid movement of information between countries, and – while privacy and security concerns form a legitimate bias for placing limits on data flows – they should not be used arbitrarily to restrict trade and innovation.

An inclusive digital transformation will also require an all-encompassing, whole-of-government approach to policy making. The deployment of digital technologies can, of course, raise a wide range of economic, technical, and socio-cultural questions – many of which are rightly detailed in the Secretary General's roadmap. Too often though, these issues are dealt with in 20th Century silos, rather than in the holistic way needed to build truly enabling environments to maximise the potential of digital innovation.

The intrinsically global nature of the Internet and digitally-enabled services also necessitates an unprecedented degree of international cooperation in policymaking if we are to make technology work for all.

To take just one example: fragmented national laws and regulations all to often inhibit the ability of entrepreneurs to leverage the vast power of the Internet to trade internationally. Given the devastating effects that COVID-19 has had on small businesses, there can be no excuse for governments not to expedite the conclusion of a new global framework of rules governing e-commerce under the auspices of the World Trade Organization.

Finally, at the heart of strenghtened digital cooperation, must lie strengthened multi-stakeholder partnerships between business, governments, the technical community and civil society. In areas of rapid technological development, leveraging private sector expertise will be essential in making informed policy choices.

What's more, the very nature of the global Internet necessitates an effective multi-stakeholder governance model to be at its core. To this end, we are pleased to participate in the WSIS forum every year and we need to ensure that this important mechanism is strengthened, agile and capable of supporting an inclusive and interdependent digital world.

The International Chamber of Commerce, and its global network of 45 million businesses in more than 100 countries, stands ready to do all it can to enable meaningful digital inclusion in the years to come.

But business does not operate in a vacuum. Nor can it act alone. Effective digital collaboration between all stakeholders will be vital in achieving a recovery from COVID-19 that, "leaves no one behind".

COVID-19 shows us quite clearly the imperative for global cooperation in the face of global challenges. Digital technologies present, to be sure, challenges. But, thankfully, they also present almost unique upsides.

Thank you.

BANGLADESH

Mr. AHM Bazlur Rahman
Chief Executive Officer
Bangladesh NGOs Network for Radio & Communication

***Question:* Role of Community Radio Broadcasting in COVID-19 Crisis in Bangladesh**

Bangladesh NGOs Network for Radio and Communication (BNNRC has been mobilizing all community radios for developing and broadcasting awareness building programs on COVID-19: contamination to protect lives and livelihoods since March 1, 2020 in line with the Inclusiveness, Access to Information and Knowledge for All

In this perspective, we have been working on COVID -19 covering with three objectives:

a. Animate CSOs, Government, health service providers and communities for reinforcing collective action.

b. Keeping community people's daily life normal and livelihood function

c. Mobilize further cooperation among government, CSOs, local market and communities' response

In times of crisis, information saves lives. In the response to Covid-19, we see how vital it is to get accurate and trusted messages to people so that they know what they need to do and where they can get help when they need it.

Now 18 Community Radios stations and two Community visual radio station in Bangladesh have been broadcasting 165 hours Coronavirus prevention education. There are 200 community youth and youth women working as community broadcaster.

Bangladeshi Community Radio stations have played a pioneering role for promoting COVID-19 program through Community Radio & Community Visual radio!

We have the pleasure to inform you that regarding Community Radio Response to the COVID – 19 Pandemic in Bangladesh Forbes magazine has published special coverage on Apr 3, 2020

Constraints for community media in the post-pandemic world

a. The rapid social distancing & Quarantine/ Isolation have caused massive pressure on the community radio sector extremely due to short notice.

b. Fundraising process have been cancelled and revenues such as advertising income are drying up overnight resulting in immediate cash flow problems, cuts in grant-funded projects / Many community radio stations have few or no cash reserve to tide them over situations like this.

c. Without swift, substantial and simple financial help from government, community radio stations such as community radio stations will have to face difficulties in the coming days and weeks.

d. Due to lockdown, out of 1000 broadcaster only 200 broadcasters able to join the radio stations physically rest of 800 broadcasters have been working from Home/Access to information/ No way to assess to information verification- only govt. information

e. Continuous fights with misinformation and disinformation /No previous Broadcasting experience during pandemic / No guideline for COVID-19 reporting/Traditional Radio format s are also big challenge

Continued relevance of community media in the age of digitization and digital media
Community Radios stations, as one of the source of information, helping to raise awareness on COVID- 19 and reinforcing Behavior Change Communication (BCC) by CSOs, Government, health officials and locally elected bodies (LEB).

Community Radio stations are building awareness to change attitudes among community people at different points in their daily lives. Community Radio stations, as a platform for those who involve in COVID -19 responses to update rural communities. They are also providing a channel for two-way communication with community people where listeners are sending SMS or call in with questions.

Community Radio stations are broadcasting programs on COVID -19 in local languages or dialects. Community Radio stations are producing contents which speaks directly to localized issues and concerns, and features trusted local people in a way that nationally or regionally produced content cannot.

Community Radio stations have utilize Facebook, YouTube and exercising mobile journalism for live broadcasting /Most of the listeners have been listening Community Radio through Mobile set.

Experiences of movements and networks in negotiating with governments on opening up third-sector media

a. It is continuous efforts - not a onetime matter
b. multidimensional approach – DRR and SDGs
c. Increase collective action/ Ensure visibility to the policy maker

State of civil society across the world give rise to optimism about the future of community media

a. Rethinking future of community media in line with New Media Eco System
b. New Actor - New Technology – New strategy – Internet as a backbone

There are four way to reform/transformation to shape the response to the crisis community broadcasting

- Enhance the capabilities of affected communities through an equity lens for adapting/coping/surviving with the new normal situation
- Focus on enhanced capabilities of Broadcasters and Stakeholders for exercising new normal and building resilience
- Accelerate of ICT applications for benefitting community people in all aspects of life
- Effective access to Information and Communication Technology and media for countering info-demic and for keeping lives & livelihood easy providing reliable information

Community Media Practitioner:

- Build knowledge: latest scientific findings, through virtual sessions and online learning
- Amplify trusted information: debunk myths in communities around the world through direct outreach, social media holder campaigns and thought-leadership on the Agenda
- Increase collective action: support public health systems, protect livelihoods and help build more inclusive community responses.

Community media and rural communities:

Now the community people are taking precautionary measures for adaptation and coping with new normal situation of COVID–19 pandemic. People now understand more about better adaptation with the COVID–19 pandemic and maintain health protocols strictly such as using of masks, washing hands, maintain social distance and avoiding public gatherings. Community Radio stations have already been established a well-trusted source of reliable information for rural people of Bangladesh.

Community radio programming is an important tool in flattening the curve, tamping down panic in line with misinformation, disinformation, and extending advice and comfort to the people most affected — wherever they live.

GLOBAL INITIATIVE FOR INCLUSIVE ICTs (G3ict)

Mr. Axel Leblois
President

Question: ***Axel, your organization, G3ict, produces the DARE Index to track progress made by countries in ensuring that persons with disabilities have equal access to digital contents and services. What key findings can you share? How do those relate to the Convention on the Rights of Persons with Disabilities and SDGs implementation?***

Digital Accessiblity: What's at Stake?

•One billion Persons live with Disabilities, of which 2/3 with severe disabilities – hearing, vision, mobility and dexterity, cognitive, speech
•Multiple barriers to perceive, understand and interact with digital information
•While solutions exist to overcome most barriers, their implementation is still limited around the world
•Affects many critical services that everyone takes for granted from television to mobile phones, web sites, e-books or electronic kiosks
•Impacts education, employment, e-government, health and emergency services and ultimately the SDGs

2020 DARE Index – Digital Accessibility Rights Evaluation Index

•137 countries Surveyed Representing 90% of the World Population
•Researched by the G3ict Advocacy Division in collaboration with Disabled People's International and regional advocacy organizations
•Local panels led by organizations of persons with disabilities or accessibility experts
•Evaluating country commitments, capacity to implement and actual outcomes

Countries Commitments to Digital Accessibility Are Progressing

Country Commitments	% of Countries with Law/Regulation/Policy 2018	% of Countries with Law/Regulation/Policy 2020
General Law Protecting the Rights of Persons with Disabilities	**83%**	**89%**
Reasonable Accommodation Defined	**64%**	**68%**
Legal Definition of Accessibility includes ICTs	**49%**	**59%**

Source: G3ict 2020 DARE Index – Comparison of the 101 countries surveyed in both years

G3ict

But Levels of Implementation of Digital Accessiblity Remain Very Low

Global Average Levels for TV, Web and e-Government and Smart Cities

Levels of ICT Accessibility Implementation and Outcomes	No policy	No implemen-tation	Minimu m	Partial	Substan-tial	Full
TV	39%	7%	26%	24%	3%	1%
Web	42%	4%	20%	30%	4%	1%
E-government and Smart Cities	**50%**	**4%**	**23%**	**18%**	**4%**	**0%**

Source: G3ict 2020 DARE Index – 137 Countries

G3ict

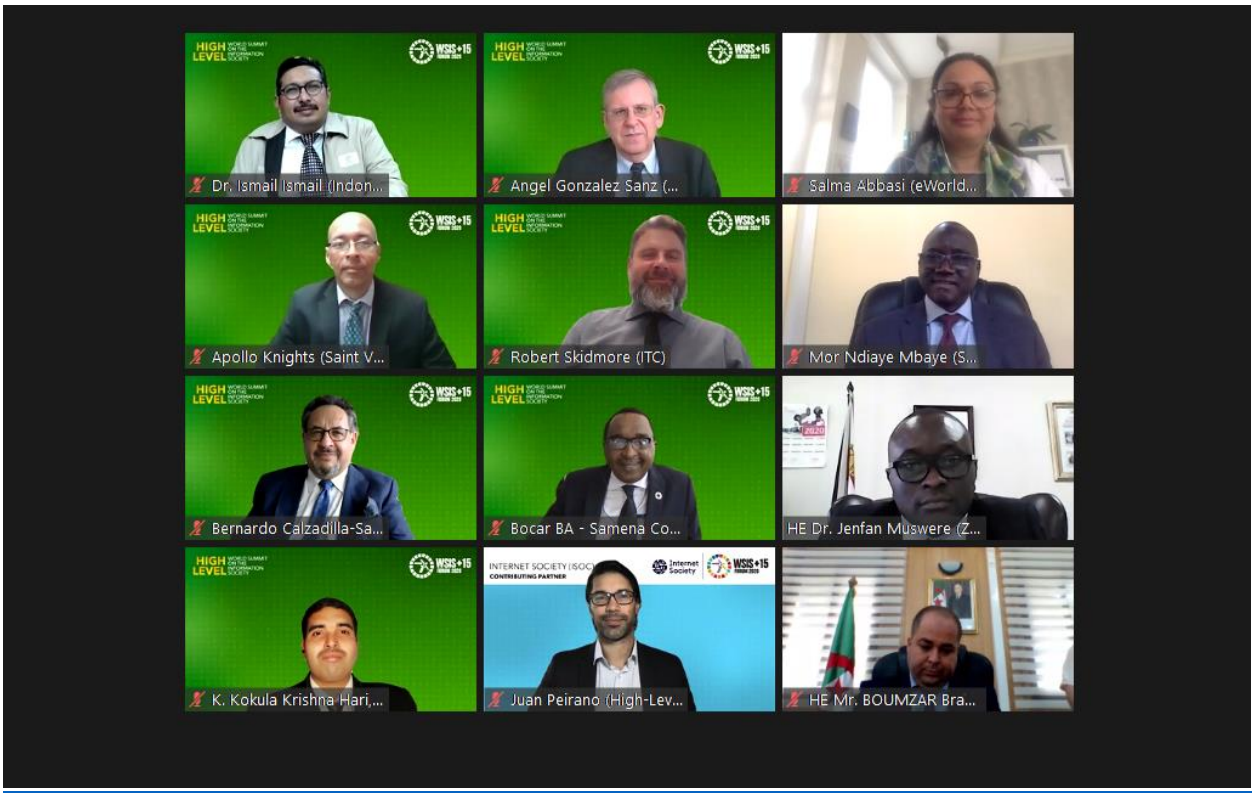
Major Gaps in Capacity to Implement

Country Capacity to Implement	% of Countries with Key Implementation Resources or Processes
Government agency for accessible ICTs	39%
Process to involve persons with disabilities in policy making on ICT accessibility	26%
References to international accessiblity standards	44%
ICT accessibility courses available at major universities or offered by professional educational services in the country	38%

Source: G3ict 2020 DARE Index – 137 Countries

Session Seven: Digital Economy and Trade/Financing for Development and role of ICT

Recording: https://www.itu.int/net4/wsis/forum/2020/Agenda/Session/172



Moderated by High-level Track Facilitator:
Mr. Juan Peirano, Policy Advisor, Global Policy Development, Internet Society (ISOC)

WSIS Action Line Facilitator ITU:
Mr. Angel Gonzalez Sanz, Chief, Science, Technology and ICT BranchDivision on Technology and Logistics, United Nations Conference on Trade and Development (UNCTAD)

Speakers:

1. **Algeria**, H.E. Mr. BOUMZAR Brahim, Minister, Ministry of Post and Telecommunications
2. **Zimbabwe,** H.E. Dr. Jenfan Muswere, Minister, Minister of Information Communication Technology, Postal and Courier Services
3. **Saint Vincent and the Grenadines**, Mr. Apollo Knights, Director, National Telecommunications Regulatory Commission
4. **Indonesia**, Dr. Ismail Ismail, Director General of Frequency Management and Postal and ICT Devices, Ministry of Communication and Informatics of Republic of Indonesia
5. **Senegal**, Mr. Mor Ndiaye Mbaye, Chief of Staff, Ministry of Telecommunication and Digital Economy
6. **International Trade Centre (ITC)**, Mr. Rob Skidmore, Chief, Sector and Enterprise Competitiveness
7. **United Nations Industrial Development Organization (UNIDO)**, Dr. Bernardo Calzadilla-Sarmiento, Director, Department of Trade, Investment and Innovation

Executive Summary by High-Level Track Facilitator

Introduction

The Panel, as the High-Level topic itself of Digital Economy and Trade, was broad and with a great deal of diversity and high expertise from all stakeholders. Also, as expected, COVID19 was at the forefront of the discussion.

The conversation started with the evolution of digital economy, experiences and policy developments in different countries cross regions (Algeria, Zimbabwe, St Vincent & the Grenadines, Indonesia, Senegal), including the effect of COVID 19. The exchange expanded also towards inclusivity, infrastructure expansion, regulatory challenges and the need of trust and collaboration, provided by stakeholder of the private sector, civil society and academia.

Vision

It is vital an inclusive, sustainable and trustworthy digital economy, fostered by national and international collaboration between all sectors and stakeholders

Fresh priorities

COVID19 has certainly shed a light onto fresh priorities across all stakeholders participating in the Digital economy. The plans towards a robust digital economy, need to consider sustainable holistic approaches. These include considerations of ICT infrastructure at all levels – from connecting the unconnected, to personal data protection and cybersecurity to protect the digital services-, innovative financial mechanism to support all sectors participating in the digital economy and how to collaborate among stakeholders to overcome the global effects of the pandemic.

Emerging trends

Societies shifted towards a virtual world. Digital economies are now not only a matter of business evolution and economic opportunities, but about the livelihood of our societies. Connectivity became a lifeline and will continue to be a lifeline. E-commerce is growing in all sectors of economy, particularly for SMEs, which are rapidly shifting to adopt digital solutions. This is an opportunity, as well as a challenge, that has to be supported with innovative funding mechanism. At the same time, work, learning - including traditional settings such as schools and Universities- , health and most of the traditional face to face services are now almost fully dependant of the digital economy. Digital literacy has become a must. At the same time with the shift towards the “new normal” of social distancing and heavy reliance of online communications, issues related to data protection and cybersecurity are now unavoidable.

Opportunities

While the global situation and challenges are at the forefront, we are in a time of opportunities for the Digital economy and Trade. International partnership and collaboration are happening more and more. Several panellists highlighted the evolution of the digital markets and economies in their countries and regions, and how developing countries are eager to achieve the levels that developed countries have.
At the same time, challenging times are pushing the boundaries for new research opportunities and the development of innovative business models to grow the digital economies. Also, evolving through capacity building and streamline effort to achieve high levels of digital literacy.

Key challenges *&* ***Road ahead***

The road towards a healthy digital economy it's directly affected on how we will address the digital divide and how we utilize the tools available to bridge it. Countries with more mature digital economies were allowed to keep moving forward during the global pandemic, but COVID 19 shed the light that if we want to have an inclusive, sustainable and trustworthy digital economy, national and international collaboration between all sectors and stakeholders is key. It is vital to understand that decisions we make to evolve the digital economy during these uncertain times, will shape the digital society as a whole for many years. In many cases the lack of trust between governments, but also between decision makers and other stakeholders in society, stifled the rapid development of the digital economies.

Almost half of the world population cannot access the benefits and opportunities of the digital economies. We need to understand the impact of the policies we implement, thinking about innovative ways to fund new solutions and technologies, massively increment digital literacy, measure the progress we make at each step of the way and leave no one behind.

ALGERIA

H.E. Mr. BOUMZAR Brahim
Minister
Ministry of Post and Telecommunications

Question: ***Algeria is a large country on the African continent and on the southern shore of the Mediterranean Sea, which has built its economy primarily on income from the export of the country's natural resources, particularly hydrocarbons. As such, Algeria is considered a middle-income country, tending to rise to the rank of an emerging country capable of digitally transforming its economy. Would you like to describe, Minister, the way in which this digital transformation of the Algerian economy is organized?***

It is now founded that information and communication technologies (ICT) constitute an inevitable lever of any regional or national socio-economic development program, in all sectors of production or service activity.

The Algerian Government has included digital development and, its corollary, the digital transformation of Algerian society, among its priorities. Its action, within this framework, aims to build the Algerian information society and to anchor Algeria to an economy based on knowledge. It also denotes a firm political will that no longer needs to be demonstrated because it is constantly recalled by the highest authorities in the country.

This commitment requires working, first, to reduce the digital divide. To do this, the action of the Algerian Government aims in particular:

- to allow all citizens to access digital networks and services;
- to develop the production and offer of digital content, especially local;
- to diversify digital uses and services;
- to renovate governance and the digital ecosystem.

To achieve these objectives, Algeria is acquiring terrestrial, submarine and space broadband telecommunications infrastructures, able to offer the necessary capacities for data exchanges with a quality of service and a safety compliant with international standards. The main achievements in this area are:

- The Algiers - Aïn-Guezzam fiber optic link, an integral part of the Algiers (Algeria) - Zinder (Niger) - Abuja (Nigeria) fiber optic link initiated within the framework of NEPAD. This link will be strengthened and secured through the construction of two routes to ensure continuity of service in the event of a malfunction. The total length of the national fiber optic backbone is 172,000 km;
- The ORVAL / ALVAL submarine fiber optic link connecting Oran and Algiers (Algeria) to Valence (Spain), currently being finalized, and which will strengthen the international bandwidth by 600 Gb/s, extendable to 10 Tb/s;
- The MEDEX link connecting the national network to the international submarine system, connecting the United States to Asia, commissioned in March 2019, and which consolidates the two already existing cables, namely SMW4 connecting Annaba (Algeria) in Marseille (France), and ALPAL2 connecting Algiers (Algeria) to Palma (Spain). It also strengthens the international bandwidth by 400 Gb/s and expandable up to 2.2 Tb/s;
- Mobile telephony using 3G and 4G technology, deployed throughout the national territory;
- The AlComSat-1 telecommunications satellite launched by Algeria in 2017, covering the fields of television broadcasting and data transmission, and which will allow:
  - to connect to the Internet, the whole of the national territory, including the isolated regions. The coverage radius of this satellite also extends to some African countries;
  - to offer users a multitude of satellite solutions and services (VSAT, IP phone, videoconferencing and geolocation, in particular);
  - to democratize tele-education and telemedicine services
  - to ensure, in the event of a disturbance on the terrestrial networks, the continuity of the connection, at relatively low costs.

Otherwise, the generalization of the use of ICT and, consequently, the advent of a digital economy in Algeria are dependent on the development of the local industry of digital equipment, content and services, which the Algerian Government is working to develop. In addition, there is the need to establish an environment of trust, which can allow an increase in commercial and financial transactions through electronic communications. For this, Algeria has endowed itself with:

- a regulatory authority for post and electronic communications, responsible for regulating the postal and electronic communications market;

- three (3) electronic certification authorities: A national authority acting as the root authority, a government authority competent to provide electronic certification services for the benefit of the Government, State institutions and the Public Administration, and an economic authority which is competent for economic enterprises;
- a legal and institutional framework promoting the emergence of an environment of trust conducive to the development of the use of ICTs.

