



WSIS
FORUM 2019
8-12 APRIL
Geneva, Switzerland

10
YEAR
ANNIVERSARY

WSIS Forum 2019

Outcome Document

WSIS Forum 2019

Outcome Document

*Information and Communication Technologies for achieving the
Sustainable Development Goals*

(13 August 2019)

Disclaimer

Please note the WSIS Forum 2019 Outcome Document is a compilation of the outcomes of the sessions (Thematic Workshops, Country Workshops, Action Line Facilitation Meetings, Interactive Sessions, Information Sessions and Policy Sessions) submitted to the WSIS Secretariat by the organizations responsible for their respective sessions. ITU does not hold any responsibility for the outcomes provided by the organizers of the sessions for the WSIS Forum 2019.

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WSIS Forum 2019: Introduction

Following the UN General Assembly Resolution A/70/125, calling for close alignment of the WSIS and SDG process as well as holding the WSIS Forum on the annual basis, the WSIS Forum 2019 was held from the 8-12 April 2019 at the ITU Headquarters in Geneva and the overall theme of the WSIS Forum 2019 was “**Information and Communication Technologies for achieving the Sustainable Development Goals**”.

More than 3,000 information and communication technology (ICT) experts and implementation actors contributed to and participated in the recent World Summit on the Information Society (WSIS) Forum 2019 to foster partnerships, showcase innovation, exchange best practices and announce new tools and initiatives to use ICTs to advance the United Nations' Sustainable Development Goals (SDGs).

For the last 10 years, WSIS Forum has proven to be an efficient global multi-stakeholder platform that is open and inclusive for all to exchange knowledge and information, enhance collaborative networks, and to share best practices in the ICTs sector.

From 8-12 April, over 300 content-rich workshops, knowledge cafes and open-space talks enabled on-site as well as virtual participants from over 150 countries to engage with more than 500 high-level representatives of the wider WSIS Stakeholder community, including ministers and deputies, ambassadors; and leaders from the private sector, academia and civil society. Aligned with both WSIS Action Lines and the SDGs, this year's programme focused on highlighting the linkages between the two, including SDG priority areas such as health, hunger, ICT accessibility, education, youth inclusion, employment, gender empowerment, the environment, infrastructure and innovation.

The Forum provided a platform to celebrate the power of innovation as we witness the emergence of the fourth industrial revolution ushered in by emerging technologies such as AI, IoTs, blockchain, 5G and many others. While this offers many opportunities, there are also many development challenges including the risk of a new digital divide.

WSIS Forum 2019 was chaired by H .E. Mr. Mustafa Jabbar, Minister, Ministry of Posts, Telecommunications and Information Technology, Bangladesh. The forum was co-organized by ITU, UNESCO, UNCTAD and UNDP, in close collaboration with all UN agencies.

As we mark the Forum's 10th anniversary, let's remember that this decade has seen a period of extraordinary growth and progress for ICTs. People's lives have been transformed. With the emergence of artificial intelligence, the Internet of Things, 5G and other new technologies, the next decade will continue to bring enormous opportunities," said ITU Secretary-General Houlin Zhao.

The concrete outcomes of WSIS Forum 2019 will enable stakeholders to strengthen implementation of WSIS Action Lines and the alignment of the WSIS and SDG processes, and include among others:

- UN Group on the Information Society (UNGIS) reiterated commitment to the WSIS Action Lines implementation and alignment of the WSIS and SDG processes, with a UNGIS Joint Statement to be released during the high-level political forum 2019, at which time UNDP and ITU will become UNGIS co-chairs for the year 2019-2020.
- UN Regional Commissions committed to strengthen regional-level WSIS action through multi-stakeholder platforms and a series of regional face-to-face meetings. It is anticipated that WSIS will be included in the UN Regional Coordination Mechanisms and WSIS4SDG will become one of the pillars of the regional SDG Forums.
- Launch of the WSIS Forum 2019 Agenda mobile application developed by the University of West Indies and ITU.
- Ministerial Round Table participants emphasized the importance of the WSIS Action Lines framework as a key UN framework for work on the information and knowledge societies, and reiterated that many national digital agendas were built upon it. They applauded the WSIS Forum for creating global partnerships and collaborations. WSIS Prizes were cited as an important global recognition of impactful ICT projects. The need for sharing existing resources and for strengthened collaboration for building digital skills and ICT incubation programmes and fighting cyberattacks was highlighted.
- ITU and UNESCO organized the *Hackathon*, Hacking Solutions for Lifelong Learning and Livelihoods.

The Forum also included the announcement of the WSIS Prizes 2019 winners and champions, which represented all seven continents and all WSIS stakeholder groups. In addition, the winning entries of the WSIS Forum Photo Contest 2019 were unveiled, highlighting how ICTs are playing a vital, enabling role on the road to achieving the SDGs. WSIS Forum 2019 was also an opportunity for partnerships to be forged and valuable tools and initiatives to be launched.

The full list of Official WSIS Forum 2019 Outcomes, and the below information materials are available on the WSIS Forum 2019 website.

- WSIS Forum 2019: Outcome Document
- WSIS Forum 2019 High Level Track Outcomes and Executive Brief
- WSIS Action Lines Contributing towards Empowering People and Ensuring Inclusiveness and Equality (2019) *will be available soon*
- WSIS Stocktaking Report 2019
- WSIS Forum 2019 and SDG Matrix
- WSIS Stocktaking Success Stories 2019

WSIS Forum 2019 was made possible through the generous support of its strategic partners – Gold plus partner: United Arab Emirates; Gold Partner: Saudi Arabia; Partners for Specific Activities: Japan, IEEE, Oman, Switzerland; Contributing Partners: Poland, Rwanda, ICANN, ISOC, ELM; Supporting Partner: IFIP and University of Geneva.

Click here to view WSIS Forum 2019 videos, interviews and highlights:
https://www.youtube.com/playlist?list=PLpoIPNIF8P2NjQ_HPwHz1ZDI4dwGOowP

Don't miss the WSIS Forum 2019 Photo Gallery:
<https://www.flickr.com/photos/itupictures/collections/72157708046419954/>

For more information about the WSIS Forum process, please visit www.wsis.org/forum

Open Consultation Process

The Agenda and Program of the WSIS Forum 2019 were designed in collaboration with the multistakeholders on the basis of official submissions received during the Open Consultation Process on the thematic aspects and innovations of the format of the WSIS Forum 2019. Involving all WSIS Stakeholders (governments, civil society, private sector entities, academia and international organizations), this process aimed to ensure active participation of different sectors during the event. The process began in July 2018 and was structured in five phases that include online submissions and physical meetings. The ITU-WSIS Secretariat received more than 250 submissions containing proposals on the thematic aspects and innovations on the format of the WSIS Forum 2019, including binding requests for partnerships, workshops, exhibition spaces and so on.

The Open Consultation Process for the WSIS Forum 2019 was structured in five phases as follows:

Phase I: Opening of the Open Consultation

The virtual launch of the open consultations took place on Monday, 2 July 2018, 14:30–15:30.

[Open calls for the WSIS Forum 2019 were announced.](#)

[More information available here:](#)

<https://www.itu.int/net4/wsis/forum/2019/Home/Consultations>

Phase II: First Physical Meeting

- The first physical meeting of the Open Consultation Process was held on Monday, 12 November 2018, 12:20-13:20 at UNESCO Headquarters, Paris, France.
- Presentation.

Phase III: Second Physical Meeting

- The second physical meeting of the Open Consultation Process was held on Thursday, 31 January 2019, 16:00-18:00 at the International Telecommunication Union Headquarters, Geneva, Switzerland.
- Agenda.
- Presentation.

Phase IV: Deadline for Submissions. February, 10th 2019

Phase V: Final Brief Meeting

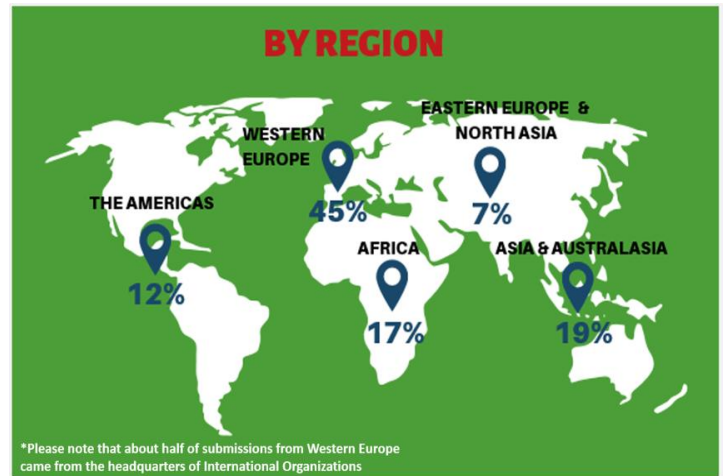
- The final brief meeting of the Open Consultation Process was held on Friday, 8 March 2019, 14:00–16:00 at ITU Headquarters, Geneva, Switzerland.
- Registration
- Remote Participation

- Webcast

Submissions by Stakeholder Type



Submissions by Region



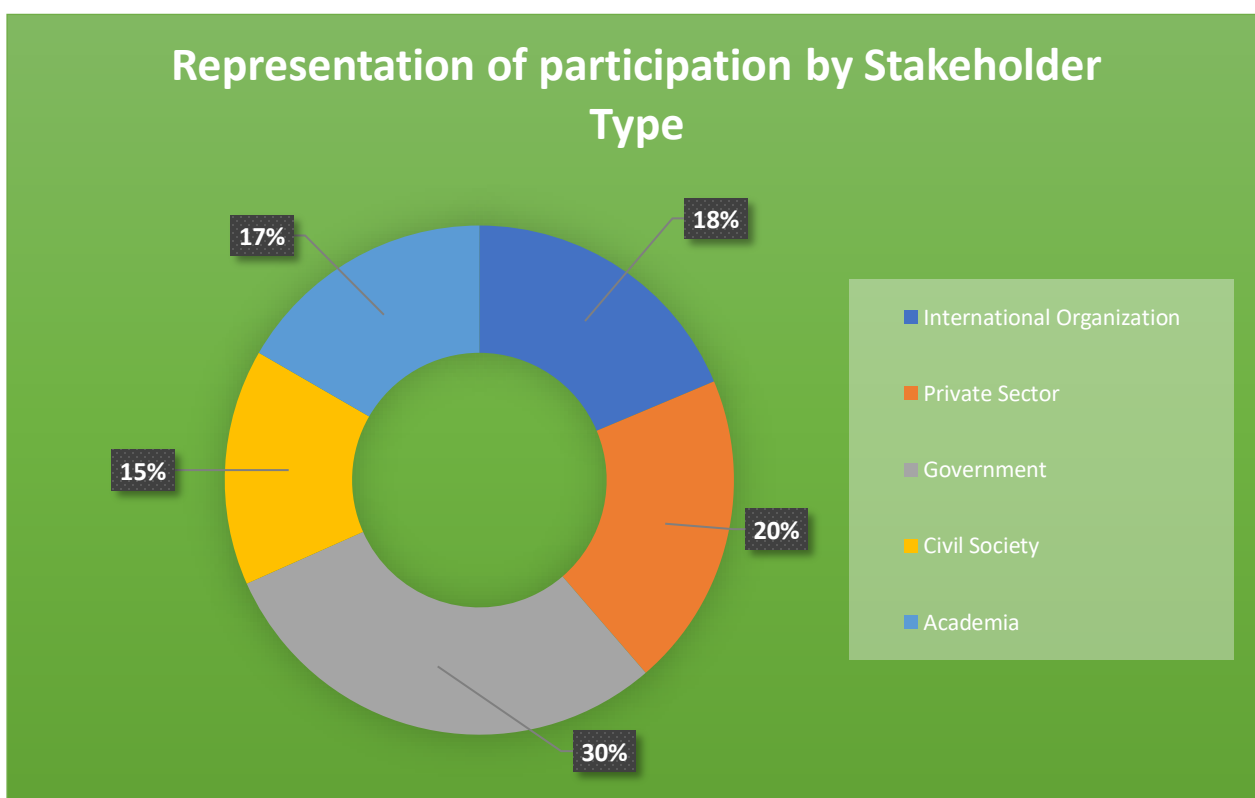
All related information can be found at:

<https://www.itu.int/net4/wsis/Forum/2019/Pages/OpenConsultations#intro>

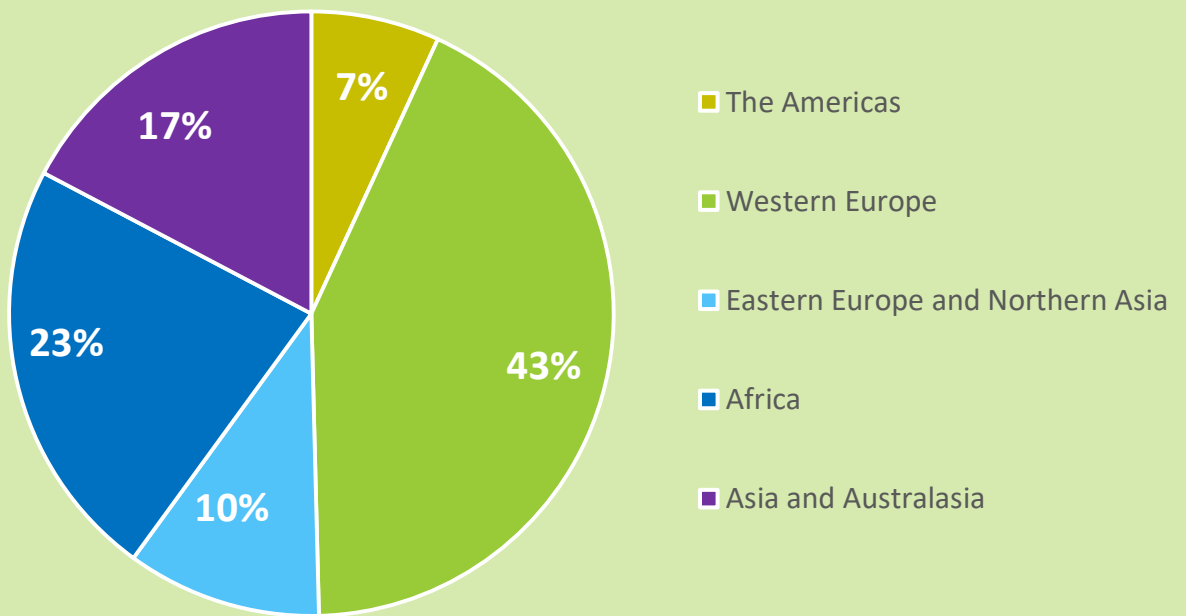
Participation at the WSIS Forum 2019

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Representation of Participation by Region



Gender Participation in the WSIS Forum 2019



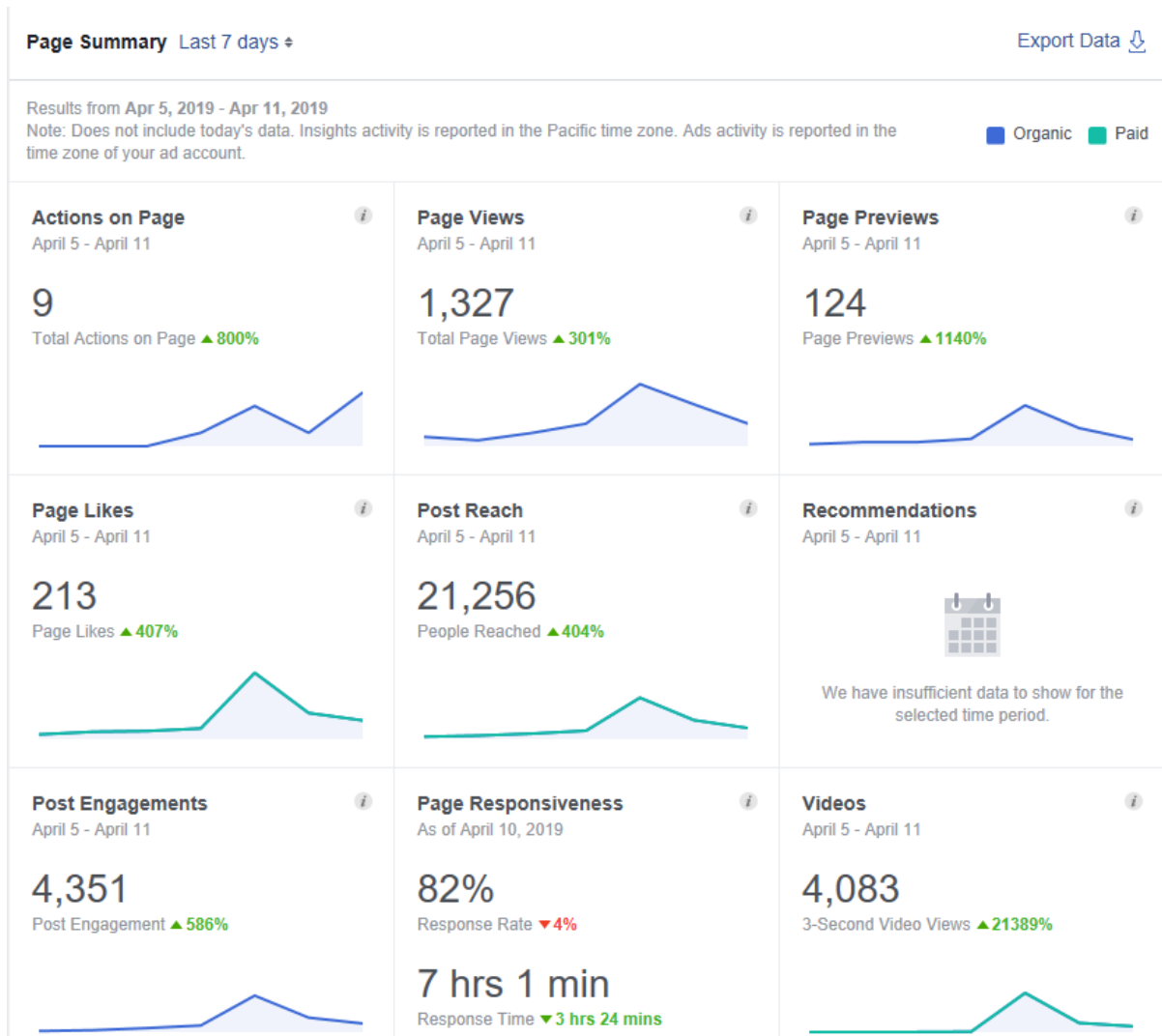
Social Media at the WSIS Forum 2019

The WSIS Forum is a widely followed event by all WSIS stakeholders, using different media including the social ones. The WSIS Process accounts on multiple platforms such as Facebook, Twitter, and Instagram have reached their highest activity rate during the Forum, with more than 3,000 tweets being generated with the #WSIS and content reaching more than 20 million accounts. The following graphics provide an overview of the different social network channel activities that were used to promote the WSIS Forum 2019 activities before and during the event.

STATISTICS

	19/11/2018	29/04/2019	% increase
Twitter	4,864 followers	5,870 followers	+ 20.6% increase
Facebook	5,745 followers	7,382 followers	+ 28.5% increase
Instagram	1,011 followers	1,335 followers	+ 32% increase

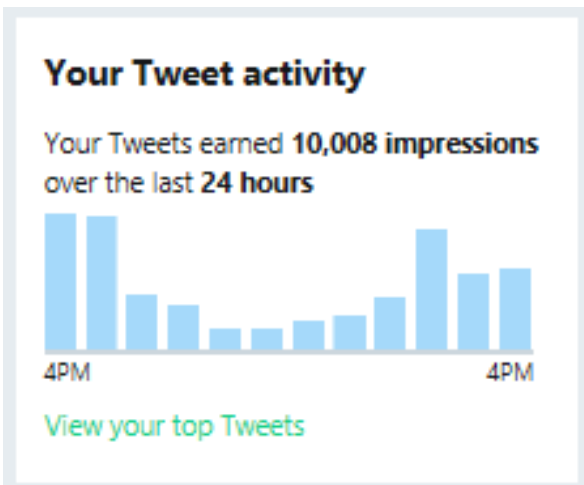
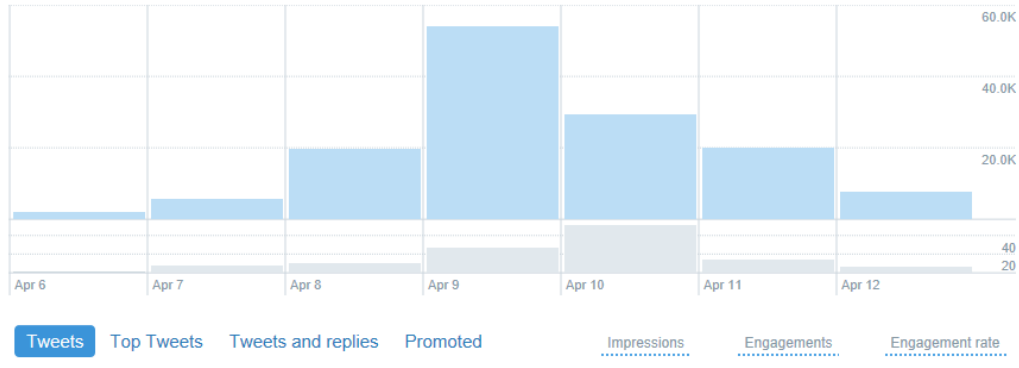
FACEBOOK TRENDS (February 8 - March 7)



TWITTER TRENDS (April 7 - April 12)

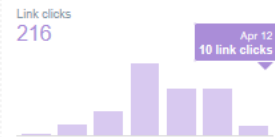
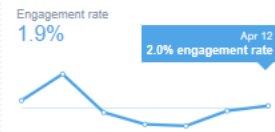
Tweet activity

Your Tweets earned **133.2K impressions** over this **7 day** period



Engagements

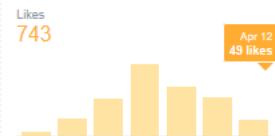
Showing 7 days with daily frequency



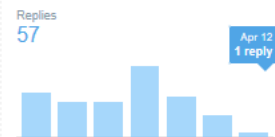
On average, you earned **31 link clicks** per day



On average, you earned **46 Retweets** per day



On average, you earned **106 likes** per day



On average, you earned **8 replies** per day

Top Tweet earned 13K impressions

@CITC_SA, Governor, Abdel Aziz Bin Salem al Ruwais, giving a speech at #WSIS Forum 2019 High Level Opening Ceremony, @ITU
pic.twitter.com/Jlmx7Bsc9h



2 3

View Tweet activity

View all Tweet activity

#WSIS was the 2nd most trending tweet during the WSIS Forum 2019 in Geneva, Switzerland.