The digital economy represents the most dynamic sector of the global economy with a growth rate equivalent to double that of the ordinary economy. Online marketing, commerce and payment can help small and medium-sized enterprises (SMEs) overcome logistical and geographic barriers, and facilitate their access to local and international markets. In this area, Algeria has proceeded to:

- upgrading its legal framework in this area, in particular by promulgating a law governing online commerce;
- the establishment of incentive financing mechanisms for the benefit of projects in the field of the digital economy;
- the development and launch of several commercial platforms;
- the implementation of electronic payment services;
- the provision of free electronic payment terminals to merchants and other organizations.

Finally, it should be noted that the occurrence of the Covid-19 pandemic was a real catalyst for the dematerialization of several services, for the remote work and learning, and for innovation, which has induced the accelerating of the pace of digital transformation of the society, in general, and the economy, in particular.

ZIMBABWE

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

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Question: ***What are the success factors for trading in the digital economy and how has Zimbabwe fared since the advent the COVID-19 pandemic?***

Last year, when my predecessor delivered Zimbabwe's Policy Statement, we thought cyclone Idai was the worst kind of disaster that could befall us. Yet here I am, this year, not able to mingle and mix with you my fellow High level Participants and grappling with an even bigger disaster, the Covid-19 pandemic, one that has fast tracked the whole world into a full-fledged digital economy, including Countries that were slowly moving towards that state and those who had not moved an inch, toward it.
The digital economy offers opportunities for increased productivity, entrepreneurship, innovation, job creation and access to new markets.
There are a number of critical success factors for trade in the digital economy, some of these relate **to businesses,** some to **Governments or Policy Makers** and some to **consumers**.

For Business, a number of factors are critical, chief among them,

- The ability to adapt to changing environmental circumstances, hence those businesses which could only do business physically, were crippled during the Covid-19 lockdowns.
- The development of data driven decision making and
- A shift in distribution channels

Given the multifaceted nature of the digital economy, it is imperative that policymakers adopt a holistic approach to address a wide range of policy areas to maximize potential benefits, while mitigating the relevant risks. Critical Policy Interventions, include:

- Promoting through subsidies and tax breaks and other policy related acts, the construction and installation of adequate ICT Infrastructure, supported by adequate energy infrastructure.
- Facilitating free flow of data, while protecting privacy
- Ensuring that public data is re-useable and discoverable

- Cutting the bureaucracy and,
- Enhancing connectivity and inter-operability of digital platforms across all Sectors, and
- Promoting innovation and entrepreneurship.

Governments need sufficient capacity to understand the changes in international technological and policy landscape in order to come up with appropriate regulatory regimes. The regulatory regime itself, should be inter-operable. Without this happening, Policy Makers can retard the pace of development. Covid-19 has shown how glaringly most Countries were not ready for digital trade, as there were serious outcries and in some cases demonstrations, for people to access physically, what could have been accessed online, during the COVID 19 related lockdowns.
Advanced technological and digital skills are essential to the development of an innovation culture, which is a prerequisite for success in the digital economy. It is therefore, incumbent upon governments to foster innovation hubs and bring together universities, laboratories, start-ups and large businesses, to innovate for the good of the economy and development. Zimbabwe has thriving innovation programmes and a wide-reaching ICT skills training programme and both should see the country increase its pace of development, both technologically and economically.

Due to the forward-looking policies of the Zimbabwean Government, Zimbabwe has fared pretty well in terms of trade, both with external partners and among businesses and consumers, within the Country. The ICT Policy of the Government, which resulted in a robust ICT Infrastructure network being installed throughout the Country, comprising both fibre and wireless technologies saw over 8.7 million internet subscriptions being recorded in the course of 2019. This has seen the economy and trade, becoming digital. With a total of 105 new base stations comprising 33 new 2G base stations, 40 new 3G base stations and 32 new LTE eNode base stations, the country could never go wrong.

When borders closed during the pandemic, online transactions between businesses in Zimbabwe and other Countries, become the norm, with delivery of goods between Zimbabwe and South Africa using a relay technic for drivers, so that crossing borders was minimised.

The Policy on electronic payments, which saw Zimbabwe even before the Covid-19 pandemic, become largely, a cashless society, helped tremendously, as there was no shock experienced by Zimbabwe regarding payment modes. It has been business as usual, with payments using the point of sale machines, mobile banking systems and other electronic forms of transfer.

The immediate fast tracking of the money transmission, mobile banking and money interoperability Regulations 2020, facilitated increased traffic cross banking and telecommunication network.

The robust communication network enabled the current online learning systems which schools and tertiary institutions are using in Zimbabwe so that students learn from home. Business meetings and social meetings, as well as church meetings, are now being held remotely, while most of Zimbabwe's work force is working from home, assisted by the increased connectivity, and e-meeting platforms.

With regards to safety of transactions, use of electronic systems and building confidence in the use of ICTs, a Cybersecurity and Data Protection Bill, which is set to become law shortly, is being debated in Parliament. In a nutshell, Zimbabwe has all the ingredients for successfully managing trade in the digital economy, both at home and abroad.
I thank you.

SAINT VINCENT AND THE GRENADINES

Mr. Apollo Knights
Director
National Telecommunications Regulatory Commission

***Question*: What would you say has been an overlooked issue that is critical in developing digital economies within underdeveloped and developing states?**

An issue that my country have come to acknowledge recently as very critical to the development of our digital economy but which we believe has been overlooked or not correlated to IcT development to date is one of the absence of a national addressing system where our homes/businesses have a number and our streets have a name. Something taken for granted in developed countries.

In several developed countries we see entities such as Amazon, FedEx, UBER, google maps, Airbnb playing a big role in improving efficiency, driving productivity, and creating economic benefits for their citizens. We also see in these said developed countries timely first responder services being delivered by their fire, police, ambulance departments where the difference of minutes and seconds can decide whether someone lives or dies. A metric so relevant in the current environment of covid 19.
Such a situation chair is quite different in many developing countries just like my own St. Vincent and the Grenadines here in the Eastern Caribbean.

In my country while we have growing international e commerce activity, we have very little domestic e-commerce, no Uber, limited functionally of google maps, no FedEx delivery to homes and non-optimum response time by our first responders. The one common and critical factor for this big divide is that of a lack of a national addressing system where our homes/ businesses have a number and our streets have a name. It is just a simple question of how can one deliver a package or service efficiently of any type to a home that has no house number? This absence of a legacy national addressing system is compounded by the lack of accurate and complete road network data in default mapping platforms such as Google maps. I will give a personal example. After many trials I was able to add my home to google maps as a landmark but people still get lost coming to my home if they use google maps as the secondary roads adjoining my home are missing from google maps. This situation is common to many other countries in the Caribbean region.

Until we see this as a critical issue that has been overlooked for too long, but which is required in levelling the playing field for technology
platforms and services to seamlessly integrate and perform on a global scale we would continue to see some countries struggle to achieve some
of the UN SDGs or expend more resources that needed to achieve them.
We can provide broadband access in all of our homes; we can facilitate computers in all of our homes but if we can't locate these homes efficiently and timely to deliver goods and services our strategies for digital transformation and growth will be severely hampered from the start.
The good thing about this challenge we face is that we do not need to expend resources to create legacy addressing systems but we can leverage the digital technology and platforms already available to create digital base addressing systems and ones that will seamlessly integrate with existing legacy systems and provide more equity among all countries to build their digital economies, allocate resources more efficiently and be more productive.
To get this done we need a formal and coordinated approach involving regional and international agencies, multinationals, and most importantly policy direction from our Governments.

Thank you for this opportunity to share this critical overlooked issue that we believe is relevant to a few developing countries globally.

INDONESIA

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

Question: ***What is the key policy to create sustainable digital economy particularly for developing countries?***

To create a sustainable digital economy particularly for developing countries, a suitable approach that covers all important aspects need to be considered. In this case, ICT Building Blocks could be used as the policy framework.

In ICT Building Blocks, there are several blocks that construct the digital ecosystem. There are infrastructure, application & platform, content, security, regulation, and digital talent.

This infrastructure part can be elaborated into three specific areas: devices, telecommunication network, and passive infrastructure such as tower, ducting, and so on. On the top of infrastructure, there lies application & platform and content or so called as Over The Top (OTT).

Besides OTT, smart city, e-education, e-commerce, and e-government are also included in application and content. All these ICT building blocks have to be developed simultaneously and nothing should be left behind. To realize the digital ecosystem, all the stakeholders have to take part and work very well in accordance with their respective roles.

The prerequisite to realize the digital ecosystem lies on the bottom of the building blocks: infrastructure. The infrastructure must be finished first or it means that the infrastructure can cover 100% of the population. The application and content will not reach the user if there is no infrastructure under it.

Finishing ICT infrastructure has become a common problem faced by many countries, especially developing countries. In many countries, ICT infrastructure is built from market mechanisms and it means no one wants to build the infrastructure in non-economical areas like rural or remote areas. This problem becomes more difficult to overcome by countries with geographical challenges like mountains or archipelago as well as scattered rural populations.

To answer this problem, investment is needed not only in terrestrial or submarine fiber optics, but also in satellites. This investment requires a tremendous amount of funding. The Universal Service Obligation (USO) fund itself is oftenly insufficient to make no one left behind in digital infrastructure. Government should try to invest like what we did to build the road and other basic infrastructures.

Another solution could be in the form of breakthrough technology. With the existing technology, covering all populations will be very expensive. A new approach like the software based Open Radio Access Network (Open RAN) could be the alternative to make infrastructure more affordable.

Moving to next blocks, the application and content are also important. These blocks are now powering the growth of the ICT sector. Without mobile applications that give direct impact to society and economy, the digital economy will not be sustainable. For example in Indonesia case, without Gojek – a ride hailing application, perhaps the number of mobile internet users will never be this huge. Without youtube and instagram, mobile data spending of the consumers will not reach this high. These layers are also the future of the mobile telecommunication industry. As we have mentioned before, use cases like smart city, e-education, e-commerce lay on these layers.

Each of the horizontal layers aforementioned need to be equipped by vertical layers i.e. security, regulation, and digital talent. Regulation is essentially required for each layer though light touch approach of regulation is now more favorable for the growth of the digital economy. It means that only the most crucial matters need to be regulated for example frequencies and standardization.

Last but not least, digital talent is the block which is no less important. Without digital talent, it is nearly impossible to realize sustainable digital economy. Even though human resources are in the field of the Ministry of Labor and Ministry of Education, support in the form of triggers is needed. Initiatives like digital talent scholarships could support the Indonesian talents in ICT sectors. This short-term scholarship is intended to train the talent with specialization in technical fields, for example, Artificial Intelligence, Big Data, Cloud Computing as well as several other training themes.

Triple helix collaboration is a must to promote digital talent as well as the other building blocks. We are collaborating with universities as well as global digital companies. Glocal (Global and local) collaboration

also needs to be considered because the full potentials of digital economy could be harnessed once it goes across vertical industries and involving MSMEs as well as existing companies.

To conclude my statement, I strongly believe that by developing every layer in ICT Building Blocks simultaneously, sustainable digital economy particularly for developing countries could be realized and its full potentials could be harnessed.

SENEGAL

Mr. Mor Ndiaye Mbaye
Chief of Staff
Ministry of Telecommunication and Digital Economy

Question: ***What are major innovations and digital solutions provided by the digital ecosystem to accelerate its adoption during the COVID-19 pandemic?***

Statement missing

International Trade Centre (ITC)

Mr. Robert Skidmore
Chief
Sector and Enterprise Competitiveness

***Question*: How can digital technologies be leveraged to increase both the scale and inclusivity of participation in trade?**

The International Trade Centre (ITC), which is the joint agency of the United Nations and the WTO fully dedicated to supporting the internationalisation of SMEs, builds competitiveness of small businesses for inclusive and sustainable growth with a focus on Trade Impact for Good.

Digital is transforming the way we produce, consume and trade. Covid-19 has accelerated that trend in a way that is irreversible. ITC's SME Competitiveness Outlook, which focused on the impact of the Great Lockdown on small business, concludes the new normal will be Digital. We are convinced competitiveness is no longer possible without it.

Digital is key to increasing MSME entry in international markets. MSMEs rely heavily on technologies provided by the global leading platforms for both inputs and outputs like webhosting, cloud-computing, e-payment, productivity tools, and they rely on the global digital market for the export of their products and services.

Since our mandate is narrow, I will focus on three main points: e-commerce, digital trade in services and digital trade intelligence and trust.

E-commerce
E-commerce presents a huge opportunity for developing countries and has proven its value to SMEs. Consumers have also increased their level of trust during the lockdown.

Many SMEs have been forced to go digital to maintain customers, or find new ones and their customers have come with them. Of SMEs ITC surveyed across Africa, Asia, Europe and Latin America, 25% began

selling online as a result of the pandemic and of the 44% not selling online, a huge majority intend to do so in the near future.

The stakes are high, and the scale can be enormous: e-commerce marketplaces in Africa were expected to generate 3 million new jobs in Africa by 2025. Following the pandemic, the hope is that that number can be even higher – if it is to compensate for the economic losses from more traditional channels. If we are to reach such numbers and have a significant impact on the wellbeing of larger populations, our responses have to match the size of our ambition.

For SMEs to adopt e-commerce at scale however, they will need support at scale. ITC has launched the ecomConnect Platform as an example. ecomConnect is an online community of entrepreneurs and experts engaged in helping SMEs develop business online. The platform includes tools and training materials and links to our analysis of e-commerce marketplaces in Africa, the "Africa Marketplace Explorer". The Explorer covers more than 50 countries and provides information on over 630 marketplaces. To complement these tools, the ecomConnect team at ITC also supports individual entrepreneurs in 20 countries. And they are exploring more options that will allow us to achieve scale. For instance, by allowing SMEs to register on local marketplaces and simultaneously list on global markets with much lower transaction costs.

Digital Trade in Services
In addition to selling products through e-commerce, ITC sees huge potential in digital trade in services.

SMEs in developing and least developed countries can compete effectively in the international market. IT companies we support in Uganda and Senegal, for instance, sell software and IT services to customers in Africa and Europe. Freelancers we work with in The Gambia and Jordan serve global clients through Upwork and 99Designs.

We see potential for these companies and especially start-ups to reach huge numbers of workers and consumers. In this model, tech-related investment in developing country markets will be critical, both foreign and local. To hit scale we need to:

1. Increase investment in enabling services, in particular in the most marginalized economies
2. Foster strong tech ecosystems
3. Support smart regulation
4. and build capacity of businesses to become investor-ready

ITC contributes through projects in Senegal, Uganda and The Gambia and we are scaling up in seven more African countries under ITC's #FastTrackTech in Africa initiative. To educate and support investors, we are issuing publications on Africa tech-hubs and on the characteristics of African outsourcing destinations.

Digital Trade Intelligence and trust

Finally, digital can make international markets more transparent and radically reduce transaction costs so they can be more accessible for SMEs. A few examples:

• We support digital exchange of information on sustainability through the trade for sustainable development and increased access and usability of intelligence in the Global Trade Helpdesk.

• We support digital platforms to link value chain actors at scale such as Shetrades.com, which has reached more than 1m women to date.

• Finally, digital trust, for instance due diligence for trade finance or block chain for traceability can bring in many new SMEs into international trade.

Digital transformation creates huge opportunities, but also challenges for our main MSMEs in developing countries. ITC embraces the digital revolution and continues to work with partners to transform digital disruption into business opportunities.

UNITED NATIONS INDUSTRIAL DEVELOMENT ORGANIZAION (UNIDO)

Dr. Bernardo Calzadilla-Sarmiento
Director, Department of Trade, Investment and Innovation

Question: How can we use the crisis as a momentum to fast-track digital transformation and future-proof trade and productive sectors?

Mr. Calzadilla began by stressing the impact of the crisis on SDG 9, as the industrial sector had been "very much affected" by the COVID-19 pandemic, especially in terms of disruption to supply chains. He underlined that a number of megatrends had already been impacting industrial development, particularly climate change. He also cited "rapid technological acceleration" as a key driver of change, allied to global trading tensions present since the global financial crisis in 2008.
As a result, financing for development has been in decline, noted Mr. Calzadilla, and thus the international community had been making an effort to mobilize external sources of financing for development, notably from the private sector. However, pressures on global supply chains were exacerbated by the outbreak of COVID-19, he said, which resulted in further disruption to supply chains and a transition by many manufacturers into production of medical products. UNIDO is assisting firms in many countries to repurpose their operations, however, the medical sector has very stringent standards on certification etc. which has resulted in barriers to entry for many firms.

At a macro-level, Mr. Calzadilla observed that countries had engaged in competition for medical supplies and also in protectionism, but that this trend had subsided. COVID-19 has accelerated society towards an inclusive and sustainable future, especially given the migration of many activities to cyberspace, such as e-commerce and the Fourth Industrial Revolution, which will make us more resilient in the long-run.
He further acknowledged that some negative externalities of this cyber-shift exist, such as a lack of trust and an upturn in cybercrime. However, he said that "we need to visualize how we are moving to the 'new normal'", adding that UNIDO had been supporting SMEs through partnerships with technical agencies and stakeholders, in addition to building a consensus around the setting for standards.
Mr. Calzadilla underlined the need to strengthen multilateralism and the international system in view of the challenge of digital transformation. "And it is very important to reiterate, we need the revitalization of the multilateral system in order to make sure that digital transformation is inclusive and does not leave anyone behind," he said.

Mr. Calzadilla stressed that UNIDO had been working with countries and partner companies to this end, citing project partners in China who had deployed robotics for transportation of medical goods and also ongoing cooperation with a number of technical agencies such as the International Telecommunication Union, in order to establish guidance on standards and normative matters.

He rounded off his contribution by emphasizing that Small and Medium Enterprises (SMEs) needed guidance on how to rebuild in the wake of the COVID-19 pandemic, and that UNIDO had established a programme to aid them to this end, as we look towards the future. The Organization has been working on promoting industrial recovery amidst the "new normal", as embedding the Fourth Industrial Revolution into its activities is vital in order to have an inclusive and sustainable framework in place for the future of manufacturing.

EWORLDWIDE GROUP

Dr Salma Abbasi
Chairperson and CEO

Question: ***What do you believe are the critical success factors to ensure that the Digital Economy provides a level playing field for everyone, particularly post COVID-19?***

COVID-19 has accelerated the transition of business, government and people to the online world. However, this has uncovered the complex multi-dimensional nature of digital infrastructure being much more than simply broadband connectivity such as security, privacy, data requirements, AIS, ML, compatible and integrated networks, platforms, information systems and cloud computing, along with accessibility, reliability and affordability for all communities. This has also elevated the importance of ICT Ministries and the need for resilient digital infrastructure as a national priority. This is due to the priceless role that digital infrastructure and services have played to support national COVID-19 responses and recovery efforts around the world. In addition, it has also forced governments to recognize the significant gap between the 'connected and the unconnected' communities and has highlighted the disproportionate reliance on 'super platforms' such as Amazon, Microsoft, Apple, Facebook, Google, Alibaba and Tencent. In March 2020, we joined hands with the IEEE and key UN agencies, development banks and governments in Asia and the Pacific to create a collaboration framework to proactively share knowledge to help save lives as they were the first region of the world to face COVID-19. We created a digital resilience platform of knowledge exchange for response, recovery and restarting businesses, particularly leveraging lessons learnt. This was facilitated through a series of focused and interactive webinar discussions and knowledge exchange across critical topics, holistically supporting crisis management of COVID-19, resilient supply chains for food security and safety nets, innovative healthcare systems, along with relevant policy reforms, collaboration frameworks, partnerships, funding streams and business models to ensure inclusive social and economic development, aligned with the SDGs.

As we move forward, it is vital that we create holistic strategies for digital migration, upskilling and access to affordable and localized e-commerce platforms across the eco-system to effectively engage the informal sector, as SMEs constitute 70% of the businesses in Africa and 50% in Asia and recent data from the ILO indicate that 60% are losing their income due to COVID-19.

In conclusion, Governments need to focus on creating platforms for digital and vocational skills that holistically empower youth, women, SMEs, family run businesses and gig workers. This will ensure that the population have vital skills to effectively and securely engage with new businesses and operational models for the online world, creating economic resilience through localized digital economic platforms connecting the ecosystem for the new normal.

However, it is essential that this thinking adjusts to accommodate and include people living in urban slums, migrants, refugees, abandoned communities and most importantly stateless people with no digital identity. It is only through such a human centric approach will we be able to ensure that the digital economy enables countries to restart and rebuild their economies in a sustainable and inclusive manner post COVID-19.

SAMENA TELECOMMUNICATION COUNCIL

Mr. Bocar Ba
CEO

***Question*: What should be the priorities for the ICT community going forward to ensure that our economies and infrastructures are more resilient in the future?**

Your Excellences! Dear colleagues and participants!

It is an honor and a pleasure to be here today during these exceptional times.

We are living in an era, which has created enormous opportunity and potential for economic- and socio-economic development and growth, for wealth-creation and prosperity and human development. At the end of 2019, 53.6% of the world's population, or 4.1 billion individuals, were using the Internet. This is a true achievement. Yet, digital divides persist, and inequalities continue to affect progress towards the economic and social development of different regions, countries, households and individuals. This is particularly visible during the current COVID-19 crisis, which puts a spotlight on our systemic weaknesses. Never before have the availability and accessibility of high-speed broadband in itself and as an enabler of relevant digital services and conduit for many 4IR technologies been so vital to our health, safety, and sanity and to keeping our economies and societies working. Yet, not everyone benefits from inclusive and affordable access to connectivity, let alone services. Moreover, widespread advanced network coverage, including 5G, and relevant affordable devices are not yet available at scale.

Our success between 2020 and 2030 will be influenced by our progress made in meaningfully leveraging digital communications technologies, their application and the advanced digital networks that they run and scale on. The COVID-19 crisis highlights just how the use of ICTs can contribute to better managing and living through crises. For example, telecom operators and vendors in China, and other partners, collaborated to provide 5G network coverage to 100+ key hospitals across China, including Leishen Shan and Huoshen Shan. Based on 5G all-weather "cloud supervisors", "5G + remote consultation" that flexibly mobilizes medical resources, and "5G + thermal imaging" in crowded areas, effective epidemic prevention and control systems were put in place. Likewise, satellite imagery has been used to map previously unmapped Cusco region in Peru to support the regional government's efforts to contain and

manage the outbreak of COVID-19 and provide cash transfers to families who are prevented from working by the quarantine and State of Emergency in Peru, and to provide nutrition and sanitation assistance. Furthermore, key initiatives have been launched across numerous countries to make available COVID-19 Track & Trace apps to better manage new infections. Ad-hoc responses of regulators and operators included the release of additional spectrum on a temporary basis to ensure that sufficient capacity could be guaranteed and that new technologies can be used to enhance connectivity; the facilitation of spectrum sharing; the implementation of extensions of deadlines on a temporary basis for expiration and the facilitation of license renewals for vital digital services providers; temporary loosening of traffic management rules and prioritization of vital digital services over other non-vital content; the temporary permission of unrestricted use of communications apps and services, including VPNs and VoIP; and many other initiatives.

But the impact of the crisis goes further than direct responses. The COVID-19 crisis has catalyzed a change in mindset and approaches within the Digital Communications Industry going forward. This change may later prove to be an essential ingredient for not only managing future challenges of pandemic scale, but also for accelerating digital cooperation and collaboration necessary for meeting globally defined goals for the next decade. The crisis has steered some of our attention and resources to using ICTs for provisioning, e.g., emergency healthcare services, delivering education remotely, distributing physical goods in lock-down environments through e.g. drones, enhancing private and public sector cooperation, improving collaboration in digital transformation, to name but a few. In so doing, a foundation has been created for an *ICT cultural shift*, with all necessary mindsets, practices, capabilities, attitudes required to be in place for treading the next decade of connectivity and connectedness. The emanating change has demonstrated that regulators and operators and the larger ICT community, together, can achieve major milestones effectively and efficiently when threats are tangible. With future crises on the horizon such as climate change and other health crises, more change and increased efforts to achieve key milestones on the way to fulfilling the SDGs are needed.

One such major milestone is accelerating the implementation of 5G and other advanced network technologies such as satellite, in a harmonized and efficient manner. This includes the meeting of necessary requirements for achieving economies-of-scale in device availability and general affordability for a mass-scale adoption. This also includes addressing persistent impediments to network infrastructure investments such as better incentives, spectrum and fiber deployment, equipment and services licensing, a broader stakeholder basis for funding and financing, and the creation of relevant partnerships across the public and private sectors. Key imperatives for policy makers and regulators, therefore, remain strong. These include review and revision of infrastructure regulations, spectrum policies, industry taxation regimes and additional costs for communications operators. It also includes new and better incentives and approaches to help accelerate investment into advanced network infrastructure such as social impact investment. Moreover, new use-case identification and implementation using different technologies remain a top priority. During the crisis, both 5G and satellite-based solutions have already proven effective in addressing some of the challenges in containing and managing the implications of the outbreak. And numerous new use-cases using different advanced network technologies are waiting to be unearthed that can prove helpful in future crises.

Increased attention should therefore be focused on unearthing win-win scenarios, and on building consensus on how we can expedite advanced network deployment such as 5G and satellite. We need to urgently promote that ICT infrastructure is essential to master crises in our hyper-connected and globalized world. Clear digital blueprints to achieve common consensus among policymakers and ICT ecosystem players need to be adopted. National ICT visions and wish-lists should be aligned with global trends and agreed ICT development objectives. *5G* and satellite-based applications should be created in close collaboration with all ICT stakeholders and industry verticals to develop a fully-fledged and sustainable ICT ecosystem with sufficient space provided to newcomers, innovators, and new investors.

The coming years will witness increased presence of users online. More AI and robotics-driven automation will be employed, and urbanization will accelerate and with it demands on smart-city management. A new world economic order is emerging, new lifestyles and healthcare expectations are developing alongside new modes of educational delivery, digitization of public services and digital identity, digital immersive experiences and entertainment, advancements in food technologies, advanced manufacturing through industrial IoT, and a host of other anticipated developments. This raises a number of questions in relation to the availability of inclusive and affordable access to infrastructure and services, societal participation, personal freedom and privacy, moral and ethical consideration in the use and application of these new technologies, and much more. To advance progress in leveraging ICTs, therefore, commitment to collaborating with all economic sectors and stakeholders of the economy, including civil society, is key. Moreover, these developments have to be accompanied by new approaches to governance through better, more agile policies and regulations that are collaborative and human-centered. To foster local value creation, a broader financing and funding basis for broadband infrastructure needs to be adopted. Such new approaches are essential for bringing the world's 2.7 billion still unconnected citizens to participate in sustainable and responsible future-making.

The year 2020 is unique in many ways for the world generally, and the ICT Stakeholder Community in particular. It continues to present a set of opportunities for us all to promote activities toward ensuring that the advanced connectivity and access to the Internet is made Available, Provides Positive impact, is Accessible, Relevant, Affordable, Trusted, Useful, and Safe ("APPARATUS"). It is now upon us to collectively help implement well-guided actions in the proliferation of broadband connectivity. Attention to aforementioned areas is critical for creating a culture of sustainable and beneficial innovation; for creating the momentum needed to accelerate progress on the Connect 2030 agenda; and for assessing how our collective success measures up to the defined goals for the next decade.

Thank you for your attention!

ASSOCIATION OF SCIENTISTS DEVELOPERS AND FACULTIES

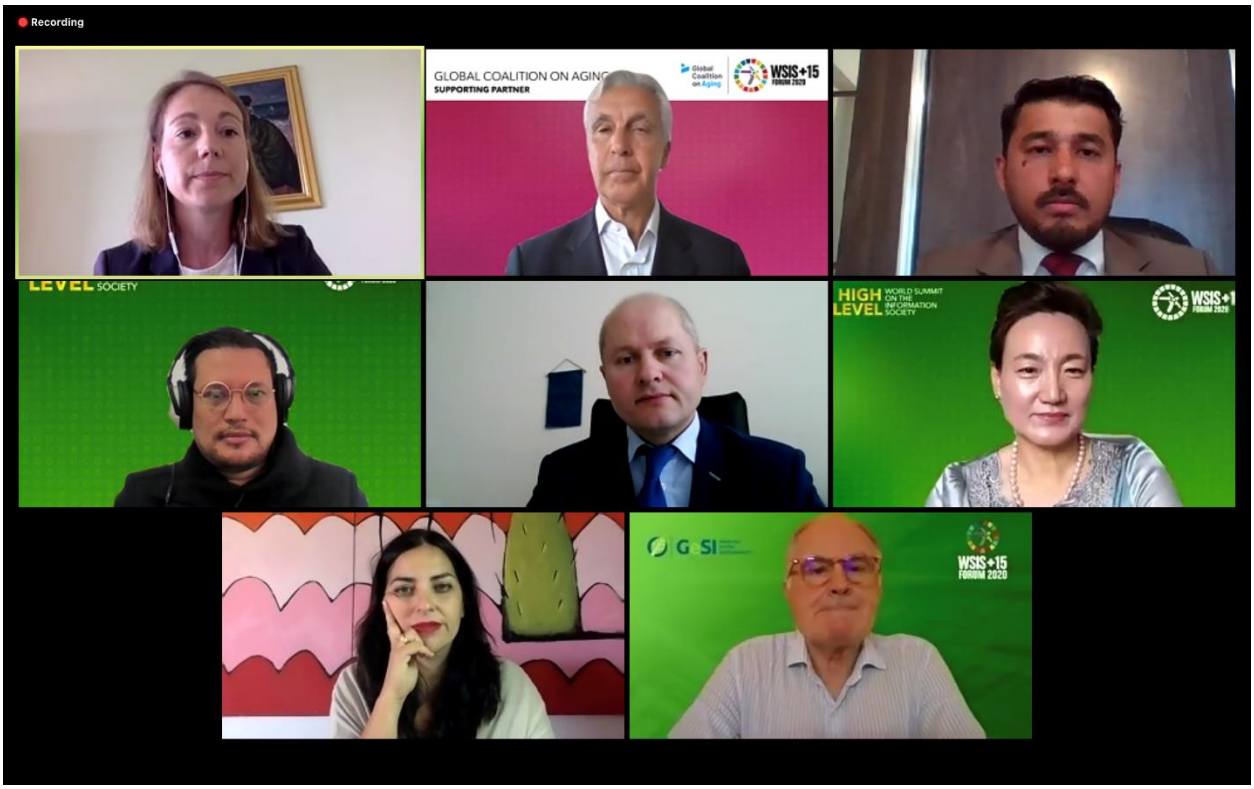
Dr. Kokula Krishna Hari Kunasekaran
International Secretary

Question: ***How do you foresee the digital financial growth in the coming years?***

Statement missing

Session Eight: WSIS Action Lines and 2030 Agenda / Enabling Environment

Recording: https://www.itu.int/net4/wsis/forum/2020/Agenda/Session/179



Moderated by High-level Track Facilitator:
Ms. Merle Maigre, Executive Vice President, CybExer Technologies, ESTONIA

WSIS Action Line Facilitator ITU:
Ms. Kim Eun-Ju, Chief, Digital Knowledge Development Hub, International Telecommunication Union (ITU)

Welcome to WSIS-20 High-Level Policy SESSION on ACTION LINES and 2030 AGENDA for ENABLING ENVIRONMENT.

Since the first WSIS, there have been significant transformation on enabling environment – i.e., policies, regulations, and market developments – in the telecommunication and ICT sector with disruption

triggered by emerging digital technologies such as AI, IoT and Big Data in information or digital society, today.

Indeed, there have been many challenges and opportunities associated with the development of a competitive digital economy, which has radically transformed the landscape of data-driven ICT policies and regulations to foster connectivity, skills, innovation and knowledge sharing and many more based on digital infrastructures, platforms and applications in cross-sectors through partnership. As a result, some leading countries like Australia, Chile, New Zealand and Singapore started to negotiate and even announce the Digital Economy Partnership Agreement (DEPA) in 2020.

Here, I would like to highlight ever more importance of enabling environment, i.e., ITU's term of collaborative policy and regulatory frameworks or 5th generation of policy and regulation in converged or interdependent digital ecosystem, which helps facilitate deployment and use of emerging technologies and thrive today's fast-evolving and competitive markets for innovative, balanced, and inclusive digital services or applications to ensure the fast-evolving digital world for all.

ITU, as its lead action line facilitator, has implemented various actions to share policy and regulatory trends and best practices as well as economic and financial issues and market developments at various platforms such as Global Symposium for Regulators (GSR), which is celebrating its 20th edition in 2020, Regional Economic Dialogues (RED) in different regions, and ITU-D Study Groups with innovative Webinars, with various products like 20 years of adopting Best Practice Guidelines, 20th anniversary edition of the ICT Regulation Handbook, and timely published study papers with guidelines and recommendations, through which policy-makers, regulators, and stakeholders in our 193 Member States can achieve meaningful connectivity for digital transformation.

Most of all, we – ITU – have undertaken timely actions for the unprecedented COVID-19 pandemics which need connectivity – especially digital connectivity with solutions – more than ever, with urgency to create an enabling policy and regulatory environment to meet the challenges: e.g., Global Network Resiliency Platform (#REG4COVID) has been developed and launched for ICT policy makers, regulators, and other interested stakeholders to share what initiatives and measures have been taken; and a series of webinars have been organized on various related issues of not only policies and regulations but also infrastructure, emerging technologies like AI and Cloud, Cybersecurity, Accessibility for PwDs etc., in order to help ensure communities – if not, the world - remain connected, harness the full power and potential of ICTs, and design and implement evidence-based policies and enforce regulatory measures in responding to and recovering from the COVID-19 together.

Through these series of initiatives and actions, we strongly believe that such concerted actions and efforts by policy makers and regulators in consultation with the ICT industry and all the stakeholders around the world are needed – or critical - to achieve universal, affordable and quality broadband access, and to mobilize financing to invest in digital infrastructure and inclusion for all.
Excellencies, honorable panels and participants,

Therefore, sharing your knowledges and experiences from this WSIS and various our platforms are essential for more inclusive, incentive-based and collaboration-driven policies and regulations, which will not only benefit consumers and businesses but also help fast-track a digital future for the billions who remain unconnected, i.e., no one left behind, so as to contribute to the SDGs together.
With this, I wish you a very fruitful discussion. Thank you for your attention.

Speakers:

1. **Moldova**, H.E. Mr. Vitalie Tarlev, *State Secretary For ICT,* Ministry of Economy and Infrastructure
2. **Colombia**, Mr. Carlos Lugo, *Commissioner,* Communications Regulatory Commission
3. **Switzerland**, Mr. Thomas Schneider, *Ambassador, Head of International Relations Service and Vice-Director,* Office Fédéral de la Communication (OFCOM)
4. **Afghanistan**, Mr. Syed Bilal Hashmi, *Vice Chairman Admin and Finance,* Afghanistan Telecom Regulatory Authority (ATRA)
5. **Malaysia**, Ms. Hanissull Jalis Md Yusof, *Director of Application Development Division,* Malaysian Administrative Modernisation and Management Planning Unit (MAMPU), Prime Minister's Department
6. **Internet Governance Forum (IGF)**, Ms. Anriette Esterhuysen, *Chairperson*
7. **Global Coalition on Aging (GCOA)**, Mr. Michael W. Hodin, *CEO*
8. **Global Enabling Sustainability Initiative (GeSI)**, Mr. Luis Neves, *CEO, Managing Director*
9. **Fundación Cibervoluntarios**, Ms. Yolanda Rueda, *Founder and Presiden*

Executive Summary by High-Level Track Facilitator

Introduction

An enabling environment at national and international levels is essential for the Information Society. ICTs should be used as an important tool for good governance. The rule of law, accompanied by 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. Governments should intervene, as appropriate, to correct market failures, to maintain fair competition, to attract investment, to enhance the development of the ICT infrastructure and applications, to maximize economic and social benefits, and to serve national priorities.

The policy session included the following participants: **Kim Eun-Ju** (WSIS Action Lines Facilitator) Chief, Digital Knowledge Development HubInternational Telecommunication Union (ITU); **Vitalie Tarlev**, State Secretary For ICTMinistry of Economy and Infrastructure, MOLDOVA; **Carlos Lugo**, Commissioner of Communications Regulatory Commission, COLOMBIA; Ambassador **Thomas Schneider**, Head of International Relations Service and Vice-Director, Office Fédéral de la Communication, SWITZERLAND; **Syed Bilal Hashmi,** Vice Chairman Admin and Finance, Afghanistan Telecom Regulatory Authority, AFGHANISTAN; **Hanissull Jalis Md Yusof**, Director of Application Development Division, Malaysian Administrative Modernisation and Management Planning Unit, Prime Minister's Department, MALAYSIA; **Anriette Esterhuysen**, Chairperson, Internet Governance Forum (IGF); **Michael W. Hodin**, CEO of Global Coalition on Aging (GCOA); **Luis Neves**, CEO, Managing DirectorGlobal Enabling Sustainability Initiative (GeSI); and **Yolanda Rueda** Founder and President Fundación Cibervoluntarios. The discussion was moderated by **Merle Maigre**, cyber security expert. E-Governance Academy, Estonia.

Vision

A dynamic and enabling international environment, supportive of foreign direct investment, transfer of technology, and international cooperation, particularly in the areas of finance, debt and trade, as well as full and effective participation of developing countries in global decision-making, are vital complements to national development efforts related to ICTs. Improving global affordable connectivity would contribute significantly to the effectiveness of these development efforts.

Fresh priorities

A modern economy requires workers with modern skills. Everyone should have the necessary skills to benefit fully from the Information Society. Therefore, capacity building and ICT literacy are essential.

Current and future workers need to develop lifelong cognitive, technical, and socioemotional skills required of a well-educated worker in the 21st century. Workers also need to be capable of processing the ever-increasing information available on the internet. Building these skills requires actions affecting all relevant environments for learning: families, schools, universities, training systems, and firms. Given the speed of technological changes, these capacities and skills will also require constant updating throughout the life cycle as workers prepare for careers that last more than one job.

Emerging trends

ICTs can contribute to achieving universal education worldwide, through delivery of education and training of trainers, and offering improved conditions for lifelong learning, encompassing people that are outside of the formal education process and improving professional skills.

Example of case studies

Moldova is an example of close interconnection between information society policy and legal framework development, illustrated by the Digital Moldova 2020 Strategy.

Malaysia has good experience in ICT in public sector, which encompasses systems development, systems operation, and ICT project management, especially in the planning and managing of the development of system applications used by Public Sector Agencies. The system applications include Digital Document Management System (DDMS), Meeting Management System, Performance Management System, and ICT Project Management System.

A non-profit organization from Spain (Fundación Cibervoluntarios) promotes the use and knowledge of new technologies as a means to alleviate social gaps, promote social innovation and generate citizen empowerment.

Opportunities

ICTs are an important enabler of growth through efficiency gains and increased productivity, in particular by small and medium sized enterprises (SMEs). In this regard, the development of the Information Society is important for broadly-based economic growth in both developed and developing economies.

Key challenges

The challenge for policy makers is to ensure that *all* current and future workers can seize the growing economic opportunities that accompany the spread of digital technologies. The risk is that rapid technological change will end up increasing inequality and leaving many behind—blunting the digital dividends. Also, it is challenging to guarantee equitable distribution of the benefits contributes to poverty eradication and social development.

Road ahead

ICT-supported productivity gains and applied innovations across economic sectors should be fostered. Policies that foster productive investment and enable firms, notably SMEs, to make the changes needed to seize the benefits from ICTs, are likely to be the most beneficial.

MOLDOVA

H.E. Mr. Vitalie Tarlev
State Secretary For ICT
Ministry of Economy and Infrastructure

Question: ***What is the impact of ICT ecosystem development projects on the ICT sector, but also on the competitiveness of the economy in general?***

Statement missing

COLOMBIA

Mr. Carlos Lugo
Commissioner
Communications Regulatory Commission

Question: ***Regulation in the ICT sector has several challenges to address new technologies and developments. We understand that the CRC is implementing a regulatory sandbox. Could you tell us more about it? when will be implemented?***

Thank you for the invitation to participate in this important event.

Regulators face several challenges that can affect the speed and efficiency in which they operate: the regulatory rigidity affects innovation and the regulator usually goes slower than technological changes.

A regulatory sandbox is a limited set of regulatory exemptions that is granted to a project or company, to allow them to test new business models with reduced regulatory requirements.

They often include mechanisms designed to ensure general regulatory objectives, including user protection, and are generally developed and managed on a case-by-case basis by regulatory authorities. It can be very useful for markets with a high regulatory burden such as the financial sector.