Geneva trends · Change

- #dayofcities
- #WSIS
ITU, nigel hickson, and 3 more are Tweeting about this
- Israel
180K Tweets
- #ELCC19
1,154 Tweets
- Gaza
12.6K Tweets
- #lec19
- #PERSONAWelcomeParty
1.51M Tweets
- Assange
1.94M Tweets
- Wikileaks
837K Tweets
- Kenya
38K Tweets

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Worldwide trends

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931K Tweets
- #lec19
- #WSIS
- Italy
99.9K Tweets
- #Geneva
- #GlobalGoals
2,651 Tweets
- #Waffenrecht
- Europe

People [View all](#)

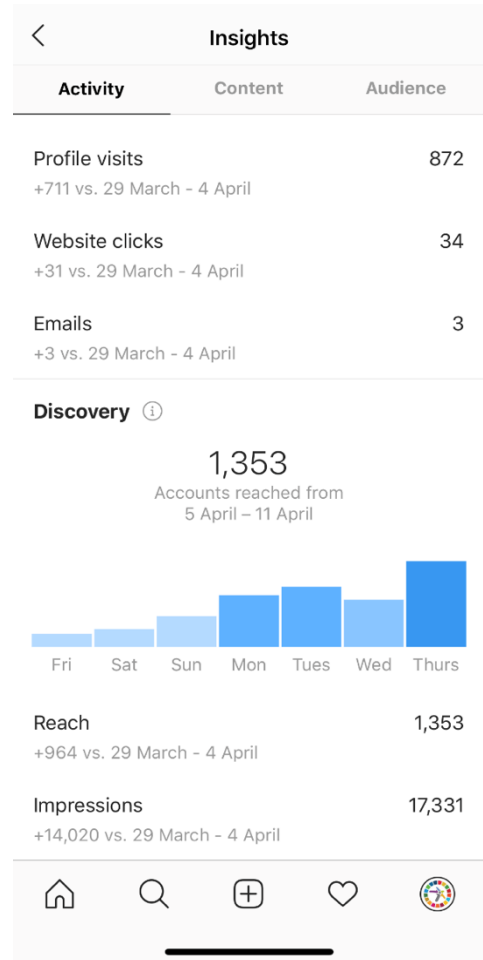
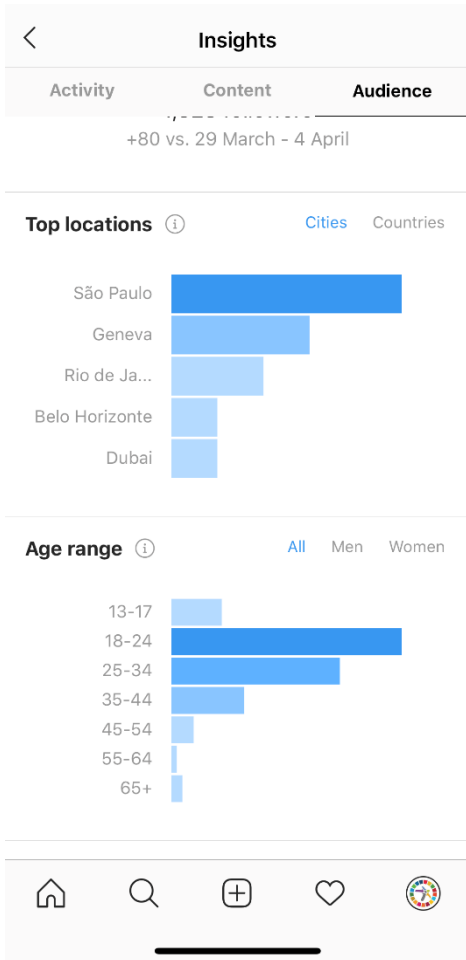
 **WSIS FORUM** 8-12 APRIL 2019 Geneva, Switzerland

Tweets 5,416 Following 891 Followers 5,620 [Follow](#)

World Summit on the Information Society WSIS
@WSISprocess
WSIS process is coordinated by @ITU in collaboration with @UNESCO @UNDP @UNCTAD to promote ICTs for achieving @UN Sustainable Development Goals ...
Geneva, Switzerland • itu.int/net4/wsis/foru...

 **Matthew Wilson** @Matthewbarbados · 56m
@ITCnews addresses @ITU #WSIS & highlights: 1 in 3 in world owns a smart phone. In Africa access to the internet grew from 4.5 million in 2000 to 475 million in 2019. E-Commerce grew by 13% in 2017
..But we know that 50% of the world's population is not connected to the Internet.

Instagram TRENDS (April 7 - April 12)



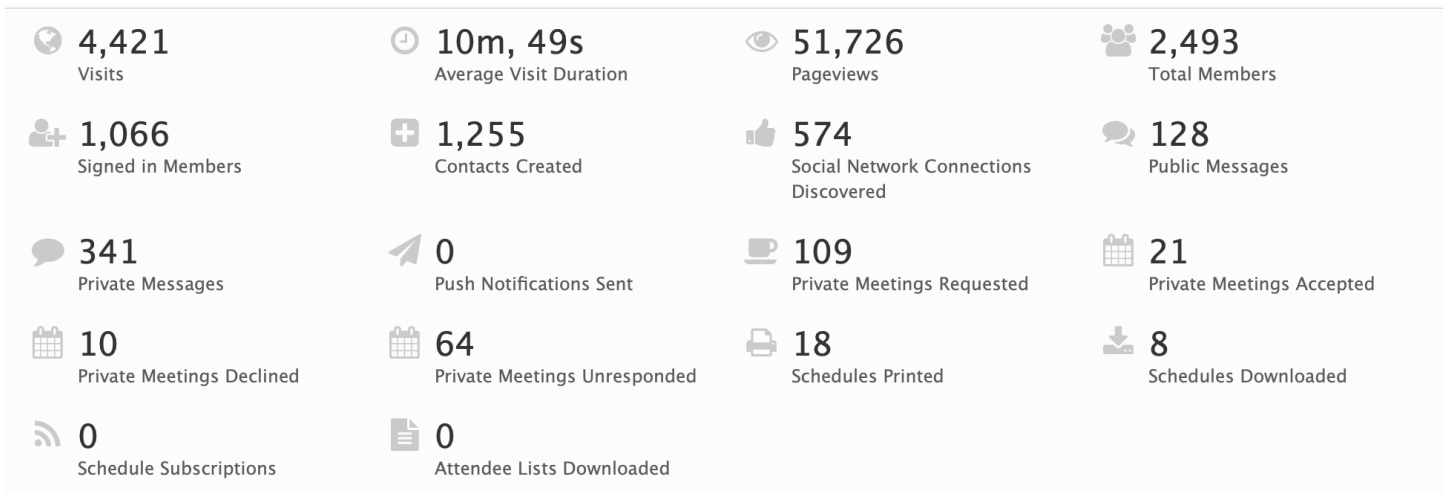
ImeetyouatWSIS outcome report

ImeetyouatWSIS is a special feature for registered participants, an online community platform created as an extension of the **WSIS Forum 2019** to help attendees to meet other registered participants, start conversations, interact with scheduled speakers and build a personalized schedule of sessions. As a confirmed participant of the Forum, people automatically registered to the online community platform and received an invitation to complete the profile.



ImeetyouatWSIS gave attendees the possibility to:

- View the profiles and interests of the other attendees
- Discover which of your Twitter, LinkedIn and Facebook contacts are also attending
- Build a personalized schedule of talks to attend
- Download hand-outs and materials for sessions
- Schedule one-on-one meetings with other attendees
- Join the discussions about WSIS related topics and issues



Opening Segment:

Opening Ceremony
Opening Session
High-Level Policy Dialogue
Handing over of WSIS Prizes
Group Photograph

Tuesday 9 April 2019

CICG, Room 1

09:00 – 13:00

Interpretation A/C/E/F/R/S

Captioning and Remote Participation

The Opening Ceremony set the priorities of the WSIS Forum 2019, bringing forth a wide range of topics within the Global Information and Knowledge Societies while emphasizing the role of Information and Communication Technologies (ICTs), WSIS Action Lines in particular, regarding the recently adopted Sustainable Development Goals (SDGs). In this way, the WSIS Forum 2019 built upon the outcomes of the UN General Assembly Overall Review of the implementation of the WSIS outcomes (UNGA Resolution 70/125), which recognized the necessity of holding this Forum on an annual basis and called for a close alignment between WSIS and the SDG processes.



The WSIS Forum 2019 therefore served as a key Forum for discussing the role of ICTs as a means of implementation of the SDGs and targets, with due regard to the global mechanism for follow-up and review of the implementation of the 2030 Agenda for Sustainable Development (UNGA Resolution A/70/1). The WSIS-SDG Matrix, developed by UN WSIS Action Line Facilitator and presented at the WSIS Forum 2015, served as the mechanism to map, analyse and coordinate the implementation of WSIS Action Lines, and more specifically, ICTs as enablers and accelerators of the SDGs.

The ceremony began with opening statements from the host, co-organizers, partners and representatives of stakeholders engaged in the WSIS Process. The Opening Ceremony concluded with the handing out of the WSIS Prizes 2019.

Detailed recordings of the Opening Ceremony are available on the WSIS Forum Website.

WSIS Prize 2019 Ceremony

Eighteen WSIS Project Prizes were awarded during this session recognizing successful initiatives by governments, private sector actors, civil society members and partnerships between all stakeholders: wsis.org/prizes. The winners were awarded for their tremendous efforts and achievements on implementation of WSIS outcomes. Mr Houlin Zhao, Secretary-General, ITU, presented the awards to the 18 Winning Projects. Please visit the WSIS Prize 2019 website for more information www.wsis.org/prizes

The International Telecommunication Union has announced the top 90 ICT-related projects recognized for implementing the WSIS Action Lines, competing for the prestigious WSIS Prizes 2019. With participants emerging from across the globe, 72 Champions were honored and 18 Winners were awarded for each of the 18 categories on April 9th at the WSIS Prizes 2019 Ceremony, held during the WSIS Forum 2019 in Geneva. Since 2012, WSIS Prizes has been recognizing remarkable efforts made by entities and organizations from around the globe that focus on accelerating the socio-economic progress of the whole world as a community.

This year, marked as the 10th anniversary of the WSIS Forum, we had a remarkable number of more than 1000 projects submitted and nominated. The 90 Awardees were selected during the Online Voting phase which was open to public; based on the votes the awarded projects were chosen – five top in each category and the most voted one was recognized as a Winner.

The Prizes Ceremony took place on Tuesday, April 9th. The 18 Winners were awarded with a WSIS special trophy given by the ITU Secretary-General Houlin Zhao. Before the Ceremony the Secretary General met with all the Awardees (during the Networking Event) and handed them over the Certificates of Recognition (Winners and Champions).

The Ceremony in itself consisted of two phases. During the first one the Winners were invited one by one to receive their trophy from the Secretary General and take a photo with him. Afterwards, the audience was able to learn more about the Winning projects from the videos played as a part of a presentation. Then, the Winners were invited again to come up to the stage and say a few words, sharing their excitement and experiences.