We started analysing this regulatory option 2 years ago, but last year we had meetings with the Korean Government to learn more about their experience in the subject and we published a document that included a benchmark, an analysis of legal aspects to take into account and a first proposal of how to sandbox could be implemented. This year we published a second document and a resolution (on May 18) that officially launched the sandbox. This sandbox that we are implementing is the first in the world especially designed for the communication sector.

Our sandbox is meant for connectivity projects that are aligned with the strategic objectives of the CRC such as quality and social well-being.

It is important to keep in mind that not only telecom operators can participate in the sandbox: the content providers, although not regulated by the CRC, can also propose projects as well as postal operators.

Selection criteria includes innovation, benefits for citizens, proven necessity (related to the fact that the sandbox is indeed required to develop the innovative project), and experience from the proponent.

We are currently preparing the application phase and we expect that next year the projects will take place. The sandbox can have a duration of up to 12 months with a possible extension for up to 12 additional months. The outcome can vary depending on the project to be implemented: in any moment the proponent can opt out of the project (prior notification to the CRC); if concluded, the outcome can be an inclusion or not of the regulatory issue being analyzed in the regulatory agenda.

Having the first regulatory communications sandbox in the world, although an example of innovative regulation, it has of course different challenges:

- Achieving the participation of various actors and having good projects.
- Adjusting the structure of the CRC for the implementation of the Sandbox.
- Also, a cultural challenge: we are used to a different regulation: very general, global. Thinking that the regulator can design together regulatory projects with companies is a cultural challenge.
- There is also competition challenge: how to control the competition variables? How to ensure that the market is not affected? Competition generates difficulties and that is why in the indicators of success those possible impacts are evaluated to be able to define whether it is implemented or not.

The ICT sector as a hole is trying to evolve, and we hope that the sandbox will be an enabler of that. Finally, I would like to say that the regulatory sandbox is one of many innovative measures that the CRC has been implementing such as simplification and an open data platform (post Data), among others.

SWITZERLAND

Mr. Thomas Schneider
Ambassador, Head of International Relations Service and Vice-Director
Office Fédéral de la Communication (OFCOM)

Question: What kind of regulation is needed to create the best possible enabling environment for further digital development, and what cooperation methods and mechanisms must we develop to deal with digital challenges?

Mr. Secretary-General, Ministers,
Excellencies, Distinguished Delegates, Ladies and Gentlemen,
Digitization is a global phenomenon. Information and communication technologies are omnipresent today and are changing the way we live, work, trade and communicate.
In the past months, the Corona pandemic has worked as an accelerator for digitalization: In only a few months, many of us have learnt to deal with online conferences, home schooling and other digital tools that many have not been using before.

However, experience has also shown that access is still not a given. Even in developed countries, like Switzerland, some children had to be connected to the internet before they could participate in home schooling during the corona lockdown.

So, we need to make sure that everyone has access. But then again, access in itself is not sufficient. People need to learn how to use new technologies safely and efficiently, so that they can get the most out of them, improve their lives and avoid additional risks.

Governments and companies need to earn the trust of citizens and users. Otherwise, they will avoid using digital tools. We are currently seeing how concerns about abuse of personal data prevent Covid-19 tracking applications from being used to its full potential. We need to provide transparent information on the opportunities and risks as well as appropriate regulation to convince citizens and companies and to gain their confidence.

Digitalization must be put at the service of ALL people. Our task is to develop a framework that allows as many people as possible, regardless of gender, age or origin, to decide themselves how to take advantage of new opportunities.
Switzerland is convinced that regulation should not be too much or too early. If we regulate, we should do so in compliance with human rights. We should envisage regulation that fosters innovation while at the same time protecting the rights of citizens against manipulation or abuse by the state or companies.
In order to find common solutions, we must work with all interest groups. Current processes sometimes reach their limits, which is why we need new forms of effective, interdisciplinary, global digital collaboration with all relevant actors. Too often, fundamental issues and governance approaches continue to be addressed in institutional silos.

We have strong foundations to build upon: 15 years ago, at the World Summit on the Information Society, we agreed to create a space for dialogue among all relevant stakeholders: governments, parliaments, businesses, civil society and academia. We created the UN Internet Governance Forum and the WSIS Forum. Both have importantly contributed to improve cooperation in the digital environment.
This open and inclusive dialogue is still necessary, but no longer sufficient.

As highlighted by the recommendations of the UN Secretary General's High-Level Panel on Digital Cooperation, we need an approach to digital governance that is agile, more inclusive and better coordinated. These recommendations as well as the UN Secretary- General's Roadmap on Digital Cooperation are a major milestone in this endeavor.

Switzerland has supported the development of digital cooperation and governance mechanisms for 20 years. We fundamentally believe that cross-silo cooperation and an inclusive multi-stakeholder approach are a prerequisite for the creation of a human- centred, free and secure digital world that benefits everyone.

We are fully committed to continue to work with all of you. Also, International Geneva, with its many organizations and institutions that are already actively shaping digital governance, shall make an important contribution to this.
Thank you.

AFGHANISTAN

CEO Mr. Syed Bilal Hashmi
Vice Chairman Admin and Finance
Afghanistan Telecom Regulatory Authority (ATRA)

Question: ***How can we create an enabling environment to help facilitate further progress in the ICT sector to allow all players to contribute to the work of the sector even more effectively?***

Thank you very much, honorable speakers, moderator, guest speakers, participants.

Good afternoon. Good evening to some of you.

We thank WSIS and the organizer of this important session for giving me the opportunity to speak in this high-level session engagement. You are asking a good question, I think. The question really fits the country's context, in our experience: How could we create an environment to further progress the ICT sector and allow engagement of all the players to make this sector more effective?

Afghanistan was facing serious challenges two decades ago. You had to travel to another country (a neighboring country) and sometimes you had to travel quite far in order to make a single telephone call. You had to pay approximately 10 USD for a call to your beloved ones living outside the country for just a few minutes of conversation. Afghanistan today is not what it used to be two decades ago. There is a saying: "If you are not getting better, then you are getting worse." So, we made progress in the last two decades. We have had the biggest investment in the country in telecommunication services during that period. We enjoy nowadays ninety percent (90%) penetration in mobile services. We also have more than thirteen million people currently using the Internet services. More than two-hundred thousand people are working in this sector, which comes to be the biggest sector regarding jobs creation for the people in Afghanistan.

The GDP of the telecom sector is playing a significant role, as it sits on top of the total government revenue nowadays. Two weeks ago, we just had a meeting between the Afghanistan Telecom Regulatory Agency (ATRA) team and his Excellency, the president of Afghanistan. The topic of the meeting focused on three main areas, which are exactly the same that are included in today's topic. The questions from the

President of the country were: (1) How do we create an enabling environment for the ICT sector; (2) How can we attract the FDIs in the sector; and (3) How can we involve other stakeholders or other players to further enrich the sector? The overall message is that an enabling environment is on top of the priorities of Government and ATRA.

ATRA has made lots of efforts to make sure we are working towards a level-playing field and enabling the environment to allow other players and stakeholders to work effectively to enrich the sector. We have erected 750 towers across the country to make sure that we have wide accessibility to the Internet, as well as to other telecom services in the whole country. All the State universities are connected with the support of ATRA's universal access fund which is called the Telecom Development Fund (TDF). We are using the TDF resources to subsidize rollout of the infrastructure needed to provide the Internet and data, and using them as well to pay for all these services for the State universities. We also are subsidizing the telemedicine project and we have started working with the hospitals, state hospitals, to make sure they are well supported regarding their telecommunications needs, which has really worked-out very well during this pandemic of Covid-19. We have made millions of dollars available for e-Government and we are currently working with and organizing the ICT National Policy for it. That shows the commitment to what and how we can further enhance the ICT sector in the country.

If the ITU, APT and other relevant institutions amongst others are really interested in getting involved, and other stakeholders are also truly interested in getting involved in the sector, I would outline the following: Afghanistan is located at the center of Asia; it is at the heart of Asia. Connecting Afghanistan means connecting the South part of Asia to the Central part of the Continent, as we can be used as the transit hub for more than twenty countries. Developing an enabling environment for the ICT sector in Afghanistan doesn't mean just enabling the ICT sector in Afghanistan, but it could also mean doing it for twenty other countries. We would like to encourage all relevant parties, including the World Bank, the ITU and other stakeholders to get involved and make sure that we altogether can commit to develop this sector for the benefit of the Region as a whole. Furthermore, an enabling environment and making further progress in the ICT sector is on top priority of the Government, and ATRA would like make sure that everyone has affordable, accessible and available Internet services everywhere, not just in the country, but in the Region as well.

Thank you very much!

MALAYSIA

Ms. Hanissull Jalis Md Yusof
Director of Application Development Division
Malaysian Administrative Modernisation and Management Planning Unit (MAMPU), Prime Minister's Department

Question: ***Digital government is government designed and controlled to leverage digital data in optimizing, transforming, and creating government services.***
The Malaysian government had implemented several initiatives towards digital governance. Tell us about the Digital Government initiatives by Government of Malaysia and throw some light on one of the champion project DDMS 2.0?

As the world is moving into the digital era, Government of Malaysia embarked on digital government initiative to achieve paperless government objective for greater efficiency, transparency and deliver better service to citizen at speed.

We have taken several initiatives in past few years to create an enabling environment for digital government. These initiatives include operationalizing a private cloud for shared services, deploying a unified communication platform for the government agency, and setting-up a government public key infrastructure for digital identity and digital signature.

The most important of the lot, in the quest of becoming paperless, was to deploy the Digital Document Management System 2.0 platform, which was launched as a pilot project in 2016 and has been rolled-out to over 170 government agencies ever since, on a software-as-a-service model. The platform is scheduled to be offered to over 700 government agencies by 2025. We believe that this is one-of-a-kind of platform in the world and government of Malaysia is the first to deploy such a centralized platform.

The DDMS is a software solution that aims to store, track and index all the electronic and paper documents and store them electronically in the form of records. The system controls the processes for capturing and maintaining evidence and information about business activities and transactions of Government agencies by providing an efficient and systematic management of records throughout the records lifecycle from creation, disseminate, maintain and finally disposal.

Currently DDMS acts as a central repository for records where by all records and documents are available to be accessed by users and can be shared for a common use. As a security measure of ICT security compliance procedure, the DDMS is also protected with ICT security protocols to ensure that government records and documents are securely protected.

The DDMS platform not only helped the Government in reducing the usage of papers, reduced carbon footprints, reduced millions of ringgits in operational cost annually, but also helped achieve greater user productivity, operational efficiency and transparency as the government records are readily available to the government staff on 24x7 basis in a secure manner.

Intangible benefits such as standardization of electronic record management practices compliance to Malaysia National Archives Act 2003 and MS ISO 16175 (Information and documentation — Principles and functional requirements for records in electronic office environments) are a plus.

Lastly the platform is still evolving. We will soon be adding Digital Workspace and Knowledge Management modules into the platform. While Digital Workspace will automate document intensive processes across agencies, facilitate the creation, modification and signing of documents digitally using PKI infrastructure. Meanwhile, Knowledge Management module will allow scholars to conduct research on government records available in public domain.

INTERNET GOVERNANCE FORUM (IGF)

Ms. Anriette Esterhuysen
Chairperson

Question: ***How has the Internet Governance Forum (IGF), and in particular national, regional and youth IGFs contributed to an enabling environment for an inclusive information society?***

An enabling environment requires a holistic approach – it requires enabling policy and regulation, resources, and, most important of all, people and institutions working collaboratively on implementation. In my view it is the key WSIS action line contained in the Geneva Plan of Action.

What are NRIs – They emerged not long after the first global IGF in Athens, 2006. First in Europe, LAC and East Africa, and now everywhere. In 2020 there are 131 that have a relationship with the global IGF. They vary in size, some led by gov, some by multistakholder organising committees, some by civil society. They continue to evolve in response to local dynamics and needs. Youth IGF initiatives have brought 1000s of younger people into the process and help drive their involvement in internet policy.

What has their impact been?

They create an opportunity for local ownership and initiatives in finding solutions. In fact, even before moving to solutions, they build a deeper, more nuanced understanding of digital divide issues.

Most importantly they've helped to build relationships between stakeholders and even within a stakeholder group – for example by creating a platform where different government departments can come together to talk about internet-related public policy.

By bringing diverse people together to talk about local and national internet-related challenges they provide an opportunity for, for example, government stakekholders to better understand the concerns of e..g business, or civil society.

These relationships lead to more informed, sustainable policy. Why? Because if policy solutions have been discussed broadly, involving all those effective, they are developed with the support of those who need to implement them.

They also contribute to implementation partnerships, and to collaborative evaluation and learning.

They also help build the capacity of different institutions and the people inside the. By bringing together communities, regulators, and technical organisations they have, for example, helped to build awareness of the potential of community networks to connect the unconnected. They create opportunities for technical training and other learning events.

Why are they so important – because good internet governance begins at home.

An internet governance ecosystem that provides spaces for all voices, from the north and the south, and of all stakeholders, needs strong and inclusive processes at global and at national levels. It needs people of all generations. NRIs are helping to build this ecosystem – nationally, regionally and globally.

Often, the connections start at the global IGF, where the barriers between stakeholder groups that may exist within a country are broken down in the general mixing and dynamics of the global IGF.

In closing, I am inviting you all to the global IGF which will be held online, later this year. Dates are to be announced early next week. The event will include input from NRIs from all over the world.
Thank you for the opportunity to be part of the WSIS Forum this year.

GLOBAL COALITION ON AGING (GCOA)

Mr. Michael W. Hodin
CEO

Question: What is the most significant ICT gap in achieving the goals of The WHO/UN Decade of Healthy Ageing?

Statement missing

GLOBAL ENABLING SUSTAINABILITY INITIATIVE (GESI)

Mr. Luis Neves
CEO, Managing Director
Global Enabling Sustainability Initiative (GeSI)

***Question:** As a member-based organisation, how are GeSI members and telecom companies in general paving the way to achieving the SDGs through digital technologies?*

Statement missing

FUNDACIÓN CIBERVOLUNTARIOS

Ms. Yolanda Rueda
Founder and President

Question: ***Challenges to achieve the Goals: Why is critical to promote Digital Transformation to engage Civil Society in the Agenda 2030 process and what are the actions lines must be taken to implement by all stakeholders?***

1.- THE 21st CENTURY IS THE CENTURY OF CITIZENS because, thanks to technology, we have passed from being beneficiaries, to being active agents. We are in a historical, unique moment, in which the appropriation of technological tools is key to eliminate gaps. Inherited gaps, related to education, work, social development ... in short, to human development. And to CLOSE these gaps is, for the first time, in our hands; technology gives us a chance, one, to each of us, to become protagonists, able to improve the world. Because it is in our DNA to attend to real needs, to solve the worries in our life and in that of others; in short, the new generations. We have a commitment, we have a responsibility, and the SDGs, indirectly, almost unconsciously, have been and are, without a doubt, our roadmap.

2.- EMPODERA That is why Cibervoluntarios created Empodera.org, a collective intelligence ecosystem, comprehensive, disruptive and resilient, that helps solve challenges and make citizen initiatives aimed at achieving the SDGs, a reality. To create real impacts, such as that of the Hierbabuena Association, that wants to make people with mental health problems visible, and their initiative is to create the “Crazy Pride Day”; or Dimitri, from Luis Vives High School, who, through the “Stop Hunger San Nicasio” project,wants to help end hunger in his community.

In this social equation, technology gives us the opportunity, of creating a new way of being and doing, of deciding how do we carry out our ideas. It is the transversal axis that helps us to deconstruct the established ideas. To re-think, to co-create, In an open, transparent, ethical, sustainable and inclusive way.

The key, then, is not only WHERE do we want to go, but HOW do we want to get there. For us, the axis is not only to generate business; that also, why not; but what moves us is TO GENERATE SOCIAL TRANSFORMATION. To address and to act on real needs,

Fundación Cibervoluntarios – www.cibervoluntarios.org – www.empodera.org 2
specific, concrete, local challenges, and to find sustainable initiatives that can be replicated and scaled globally.

Empodera.org helps these processes, that is why the United Nations support us and are interested in scaling our methodology to three other countries throughout this year.

3.- A CALL TO ACTION But, for citizens to participate, we cannot forget that there is still much left to do. I will focus on two things:

One, access to and appropriation of technology. 30 years of Internet and yet, according to ITU data from last December, 3,600 million people, 50% 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 be empowered, become agents of change in their communities, stress the importance of Internet access to accelerate the progress of humanity, something that the United Nations recognized for the first time in 2011 and insisted on again in 2016.

This is that we have been doing in Cibervoluntarios since 2001. Now, and more so after COVID-19, where the vital and strategic importance of being connected has been revealed to us, that this right becomes a universal right. It is our goal and duty as an organisation focused on ensuring that technology is the lever that guarantees human rights.

Secondly, today, the borders between the sectors: Administration, Business and the Third Sector, Under the commitment of achieving the 2030 Agenda, have no sense. Technology has blurred them. Technology brings us closer.It has broken borders and opened a dialogue. Let's start working towards the Fourth Sector. Working together to generate social impact. We must not work alone. We have to listen to the one next to us, to co-create and colead joint initiatives of social transformation, of environmental impact. And, above all, to include citizens from the beginning. We need to be part of the decision making, of the actions.

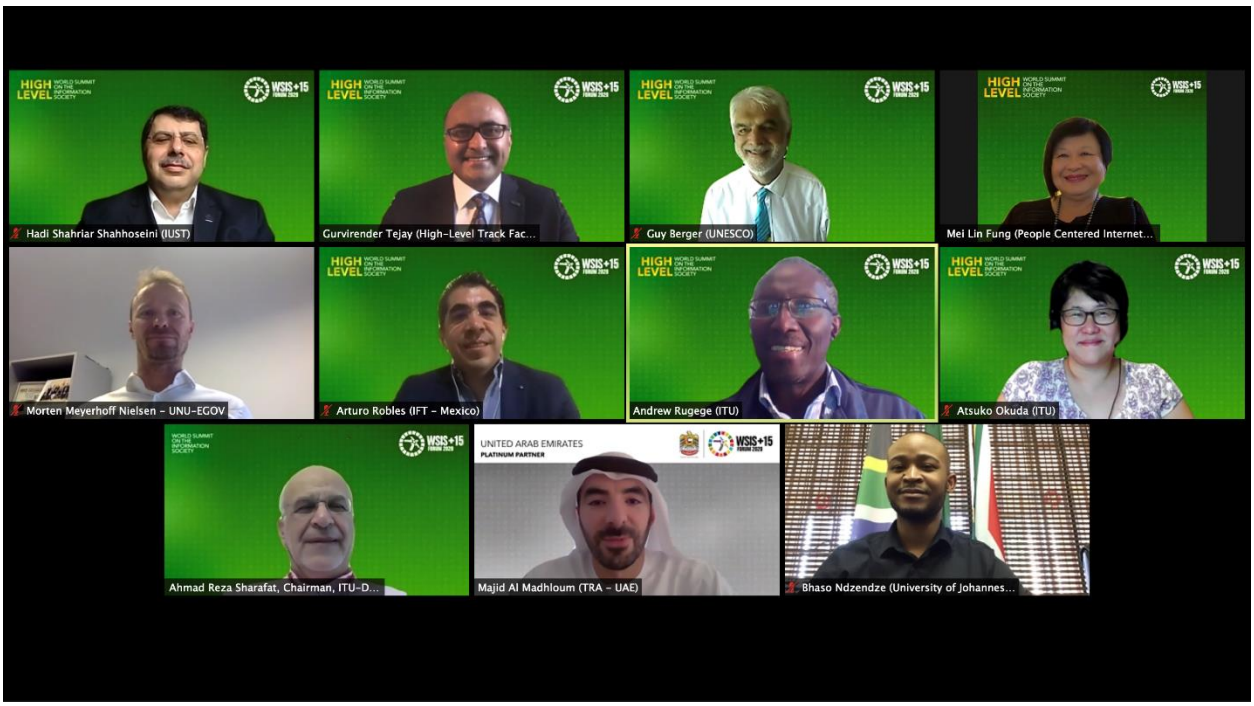
In short, the civil society, we have the determination of always, but now, we also have the tools to build today the society of tomorrow. For many, the universal right to Internet Access, or the 2030 Agenda, are difficult to achieve utopias. We are the ones who think that utopias are there to be achieved.

Our axes are: technology, human rights and the planet. Working to make internet access and technological appropriation a universal right is our goal. Working to achieve the SDGs is our commitment.

Thank you very much.