Name of Entity	Project Title	Name of Category	Country
1. National Social Insurance Fund (CNAS)	The e-payment of social security contributions	Category 1: "Role of governments and all stakeholders in promotion of ICTs"	Algeria
2. Ministry of Digital Economy and Society (MDES)	The Village Broadband Internet Project	Category 2: "Information and communication infrastructure"	Thailand
3. St. Petersburg State Unitary Enterprise "St. Petersburg Information and Analytical Centre" (IAC)	United libraries portal - free knowledge for all	Category 3: "Access to information and knowledge"	The Russian Federation
4. Paschim Banga Society for Skill	Capacity Building through end-to-end ICT enabled "Utkarsh Bangla"	Category 4: "Capacity building"	India

	Development, Dept of Technical Education, Training & Skill Development, Govt. of West Bengal (UB)	programme		
5.	China United Telecommunications Co., Ltd.	Data Encryption Leak-proof and Tamper-resistant Network System Based on Quantum Communication Trunk Line	Category 5: "Building confidence and security in use of ICTs"	China
6.	Bangladesh Computer Council (BCC)	Establishment of Bangladesh National Digital Architecture (BNDA) and e-Government Interoperability Framework (e-GIF)	Category 6: "Enabling environment"	Bangladesh
7.	Ministry of Environment, Water and Agriculture	Licenses Portal	Category 7: "ICT applications: benefits in all aspects of life — E-government"	Saudi Arabia
8.	BnC Bot (Bot Bán Hàng as Vietnamese name)	BnC Bot	Category 8: "ICT applications: benefits in all aspects of life — E-business"	Vietnam
9.	University of La Punta (ULP)	Generative Schools	Category 9: "ICT applications: benefits in all aspects of life — E-learning"	Argentina
10.	Ministry of Health	E-Health Mato Grosso (Telessaude Mato Grosso)	Category 10: "ICT applications: benefits in all aspects of life — E-health"	Brazil
11.	The Rockefeller Foundation	Digital Jobs Africa	Category 11: "ICT applications: benefits in all aspects of life — E-employment"	United States of America
12.	Sigfox Foundation	A less intrusive rhinos conservation, a hope for endangered species	Category 12: "ICT applications: benefits in all aspects of life — E-environment"	France
13.	Swift Vee	Swift Vee (Livestock)	Category 13: "ICT applications: benefits in all aspects of life — E-	South Africa

		agriculture”	
14. IRAN National Research and Education Network (SHOA)	IRAN National Research and Education Network	Category 14: “ICT applications: benefits in all aspects of life — E-science”	Iran (the Islamic Republic of)
15. Musabe Foundation	Uganda Computer Aid	Category 15: “Cultural diversity and identity, linguistic diversity and local content”	Uganda
16. Chamber of Information and Communication Technologies (Cámara de Tecnologías de Información y Comunicación) (CAMTIC)	Working in ICT is cool	Category 16: “Media”	Costa Rica
17. Personal Data Protection Commission, Infocomm Media Development Authority (PDPC, IMDA)	Artificial Intelligence (AI) Governance and Ethics Initiatives in Singapore	Category 17: “Ethical dimensions of the Information Society”	Singapore
18. UAE Space Agency (UAESA)	UAE Space Agency Global Efforts in Partnership Sustainable Development	Category 18: “International and regional cooperation”	United Arab Emirates

Moderated High-Level Policy Sessions

Interpretation: A/C/E/F/R/S
Captioning and Remote Participation

The WSIS Forum builds upon the outcomes of the UN General Assembly Overall Review of the implementation of the WSIS outcomes ([UNGA Resolution 70/125](#)), which recognized the necessity of holding this Forum on an annual basis and called for a close alignment between WSIS and the Sustainable Development Goals (SDG) processes. The WSIS Forum has served as a key Forum for discussing the role of ICTs as a means of implementation of the Sustainable Development Goals and targets, with due regard to the global mechanism for follow-up and review of the implementation of the 2030 Agenda for Sustainable Development ([UNGA Resolution A/70/1](#)).

Policy Statements were delivered during the High-Level Track (9-10 April 2019) of the WSIS Forum 2019 by high-ranking officials of the WSIS Stakeholder community, representing the Government, Private Sector, Civil Society, Academia and International Organizations. The high-level track consisted of the opening segment, interactive policy dialogues, ministerial round table, and a high-level networking programme. Policy Sessions were moderated by high-level track facilitators and were grouped around different themes identified as important by the WSIS Stakeholders during the [open consultation process](#) and the outcomes of the UN General Assembly Overall Review.

Moderated High-Level Policy Sessions

Interpretation: A/C/E/F/R/S

Captioning and Remote Participation

During the High level Track fourteen moderated High-level Policy Sessions (HLPs) took place on the 9th and 10th of April. Please see the moderators and speakers of the HLPs below. Details and the policy statements are available in the document *-WSIS Forum 2019 High Level Track Outcomes and Executive Brief* available at :

https://www.itu.int/net4/wsis/Forum/2019/Files/documents/outcomes/WSISForum2019_HighLevel_TrackOutcomes.pdf

Complete recordings are available in the interactive agenda here:

<https://www.itu.int/net4/wsis/Forum/2019/Pages/Agenda#intro>

HIGH-LEVEL POLICY SESSIONS	
Tuesday, 9 April (CICG, Room 1, Level 1)	Tuesday, 9 April (CICG, Room 2, Level 0)
<p>Time: 14:30 – 15:15 Session 1: WSIS Action Lines and the 2030 Agenda Chairman: H.E. Mr. Mustafa Jabbar, Minister, Ministry of Posts, Telecommunications and Information Technology, Bangladesh</p> <ol style="list-style-type: none"> 1. Moderated by High-level Track Facilitator: Ms. Valeria Betancourt, Association for Progressive Communication (APC), South Africa 2. WSIS Action Line Facilitator ITU – Dr. Eun-Ju KIM, Chief, Innovation and Partnership Department (IP) 3. Bangladesh - H.E. Mr. Zunaid Ahmed Palak, Hon'ble State Minister for Information and Communication Technology 4. Bhutan - H.E. Mr. Karma Donnem Wangdi, Minister, Ministry of Information & Communications 	<p>Time: 14:30 – 15:15 Session 2 Bridging Digital Divides Chairman: H.E. Mr. Mustafa Jabbar, Minister, Ministry of Posts, Telecommunications and Information Technology, Bangladesh</p> <ol style="list-style-type: none"> 1. Moderated by High-level Track Facilitator: Prof. Francois Grey, Geneva Tsinghua Initiative, University of Geneva, Switzerland 2. WSIS Action Line Facilitator UNESCO –Abdulaziz Almuzaini, Director of the Geneva Liaison Office 3. Bulgaria - H.E. Mr. Rossen Jeliakov, Minister, Ministry of Transport, Information Technology and Communications 4. Lithuania - H.E. Mr. Elijus Čivilis, Vice-Minister, Ministry of the Economy and Innovation

<p>5. Djibouti - H.E Mr. Abdi Youssouf Sougueh, Minister, Ministry of Communication, Post and Telecommunication</p> <p>6. Iran - H.E. Mr. Mohammad Javad Azari Jahromi, Minister, Ministry of ICT</p> <p>7. Sigfox – Mr. Ludovic Le Moan, CEO</p> <p>8. Cibervoluntarios Foundation - Mrs. Yolanda Rueda, Founder and CEO</p> <p>9. International Commission on Cyber Security Law - Dr. Pavan Duggal, Chairman</p> <p>10. FerMUN - Mr. Sebastien Behaghel, Secretary General FerMUN 2019</p>	<p>5. Namibia - H.E. Mr. Stanley M. Simataa, Minister, Ministry Of Information and Communication Technology</p> <p>6. Egypt - Dr. Abeer Shakweer, ICT Minister’s Advisor for Social Responsibility and Services</p> <p>7. Somalia - Mr. Abdi Sheikh Ahmed, General Manager, National Communications Authority</p> <p>8. United Kingdom – Mr. Alex Jones, Head of Emerging Futures and Technology, Department for International Development</p> <p>9. Facebook - Mr. Robert Pepper, Head of Global Connectivity Policy and Planning</p> <p>10. Research ICT Africa - Prof. Alison Gillwald, Executive Director</p>
<p><i>Tuesday, 9 April (CICG, Room 1, Level 1)</i></p>	<p><i>Tuesday, 9 April (CICG, Room 2, Level 0)</i></p>
<p><i>Time: 15:15 – 16:00</i> Session 3 Bridging Digital Divides Chairman: H.E. Mr. Mustafa Jabbar, Minister, Ministry of Posts, Telecommunications and Information Technology, Bangladesh</p> <ol style="list-style-type: none"> Moderated by High-level Track Facilitator: Mr. Greg Francis, Access Partnerships, United Kingdom WSIS Action Line Facilitator UNDESA - Mr. Vincenzo Aquaro, Chief E-Government Branch, Division for Public Administration and Development Management Equatorial Guinea - H.E. Mr. Hipólito Ondo Envo Bela, Vice Minister, Ministry of Transport, Post & Telecommunications Georgia - H.E Mr. Lasha Mikava, Deputy Minister, Ministry of 	<p><i>Time: 15:15 – 16:00</i> Session 4 Enabling Environment Chairman: H.E. Mr. Mustafa Jabbar, Minister, Ministry of Posts, Telecommunications and Information Technology, Bangladesh</p> <ol style="list-style-type: none"> Moderated by High-level Track Facilitator: Ms. Mei Lin Fung, Institute for Electrical and Electronic Engineers (IEEE), USA WSIS Action Line Facilitator ITU – Mr. Kemal Huseinovic, Chief, Department of Infrastructure, Enabling Environment and E-Applications (IEE) Bahrain - H.E. Mr. Kamal bin Ahmed Mohammed, Minister, Ministry of Transportation and Telecommunications

<p>Economy and Sustainable Development</p> <ol style="list-style-type: none"> 5. Poland - H.E Ms. Wanda Buk, Undersecretary of State, Ministry of Digital Affairs 6. CMAI Association of India - Prof. Narendra Kumar Goyal, President 7. eWorldwide Group, Dr. Salma Abbasi, Chairperson and CEO 8. Telefonica - Mr. Christoph Steck, Chief Policy Advisor 9. ISOC – Ms. Constance Bommelaer de Leusse, Senior Director of Global Internet Policy and International Organizations 10. UN Women - Ms. Christine Löw. Director, UN Women Liaison Office in Geneva 11. UNESCAP - Ms. Atsuko Okuda, Chief of the Information and Communication Technology and Development Section of IDD 	<ol style="list-style-type: none"> 4. Zimbabwe - H.E Mr. Kazembe Kazembe, Minister, Ministry of Information Communication Technology and Courier Services 5. UAE - H.E. Ms. Ohoud Ali Shehail, Director General, Ajman Digital Government 6. Afghanistan - Dr. Mohammad Najeeb Azizi, Chairman, Afghanistan Telecom Regulatory Authority 7. Mexico - Mr. Adolfo Cuevas Teja, Commissioner, Federal Telecommunications Institute 8. Romania - Mr. Sorin Mihai Grindeanu, President, National Authority for Management and Regulation in Communications 9. Switzerland - Mr. Philipp Metzger, Director-General, Federal Office of Communications (OFCOM) 10. A2i Bangladesh - Mr. Anir Chowdhury, Policy Advisor 11. ASIET - Mr. Pablo Bello, Executive Director 12. International Chamber of Commerce - Mr. Crispin Conroy, ICC Representative Director and Permanent Observer to the UNOG
<p>Tuesday, 9 April (CICG, Room 1, Level 1)</p>	<p>Tuesday, 9 April (CICG, Room 2, Level 0)</p>
<p>Time: 16:00 - 16:45 Session 5 Building confidence and security in the use of ICTs Chairman: H.E. Mr. Mustafa Jabbar, Minister, Ministry of Posts, Telecommunications and Information Technology, Bangladesh</p> <ol style="list-style-type: none"> 1. Moderated by High-level Track Facilitator: Mr. Morten Meyerhoff, Tallinn University of Technology, Ragnar Nurkse Department of Governance and Innovation/ 	<p>Time: 16:00 – 16:45 Session 6 Bridging Digital Divides/ Digital Economy and Trade/ Financing for Development and role of ICT Chairman: H.E. Mr. Mustafa Jabbar, Minister, Ministry of Posts, Telecommunications and Information Technology, Bangladesh</p> <ol style="list-style-type: none"> 1. Moderated by High-level Track Facilitator: Ms. Valrie Grant, GeoTech Vision, Jamaica