Session Nine: Knowledge societies, Capacity building and e-Learning

Recording: https://www.itu.int/net4/wsis/forum/2020/Agenda/Session/204



Moderated by High-level Track Facilitator:
Dr. Gurvirender Tejay, *Associate Professor of Information Systems*, College of Business University of Colorado
WSIS Action Line Facilitator ITU:
Mr. Guy Berger, *Director of Strategy and Policy* Communication and Information Sector, UNESCO

Speakers:

1. **Mexico**, Mr. Arturo Robles Rovalo, *Commisioner,* Federal Telecommunications Institute
2. **United Arab Emirates (UAE)**, Eng. Majid Al Madhloum, *Senior Manager, Center of Digital, Innovation "CoDI",* Telecommunications Regulatory Authority (TRA)
3. **International Telecommunication Union (ITU)**, Prof. Ahmad Reza Sharafat, *Chairman, ITU-D Study Group 2*
4. **International Telecommunication Union (ITU)**, Mr. Andrew Rugege, *Regional Director, R.O. for Africa*
5. **People Centered Internet and Impact Network**, Ms. Mei Lin Fung, *Chair and Cofounder*

6. **Iran University of Science and Technology (IUST)**, Dr. Hadi Shahriar Shahhoseini, *IUST Vice Chancellor for International Affairs and Director of Research Center for ICT Strategic and International Studies (ICT-SIS)*
7. **University of Johannesburg**, Mr. Bhaso Ndzendze, *Research Director,* Centre for Africa-China Studies
8. **International Telecommunication Union (ITU)**, Ms. Atsuko Okuda, *Regional Director, R.O. Asia & Pacific*
9. **United Nations University (UNU)**, Mr. Morten Meyerhoff, *EGOV Advisor*

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 positive integration into the knowledge economy. The panel discussed issues related to increased capacity building in the areas of education, technology know-how and access to information, which are major factors in determining development and competitiveness. The High-Level Speakers shared unique perspectives on this complex, multi-faceted yet immensely impactful topic that holds the promise to unlock and enable attainment of one's full human potential in the era of modern ICTs from Artificial Intelligence (AI) to the science-fiction inspired Quantum Teleportation (of information).

Vision

Knowledge societies are more than knowledge economies. They encompass the whole society respecting the right to express opinion, to seek and receive opinion and information, to practice cultural and linguistic diversity, and to have access to quality education. Key views articulated by the panel include:

- Digital transformation is indispensable for sustainable development requiring quality ICT centric education and training.
- Empathizing with the target audience is key to understand the capacity building requirements.
- Increase digital skills among population for digital transformation of all societies.
- Attaining SDGs require accessible and affordable ICT infrastructure, capacity building, localized digitized applications, and ICT policy and regulation.

Fresh Priorities

The panelists discussed multiple priorities for knowledge societies, capacity building and e-learning. The overarching emphasis was on digital literacy, access to information, and e-learning ecosystem. The significant priorities put forth by the panelists involve:

- Enhancing the digital journey of citizens through research, innovation and training.
- Identifying skills to bridge the digital divide including technical literacy skills and competencies.
- Cyber security, digital policy and regulation, network and digital infrastructure, digital inclusion and digital integration systems.

- Collaborative regulatory approach to foster digital transformation.

Emerging Trends

The common trend seems to be the COVID-19 pandemic serving as a great catalyst resulting in an accelerated shift to digital in remote work and e-learning. The panelists also deliberated the rapid adoption of AI, machine learning and IoT as valuable tools. Some panelists highlighted the necessity of digital literacy and looming job losses requiring digital skills for jobs of the future. The following are additional trends emphasized in the panel:

- Empowering the communities by working with governments to identify, localize and implement digital public goods at scale.
- Covid-19 pandemic impacting e-learning and e-science ecosystem with collaborative scientific network exhibiting good performance.
- Problems of cyber bullying, disinformation, hate speech and online radicalization.
- Implementing measures to enhance security of critical infrastructure, networks and data.
- Significant job losses caused by AI, increased automation and robotics with maximum impact on low and medium skills level.

Example of Case Studies

The panelists highlighted few strategic initiatives from across the world to underscore their impact on knowledge societies. We should take note of the following initiatives:

- UAE - International Center of Digital Innovation
    - Aims to help key stakeholders in integrating innovation into the national development agendas and activities.
- UAE - Center of Digital Innovation Virtual Academy
    - Aims to provide free access to courses in ICT, entrepreneurial skills, soft skills and cybersecurity.
- Mexico - Federal Telecommunications Institute (IFT) Collaborative Regulatory Approach
    - Mobile and fixed service operators provide health information and distance learning service at no cost to prepaid mobile users.

- ITU-UNICEF GIGA initiative
    - Aims to connect every school, every young person to information, opportunity and choice.
- ILO-ITU joint program
    - Aims to equip youth with job-ready digital skills in Africa digital economy
- African Girls Can Code initiative
    - Focuses on code skills, soft skills and advocacy to mainstream ICT's agenda in national school curriculum.
- Africa Smart Villages initiative
    - Aims to empower villages with digital access to vital services including capacity building and e-learning.
- ITU, UNICEF and UNESCO initiative in Thailand
    - Aims to map the unconnected communities for future interventions to ensure e-learning benefits for all children.
- ITU and Cisco partnership for the Digital Transformation Centers Initiative
    - Aims to bridge the digital divide by providing relevant skills to actively participate in digital society and economy.
- UNESCO Initiatives
    - ICT competency framework for teachers, packages on empowering girls with coding, building digital capacity for people with disabilities and minority languages, and AI toolkit for policymakers.

Opportunities

The panelists accentuated inherent opportunities in connecting communities, extending digital skills, and workforce development through vocational training and upskilling. Few other opportunities highlighted by the panelists include:

- Regulatory learning networks to address rapid change and innovation of cyber criminals.
- Diversify the delivery of trainings for larger regions and in multiple languages.
- Develop virtual student exchange program between universities to reduce digital divide.
- Focus on STEM disciplines along with fostering creativity and entrepreneurship.

Key Challenges

The overall challenges pertain to affordable access to digital connectivity, education and digital literacy. Some of the panelists expressed significant concerns with communities unable to access essential online services. The crucial challenges underlined in the panel are as follows:

- Resilient digital infrastructure and cyber-attacks.
- Ensuring quality education, proper evaluation and e-learning
- Workforce reskilling or upskilling for digital skills to perform future jobs.
- Importance of reading, writing and arithmetic literacy
- Local skill development for developing public goods in terms of digital content.

Road Ahead

The digital literacy should be approached as a societal issue rather than empowering individuals only. It is imperative to channel individual empowerment towards active engagement in digital governance to help shape both the offline and digital environments. The predominant focus on networks and device availability only is quite limiting resulting in significant inadequacies. It is critical for regulators to work together with industry in order to achieve a full knowledge society. Other recommendations from the panelists comprise:

- Develop local operational capabilities for economies of scale in time leading to sustainability.

- Need to focus on the issue of upskilling, reskilling and educating in order to avoid large proportions of population without skills requirements to operate in a traditional job dominated in the future by technology.

The heightened activities in e-learning and e-science ecosystem will accelerate the implementation of knowledge society.

MEXICO

Mr. Arturo Robles Rovalo
Commissioner
Federal Telecommunications Institute

Question: ***In a constantly changing digital environment, it is important that each person has the opportunity to acquire the skills and knowledge necessary to understand, actively participate and fully benefit from the information society and the knowledge economy. This becomes even more relevant in this time of pandemic that forces us all to isolate ourselves physically but not virtually. In this sense, what role do regulators play in promoting capacity building and e-learning and how could collaborative regulation be leveraged to achieve a full knowledge society?***

First of all, I wish to send my greetings to all the panelists and participants in this session, wishing that everyone is in good health. Likewise, I am very grateful for the opportunity to share the perspective of the Federal Telecommunications Institute from Mexico on this very relevant topic.

Today more than ever information and communication technologies (ICT) have proved to be crucial and essential for our societies around the world. There is a general consensus that many aspects of our daily life could be maintained thanks to the connectivity that allowed us to stay informed, in contact with loved ones, tele-work or telecommuting, tele-health, tele-education, mobile payments, among other things more.

During these critical times, Internet connectivity has become a central element for many of us; however, the persistent lack of connectivity in countries and regions, also highlighted the great differences that still exist between the connected and the not connected.

The economic and social consequences of the global pandemic have made it clear that no single authority by itself will be able to find a solution; therefore a collaborative approach to regulation has proved to be vital to overcome the challenges, and more generally to foster the digital transformation of the countries. Since a knowledge society can only be achieved by ensuring connectivity for all people, especially in a dynamic and evolving technology environment.

In this sense, in order to contribute effectively to the multiple efforts underway, it is necessary for regulators, ICT ministries, industry and all those involved in the ICT sector to use these key strategies, which are collaborative regulation and international cooperation, in order to Build the best possible platform, so that information and communication technology can help defeat COVID-19 and make us more secure, strong and connected. Furthermore, international cooperation is important to address the risks and externalities inherent in a digital environment, as well as to share experiences and best practices.

The outbreak of COVID-19 in Spain, the second with the most infections and deaths from the pandemic, gave countries the guidelines for their national response strategies. The speed, the lethality and the devastating impact of the pandemic helped other countries to learn from the terrible experience and thus respond to the emergency with adequate strategies to deal with the crisis caused by the coronavirus.

The Federal Telecommunications Institute (Institute), as a convergent regulatory body whose main objective is the efficient development of broadcasting and telecommunications in Mexico, and at the same time it is the competition authority for these sectors. In this sense the institute, focusing on its main objective, has been taking measures to face the global pandemic in which we are all involved. As we know, telecommunications and broadcasting will be essential to face the coronavirus, on the one hand, to keep us informed and on the other to continue carrying out our activities.

That is why the Institute, in coordination with the Federal Government authorities and the Mexican telecommunications industry, reached an agreement by which mobile operators will allow their users free access, without consuming data from your balance, to the content of the page https://coronavirus.gob.mx.
It's important to mention that the market share that main operators have is 98.53% of the market. Telcel 62.49%, Telefónica 21.22% and AT&T owns 14.82%.
In Mexico, there are 83.5% of mobile telephony service lines in the prepaid modality and its distribution of market share is as follows:

Market Share prepaid per operator (%)
Telcel = 61%
Telefónica = 24 %
AT&T = 13%
Others = 2%

Additionally, the major mobile operators in Mexico, coordinated by the Institute, presented an "emergency plan" for its active prepaid clients of the main commercial offers:

➢ Enable for a single occasion and for free, a package of voice calls and / or SMS.

➢ For prepaid services, it made available to its customers 100 minutes and 150 free SMS with a validity of 30 days for the AT&T Plus plan,

➢ As well as 300 free minutes for AT&T “Plan Unidos” with a 14-day validity. All this in order to keep their families and friends close.

In the same way, the Institute, in coordination with FIXED SERVICES operators established agreements in which their clients has the option of temporarily migrate a low-cost package called "Contingency Support" consisting of Internet access with a speed of 2Mbps, free browsing and unlimited data, landline phone users will be able to continue receiving calls and dial free emergency numbers, as well as dial to the line enabled by the Federal Government to attend the health emergency and the payment date will be deferred. The cost of this packet monthly is $100.00 MXN this is equivalent to $ 4.42 USD.

In addition, the Institute release an informational campaign to promote the use of telecommunications and broadcasting services as “partners against the Coronavirus” to continue economic, education and health activities that includes recommendations to prevent networks congestion, tutorials for tele-working and online payments, and the available supports that the operators are offering to help their costumers during the emergency.

Also, in Mexico, the Ministry of Education implemented a program for all school levels of education classes, based on official study plans and programs, which will be broadcast. As well as the educational radio for indigenous communities, brochures from the National Council for Educational Development that were distributed in marginalized areas; it also implemented the "New Mexican Online School" platform with Google Education for students with internet access.
As is clear that the state and federal public media have played a fundamental role in facing the crisis, even radio programming at broadcast programs at educational programs for girls and boys, which are broadcast by the public radio station.

Regarding access to the Internet as a means to eliminate the digital divide, the Institute has put all its efforts into implementing a series of regulations that allow users to have better service options at affordable prices. Thanks to the growth of 4G networks in México, the mobile internet is reaching more populations.

Another strategy that has been useful in improving telecommunications and broadcasting coverage was the combination of: strong competition policies for the market and promoting social responsibility through single and spectrum concessions for commercial, public and social, community and indigenous use, as well as satellite concessions and authorizations.

In this time of emergency in the country and worldwide, technologies are playing a key role as well as a collaborative approach in maintaining productivity, as well as access to fundamental rights such as education. Without a doubt technology has been a great ally.

Finally, I can conclude that in a society in which information and knowledge have become current pillars of prosperity and social development, the remote health, work and education systems through ICT will help democratize human rights and improve the resilience of all countries, mainly in emerging economies as Mexico. But all this will be achieved through the appropriate appropriation of ICT and not only with networks and devices availability.

The IFT continues working together with industry and other authorities in order to guarantee the continuity of telecommunications services, the spreading of priority messages regarding health, as well as keeping the population connected during emergency situations.

UNITED ARAB EMIRATES

Eng. Majid Al Madhloum
Senior Manager, Center of Digital Innovation "CoDI"
Telecommunications Regulatory Authority (TRA)

***Question**: Capacity building in the areas of education, technology know-how and access to information, which are major factors in determining development and competitiveness. What are some good practices that took place in the last few months of the pandemic do you believe can be leveraged on to support this? Furthermore, what are some of the initiatives in the UAE that were launched recently in the Capacity Building?*

Introduction

There is no doubt that in the last few months, we all have witnessed new norms being imposed on us and as a result, we had no choice but to shape our new normal. Despite the challenges and opportunities, we as the information society should not limit the efforts to solving current and immediate capacity building challenges only but instead, we should leap forward and take proactive steps. The world is more connected that ever, what if the next pandemic was digital? Just something to think about.

What are some good practices that took place in the last few months of the pandemic do you believe can be leveraged on to support this?

- **Enabling developing communities** through skills comes in different forms, in some cases the challenge is access to knowledge hence a good way to look at it is more towards promoting open platforms and affordable eLearning services could form a solution. In other cases, where access is not the challenge, digital skills are. Therefore, identifying those skills to bridge the digital divide is a good starting point, be it technical literacy skills, competencies such as creativity and collaboration or even character qualities like adaptability and growth mindset especially in entrepreneurial communities. The morale here is the empathizing with the target audience is key to understand the capacity building requirements, and therefore this will lead to the development

of local operational capabilities and that is how the economies will scale with time leading to sustainability. In simple words, there is no one size fit all approach: Different communities have different challenges and hence requires different solutions and, in many cases, with some enablement the solution is also from that very same community.

- **Effective cross boarder collaboration and partnerships**. The pandemic did not consider geographical boundaries and borders, so why should we when it comes to capacity building. In other words, reuse, and compliment rather than compete and limit. During the peak of the pandemic, we saw how opening the source and IP of ventilators set good example e.x MIT Emergency Ventilator Project or the Combi-ventilate developed by the Irish Forklift company and others in India and other places. In addition, sharing medical expertise between countries, flying medical teams to cover for the shortage of skills.

What are some of the initiatives in the UAE that were launched recently in the Capacity Building?

- In the UAE's TRA Center of Digital Innovation. We have an online training platform named the TRA Virtual Academy, this is one of the WSIS winners by the way. It provides free access to courses in ICT, entrepreneurial skills, soft skills, cyber security and more. The platform can be accessed in literally seconds and does not have pre-requisites other than internet access. The courses can provide the necessary skills for tech entrepreneurs as well as life-long learners, students, researchers, employees, job seekers. It is being accessed by people from 80 plus countries and recently we have crossed the 200,000 registrations to our courses. One of the interesting things that happened lately is that we've been approached by a Center of Excellence in Africa to utilize the capabilities of the academy , in addition we are now studying how to diversify the delivery of trainings, offer courses in the 6 official languages of the United Nations and enable offline access too.

- The second initiative is the International Center of Digital Innovation (I-CODI) this is a great collaborative initiative between ITU Development Sector and the TRA to establish a center of digital innovation physically in Geneva and virtual as well. I-CoDI will help ITU Members, Sector Members, and other key stakeholders to integrate innovation into their national development agendas and activities. Innovation has been recognized as a powerful engine for promoting development, addressing socio-economic challenges, and increasing the overall competitiveness of countries through capacity building. I-CoDI is inspired by UAE's CoDI, that was launched in 2013, as part of the UAE's efforts in digital transformation and enhancing the digital journey of the UAE citizens and Government through research, innovation, training, skills development and of ICT advisory services. This is another example of how the UAE is promoting of ICTs for development thought access to information and knowledge.

INTERNATIONAL TELECOMMUNICATIONS UNION (ITU)

Prof. Ahmad Reza Sharafat

Chairman, ITU-D Study Group 2

***Question:* What are the critical success factors (CSFs) and key performance indicators (KPIs) for capacity building through e-learning, and how ITU can assist developing countries to benefit from e-learning?**

Digital transformation is indispensable for sustainable development, which in turn requires a paradigm shift in providing quality education and training by offering ICT-centric education and training in many diverse fields. With COVID-19 pandemic and the necessity to practice and maintain social distancing, we are witnessing a significant jump in the use of e-learning as an alternative to the more conventional brick and mortar classrooms. This has many direct and indirect benefits, such as less time wasted on physical transportation for individuals, reduced traffic jams, less air pollution, and less expenditure on transportation. The conventional way of life that was partially centered on physical presence was not sustainable in the long run even without a pandemic, and COVID-19 has forced the entire world to experiment with new tools and applications to cope with it. Even when the current pandemic is over, it is expected that remote presence and the work-from-home paradigm will continue and expand, as many businesses have already taken the necessary steps to permanently provide such flexibilities at least to a portion of their workforce.

Education and training are among the sectors most affected by COVID-19 pandemic. Prior to this, we have witnessed a gradual, but steady and at times, accelerated use of distance education at higher levels, but pre-university education was mostly based on brick and mortar classrooms. Massive open online courses, also called MOOCs, were becoming increasingly popular in universities, and even prestigious institutions of higher education were offering such courses to all those interested across the globe. Of course, over the years, some measures were developed to ensure both the quality of teaching as well as the required levels of learning and proficiency is achieved by the participants. This may not be the case in the widespread and to some degree unplanned use of online courses in pre-university education as well as in the advanced university level education by those institutions that did not have prior experience in ensuring quality education and proper evaluation.

Considering the above, and irrespective of the reasons, distance education and e-learning will be on the rise in all societies, and it is essential for all stakeholders to be aware of various factors that are essential in achieving success, also known as critical success factors (CSF) as well as the metrics that are indicative of e-learning performance, also known as key performance indicators (KPIs) in all educational institutions.

CSFs have **four pillars**: **Students**, **instructors**, **administrative support**, and **ICT infrastructure**. **Students** should have the desire/obligation to engage in e-learning. They also need to have the necessary end-user tools and applications, and they should afford the time to spend on e-learning. **Instructors** should have the desire/commitment to engage in e-learning. They should also be well versed in using e-learning tools, have the necessary teaching material tailored to the environment, and have the necessary end-user tools and applications. **Administrative support** should ensure e-learning is effective and successful; and may include utilization of learning management systems (called LMS), which store course contents, provide authoring tools to instructors for developing attractive and effective course material, and offer other desirable functionalities. **ICT infrastructure** consists of a data center that include interfaces, servers, storage facilities, various software packages and applications, as well as network accessibility, bandwidth, and security. Considering that e-learning has become unavoidable on a much larger scale due to COVID-19 pandemic, one must carefully check if the existing ICT facilities are adequate to serve all students attending many concurrent courses.

KPIs are essential in ensuring that the e-learning objectives are achieved efficiently. KPIs include the number of registered students, the number of active students at any given instance, the average training time per student in each course, the completion rate for each course, the average score in each course, and the student satisfaction rate. Such KPIs can be measured and managed via the learning management system, and appropriate action can be taken to enhance the strengths and to improve the weak points in e-learning.

ITU can assist the developing countries by providing expert advice on the ICT infrastructure for e-learning.

INTERNATIONAL TELECOMMUNICATIONS UNION (ITU)

Mr. Andrew Rugege

Regional Director, R.O. for Africa

Question: ***Could you tell us more about ITU Initiatives for building a knowledgeable society, and more specifically the GIGA project?***

Statement missing

PEOPLE CENTERED INTERNET AND IMPACT NETWORK

Ms. Mei Lin Fung
Chair and Cofounder

Question: ***The Internet is now becoming the infrastructure that underlies all infrastructure for at least half the world. What can we learn from the original spirit and spread of the Internet, for the building of capacity and e-learning in knowledge societies that can foster the achievement of the UN Sustainable Development Goals by 2030?***

The Internet spread, not through the UN or the World Bank, but because individual people cared! In 2014, here in Silicon Valley, with one of the fathers of the Internet, Vint Cerf, I organized the 40th anniversary of the TCP/IP specification which underlies the Internet.