<p>United Nations University</p> <ol style="list-style-type: none"> 2. WSIS Action Line Facilitator ITU – Mr. Preetam Maloor, Senior Strategy and Policy Adviser, ITU 3. Cuba - H.E Mr. Ernesto Rodríguez Hernández, Deputy Minister, Ministry of Communications 4. Slovenia - H.E Mr. Leon Behin, State Secretary, Ministry of Public Administration 5. France - Mr Serge Abiteboul, Member of the High Level Board, Autorité de Régulation des Communications Électroniques et des Postes (ARCEP) 6. Turkey - Mr. Ömer Abdullah Karagözoğlu, Chairman of the Board and President of the Authority, Information and Communication Technologies Authority 7. Symantec - Mr. Jeff Greene, Vice-President, Global Government Affairs 8. EastWest Institute - Mr. Bruce McConnell, Executive Vice President 9. PANIAMOR Foundation - Mrs. Milena Grillo, Director of Strategy and Innovation 	<ol style="list-style-type: none"> 2. WSIS Action Line Facilitator ITU – Dr. Cosmas Zavazava, Chief of Department, Projects & Knowledge Management, Telecommunication Development Bureau 3. Armenia - H.E Mr. Hakob Arshakyan, Minister, Ministry of Transport, Communication and Information Technologies 4. Benin- H.E. Mrs. Aurélie Adam Soule Zoumarou, Ministre de l'Economie numérique et de la Communication 5. United Kingdom - H.E. Mr. Julian Braithwaite, Ambassador and Permanent Representative, Permanent Mission of the United Kingdom to UNOG 6. Rwanda – Ms. Claudette Irere, Permanent Secretary, Ministry of ICT and Innovation 7. Greece - Prof. Konstantinos Masselos, President, Hellenic Telecommunications & Post Commission (EETT) 8. Poland - Mr. Marcin Cichy, President, Office of Electronic Communications (UKE) 9. Subah Infosolutions Ghana Limited - Dr. Kwaku Ofori Adarkwa, Chairman of the Board 10. Qatar - Mr Ali Alwaleed Al-Thani, Economic Advisor to the Prime Minister, Amiri Diwan - Office of the Prime Minister
<p><i>Tuesday, 9 April (CICG, Room 1, Level 1)</i></p>	<p><i>Tuesday, 9 April (CICG, Room 2, Level 0)</i></p>
<p><i>Time: 16:45 – 17:30</i> Session 7 Ethical dimensions of information and knowledge societies Chairman: H.E. Mr. Mustafa Jabbar, Minister, Ministry of Posts, Telecommunications and Information</p>	<p><i>Time: 16:45 – 17:30</i> Session 8 Inclusiveness – access to information and knowledge for all Chairman: H.E. Mr. Mustafa Jabbar, Minister, Ministry of Posts, Telecommunications and Information</p>

<p>Technology, Bangladesh</p> <ol style="list-style-type: none"> 1. Moderated by High-level Track Facilitator: Dr. Jabu Mtsweni, Council of Scientific and Industrial Research (CSIR) 2. WSIS Action Line Facilitator ITU – Mr. Yushi Torigoe, Deputy Director, Telecommunication Development Bureau 3. CMC–Iraq - Dr. Ali Al-Khwildi, Chief Executive Officer 4. Singapore - Mr. Zee Kin Yeong, Assistant Chief Executive, Infocomm Media Development Authority (IMDA) 5. IEEE - Dr. Konstantinos Karachalios, Managing Director 6. WeRobotics - Ms. Sonja Betschart, Co-Founder and Chief Entrepreneurship Office 7. Ecole polytechnique fédérale de Lausanne (EPFL) - Dr. Julia Binder, Head of EPFL Tech4Impact 8. The FutureWork Institute – Ms. Margaret Regan, President & CEO 9. Intervale – Dr. Yuri Grin, Deputy Director General 10. Aerospace Engineer- Ayanna T. Samuels 	<p>Technology, Bangladesh</p> <ol style="list-style-type: none"> 1. Moderated by High-level Track Facilitator: Mr. Carl Gahnberg, Internet Society 2. WSIS Action Line Facilitator ITU – Mr Bilel Jamoussi, Chief of the Study Groups Department 3. Dominican Republic – H.E. Mrs. Zoraima Cuello, Vice Minister of the Presidency 4. Romania - H.E. Ms. Maria-Manuela Catrina, State Secretary, Ministry of Communications and Information Society 5. Uganda – Dr. Norah Mulira, Commissioner, Uganda Communication Commission 6. Zimbabwe - Dr. Gift Kallisto Machengete, Director General, Postal and Telecommunications Regulatory Authority 7. Portugal - Mr. João Miguel Coelho, Vice-Chairman of the Board of Directors, ANACOM 8. Italy - Dr. Rita Forsi, Director-General of Institute for Communications and Information Technologies, Ministry of Economic Development, Labour and Social Policie 9. Horyou SA - Mr. Yonathan Parienti, CEO 10. Amplio Network - Mr. Cliff Schmidt, CEO 11. India – Mr. Sanjay K. Thade, Principal Secretary, Backward Classes Welfare & Tribal Department Divisional Commissioner, Medinipur Division, Government of Bengal
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<p>Wednesday, 10 April (CICG, Room 1, Level 1)</p>	<p>Wednesday, 10 April (CICG, Room 2, Level 0)</p>
<p>Time: 9:00 – 10:00 Session 9 ICT applications and services / Climate Change Chairman: H.E. Mr. Mustafa Jabbar, Minister, Ministry of Posts, Telecommunications and Information Technology, Bangladesh</p> <ol style="list-style-type: none"> 1. Moderated by High-level Track Facilitator: Dr. Suay Ozkula Research Associate & University Teacher University of Sheffield 2. WSIS Action Line Facilitator ITU – Mr. Yushi Torigoe, Deputy Director, Telecommunication Development Bureau 3. Burkina Faso - H.E Ms. Hadja Fatimata Ouattara Sanon, Minister, Ministry of Post and Telecommunications 4. Iraq - H.E Dr. Naem Yousir, Minister, Ministry Of Communication 5. Oman - H.E. Mr. Salim Al Ruzaiqi, CEO, Information Technology Authority 6. Azerbaijan - H.E. Mr. Elmir Velizadeh, Deputy Minister, Ministry of Transport, Communications and High Technologies 7. Latvia - H.E. Mr. Edmunds Beļskis, Deputy State Secretary for Information and Communication Technologies, Ministry of Environmental Protection and Regional Development 8. Senegal –Mr. Modou Mamoune Ngom, Director of Telecommunications, Ministry of Telecommunications, Posts and Digital Economy. 	<p>Time: 9:00 – 10:00 Session 10 Inclusiveness – access to information and knowledge for all Chairman: H.E. Mr. Mustafa Jabbar, Minister, Ministry of Posts, Telecommunications and Information Technology, Bangladesh</p> <ol style="list-style-type: none"> 1. Moderated by High-level Track Facilitator: Ms. Sophie Peresson, International Chamber of Commerce (ICC) 2. WSIS Action Line Facilitator ITU – Mr. Alexander NTOKO, Chief of the Operations and Planning Department 3. Algeria - H.E. Ms. Houda Imane Faraoun, Minister, Ministry of Post, telecommunications, Technologies and Digitalization 4. Portugal - H.E. Mr. Luís Goes Pinheiro, Secretary of State for Administrative Modernization, Ministry of Presidency and Administrative Modernization 5. India - Ms. Roshni Sen, Principal Secretary, Government of West Bengal 6. Malawi - Dr. Esmie T. Kainja, Permanent Secretary for Information and Communications Technology 7. ICANN - Mr. Göran Marby, CEO and President 8. UNICEF- Ms. Jasmina Byrne, Chief of Policy 9. United Nations University Institute on Computing and Society (UNU-CS) – Dr. Araba Sey, Head of Research/Principal Research Fellow

<p>9. JokkoSanté - Mr. Adama Kane, CEO & Founder</p> <p>10. ILO - Mr. Srinivas Reddy, Chief of the Skills and Employability Branch</p>	<p>10. UN Internet Governance Forum - Ms. Lynn St. Amour – Chair, UN Internet Governance Forum Multistakeholder Advisory Group</p>
<p><i>Wednesday, 10 April (CICG, Room 1, Level 1)</i></p>	<p><i>Wednesday, 10 April (CICG, Room 2, Level 0)</i></p>
<p><i>Time: 10:00 – 11:00</i></p> <p>Session 11</p> <p>Digital Economy and Trade</p> <p>Chairman: H.E. Mr. Mustafa Jabbar, Minister, Ministry of Posts, Telecommunications and Information Technology, Bangladesh</p> <ol style="list-style-type: none"> 1. Moderated by High-level Track Facilitator: Mr. Ted Chen, EverComm Singapore 2. WSIS Action Line Facilitator UNCTAD – Mr. Torbjörn Fredriksson, Chief, ICT Policy Section, Division on Technology and Logistics 3. Cameroon - H.E Mrs. Libom Li Likeng Mendo Mente, Minister, Ministry of Telecommunications, Posts 4. Republic of North Macedonia - H.E. Mr. Damjan Manchevski, Minister, Ministry of Information Society and Administration 5. Russian Federation - H.E. Mr. Mikhail Mamonov, Deputy Minister, Ministry of Digital Development, Communications and Mass Media 6. Indonesia - Mr. Ahmad M. Ramli, Director General for Post and Informatics Operations, Ministry of Communication and Informatics 7. Colombia - Mr. Germán Darío Arias, Commissioner, Communications Regulatory Commission 8. Asia-Pacific Telecommunity - Mr. Masanori Kondo, Deputy Secretary General 	<p><i>Time: 10:00 -11:00</i></p> <p>Session 12</p> <p>Gender mainstreaming</p> <p>Chairman: H.E. Mr. Mustafa Jabbar, Minister, Ministry of Posts, Telecommunications and Information Technology, Bangladesh</p> <ol style="list-style-type: none"> 1. Moderated by High-level Track Facilitator: Prof. Tim Unwin Royal Holloway, University of London & Lanzhou University, China 2. Welcoming Remarks – Ms. Doreen Bogdan-Martin, Director, Telecommunication Development Bureau 3. YouTube-Google - Ms. Sarah Clatterbuck, Director of Engineering 4. Israel Tech Policy Institute - Ms. Limor Shmerling Magazanik, Managing Director 5. Health and Environment Program - Dr. Madeleine Scherb, President 6. Humanized Internet - Ms. Monique Morrow, President and Co-Founder 7. EC MEDICI Framework - Prof. Alfredo Ronchi, Secretary General 8. European Commission - Ms. Maya Plentz, Innovation Policy Advisor 9. World VR Forum – Mr. Salar Shahna, President, World VR Forum 10. EQUALS Global Partnership-Internet Society – Ms. Joyce

<p>9. MLi Group - Mr. Khaled Fattal, Chairman</p> <p>10. ASDF International - Mr. Kokula Krishna Hari Kunasekaran, International Secretary</p> <p>11. Open Health Network - Mrs. Tatyana Kanazaveli, CEO</p>	<p>Dogniez, Chair (EQUALS) - Vice President of Community Engagement and Development</p> <p>11. Aspire Artemis Foundation - Mr. Kenneth Herman, Director of Technology Programming</p>
<p><i>Wednesday, 10 April (CICG, Room 1, Level 1)</i></p>	<p><i>Wednesday, 10 April (CICG, Room 2, Level 0)</i></p>
<p><i>Time: 11:00 -12:00</i></p> <p>Session 13</p> <p>ICT applications and services</p> <p>Chairman: H.E. Mr. Mustafa Jabbar, Minister, Ministry of Posts, Telecommunications and Information Technology, Bangladesh</p> <ol style="list-style-type: none"> 1. Moderated by High-level Track Facilitator: Ms. Sabrina Cohen Dumani Executive Director of the FFPC Geneva Fondation pour la Formation Professionnelle Continue 2. WSIS Action Line Facilitator ITU – Mr. Kemal Huseinovic, Chief, Department of Infrastructure, Enabling Environment and E-Applications (IEE) 3. Kenya - Mr. Samuel Mutungi, Member of the Universal Service Advisory Council, Communications Authority of Kenya 4. Pierre Mirlesse Consulting - Mr. Pierre Mirlesse, CEO 5. SAMENA Council - Bocar Ba, CEO 6. University of Applied Sciences, Western Switzerland (HES-SO) - Prof. Nabil Abdennadher, Head of IT research institute /Head of LSDS research group 7. Richard Kerby LLC - Richard Kerby, President 	<p><i>Time: 11:00 – 12:00</i></p> <p>Session 14</p> <p>Knowledge societies, capacity building and e-learning / Media</p> <p>Chairman: H.E. Mr. Mustafa Jabbar, Minister, Ministry of Posts, Telecommunications and Information Technology, Bangladesh</p> <ol style="list-style-type: none"> 1. Moderated by High-level Track Facilitator: Dr. Naila Siddiqui Kamal Senior Lecturer, Imperial College School of Medicine London 2. WSIS Action Line Facilitator ITU – Dr. Cosmas Zavazava, Chief of Department, Projects & Knowledge Management, Telecommunication Development Bureau 3. AIIESEC – Mr. David Scicluna, President 4. Bangladesh NGOs Network for Radio & Communication - Mr. AHM Bazlur Rahman, CEO 5. CEABAD - Mr. Sungham Choi, Program Director 6. The Womanity Foundation - Mrs. Valentina Di Felice, Head of Impact and Learning 7. Iran University of Science and Technology (IUST) - Dr. Hadi Shahriar Shahhoseini, Vice Chancellor for International Affairs and Director of Research Center

<p>8. UN Habitat - Dr. Graham Alabaster, Chief, Waste Management and Sanitation, Urban Basic Services Branch</p> <p>9. FAO - Mr. Samuel Varas, Director of IT Division</p> <p>10. University of Ilorin, Nigeria/ University of York UK - Dr. Abdulkarim Oloyede, Senior Lecturer In Wireless Telecommunications</p>	<p>for ICT Strategic and International Studies (ICT-SIS).</p> <p>8. International Organization for Migration (IOM) – Leonard Doyle, Head of Media and Communications, Chief Spokesperson</p> <p>9. India - Dr. Subrata Roy Gupta, Principal Scientist , National Informatics Center WBSC , Ministry of Electronics & Information Technology</p> <p>10. Just Net Coalition – Mr. Norbert Bollow, Co-convenor</p>
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High-Level Dialogues



HLD

High-Level Dialogues (HLD) provide a unique combination of expert panelists and audience interaction. These High-Level Dialogues are on specific topics identified as crucial within the mandate of the WSIS Forum 2019 and provide insights from leading experts on these pivotal issues.

HLD1 An End to Electronic Waste: Building the E-waste Coalition

Wednesday 10 April 13:30 – 15:00
CICG, Room 1 Interpretation E/F
Captioning

HLD2 The Ethical Dimensions of Artificial Intelligence

Wednesday 10 April 13:30 – 15:00
CICG, Room 2
Captioning

HLD3 Whole of Government Approach to Scale Digital Transformation for SDGs

Wednesday 10 April 13:30 – 15:00
CICG, Room 3+4
Captioning

HLD4 ICT Accessibility: The Key to Inclusive Global Communication

Wednesday 10 April 15:00 – 16:30
CICG, Room 2 Interpretation A/C/E/F/R/S
Captioning

HLD5 ICT4ALL: Indigenous languages Matter for Peace, Innovation and Development

Wednesday 10 April
CICG, Room 2
Captioning

15:00 – 16:30
Interpretation E/F

HLD6 What would it take to trust AI?

Wednesday 10 April
CICG, Room 3+4
Captioning

15:00 – 16:30

HIGH-LEVEL DIALOGUE



An End to Electronic Waste: Building the E-waste Coalition

Wednesday 10 April

13:30 – 15:00

CICG, Room 1

Captioning

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/193#>

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11
Action Line C7 E-Environment

II. Key achievements, announcements, launches, agreements, and commitments

The signing of a Letter of Intent by three new UN entities, seeing them join seven existing signatories in paving the way for coordination and collaboration on UN system-wide support for e-waste management

III. Main outcomes highlighting the following:

1) Debated Issues

Everyday consumer products are thrown away and we continue to operate in a linear system where value is not being captured from e-waste. Yet, e-waste is still an emerging issue and it is multi-disciplinary in nature. There is very little data available making it difficult to understand the full picture. At the same time there is still a lack of interest in and understanding of this waste stream, and there is a need to attain greater commitment.

For many years' e-waste has been landfilled by municipalities, who are now returning to these sites to mine for the lasting valuable components. From a public health point of view there is still a lack of knowledge on why health entities need to be involved in the e-waste discussion. It is about finding the right argument and messages. There are opportunities to scale up best practices, and create jobs and business along the supply chain. Likewise, e-waste should not be seen as a menace only, but more so as a job creator and value grower.

Achievements

The World Health Organization, International Trade Centre and UN Human Settlements Programme all signing the Letter of Intent as new signatories, joining the seven existing UN entities who all signed at last year's 2018 World Summit on the Information Society Forum.

A step towards a more circular narrative after the recent joint E-waste Coalition, World Economic Forum and World Business Council for Sustainable Development report on *A New Circular Vision for Electronics*.

Challenges

- The messaging and communication around the e-waste challenge is still not striking enough to gain interest and adequate momentum in this area.
- The classical view of e-waste as a menace and the operational cost approach to clearing it up is still with us, and this needs to shift to focus on value and business opportunities.
- Similar to many years ago, there is still a lack of data relating to e-waste and data collection under the indicators of the Sustainable Development Goals.
- E-waste projects and activities are often duplicated and resources funding them are limited or short-term. On this front, building the e-waste coalition has come at an opportune time.

2) Quotes

- "All types of wastes need to be handled, managed in a proper way, taking into consideration the health impact" (Dr. Maria Neira, World Health Organization)
- "We need to integrate informal workers into formal employees and entrepreneurs into formal employers" (Mr. Anders Aeroe, International Trade Centre)
- "The risk of having hazardous components in the waste stream, means huge costs in the future which will fall on municipalities" (Mr. Graham Alabaster, UN Human Settlements Programme)

IV. Overall outcomes of the session highlighting

- A greater understanding and recognition of the work and objectives of the E-waste Coalition, including recommendations for specific work streams.
- Further discourse among governments, the UN, the private sector and other stakeholders on their role in addressing the global e-waste challenge.
- Through the ongoing E-waste Coalition, continued long-term discussions among UN entities on the possibilities for increased programmatic collaboration and grand partnerships in their efforts to tackle the global e-waste challenge.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)



VI. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

A focus on the environment impact – both positive and negative – of the vast amount of ICT equipment designed and implemented to mitigate the effects of climate change and to help us lead more energy efficient lives. Or the impact of ICTs growth and smart cities on the rise of e-waste, including the waste from telecommunications devices which is circling the world in space.

HIGH-LEVEL DIALOGUE



The Ethics of Artificial Intelligence

Wednesday 10 April
CICG, Room 2
Captioning

13:30 – 15:00

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/195#>

I.Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11 C10

II.Key achievements, announcements, launches, agreements, and commitments

a. In the recently published preliminary study on the ethics of artificial intelligence by COMEST, several of the most crucial ethical issues of AI were identified. These include: 1) the standardization of cultural production; 2) gender bias and social exclusion; 3) the transformation of the relationship between knowledge and decision-making and expertise; 4) the orientation of media content through automated journalism; 5) the erosion of critical thinking in educational curricula, and 6) its use in democratic processes;

b. The reflection on the governance of AI would require a pluridisciplinary and multicultural approach, opening up questions about what type of future do we want for humanity. The norms that will govern Artificial Intelligence must first be compatible with internationally agreed human rights and standards;

c. In discussions on AI, we can draw on UNESCO's concept of Internet Universality, for an Internet governance based on the foundation of human rights, openness, accessibility, and multi-stakeholder participation;

d. AI education should empower citizens to develop new forms of critical thinking, including 'algorithm and software awareness', and the ability to reflect on the impact of AI on information, knowledge, and decision-making. A second field of ethical questions regarding AI and education concerns the roles of AI in the educational process itself, as an element of digital learning environments, educational robotics, and systems for 'learning analytics', that all require responsible development and implementation.

e. We must empower institutions in the governance of AI, in order to be capable of ensuring and managing AI security, stabilizing technological development to prevent new extreme risks, and driving a human-centered AI development and design.

- f. Challenges for the ethical development of AI include questions of autonomy, explicability, transparency, and bias;
- g. Key areas for the development of an ethical AI include 1) identifying challenges and risks 2) ensuring inclusiveness; 3) ensuring dialogue with government counterparts for the development of public policies; 4) Investment in research and development; 5) investment in training and AI literacy skills;
- h. For an ethical AI, we must transition from policies to practice, building on soft governance mechanisms of standards in this field that exist. The OECD has developed a set of core principles related to AI, and the IEEE several standards as it concerns ethically aligned design that are important principals and standards in the field of the ethical development of AI. Furthermore, the recently published “Ethically Aligned Design” of the IEEE, alongside UNESCO’s “Steering AI for Knowledge Societies: A ROAM Perspective” are useful publications in this field.;
- i. In the ethical development of AI, the deepening of the AI digital divide must be avoided to counter possible hegemony in this field;
- j. Given the borderless nature of AI, minimal ethical standards and measures must be put in place for all stakeholders concerning AI development and applications;
- k. The media is a key stakeholder of the development of an ethical AI in order to ensure that counter-narratives concerning AI, its development, and use are put forward, notably as it concerns AI innovations from the global south, and the contribution of women and developing countries to AI’s development.