The US National Science Foundation funded the spread of the Internet, so professors could collaborate on research, through the National Research and Education Networks or NRENS's. "Network Information Centers" allowed faculty and students to connect to global counterparts.

At our open-air celebration of the Internet's 40th birthday, in a park in Palo Alto, people talked about how the Internet came to their country. Many of them took risks in order to connect their country to the Internet. The widow and daughter of the Moscow State University professor told us that connecting Russia to the Internet was what he was proudest of doing in his life.

The people at the 40th anniversary were thrilled and amazed they changed the world! Now the Internet is the infrastructure that underlies all other infrastructures, transforming Industries music, finance and banking, the global supply chain and now government and politics are in flux. With COVID, the shift to digital – in remote work, e-learning, online-shopping, eating, socializing happened in a few weeks, instead of taking 5-10 years.

Friendship and empathy are what fuelled the spread of the Internet. I learned this from Internet pioneers: Vint Cerf, my co-founder of the People Centered Internet and Douglas Engelbart, the inventor of the computer mouse at SRI. UCLA and SRI were the first two nodes of the Internet.

For the first time the UN is headed by an electrical engineer: Antonio Guterres, Secretary General created the UN High Level Panel for Digital Cooperation. I am excited about the Digital Cooperation Roadmap especially the project underway called GIGA. It's led by the ITU and UNICEF and aims to connect all the schools of the world. Just like the original Internet where universities trained local students to set up and operate the network equipment, GIGA is the next wave of the Internet whereby local people can design and operate school NIC's.

Ndemo Bitange was at the University of Nairobi in Kenya and helped set up their NIC. This set Ndemo on his future career – he became Permanent Secretary of ICT for Kenya and in that role, opened the door for mobile money and the creation of MPESA.

Today digital technology brings perils as well as promise. Connecting the schools safely means regulators have to assure that technologies Do No Harm. I commend the ITU for #Reg4Covid and in 2019 WSIS, Regulators on the digital frontier spoke about the importance of "share and learn" together in Regional (cross border) networks. National implementations can be improved by sharing breakthroughs and building on lessons learned by neighbors. Regulatory learning networks are needed to keep up with rapid change and the constant cyber-attacks. Regional networks are also key to designing regional infrastructure built on common digital building blocks (Appendix 1) This can decrease by ten-fold the cost of health, education, social support systems. I know because I am from Singapore where this strategy has been underway for 2 decades with huge cost savings. Singapore is also the home of the DQ Institute – Digital Quotient – recognized by OECD, IEEE and others for assessing child and adult digital literacy.

Local skill development, community leadership, support for local innovation are critical parts of the next wave of the Internet with GIGA. People have the energy to realize aspirations, build digital capacity and achieve the SDG's, provided we remove the barriers. This will require regional investment in digital public goods, digital networks (Appendix II) and infrastructure for learning and participating in global trade in goods and services.

As Kenya showed with Ndemo, we MUST seize the opportunity to develop the Ndemo's of the 21st century in every school in every village in every province and every town. Only then can we achieve the UN SDG's with everyone working together, digitally cooperating in the age of digital interdependence. This talk is built on the foundation of feedback from members of the NextNow and People Centered Internet communities, I am grateful for their inspirations for this talk.

"When the story of these times gets written, we want it to say that we did all we could, and it was more than anyone could have imagined." -- Bono

What happens in the next few years will change the future, and these changes will last for generations. What we do together now really matters.

Just like at the beginning of the Internet.

IRAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (IUST)

Dr. Hadi Shahriar Shahhoseini
IUST Vice Chancellor for International Affairs and Director of Research Center for ICT Strategic and International Studies (ICT-SIS)

Question: ***This leads us to our next issue, a prominent one that all of us are currently experiencing or might have experienced, e-learning in the current pandemic times. For this we pose a next set of questions to our panelist from Iran University of Science and Technology. From your point of view, how has covid-19 pandemic changed e-learning and e-science ecosystem in universities and what opportunities will there be after 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 2020 which this year is held through the web, and have opportunity to address about e-learning and e-science ecosystems. First of all I would like to appreciate the ITU and the Forum Secretariat for their hard works in the past five months for moving from physical to virtual forum.

My university, Iran University of Science and Technology (IUST), with more than 15000 students and 400 faculty members, is a member of UT5 (the Alliance of 5 Leading Iranian Universities of Technology). IUST ranked in 2020 by QS and Times Higher Education ranking systems in top 650 universities in the world and 87 in Asia. Also, in 2020, IUST was ranked as the first top university in Iran for its international activities during 2019, by Ministry of Science, Research and Technology.

In March 2020, the world suddenly faces Covid-19 Pandemic. Almost all usual activities are rapidly stopped, and the people were limited to the personal area. IUST is not exempt for this case, but due to long experience in e-learning, it was among the first universities in Iran that managed to continue its role in higher education virtually, in the first week of receiving signs of pandemic in Tehran. Other scientific activities were also turned in the same environment. Fortunately, more than 97% of classes continued without any interruption via the Internet and web-based systems; while before the pandemic, only 10%

of classes used e-learning system. 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. In this way, video conferencing apps such as Zoom and Adobe Connect, messengers such as WhatsApp, video sharing apps such as YouTube, video chat apps such as Skype, and LMS systems are used in a mixed manner for connecting students and teachers as well as the meetings between students, project advisor and supervisors in universities. Even so the pandemic situation has made a lot of problems in the normal activities in the world, but it has opened new opportunities too. I want to raise two important opportunities in this speech.

Firstly, these high-quality courses and services of strong and top universities in each country could be provided to students in entire the country especially in remote area in their local languages. This could be done through virtual student exchange programs between universities. This results in reducing digital divide in learning system and developing more and more local contents, which is emphasized in WSIS Action Line C8.

Secondly, I think this large scale experiences during the pandemic, is a great opportunity to get used to using the developed distance learning and scientific collaboration platforms for our other targets in post-corona era. This may be blended learning and life-long learning in e-learning ecosystem and Collaborative and Open Science with equitable access in e-science ecosystem.

Last year in this high-level-session, I emphasized on using emerging technologies, such as AI and Big Data, as well as Mass-Adopted Technologies like mobile networks as platforms that will play vital role in our life. These technologies have shown a good response in recent months. The collaborative scientific networks have also shown good performance in combating the Corona Virus Pandemic. In fact we start with zero knowledge and in about six months, there is promising progress. These have not possible without technologies, scientific collaborations and the agility in using digital skills.

While the world is in hard situation and there are many challenges in this way, but I believe that the combined efforts and initiatives by virtual and real activities in e-learning and e-science ecosystems will increase our flexibility during the crisis, and indeed accelerate the implementation of knowledge Societies. Thank you for your attention.

UNIVERSITY OF JOHANNESBURG

Mr. Bhaso Ndzendze
Research Director, Centre for Africa-China Studies

Question: ***How do South African universities advance internationalisation, research and quality teaching priorities in the currently unstable environment?***

Higher Education during COVID-19: The Experience of the University of Johannesburg

The first cases of COVID-19 in South Africa coincided with the early stages of our academic calendar for 2020. Thus, as the lockdown was introduced in late March, the concern was maintaining the academic calendar. The ongoing crisis has put a lot of our institutions of higher learning under a lot of strain and has tested their resilience. It has been a challenging time. But just as well, it has presented a lot of opportunities for research, for our curriculum, and for our internationalisation efforts. I briefly outline these below.

Education

Like a lot of institutions throughout the world, we have had to learn by doing. The crisis especially began with the start of the academic year. So, we have had to make a number of adjustments – we've had no choice but to migrate online, and the challenges of internet access have manifested themselves. But at the same time, there have been non-negotiables on quality education, with external review of major assessments being maintained and enhanced in some regards. Thus, the focus has been on teaching the content in a manner that accommodates the new realities, expert involvement through guest lectures by practitioners, as well as a stronger focus on external examination that takes cognizance of this context. We have had a very conducive partnership with the government and private sector: with Internet and device provision for every student starting in April to ensure that no student is left behind. The University of Johannesburg has over 50, 000 students, and so this has been a major task. But the online dispensation has offered insights in terms of analytics, and has allowed us to implement such methods as tracking the attention spans of our students and thus noting what works and what does not and implementing

accordingly. Having found us at a point where our university was pivoting towards the fourth industrial revolution, it has found us agile.

Similarly, the ongoing lockdown has enhanced and enriched our curriculum in real time by offering insights into patterns along economics, policy, systems analysis, political theory, environmental impact, digital technology and the relevance of international organizations to mention just a few.

Enriched research

A lot of articles, in the popular press, and in leading journals on COVID-19 from a variety of aspects. In special issues, in working paper series, and in upcoming books, with a number of calls for contributions having gone out. So, the work has been interdisciplinary. It has also been characterised by internationalisation if only counterintuitively. Since every institution throughout the world is facing the same problem at the same time, which is a rare occurrence. So, we are thinking through the same dilemma, and seeking to anticipate its implications on a global scale, this makes excellent precondition for collaboration.

INTERNATIONAL TELECOMMUNICATIONS UNION (ITU)

Ms. Atsuko Okuda

Regional Director, R.O. Asia & Pacific

International Telecommunication Union (ITU)

Question: ***What are the emerging trends and challenges you face in Asia and the Pacific when it comes to capacity development and e-learning? How are you addressing them in the ITU regional office?***

Capacity development and e-learning have become an area of increasing importance at the time of COVID-19 response and recovery in Asia and the Pacific. When the COVID-19 lockdown was implemented across the region, many people shifted to online platforms to perform essential functions, such as learning, business, trade, healthcare, government services among others.

In the process, it was recognized that not only infrastructure and network but also people's skills and capacity to be able to use online platforms and services were found essential. In particular, due to the massive number of students who were asked to take courses online, e-learning has become a critical area of focus so as not to leave any child behind. According to the UNESCO, 290 million children were out of school due to COVID-19, and it will have significant impact on their learning and future opportunities.

In response to the above challenges, the ITU Regional Office for Asia and the Pacific has been at the forefront in addressing the urgent needs of member countries and people in the region. In order to enhance general digital skiils and literacy among the government officials, ITU has been implementing targeted and essential training courses through ITU Academy and Centers of Excellence.

In order to accelerate the digital skills uptake in society, ITU has been partnering with CISCO Systems and established the Digital Transformation Center (DTC) across the globe. In Asia and the Pacific, there are 3 DTCs, one in the Philippines, Indonesia and Papua New Guinea. The DTC in Papua New Guinea was inaugurated in July 2020, and the training of trainers started. It is hoped that the trained trainers then will impart the skills and knowledge widely in society and economy.

ITU is also currently conducting a study to map the digital divide and under-connected communities and schools in Thailand. The report is intended to support the government efforts to ensure that all children can take advantage of the e-leanring services provided by the government in response to COVID-19.

Globally, ITU is partnering with UNICEF in the implementation of the Giga project which aims to improve school connectivity. A webinar was recently organized to kick start the Giga introduction with the participation of around 30 member countries and over 160 participants.

Such support to capacity development and skills development must compliment other work in extending digital connectivity and digital services so as to overcome the COVID-19 induced challenges and build back better. ITU has assisted in the installation of satellite communication ground terminals in remote islands of 9 Pacific Island countries. When Cyclone Harold hits several countries and the remote islands, the satellite facilities were the only channel of communication for disaster response and recovery in the midst of COVID-19 lockdown. The communities started using the satellite bandwidth made available by the project for e-leanring and e-health, among others.

ITU provides an integrated solution to address these technological, social and economic challenges among member countries in the region to address the digital divide and overcome the negative impact of the COVID-19 pandemics. We cover not only spectrum management, satellite communication and broadband networks but also policy, regulation, digital services, capacity development, digital inclusion and cybersecurity. The ITU memberships range from private sector to academia and civil society organization and convene the global and regional meetings which shape the future development of ICT and digital technology.

UNITED NATIONS UNIVERSITY (UNU)

Mr. Morten Meyerhoff
EGOV Advisor

Question: ***In light of the rapid Digi-industrial revolution of society, technology is rapid transforming the type of competences and labour sought by the public and private sectors. What trends do you see emerging? And what is the impact on skills?***

A digital transformation of society. A new industrial revolution. Whatever we call it, something is afoot. The move from our current info-industrial society to a digital one entails new technologies, new concepts and new ways of organizing and producing value.

Estimates of the impact of data analytics and Artificial intelligence vary. Early estimates of the potential of Big and Open data is estimated to 1.9% of GDP in 2020 across 21 different sectors in the EU plus UK (demosEUROPE & WISE Institute). In the USA it is estimated that Federal authorities can save an estimated 634 million labour hours or US$21.6 billion in labour cost can be saved (Deloittes Research, 2017). As we automate, introduce autonomous vehicles and service robots the digital transformation may add up to US$ 15 trillion to the global GDP (PWC, 2018).

The impact on the labour market vary. Automation of manual blue-collar jobs and repetitive white-collar work will disappear, others augmented by AI. The impact and timing will vary according to the degree of digitization and current labour intensity of processes in various industries. For instance, estimates across 12 sectors in the G20 countries (WEF, 2018) Show that the digital transformation will impact 46-62% of information and data processing jobs between 2018 and 2022. By comparison communications and interaction (23% - 30%), coordination, development, management and advertising (20% - 29%), research, recommendations and decision making (18% - 27%) will be impacted less. Early estimates on the global economy show that 47% of US jobs, 57% of those in the OECD and up to 77% of those in China are potentially going to be automated by AI and robots (WB, Oxford University, 2013). Offset by new jobs, later study show that 40-60% of jobs are at risk of being digitized, with traditional "female" jobs less effected than "male" jobs in the longer term and countries like Finland and Republic of Korea (both 22%) will be less impacted than say Slovakia (445) (IFW, Kiel Institute for the World Economy, 2016; PWC, 2018).

The impact of technology on jobs, also impact the labour force. A full 44% of workers may not have the skills to make the transition into other employment by the mid-2030's (PWC, 2018). While some 35% of employees will require up to 6 months training for reskilling, 9% will require 6-12 months, 10% more than 12 months (WEF, 2018)

While the opportunities and risks are multiple, it is unclear how we will navigate the digital transition. For one, ttraditional route to wealth though industrialisation and mass manufacturing creating jobs increasingly closed to emerging economies.
Politically it is tempting to create large numbers of "here-and-now" jobs rather than fewer but long-term jobs. The number of low skilled jobs in agriculture, construction, manufacturing, retail and manufacturing will contract as Roberts will sowing our cloth, scan our shopping trolleys, automate and assist construction, answer the phones etc.

Up- and re-skilling from our current info-industrial society to a digital one is therefore essential. Short and long-term planning is required as the STEM demand already outstrips supply. Gender and geographical imbalances need to be addressed in STEM, VET and transformation to a digital knowledge society. Essentially a two-pronged solution is our only choice to successfully addressed the changes in skills demand: Up-skill though VET and life-long learning, and Increase STEM supply.

Public-private partnership and regulatory approaches to increase VET, STEM and successful transformation are required. Our education systems must be re-orientated to to include more STEM, innovation and entrepreneurship. In doing so policy makers, employers and educators must do five things: First, look ahead and beyond election cycles. Second, assess technology investment and the impact on employees. Third, align learning objectives with organizational and national strategies. Forth, proactively up- and re-skill employees for win-win future. Fifth, communicate and manage change the change.

Session Ten: Ethical Dimensions of Information and Knowledge Societies

Recording: https://www.itu.int/net4/wsis/forum/2020/Agenda/Session/210

Moderated by High-level Track Facilitator:
Ms. Timea Suto, Knowledge ManagerInternational Chamber of Commerce (ICC)

WSIS Action Line Facilitator ITU:
Ms. Dafna Feinhloz, Chief of Bioethics and Ethics of Science and Technology, UNESCO

Speakers:

1. **Zimbabwe**, Dr. Gift Kallisto Machengete, *Director General,* Postal and Telecommunications Regulatory Authority
2. **Italy**, Mr. Mattia Fantinati, *Special Advisor of Minister of Innovation and Digitalization,* Ministry of Innovation and Digitization
3. **International Federation for Information Processing (IFIP)**, Ms. Moira de Roche Holmes, *Chair,* IP3, IFIP Board member
4. **Lativa State Radio and Television Centre**, Mr. Edmunds Belskis, *Chairman of the Board*
5. **Horyou**, Mr. Yonathan Parienti, *Founder & CEO*

6. **The UN Brief**, Ms. Maya Plentz, *Editor in Chief*

Executive Summary by High-Level Track Facilitator

Introduction

The High Level Policy Session on Ethical Dimensions of Information and Knowledge Societies

took place on 28 July 2020 and discussed the importance of ethics for the Information 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;
- the Postal and Telecommunications Regulatory Authority of Zimbabwe;
- the Ministry of Innovation and Digitization of Italy;
- the International Federation for Information Processing;
- the Latvia State Radio and Television Centre;
- Horyou; and
- The UN Brief.

The session kicked off with an overview of the topic delivered by UNESCO, as a the Action Line Facilitator, explored a few national examples, initiatives and projects from around the world and then looked deeper into a topical considerations around privacy, social inclusion and building trust.

Vision

The session highlighted the need for greater collaboration and multistakeholder dialogue. Participants underlined the need for shared values, sharing of information and raising awareness as well as inviting input from all stakeholders in their activities and initiatives in order to improve cooperation so that all can share in the benefits of the information society and new technologies.

Fresh priorities

Participants noted the need for common ethical frameworks, building trust and multistakeholder cooperation in the development, deployment and use of emerging technologies.

The session commenced with a presentation of UNESCO's ongoing work to elaborate a global non-binding instrument in the form of recommendation on ethics of artificial intelligence, through a multidisciplinary, multicultural and pluralist approach. In the spirit of this approach, the first draft of the recommendation was written by a panel of 24 experts from different regions and backgrounds. Input from the global community was invited on this draft from the global community. Based on this input a second draft will be elaborated by the expert group and then deliberated by UNESCO Member States is to be possibly adopted by UNESCO at its General Conference in 2021.

The document aims to include the voices of the global south, focus on the environment and ecosystems, and promote gender equality and human rights. Th project aims to define shared values and principles and discuss how these should be then transformed into concrete policy measures.

Against this backdrop, participants shared their thoughts, activities and lessons learned, highlighting similar priorities of access, inclusion, respect of human rights and gender equality. They also agreed on the importance of capacity building and multistakeholder dialogue to foster trust in the development and adoption of emerging technologies, such as AI.

Emerging trends

In sharing their own projects, initiatives and lessons learned, participants noted:

- Shared values and principles: developing shared values and principles fosters trust in the development, deployment and use of emerging technologies. Participants noted that the development of codes of ethics are beneficial to raise awareness and promote ethical behavior within organisations but also to inspire other organisations or industries.
- Building trust: organisations developing, deploying or operating AI systems should be held accountable for their proper functioning. For example, participants noted the efforts of some companies ensuring their hiring processes are transparent and inclusive to fight any potential bias in the AI system they are developing.
- Skills development: participants noted the importance of capacity building and skills development, not just in digital literacy, but also to foster common understanding of ethical principles.
- Sustainable Development Goals: alignment with the shared goals and objectives of the UN SDGs can provide a framework for discussions on shared values and principles.
- Enabling environment: participants noted that in order to promote continuous innovation and investment in technology for inclusive socio-economic growth multistakeholder collaboration and enabling policy environments are necessary.

Example of case studies

Participants shared projects they lead and/or are collaborating on. They highlighted:

- Efforts to deploy service automation in Latvia
- Efforts to expand meaningful connectivity in Zimbabwe
- The IFIP International Professional Practice Partnership efforts to develop code of ethics
- Efforts to develop a social network for good by HorYou, to share positive content and inspirational actions towards the SDGs and leverage blockchain technology to inspire philanthropists, companies and citizens to channel funding for projects of their interest

Opportunities

In the context of the current COVID-19 pandemic participants noted mostly the opportunities offered by emerging technologies like AI and blockchain for the analysis, understanding, management and recovery from the current crisis.

They also noted the potential of emerging technologies to catalyse the delivery of the Sustainable Development Goals. Participants highlighted the role of the United Nations and the office of the UN Secretary General to drive open, inclusive, multistakeholder conversations around emerging technologies.