III. Main outcomes highlighting the following:

1) Debated Issues

Main issues debated: This high level dialogue took stock of ongoing discussions and existing initiatives and studies on the ethical dimensions of Artificial Intelligence and discussed possible recommendations so that Artificial Intelligence can contribute towards fundamental values that leave no one behind. Specifically, the high level dialogue addressed the following: What do we mean exactly by a human centred and ethical AI? What are the immediate and potential long-term ethical challenges raised by AI in the domains of UNESCO’s mandate? What are some of the challenges in establishing ethical frameworks and principles in this field? Does this definition change in different regions of the world? What is a possible way forward and who needs to be involved in the conversation?

2) Quotes

- Dr. Salma Abbasi, Chairperson and CEO, The eWorldwide Group: “In the development of an ethical AI, private sector companies must be held accountable. The development of an ethical AI is a question of urgency.”
- Adriana Eufrasina Bora, Student, International Public Management: “The future will be bright but only if we appropriately educate and actively include the youth in shaping it.”

- Katie Evans, PhD Philosophy, the ethics of AI: “Data, when it is collected properly, can tell us a lot about how the world is, but it is comparatively quite silent regarding how the world ought to be. In other words, we have to be careful how our data defines us in the age of AI, how what we do, what we buy, who we know and where we’ve been all come to affect where we’re going and what we’re capable of in the digital space and beyond. Because all of these elements are not the sum-total of human potential. At the very least, we have to preserve the freedom to surprise algorithms, with unexpected choices, purchases, searches, and affiliations.”
- Mei Lin Fung, co-founder, People Centered Internet: "Ethics for AI are the guardrails we need to put in place to assure that humanity can trust the digitally transformed world we are going to be living in - trustworthiness, reliability and safety can be sacrificed by commercial companies without laws designed to enforce these basic requirements that enable day to day living."
- Konstantinos Karachalios, Managing Director, IEEE: "The time has come for all of us to assume our responsibility and to do our duty. We, as part of the global techno-scientific community, are there to propose technical solutions, to engage with political actors, with industry and with civil society, to explain and to listen. Nobody can do it alone, and nobody who has something to contribute should remain idle. It is time to pass from principles to action."
- Nicolas Mialhe, Co-Founder and Director, The Future Society: “Ethics does not exist in a vacuum. Governing the rise of AI means seeking to reconcile problems and preoccupations of the end of the world, with those of the end of the month, and those of end of the day. Given the complexity of the AI revolution doing this requires a multi-stakeholder approach.”
- Monique Morrow, President, VETRI Foundation: "Let's develop the future we would like to have together, not the one we wish to avoid. Ethics and AI do not have to result in a zero-sum game therefore let's apply an "AI Hippocratic Oath" before it is too late!"
- Karine Perset, Economist, OECD: “No stakeholder group can do this alone. We must develop tools to measure and monitor AI and its development, and emphasize a multi-stakeholder and multi-disciplinary approach.”
- Amandeep Singh Gill, Executive Director, Secretariat of the High-level Panel on Digital Cooperation (ex officio) “In the development of an ethical AI, we must ensure investment for good, inclusive incubation to scale solutions that work. We can ensure good governance of AI through ecosystems of shared practice.”
- Peter Paul Verbeek, COMEST Member: “Artificial Intelligence will not take over the world. We shouldn’t frame our conversation like this. AI will directly influence how we achieve the sustainable development goals. AI is directly linked to democracy, and the future we want.”

IV. Overall outcomes of the session highlighting main conclusions reached during the discussion

- Considering the ethical dimensions of AI is essential as ethical dimensions have a reach beyond legislative frameworks, and are deeply connected to democratic processes;
- In the development of an ethical AI, a commitment to human agency must be privileged;
- Machine learning and AI-driven algorithms show how the world is, but not how it ought to be. Human agency and potential must be centralized in order to develop an AI that contributes to the sustainable development goals;
- Collaborative and inclusive approaches to AI must be ensured in order to develop, through multi-stakeholder consultation, guiding principles for an ethical AI;
- The development of principles, policies, and standards for an ethical AI must be rooted in existing work in this domain, notably by the IEEE, European Commission, Council of Europe, OECD, and UNESCO;
- In the development of an ethical AI, the focus must be on empowering the most vulnerable to be producers, and not just consumers, of AI solutions for sustainable development;
- The Internet universality framework of UNESCO and its ROAM principles are a useful starting point for international reflection on how to develop a rights-based, open, accessible, and multi-stakeholder AI;
- As there is a clear lack of knowledge and of access for the wider public on AI, the discussion on the ethics of AI cannot remain in the realm of industrialists, economists, philosophers, etc. but needs to be opened up to other stakeholders and include a greater public for expanding the understanding of AI and starting debates;
- The development of an ethical AI must be “designed positively,” with additional emphasis on the development the necessary tools to measure and monitor its growth in a multi-disciplinary way.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

GOAL 17: Partnerships to achieve the Goals

GOAL 16: Peace and Justice Strong Institutions

GOAL 9: Industry, Innovation and Infrastructure

GOAL 4: Quality Education

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

The role of artificial intelligence should be analyzed as it concerns all WSIS action lines based on the WSIS-SDG Matrix model.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Artificial Intelligence and Sustainable Development.

HIGH-LEVEL DIALOGUE



Whole of Government Approach to Scale Digital Transformation for SDGs

Wednesday 21 March
CICG, Room 1
Captioning

15:00 – 16:30
Interpretation A/C/E/F/R/S

This outcome will be made available soon.

HIGH-LEVEL DIALOGUE



ICT Accessibility: Inclusive Communication for All

Wednesday 21 March

15:00 – 16:30

CICG, Room 1

Captioning

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/203#>

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11
WSIS Action Lines C1, C2, C3, C4, C6.

C1: Governments have a leading role in developing and implementing comprehensive policies, strategies, and standards for ICT accessibility, and bear the duty of ensuring all citizens, including persons with disabilities, enjoy the same rights and opportunities. In adhering to standards for ICT accessibility, meanwhile, industry can ensure that all ICT products and systems are made according to universal design principles, and for maximum affordability.

C2: National digital strategies should address the needs and experiences of all citizens, including persons with disabilities and older persons, by taking appropriate educational, administrative and legislative measures for their full inclusion and effective participation in the information society.

C3: ICTs have the potential to quickly and radically improve people's lives – by facilitating access to information, basic services, and healthcare and education, for example – but these technologies are not always accessible or available to everyone. The promotion and implementation of ICT accessibility for persons with disabilities ensures equitable access to information and communication, without limitation, as a tool for self-empowerment and inclusion in the digital economy and all aspects of society.

C4: The capacity of governments and other relevant stakeholders to develop and implement policies and strategies for ICT accessibility needs to be built (for example through training courses for public administration or making guidelines and standards widely available), while the capacity of the technology's end users must also be built so that they can fully benefit from the ICTs available to them.

C6: Making accessible ICTs widely available and affordable requires innovative business, policy and regulatory practices which will incentive all relevant actors – such as procurers, manufacturers and service providers - to invest in ICT accessibility and thereby the full inclusion of persons with disabilities in the information society. Policies requiring government agencies to procure accessible ICTs, for example, have been shown to be very effective in this regard.

II. Key achievements, announcements, launches, agreements, and commitments

- Awareness raised of WSIS participants to the High Level Dialogue on the importance that policymakers, industry, manufacturers and public sector as well as academia and civil society implement ICT accessibility (policies, regulations and related standards) to ensure access to ICTs for all people without any discrimination (regardless of gender, age, ability, location and financial means).
- Capacity built of all participating stakeholders on the concrete steps and actions each of them can take to contribute to the implementation of ICT accessibility.
- Information on key resources, programmes and trainings that support the global implementation of ICT accessibility was shared among WSIS participants.
- All WSIS participants were called on to take action at all levels, thus implementing ICT accessibility and developing accessible ICTs to jointly contribute to the development of inclusive digital society

III. Main outcomes highlighting the following:

1) Debated Issues

- ICT accessibility for persons with disabilities is an intrinsic right (independent from the benefits their inclusion brings to society)
- Best practices in implementing legislation, regulatory measures and standards in ICT accessibility and development of accessible products, services (including through websites) were shared by the European Commission representative in support to other regions who may wish to follow similar practices
- To remove the barriers that hinder persons with disabilities from participating in digital societies, a coherent and complementary accessibility ecosystem (policies, legal framework, and regulations) is needed, accompanied with practical solutions in the form of standards, training and partnerships.
- ICT accessibility implementation requires the efforts of multiple stakeholders in society: government, the private sector, academia, civil society, and the media.
- Success/best practice: Ceapat, Spain's national center for technology (in place for over 30 years), successfully provides public services to persons with disabilities and older persons, including advice, needs assessment, as well as assistive and accessible technologies to contribute to the independent life of persons with disabilities and older persons.

- Success/best practice: Mexico as a role model in implementing policy and regulatory measures in ICT accessibility, but also in strategic partnership with relevant stakeholders to ensure that all citizens will benefit from information and communication products and services
- Success/best practice: Egypt as one of the first countries to give particular attention to implementing regulatory measures and strategy for the digital inclusion of persons with disabilities (since 2012), based on four pillars: infrastructure, accessibility of services, capacity building (ex. National ICT Academy for the digital skills development of persons with disabilities), and legislative framework
- The importance of standards in ICT accessibility was emphasized and their implementation, while being recognized as being challenging, is crucial. W3C raised awareness on the existing global standards in ICT accessibility to ensure that globally websites are accessible for all persons, including for persons with disabilities.
- The majority of barriers on the web are due to lack of awareness, training, and understanding of ICT accessibility issues by those involved in web development.
- Accessible ICTs are not a panacea for the (digital) inclusion of persons with disabilities: we need to build awareness, normalize disability, and make it part of every day conversation for there to be a shift in mindset
- It is necessary to recognize diversity within ‘persons with disabilities’ as a group: there are many forms of impairments that can cause different needs (e.g. visual, auditory, cognitive, etc.) – deaf persons, for example, should also be recognized as a worldwide language community
- Nothing about us, without us: persons with disabilities need to be involved in all aspects and stages of ICT accessibility implementation for it to be successful and useful

2) Quotes

- “There is no such thing as an inclusive information society without accessibility, which must be flexible, personal, and adaptive, and satisfies the needs, choices, and preferences of individuals.” – Ms. Inmaculada Placencia Porrero, Senior Expert, Disability and Inclusion Unit, Directorate General for Employment, Social Affairs and Inclusion, European Commission
- “Accessibility must be sustainable, sustainability must be accessible” – Dr. Miguel Ángel Valero Duboy, Director, Ceapat-Imsero, Ministry for Health, Consumer Affairs and Social Welfare, Government of Spain
- “Everybody’s work in ICT accessibility makes a difference, but only by working together we can make a lasting change to build an inclusive digital society.” – Ms. Roxana Widmer-Iliescu, ITU-D Focal Point for ICT Accessibility.