They mentioned, furthermore, the potential of AI to innovate public service and improve the efficiency of institutions.

Key challenges

Speakers noted the need for raising awareness and capacity building not just in digital literacy, but also on ethical frameworks. This was also mentioned as a key element on the road towards the implementation of ethical guidelines and principles.

Road ahead

The session provided common understanding of goals: inclusive and meaningful access to technology, skills and capacity building and fostering trust in new and emerging technologies, and it highlighted that the road towards these goals is based on holistic and evidence based policy-making and international collaboration rooted in multistakeholder dialogue.

ZIMBABWE

Dr. Gift Kallisto Machengete
Director General
Postal and Telecommunications Regulatory Authority

Question: ***How can a Knowledge Society manage the ethical dimensions that come into play when generating, sharing and making available, knowledge that may be used to improve human development and what has been the Zimbabwean experience?***

We live in a world where creation, organisation, dissemination and use of information, is mostly done through the click of a button. Many people across the world and in Zimbabwe, turn to the internet for a variety of information. It can be study material for educational purposes or just self-improvement information. It can be self-help information that assists them in solving a problem in the home or at work, or even in business. It can also be treatment solutions for a health problem. Currently the COVID 19 crisis has seen many "internet doctors' churning out prescriptions on social media and the internet, for the pandemic.

Unfortunately, there is no quality assurance of information posted on the internet. Anyone can post anything and even claim to be an expert. Some of the solutions can even turn out to be harmful, while some of them can add a wealth of useful knowledge.

The advent of various technologies and increased interconnectedness has not eliminated the ethics relating to information but increased ethical concerns in various dimensions. Identification of the relevant ethics and their various facets, is critical for knowledge societies to deal with the issues involved. These ethical concerns are what WSIS Action Line C10 deals with.

The first step that can be taken by knowledge societies in dealing with the Ethical issues that may arise, is to identify the dimensions. The next step is to come up with measures to manage the ethical issues and the last one, is to come up with sanctions for unethical behaviour.

The basic principles of ethics that come to mind include Integrity and accuracy of information, privacy and confidentiality, Copyright and plagiarism, security and, intellectual property. In addition, knowledge

Societies also need to consider issues arising from emerging technologies, especially the use of artificial agents in activities that require moral decisions to be made, such as self-driven cars, where there is no human intervention. They also need to consider the implications of Internet of things, where intelligent gadgets make decisions that may require moral considerations to be taken into account.

Technology has a tendency to make what is unethical, look normal and acceptable. A person that would never contemplate walking into a bookshop or music store, to steal a book or music CD, may not see anything wrong in downloading a book or music in a way that makes him avoid paying the Author or Singer. The ease with which one can copy and paste material, may make Students and work-shop presenters plagiarise other people's work without a qualm.

Individuals can deal with information integrity issues by checking the credentials of authors, verifying the information against a primary source and evaluating the website.

Methods of dealing with the ethical dimensions, at corporate and government level, include putting in place Codes of Ethics, having robust secure systems, formulating internet use policies and promulgating laws that govern creation and dissemination of information, as well as treaty level agreements, among countries. Censorship is an age-old method, that can also be useful. Censorship may be good in order to prevent readers being exposed to offensive and objectionable material. It may however be regarded as unethical, as it results in failure to provide the necessary information for scholars and innovative people, to come up with solutions that benefit society.

There is however, no doubt that we all have the ethical duty to protect the minds of children to ensure that what they consume is morally sound and does not damage them to an extent that makes them adopt unethical ideas and behaviours portrayed in the material shared with them. Society and individuals, have a duty to make sure that solutions posted on the internet in different articles, do not harm their readers ,be they medical patients, aspiring business people or those seeking self-help information to improve their lives and relationships. In this regard, Zimbabwe commends ITU for its recently Published Child online Protection Guidelines.

Zimbabwe has had its fair share of information and knowledge dissemination. This has also come with a fair share of ethical problems.

Just as other parts of the world have grappled with hacking, Government systems in Zimbabwe, as well as banking system have been targeted. Some of its people have been lured into pyramid schemes, or fallen victim to phishing and identity theft and, have had their computer systems compromised. While privacy data breaches in Zimbabwe have not been as spectacular as incidents like the 2013 yahoo data breach, which compromised over 3 billion user accounts, or the over 10 major incidences of hospital and medical data breaches in the USA in 2019, Zimbabwean companies have also experienced some data breaches. Recently, one of the Country's citizens had her COVID 19 results come out in the press, complete with her name and address, before she had even received the results from the testing centre. The results also went viral on social media and people panicked when they saw her. Data breaches that may result from

mistakes by employees of entities that store large amounts of personal data, as in the case of the Blue cross employee who in error uploaded data relating to 16000 Blue Cross patience on a public facing website, can also be part of the problem.

Zimbabwe has come up with policies that encourage both the public and private sector to secure their computer systems and websites. The local banks have robust firewall systems to ensure safe transactions. Laws in place include copy right and intellectual property laws. The right to privacy is enshrined in the constitution, while confidentiality contracts are the norm in inter-company transactions and consultancy arrangements, as well as cross border transactions. A new cybersecurity and data protection Bill is due to become law soon, to enhance the existing laws. Universities use plagiarism checkers to ensure that students do not commit this offence.

These laws simply compliment the moral norms that are ingrained in every Zimbabwean, that of (Ubuntu) (the nature of our personality). This concept is promoted continuously by our Government and the Postal and Telecommunications Regulatory Authority of Zimbabwe, in the quest to achieve the ethical target of bridging the digital divide, to ensure that every citizen joins the information highway and participates as a full member of our knowledge Society.

ITALY

Mr. Mattia Fantinati
Special Advisor of Minister of Innovation and Digitalization
Ministry of Innovation and Digitization

Question: ***Should different uses of technology in government or private sector be held to different regulatory standards?***

Thank you very much and thank you all distinguished colleagues, for this opportunity to join this discussion about the near future of AI.
AI will produce social and economic changes far deeper than any other technological revolution The way we are approaching AI today, will define the world we live in tomorrow. The choices we are facing today are related to fundamental ethical issues about the impact of AI on society
Due to the impact Most developed countries have adopted different approaches on AI which reflect their own political, economic, cultural and social system
In the United States and in China, large companies are significantly investing in AI and are exploiting large amounts of data, instead Overall, Europe is lagging behind in private investments due to the fact that most of the EU enterprises are small and Medium sized.
To tackle the issue of the trade of Important topic:
I think that each state has its own conception how to help companies to scale up the market. Even in EU we have of SEVERAL visions. I believe that It's crucial that a Government supports companies' efforts removing burdens from economic activities to foster innovation. At same time, government set standard of transparency coding. Focusing on the concept "human centric vision", that means "transparency".

The politic in this case plays a fundamental role: the algorithm selection of AI entails a pollical decision.

Italy has been at the forefront in recognizing the importance of protecting and defending human rights on the Internet with The Internet Bill of Right in 2015.

The highest point of a 10-year long process of debate that included a commission of multi-stakeholder experts and a public consultation before it was formally approved by the Italian Parliament.

The Declaration has been praised and recognized by the Council of Europe parliamentary assembly as well as by the WWW Foundation as a landmark example of promoting and defending Human Rights online.

The Covid-19 crisis has shown that the Internet is an essential resource for our societies and economies, from trade to health and education, no country could have "survived" the lockdown without it. The need to ensure access for all and the protection of human rights has become even more urgent.

INTERNATIONAL FEDERATION FOR INFORMATION PROCESSING (IFIP)

Ms. Moira de Roche Holmes
ChairIP3, IFIP Board member

Question: ***What support does IFIP provide to governments, organizations and the information society to help them promote and ensure ethical behavior?***

Before I answer the question, let me position the International Federation for Information Processing - IFIP's role and interest in ethical behavior. We all agree that for Information and Knowledge Societies to use Digital products, they must Trust in the product. What is Trust based on – well surely it is heavily reliant on Ethics? We have all seen how Technology and other organizations suffer reputational damage, in some cases never to recover, because of a failure of ethics. Would you trust someone who it unethical?

To quote my colleague Don Gotterbarn "The commonly held belief that we are ethically good, coupled with the ease with which we make most of our day to day ethical decisions leads us to believe in the "Fatal Premise" - "Evil is done by evil people; I am not an evil person and therefore I cannot do evil." We must take the extra time to consider a decision or [computer] system's potential impacts on a broad range of stakeholders." We should think along the lines of the medical profession – first do no harm!

To support our goal of Ethical behavior, we are finalizing the IFIP Code of Ethics, as an exemplar. It is a concern that there are so many Codes out there – more than 170 at last count. This provides confusion and allows individuals to choose the code that suits them best. The Code will be published digitally in September this year, and in book format in 2021.

A code of ethics gives voice to values. There should be one or two exemplars that set the standard – formed through a consultative process. Substantial Codes of Ethics that go beyond simply saying "Be Good" may help in this process. When much ethical decision-making is unconscious, it is important to raise consciousness when it comes to new situations. Examples of ethical decision making are essential. Enforcement of codes of ethics is the wrong focus, we need to work toward ethics as part of everyone's "DNA" (living the values).

IFIP's promotes Professionalism in ICT: one of its strategic imperatives is "IT as a Global Profession". It encourages Member Societies and others in the ICT Industry to have a code of ethics – indeed going forward we will encourage the use of the IFIP code of Ethics as a starting point, which members can amend or add to as it suits local conditions – and to promote Professionalism amongst its members and the broader ICT community. Ethics and Trust, along with Competence are founding principles of any Profession – ICT is no different. IP3 accredits those member societies who meet the defined standards for conferring professional grade on their member.

We do not believe it is easy to regulate ethical behavior, but governments can set the example. We encourage governments to procure Digital Products and Services from certified ICT professionals. IFIP can guide governments on this and assist with adapting the IFIP Code of Ethics as a guiding tool and ensuring that procurement processes for digital products and services are from trustworthy organizations.

King IV Principles of Governance, followed by many organizations around the world, propose that organizations have an Ethics committee that considers all operations and decisions through an ethical lens. In some countries – South Africa for example, setting up such a committee is proscribed in the Companies Act. All governments should consider this in their regulations, and certainly have such a committee in their own organization.

A misuse of "ethics" is ethics-washing, or ethics theater, where companies give the appearance of being very concerned about ethics to avoid the application of EXTERNAL regulations, and yet do nothing to mitigate or respond positively to those concerns when they do arise. For example, promoting "AI for Good" while developing and selling questionable surveillance software is ethics-washing.

IFIP also contends that there is an ethical imperative to "leave nobody behind". We have a project "Digital Skills for everyone, everywhere". This project will work with other bodies including UN structures and global non-profit organizations. The outcome will be frameworks for Digital Skills for end users, consumers, and IT Professionals, that can be used to roll out digital skills in any setting. The framework will align with the Sustainable Development goals, embed the FAIR & CARE principles, and take guidance from UN Secretary General's roadmap for Digital Cooperation. We welcome anyone who would like to partner with us on this project.

LATVIA

Mr. Edmunds Belskis
Chairman of the Board
Latvia State Radio and Television Centre

Question: ***How will automatic data processing in the provision of proactive digital services affect individuals' perceptions of privacy?***

Development of digital services, proactive provision of services, and related ethical aspects were addressed by Edmunds Beļskis, Chairman of the Board, Latvia State Radio and Television Center.

The principle of proactivity in the provision of services can be ensured at different levels in line with the context of the service and the institutional capabilities. At the basic level, it can be implemented as a provision of proactive information and status notifications or in the form of reminders that allow the person to be informed.

Higher added value for the citizens and increased efficiency for institutions can be achieved by service automation, where the service is executed automatically (or automatically with a personal permit), taking into account already available and/or harvestable data from the public institution or other public bodies (for instance, application of municipal annual real estate tax and the size of the family, electricity discounts for the most socially vulnerable groups, automatic reimbursement of the overpaid income tax…). Thus, investments in service automatization shall be aligned with expected demand.

The technology-driven gradual transition of the service delivery from reactive to proactive is one of the signs of digital transition and indicates governmental and societal maturity and readiness levels, but at the same time, it is urgently needed to take immediate actions of legal framework harmonization.

Proactive provision of services shall significantly reduce administrative burdens, increase the level of societal satisfaction, and leading towards a higher level of trust to governments and at the same time increase efficiency of public administration authorities. To be able to provide proactive services it is necessary to ensure the exchange of data and it can be achieved through the development of interoperability framework of information systems of different public administrations. Therefore,

proactive service delivery goes well with the implementation of the "once only" principle and foster opening and re-use of data held by the national administration.

Compliance with ethical principles, values, and fundamental rights shall be insured at all stages of the proactive service delivery process – from the very beginning of designing the service to its execution.

The development and deployment of proactive services are strongly linked to public confidence. Citizens and businesses are expecting from governments the development of proactive services delivery and at the same time ensuring respect for privacy and protection of personal data, which includes data security and integrity, as well as portability and ownership of the data.

The integrity and interoperability of the digital resources of public administration and data security are prerequisites and a basis for public confidence, which is a cornerstone of good governance.

In this context, it would be important to note two ethical aspects:

- First, develop and implement proactive digital solutions within a framework of high ethical standards of public sector representatives and information society policymakers;
- Second, algorithms should be transparent, as well as paying special attention to incorporation of those principles where the provision of services could affect the values and ethical principles of society or their violation.

The importance of ethical principles, values, and fundamental rights within driven by the technology development of proactive service delivery cannot be underestimated. It is important to provide for all involved actors – public administration, citizens, and businesses with a common system of ethical principles.

A key success factor of proactive public service delivery is a societal level of understanding of the use of personal data. The debate about an ethical principle in the provision of proactive public services very clearly highlights the subject of personal data protection and therefore it is important to organize public awareness-raising activities to build understanding to be able to live and work in the next level of digital advancement.

Technologies used for extensive data processing (e.g. Artificial intelligence, machine learning, biometric data processing) and multi-scale decision-making digital solutions for the provision of proactive services have to respect ethical principles, societal values, and fundamental rights and delivery of services have to be based on transparent operating principles set by the governments.

HORYOU

Mr. Yonathan Parienti
Founder & CEO

Question: ***Could you tell us how Horyou platforms and technological solutions are supportive of achieving universal impact and social inclusion while integrating the United Nations Sustainable Development Goals?***

How Horyou platforms and technological solutions are supportive of achieving universal impact and social inclusion while integrating the United Nations Sustainable Development Goals

An existing Social Good ecosystem to join, expand and partner with:

- The Horyou community gathered more than 400,000 citizens over the last two years, as well as numerous NGOs and social entrepreneurs that are active in SDG related subjects and actions, in more than 180 countries on all five continents.

- The Horyou social network platform (Horyou.com) allows for the sharing of news, actions and SDG related contents and benefits with a voting system called “the Light” that enables to highlight the actions and interactions of active members, advocators of sustainability and sustainable solutions supporting the 2030 Agenda of the United Nations. Each user of the Horyou social network is asked to select up to three Sustainable Development Goals which they support, while enhancing the knowledge and encouraging the adoption of the SDGs framework and conducting positive and constructive activities on the social media.

This makes it a ready to leverage platform for educational purposes on topics like sustainability, solidarity, innovation and understanding the Global Goals of the United Nations and its related SDG programs and initiatives at an international level.

- Alongside its social networking platform, Horyou created a market place called HoryouMarket.com, which will be launched publicly by end of 2020 and which will be an SDG friendly ecosystem to buy and sell local, sustainable or innovative products within the SDG framework. This will act as an incentive for small and medium size entrepreneurs and be connected with the Horyou ecosystem to increase its global outreach and visibility.

- Lastly, with the development of its Utility Token, first Digital Asset dedicated to social inclusion, the HoryouToken, which has been integrated in the Horyou social network ecosystem, Horyou now provides for each of its members the opportunity to benefit from a digital wallet to be able to receive incentives in HoryouToken(s). The HoryouToken can be adopted at multistakeholder levels and provide a future purchasing power value with a traceable philanthropic mechanism called the "Proof of Impact". It is a blockchain technological solution supporting Universal Impact at Citizen level. This opens a new way of value creation and redistribution at local level, backed by a community driven voting system and traceable mechanism of redistribution of incentives that can lead to revenue and purchasing power creation in a more inclusive way. Partnerships with Ministries of Education, Information, Communication and Innovation, leading CSR Private Sector Groups and International Organizations are the upcoming phase of this international expansion of Horyou SDG friendly ecosystems, to establish an implementation in their respective strategies of advocating the SDG framework, 2030 Agenda and dynamics, as well as promoting the entrepreunership engines for their Youth that can lead to a more Universal Impact and Social Inclusion.

THE UN BRIEF

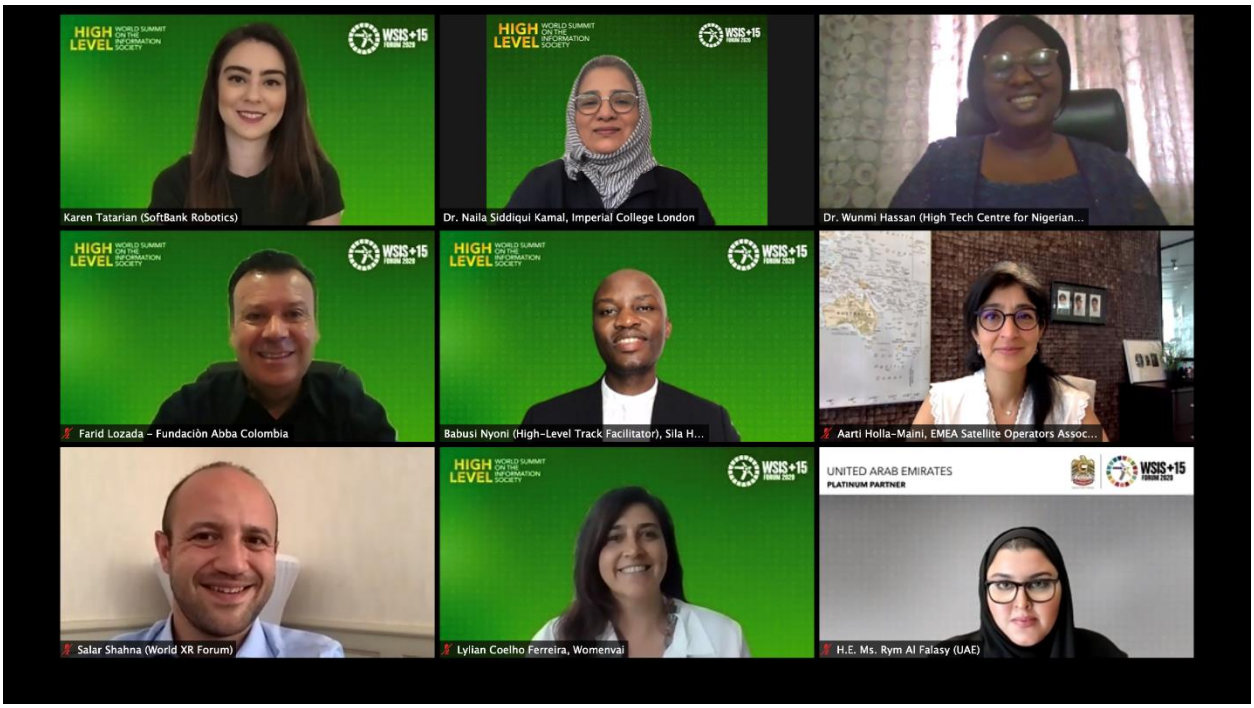
Ms. Maya Plentz
Editor in Chief

Question: ***What can we do to bring more women to decision-making positions in cybersecurity?***

Statement missing

Session Eleven: Gender Mainstreaming and ICTs

Recording: https://www.itu.int/net4/wsis/forum/2020/Agenda/Session/219



Moderated by High-level Track Facilitator:
Mr. Babusi Nyoni, CEO, Sila Health
Closing Remarks:
Mr. Houlin Zhao, *Secretary-General,* International Telecommunication Union (ITU)

Speakers:

1. **United Arab Emirates (UAE)**, H.E. Ms. Rym Al Falasy, *Secretary-General,* The Supreme Council for Motherhood and Childhood
2. **EMEA Satellite Operators Association (ESOA)**, Ms. Aarti Holla-Maini, *Secretary-General*
3. **Imperial College London**, Dr. Naila Siddiqui Kamal, *Senior Lecturer*
4. **Colombia**, Mr. Farid Lozada, *CEO,* Fundación Abba Colombia
5. **High Tech Centre for Nigerian Women and Youths**, Dr. Wunmi Hassan, *President and CEO*
6. **Softbank Robotics**, Ms. Karen Tatarian, *Robotics Researcher*
7. ***AgroParisTech-SUEZ* & WOMENVAI**, Ms. Lylian Coelho Ferreira, *Development Director of the Chair at AgroParisTech-SUEZ and co-founder Womenvai*
8. **World XR Forum**, Mr. Salar Shahna, *President*

Executive Summary by High-Level Track Facilitator

Introduction

It has been widely recognised throughout past decades that the inclusion of women is vital for the shift towards development and poverty eradication. Yet persistent concerns regarding female inclusion and gender equality remain. 20 years ago the Beijing Declaration and Platform for Action 1995 called for the 'full and equal participation of women' in and through media and new technologies of communication; yet according to a report by the UN Broadband Commission Working Group on Gender, 200 million fewer women than men around the world have Internet access today.

Vision

ICTs as an integral part of the creation of societies in which both women and men can substantively contribute and participate. Serving as tools through which gender equality and women's empowerment can be advanced.

Fresh priorities

The use of ICTs in bridging the gendered socio-economic gap brought about by the COVID-19 pandemic.

Emerging trends

1. Proactive investment in women in communication and information technology through actively anticipating the collective futures of women.

2. Grassroots education and inclusion of young girls as a foundation for gender equality

3. Using ICT entrepreneurship to drive economic inclusion

Example of case studies

1. Proactive investment in women in communication and information technology

National Strategy for Empowerment of Emirati Women in the UAE seeks to provide a decent living for women in the United Arab Emirates by making them an integral part of all sustainable and developmental fields.

2. Grassroots education and inclusion of young girls as a foundation for gender equality

Avanti Communications in Kenya runs the AI ML NGO program. They educate 78,000 marginalized girls around 245 schools and train teachers in digital skills. The learning focuses on literacy math and life skills and the results of using computer labs are that for every one year of learning with the mango connectivity program the learning age of the children actually increases by 18 months.

High Tech Centre for Nigerian Women and Youths organises the Women in ICT Summit in Nigeria to empower women and girls in ICT.

All Girls Code is an NGO in Lebanon that promotes the inclusion of women in engineering and technology. It has grown to over 400 members within 3 years, with a team of over 40 people in its quest to raise awareness to its cause.

Womenvai offers programmes to women and girls in STEM from as early as the age of 8 throughout the entirety of their career path in fields such as climate action in order to achieve their respective ambitions with women's contributions at the core.

3. Using ICT entrepreneurship to drive economic inclusion

SES Networks runs an elevate training program for satellite dish installers. Many female entrepreneurs, especially in Africa, have completed this training giving them a skillset that enables them to generate income and become financially independent.

Fundaciòn Abba Colombia has trained more than 2000 people including women and young girls in the leadership skills needed to operate successful online businesses and to increase domain knowledge in the use of technology to defend the rights of women.

Opportunities

1. Dedicated initiatives targeting gender equality and celebrating the achievements of women with the promise of inspiring other young women and opening their minds to what they too can achieve.

2. Increasing the awareness and access to knowledge of female frontline health workers to accelerate the use of technology to provide healthcare at scale. This is important considering how many women serve as primary caregivers and household leads.

3. Improving young women's access to technology in order to increase the income levels of female-led households in impoverished areas.

Key challenges

1. A renewed lack of representation in what are currently termed “disruptive” technologies.

2. Technology can widen the inequality gap as evidenced by the growing divide between Colombia’s rich and poor where lack of internet access in the latter’s cities and towns has driven many to join the armed conflict for lack of better opportunities.

3. Lack of representation in law making structures means there is a latency in the drafting and passing of amendments and laws that support women.

Road ahead

Widescale international cooperation will be needed in order to realise the vision of enhancing the use of enabling technology, in particular information and communications technology, to promote the empowerment of women.

UNITED ARAB EMIRATES

H.E. Ms. Rym Al Falasy
Secretary-General
The Supreme Council for Motherhood and Childhood

Question: ***What is the role of the United Arab Emirates in engaging women in creating a creative and sustainable future based on the tools of the Fourth Industrial Revolution?***

What are the UAE plans to empower and build women's capabilities in the field of communications and information technology? What are the opportunities for technical entrepreneurship in the UAE?

The UAE believes in the need to encourage women to participate fully in building societies and are keen on enabling their capabilities and preparing a generation of young national talents with capabilities and entrepreneurs for the fourth industrial revolution. Equipping them with the necessary knowledge and skills in the fields of advanced science and technology through an educational system focused on the applied side of Innovation and entrepreneurship in priority sectors.

Good education started in 1954 even before the establishment of the Federation.
Today, the number of enrolled in universities from 2015-2019 exceeded 324 thousand, distributed among more than 75 universities across the country of which to 63% of female students.

The beginning of the actual journey of empowering Emirati women was in 1975, when His Highness Sheikh Zayed bin Sultan Al Nahyan, may he rest in peace, directed to establish the General Women's Union, the first national mechanism for the advancement, empowerment and leadership of women in the United Arab Emirates, headed by “Mother of the Nation” Her Highness Sheikha Fatima bint Mubarak, Chairwoman of the General Women's Union, Supreme Chairwoman of the Family Development Foundation and Chairwoman of the Supreme Council for Motherhood and Childhood.

Fatima Al Kabbi is one of our young inventors that we are proud of. She was the youngest Emirati inventor at the age of seven. She is one of our inspirational young Inventors at the Virginia Tech University as a

first-year student. She has won several awards locally and internationally, today we are proud that she represents the United Arab Emirates and the youth Assembly of the United Nations.

In terms of the UAE plans to empower and build women's capabilities in the field of communications and information technology, the United Arab Emirates is among the first countries that always seek to invest in the future, anticipate opportunities and find proactive solutions . So a number of strategies were prepared, such as the national strategy for women's empowerment and women's leadership.

The Emirates strategy for the fourth industrial revolution the advanced science strategy and other relevant strategies in clarifying plans and programs that support the process of supporting and empowering women, A set of initiatives have been directed at women and children and have been implemented based on the strategies that have been developed and a small part of them is
1. The digital child, WSIS award winner
2. Safe Surfers – an initiative done with TRA and General Women's Union.
3. The "You have an Opinion" service, which was created to anticipate the future of Emirati women and search for the real needs of women, through which to open a case or a proposal and open the way for members of society to participate and express an opinion.
The Emirati woman is a good example of the outputs of the strategies applied. It is who she has proven her presence in the space sector with the recent Mars mission here in the United Arab Emirates space agency focuses on the developing skills of females where women represent 40% and the MIT Space Agency.

In the field of discovering Mars, Emirati women lead the scientific team of the Emirates Mars Exploration Project today and participate in space science studies with the most important international space agencies.

The opportunities for technical entrepreneurship in the UAE is change-makers, individuals who do not only have the ability to innovate, but who have the courage and motivation to live their dreams and turn ideas into reality. The UAE provided the tools, programs and institutions that support and facilitate the process of individuals' involvement in the technology entrepreneurship sector by creating stimulating business environments that encourage effective partnerships between the government and private sectors, and in some ways including:
• Councils of businesswomen across the UAE aiming to activate the role and participation of women and business leaders and innovators in the private sector, contribute to maintaining the continuity of their business, provides advice in addition to supporting and establishing integrated and innovative business incubators and encouraging creative ideas of women, identifying and developing them, and providing the necessary environment for their sustainability.
• Most of the country's economic departments offer special facilities for entrepreneurship licenses and entrepreneurship for women. And funds designated solely for financing technical projects such as the Communications and Information Technology Fund.
At the end, UAE is racing against time, the impossible does not exist, neither by our methodology nor in the way we work. We have no boundaries to our aspirations. We have gone through the stage of

empowering women and we have passed the stage of empowering society through women. Emirati women are an active partner in society and a pillar of its success. Through strategies and plans. Today we are heading to a new stage in which we provide more tools that enhance their leadership role in our society and raise the rates of their participation and representation in all fields locally, regionally and internationally.

EMEA SATELLITE OPERATORS ASSOCIATION (ESOA)

Ms. Aarti Holla-Maini
Secretary-General

Question: ***The satellite sector is a high-tech sector – can women really aim for the stars and overcome the hurdles to make a difference in this sector?***

The space sector is exciting and high tech, and it is one that makes people dream. Hasn't everyone stared at the stars and the moon at some point in their lives and wondered what it's like in space? While still being a minority, there are women in this sector in diverse fields - from engineers and spectrum experts to General Counsels, Secretary Generals and Directors in space agencies and relevant UN bodies. To name a few: Nicole Stott, former NASA astronaut who has made visits to the International Space Station, Fatmah Alyammahi, a flight dynamics engineer at the Al Yah Satellite Communications company in the UAE (Yahsat), Simonetta di Pippo, an astrophysicist who was the European Space Agency's first female Director of Human Spaceflight and who is now Director of the UN Office for Outer Space Affairs and many others who are changing the profile of the industry as it evolves.

Girls, already at a young age, start losing their dreams and undervaluing their capabilities as they mould to meet the expectations of others. Getting into a high-tech sector like space requires girls to have an own-interest and courage so that they can find their way in what is likely to be a male-dominated sector.

It is vital for girls and young women in particular, to pursue their goals and seize opportunities in this way. We know that educated girls and women are likely to be healthier and happier, become drivers of the micro-economy and ultimately help lift families, communities and even nations out of poverty. The satellite sector is helping to make this happen.

So much of the world is digitally divided and so many of those disadvantaged people are young women and girls. Two examples highlight how satellite communications are bridging the gender divide.

- In Kenya with their iMlango programme, Avanti Communications is providing connectivity and education tools to 78000 marginalised girls across 245 schools as well as training teachers in Digital

Skills. The learning focus is on literacy, maths and life skills and the results of using the computer labs are that for every one year of learning with iMlango, the learning age of the children actually increases by 18 months. The lives of these children would not have been transformed like this without satellite because they live too far away for it to make economic sense for telecoms companies to connect them - thankfully satellites are already in place and cover the world.

- Another example is SES's Elevate training program for dish installers. Many female entrepreneurs have completed the training, giving them a skillset that is particularly valuable to get jobs in Africa and supporting them in becoming financially independent.

Education is at the heart of sustainable growth. Without it, we cannot hope to drive change for millions around the world and women are key to that change. ITU initiatives such as Girls in ICT Day, the Girls & Women Talking Tech Interviews and the Equals Global Partnership should be applauded but the focus should be on dedicated and tangible programs capable of directly transforming women's lives through education and training.

IMPERIAL COLLEGE LONDON

Dr. Naila Siddiqui Kamal
Senior Lecturer

Question: ***Is there a gender gap in female clinician representation in health informatics?***

On the Frontline of Covid – 19 Pandemic.

On the first of March I got a call from a colleague with the news that the hospital I work at was declared as the epicentre for Covid-19 patients in London. Over the next few days we heard and saw the most challenging times of our careers so far. It felt like being on the frontline of a war zone. With eight wards declared as full of covid- 19 afflicted patients, most of them elderly and number of mortuaries going up from one to three within a short span of time.

Amongst all this, we witnessed some amazing demonstrations of individual and team workings as well as unprecedented speed of transformation of services and operating procedures. Digital transformation was the mainstream of these changes to facilitate remote access as much as possible.

Virtual wards were set up and telehealth clinics became the only ambulatory outpatients service running and that also in the most in need areas such as cancer and antenatal care from my specialty of OBGYN.

The realisation that there is an essential need for training of medical students and doctors at these times even more than any other time resulted in our initiative called **MedRet Academy,** a global virtual educational hub for clinicians to attain continued professional development.

MedRet academy was approached by an educational organisation based in Middle East and Pakistan to put together an educational program for women's health as part of the **United Nations Sustainable Goals**:

- By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births.

- By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes.

MedRet Academy launched a **12-week virtual course** for an initial cohort of 100 telehealth front line doctors from various parts of the globe.

The curriculum developed for this purpose was unique as its learning objectives covered both health informatics plus role of disruptive technologies in healthcare as well as the clinical knowledge & skills together.

The uniqueness of this course also was its approach. It focussed upon developing *ethical, evidence based effective and economical* health delivery model which would serve well in developing and challenged parts of the world.

We have now been approached by a few NGOs to deliver similar bespoke training to doctors on the frontline in natural disaster zones and other refugee sectors such as Yemen and Lebanon.

We are excited to virtually play a role in training clinicians in OBGYN and other specialties through our wide multidisciplinary faculty specially in remote areas where medical help is most needed.

Hence Covid-19 along with its disastrous impact has triggered an unprecedented speed of transformation in human endeavour and technology uptake as well.

COLOMBIA

Mr. Farid Lozada
CEO
Fundación Abba Colombia

Question: What are the challenges your organization faces for women in Colombia to have more access to technology?

Good morning to everyone from Colombia. Thank you very much to Mr Houlin Zhao, general secretary of ITU, Greetings to all High-Level participants, thank you to Mr. Babusi Nyoni for the questions.
Abba Columbia, an NGO organization working since 2005 through seminars, workshops, leadership skills and sustainable business for women, Young girls, ethnic groups, Young men, especially in the area where the arm conflict in Colombia is affecting the population.

In Colombia the massive use of technology like computers, tablets, cell phones and the different internet services, has contributed to expand different ways of violence against women and girls, especially women in por areas. There is a big gap between women in the big cities like Bogota, Cali, Medellin etc, and those in the rural areas and small towns where the access of internet its difficult and very expensive to have.
Most of these towns and villages has been affected by the arm conflict and controlled by the guerrillas and other arm groups who recruit women and Young girls to be part of the conflict.

Colombia has improved a lot in technology, but it is important to developed an strategy to tech women and Young girls to use technology in a dynamic way to help them to developed their skills and use them to start their own sustainable business which will help them to get out of poverty, especially in the areas where the access of technology is difficult.
Creating a network business in these areas and giving them the opportunity to be their own bosses of their own Jobs, will help them to get out of the arm groups, this also give the opportunity to these women and Young girls to be in contact with each other to avoid any kind of violence. This is a real challenge as most of these towns and villages are control by the guerrillas and in many cases, they decided who can have access to technology.

During this time of the pandemic COVID19, women had suffered domestic violence but a great majority of them feel fear to use their cell phones to call the authorities because the threats they received.
It is really a big challenge and a big job we have ahead of us to use technology to create self-sustainable Jobs for women or Young girls in those areas where they suffer violence in Colombia.
We are improving but we need to do more so women can have access to get cell phones, laptops, internet and use it to increase their income for their families; especially single mothers and Young widows who have lost their Young husbands in the arm conflict.

Challenges
To build up a leadership among women with the participation of Young girls and empower them to lead and established new laws and regulations of the use of technology to avoid any kind of violence against women and Young girls.
To developed among women and Young girls the kind of leadership that can influence in the internet business and telecommunications to develop good practice of technology to defend the rights of women.
To do online campaigns to generate a culture to defend and protect women and Young girls of any kind of violence.
To strengthen the organizations related to technology which are already working in Colombia defending the rights of women.

Achievements
"Women of success" is a school we have created especially for women interested in developing their own business. The school is run every Friday morning and now due to the pandemic is done online.
For the last 3 years we have trained more than 2000 people (including women, Young girls, ethnic groups etc), with great success for the majority of them.
Our organization was accredited last year in June with ECOSOC status, United Nations.
I want to finalize with this quote:
"Education is the most powerful weapon to change the world" Nelson Mandela

NIGERIA

Dr. Wunmi Hassan
President and CEO
High Tech Centre for Nigerian Women and Youths

Question: ***How our NGO has been affecting women and girls in ICT and STEM fields? What forms of supports are available for our interventions and Any challenges or areas for future partnerships for educating and empowering women and girls especially?***

The interventions for Women and Girls in ICTs, STEM and Technology Learning's and Capacity building has been long carried out in Nigeria. This is a way to assist the females in our ecosystem as Tech Women have opportunities to be Digital literate and have capability to make a living as Tech Savvy citizens.

We at the NGO have been training, empowering and engaging women and girls at the public, private and communities, including educational institutions from primary levels, to use ICT as tools for development.

We have also started Learning's in solar panel assembly for power / energy alternatives, and Biogas Digester for methane production for domestic cooking and commercial purposes, as well as harvesting organic manures from its wastes. This are eco-friendly Technologies that can help women and Environmental preservation.

A major challenge is funding that can enable more capacity building and empowerment of women and girls to start Tech businesses...

Our vision post covid is to assist about 50 women and 50 girls from each of the 6 Geopolitical states of the country to learn and become independent before the end of this year 2020. This shall be made possible with sponsorship and funding support from local or international sources which we are exploring.

SOFTBANK ROBOTICS

Ms. Karen Tatarian
Robotics Researcher

Question: ***As the youngest panelist, still completing her PhD in Robotics and AI at the Sorbonne University under a Marie-Curie Fellowship, can you please highlight how and why it is crucial to implement gender equality policies very early on especially in the development of technologies in AI and robotics while sharing more about your personal experience working and studying in the STEM field?***

Statement missing

WOMENVAI

Ms. Lylian Coelho Ferreira
Development Director of the Chair at AgroParisTech-SUEZ and co-founder Womenvai

Question: ***Which Initiatives in STEM sectors, including ICTs you did to improve gender equality ultimately contribute to economic development and to achieve the Millennium Declaration ?: ("To promote gender equality and empowerment of women as effective ways to combat poverty, hunger and disease and to stimulate development that is truly sustainable")***

Most than ever before efforts of male and female engineers and is key to achievement of the SDGs: what are the recommendations you would give to the UN technical agencies who need to actually mainstream gender at all levels, from field projects, to the Top management?

By co-founding members of WOMENVAI – a platform for innovative projects in Environment and High-Tech – led by women – supported by women AND men, and its strategic partners.

During COVID 19 crisis we are watching a social revolution with women in leadership improving their professional life with ICT's Tools and rising theirs voices

We shall not stop here of course, as we wish to call on governments and policymakers to implement gender mainstreaming in ICTs and Environment and we promote focus on Priority A "Advancing Policy": We emphasis the bidirectional relationship between gender equality and technology – and, as stated in the SDGs, the importance of "enhancing the use of enabling technologies, in particular ICT, to promote women's empowerment" (SDG 5b).
Through the development of tailored policies and improved access to financial services, particularly for SMEs (Small Medium Entreprises); opportunities for progression towards leadership and within education; and encouragement of entrepreneurship, we argue that women will be empowered to contribute further to sustainable and inclusive growth.

Financing the Climate change adaptation is an important method of fostering inclusion at all levels. We want to move further the achievement of the Sustainable Development Agenda towards 2030 through approaches that allow us to act effectively, accelerate change, and ensure a positive global impact

- ICTs must be recognised as key drivers for ethical trade and responsible businesses, and vital to development in developing economies; - Qualified women entrepreneurs, engineers and scientists must have equal access to leadership positions, particularly in technology focused companies and organizations; - Women entrepreneurs, engineers and scientists must receive equal payment at the same level of responsibility, as male colleagues;

- The innovation, entrepreneurship and integration of women in science, technology and engineering must be encouraged; - Women must receive and play an equal role in influencing and building Industry 4.0 worldwide; - Strengthening the private sector and the link between business and development to maximize GDP growth is a must. - To achieve the above, international cooperation among organizations for women in science, technology and engineering is of utmost importance.

Consequently, planning our contribution to the climate change adaptation, better future through fulfilling SDG goals, together with our partners at the international, regional and national levels:

1- We want to develop active collaboration across our global platform and provide expertise, workshops and projects to support the engagement, recruitment and retention of women in ICTs (Information and Communication Technologies) for a more efficient sustainable development;

2- We propose to share good practices in ICTs for women and girls, as: providing programmes for mentoring for women and girls in ICTs; sharing resources and materials to reach all young people; building technology and leadership programmes to empower women to be influencers, creators and developers of ICTs, within a sustainable development and for the benefit of our planet;

3- We wish to raise awareness at the highest levels of gender issues in ICTs and Environment, and together with you all, we call now on governments and policymakers to implement gender mainstreaming in ICTs and Environment.

Women and men, engineers and scientists, together lead technological programmes and projects around the world. Innovation, strategic planning, cooperation and modernization of the infrastructure are key success factors for enhancing an ambitious climate action plan.

WORLD XR FORUM

Mr. Salar Shahna
President,
World XR Forum

Question: ***In the world of extended reality how is gender equality mainstreamed? In the creations of Avatars, use of voices and display of virtual and augmented reality what have you observed?***

Statement missing