IV. Overall outcomes of the session

The panel reaffirmed that achieving ICT accessibility requires the engagement of multiple stakeholders, a coherent accessibility ecosystem, and awareness raising, and that the involvement of persons with disabilities (following the principle of ‘nothing about us, without us’) is necessary for the success of any intervention for ICT accessibility.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

SDG 4: Accessible ICTs can help ensure inclusive and equitable education and opportunities for lifelong learning for all, including persons with disabilities, through universal design principles that ensure information is delivered and communication is enabled in a way that corresponds to any learner’s needs.

SDG 8: Accessible ICTs can connect persons with disabilities with employment opportunities in the digital economy, thereby providing a pathway to full and productive employment and decent work.

SDG 10: Greater ICT accessibility promotes the social, economic and political inclusion of all people, irrespective of ability. The adoption of effective policies and standards at a national level can create an enabling environment for ICT accessibility and thereby accelerate SDG 10 implementation.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

N/A.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

N/A.

HIGH-LEVEL DIALOGUE



ICT4ALL: Indigenous languages Matter for Peace, Innovation, and Development

Wednesday 10 April
CICG, Room 2
Captioning

15:00 – 16:30
Interpretation E/F

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/259#>

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

Article 15 of the WSIS Declaration of The World Summit on the Information Society states “In the evolution of the Information Society, particular attention must be given to the special situation of indigenous peoples, as well as to the preservation of their heritage and their cultural legacy”. Since the adoption of the WSIS Declaration in 2003, and of the Tunis Declaration in 2005, various stakeholders addressed the issues of access to information and knowledge for marginalized groups. Numerous examples of effective usage of ICTs proved to be good practices and important means capable of improving the lives of indigenous peoples. The adoption of the UN Declaration on the Rights of Indigenous Peoples in 2006 provided a comprehensive normative framework for the indigenous issues inclusive development.

Relevant WSIS Action Lines: C1; C2; C3; C4; C5; C6; C7; C8; C9; C10; C11.

II. Key achievements, announcements, launches, agreements, and commitments

- a. A key message to draw from the panel is that promoting multilingualism through ICTs contributes to the preservation of the invaluable traditional knowledge imbued in languages that would otherwise undergo digital extinction, but also to the application and harnessing of this very knowledge for development and innovation in different fields.
- b. In order to achieve fruitful results and produce effective language technologies, it is key that indigenous peoples and indigenous language users in the first place are involved in the development process.
- c. There are a series of ethical, political, cultural, economic and technical challenges that prevent the development of and mainstreaming of language technologies in minority, lesser-user languages, as well as multilingual ones;

- d. A way forward could be the organization of international conferences, workshops, as well as the out-sourcing of source-codes from tech companies to indigenous people so that they can be developed and integrated in new technologies.

III. Main outcomes highlighting the following:

1) Debated Issues

- How to address the growing digital divide between speakers of dominant and minority languages, caused by the limited availability of, as well as lack of access to, indigenous language technologies;
- Existing language technologies in minority, lesser-used, and indigenous languages, and strategies to encourage knowledge-sharing for the promotion and development of language technologies that are multilingual as well as in minority languages from low GDP countries;

2) Quotes

- *Please provide two important quotes from the session and the names & organisation of the person you are quoting:*
 - 'We are trying to develop a momentum among all indigenous people in the world to urge major tech companies to take their responsibilities; it is our hope that governments will commit themselves to improve the situation for indigenous language users, by implementing legislations that secure and support the digital inclusion of minority and indigenous languages' (Eirik Larsen, Political Advisor and Representative of the Sami Parliament of Norway)
 - If we promote multilingualism, we discover new customers, it benefits our society. There is no development without participation, and indigenous people must be an integral part of the development process. We need to be more aware of the language technologies available but also to exploit their potential for the benefit of all. (UNESCO/CI Representative)

IV. Overall outcomes of the session highlighting

- main conclusions reached during the discussion:
 - 1) Critical to think collectively and concretely about how to adjust technological developments and AI to serve all languages, need for **new research directions and business strategies** to reduce the cost for developing indigenous language technologies, and to encourage knowledge-sharing

practices and their mainstreaming at the international level to enhance profit as well as contribute to global development;

- 2) Sharing strategies among multiple partners represents a way forward to fight the digital exclusion of indigenous/minority groups: joint-efforts are required from all stakeholders, from indigenous language users themselves, to the public and the private sector, academia, and civil society organizations.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

Relevant SDGs: 1, 4, 5, 7, 8, 10, 13, 16, 17.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting:

The panelists concentrated on WSIS Action line C8: 'Cultural diversity and identity, linguistic diversity and content', which is related to access to knowledge and information' (Action line C3), 'the role of governments and all stakeholders in the promotion of ICTs for development' (Action Line C1), and 'ICT Application' (Action Line C7).

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020:

- a. Digital inclusion of marginalized groups and linguistic minorities;
- b. Harnessing indigenous knowledge for development and innovation in the private-sector.

HIGH-LEVEL DIALOGUE



What would it take to trust AI?

Wednesday 10 April
CICG, Room 3 & 4
Captioning

15:00 – 16:30

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/199#>

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

This is a cross-cutting topic and the themes explored in this session will be essential to the implementation of all the WSIS Action Lines.

II. Key achievements, announcements, launches, agreements, and commitments

The 'AI for Good Global Summit' is the leading United Nations platform for dialogue on AI, organized by ITU in partnership with XPRIZE, ACM and sister United Nations agencies. The summit focuses on concrete impact, generating new AI projects to accelerate progress towards the SDGs. More than 30 projects came out of the 2018 summit. The third edition of the Summit is from 28-31 May 2019 in Geneva.

III. Main outcomes highlighting the following:

1) Debated Issues

- Please capture highlights of the main issues debated and interactions with audience
 - The issue of trust in AI is central to ensuring that AI technologies fulfil their potential to help address many of humanity's most critical social, economic and environmental concerns. As key stakeholders, the panelists discussed the role their organizations/sectors can play in developing systems, policies and safeguards that help build trust in AI.
 - The panelists discussed the core policy imperatives that are central to building safeguards to ensure trust in AI.

- The role of AI in contributing to international peace and security was deliberated upon, as well as its potential to transform the cyber security landscape in a way that delivers value for all.
- Digital inclusion, child protection, and issues relating to ethics, transparency, accountability and data, formed the basis of the discussion and audience interactions.
- Please highlight key achievements and challenges shared by the audience and/ or panellists
 - AI technologies hold a deep promise to drive progress towards the 2030 Agenda for Sustainable Development. The panelists discussed issues related to protecting rights, ensuring security, privacy, transparency and accountability, legislation and regulation, emphasizing education and skills development, increasing community awareness and buy-in, building infrastructure and connectivity, and international multi-stakeholder collaboration to help AI deliver on this promise.

2) Quotes

- *“Ultimately, the path to a transformative but also a safe, trusted and inclusive AI will require unprecedented collaboration between government, industry, academia and civil society. At stake is our chance to seize this moment to identify practical AI applications with the potential to accelerate progress towards the SDGs and improve the quality and sustainability of life on our planet.”* – Mr. Houlin Zhao, Secretary-General, ITU
- *“Developing countries are aware of the utopian promise that AI holds, and there is a need to put in place mechanisms that can ensure that we harness AI, that we can develop it further, even as consumers, that we can leverage our potential as a market, even though we are not the early birds in developing this technology, and be the voice that is heard in forums discussing AI around the world.”* – Dr. Nora Mulira, Commissioner, Uganda Communication Commission

IV. Overall outcomes of the session highlighting

- main conclusions reached during the discussion
 - i. Multi-stakeholder collaboration and cooperation at the national, regional and international level is essential to help AI accelerate progress across each of the 17 Sustainable Development Goals
 - ii. There needs to be greater emphasis on moving this debate away from expert discussions in boardrooms and forum discussions into an inclusive societal dialogue that involves each and every person.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

AI technologies are expected to play a critical role in accelerating progress towards each one of the 17 SDGs. However, while they have the potential to help address many of humanity's most critical social, economic and environmental issues, the issue of trust is central to ensuring that they deliver on their promise to advance the 2030 Agenda and leave no one behind.

VI. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

- A focus on AI and its impact on the SDGs and WSIS Action Lines
- Deeper dive into benefits of AI for developing countries such as through smart cities etc.

Ministerial Round Table (MRT)

Closed Session - Ministers Only

14:00 – 16:15

Wednesday 10 April

(E/F/)

The Ministerial Round Table has provided a platform for an interactive talk in a high-level setup on the opportunities and challenges of implementing WSIS Action Lines for achieving SDGs, building upon the outcomes of the UNGA WSIS Overall Review. It was focused on the national approaches aiming at strengthening the role of WSIS Action Lines/ ICTs, as enablers of SDGs. This has also been an opportunity to brainstorm on ways to foster multi-stakeholder partnerships building and sharing of best practices in the implementation of the WSIS Outcomes towards 2025.

Format: The Round Table has been organized in a dialogue style moderated by the WSIS Forum 2019 Chairman, H.E. Mr. Mustafa Jabbar, Minister, Ministry of Posts, Telecommunications and Information Technology, Bangladesh.

Guiding Questions:

- 1) The WSIS Outcomes provides a framework for leveraging ICTs as enablers of Sustainable Development Goals. How have the national strategies towards using ICTs for achieving the SDGs been integrated as part of the National Development Plans?
- 2) We are celebrating 10 years of the WSIS Forum this year. The Forum serves as a platform to highlight and analyze the achievements of WSIS Action Lines. The world is witnessing the fourth industrial revolution ushered in by emerging technologies such as AI, IoTs, blockchain, 5G and many others. This offers many opportunities and also many development challenges including the risk of a new digital divide. In this context, how can we collaborate to strength the WSIS Forum as a unique platform of all ICT for Development practitioners?

Many Ministers expressed their continued support for the Ministerial Round Table to share their national experiences and set some action plans. The participants of the Ministerial Round Table emphasized the importance of the WSIS Forum as a platform to share, learn, and exchange information.

They applauded the WSIS Forum as an opportunity for all to engage on issues that are almost universal. Issues such as digital security, cybersecurity, accessibility, and

innovation were highlighted. The importance of whole government approach was also underlined. Some Ministers on this occasion shared their experiences and their success stories highlighting the innovation in technology and policies.



High-Level Policy Statements: Concluding Session

Wednesday 10 April 2019

16:30 – 18:00

CICG, Room 1

Captioning

Interpretation: E/F/R/S/C/A

Concluding Session:

- Mr Houlin Zhao, Secretary-General, ITU
- Chairman of the WSIS Forum: H.E. Mr. Mustafa Jabbar, Minister, Ministry of Posts, Telecommunications and Information Technology, Bangladesh.

The Chairman of the WSIS Forum 2019 and the High-Level Track Facilitators have provided the summary for the High-Level Policy Sessions. Please read the outcome in this document: <https://www.itu.int/net4/wsis/forum/2019/Files/Outcomes/DRAFT-WSISForum2019HighLevelTracksOutcomes.pdf>

Interactive Facilitation Meetings



WSIS Action Lines

The Tunis Agenda for the Information Society states that the WSIS implementation mechanism at the international level should be organized based on the themes and action lines in the Geneva Plan of Action and moderated or facilitated by UN agencies when appropriate. In addition, it states that ITU, UNESCO and UNDP should play a leading facilitating role in the implementation of the Geneva Plan of Action.



- [C1. The role of public governance authorities and all stakeholders in the promotion of ICTs for development](#)
- [C2. Information and communication infrastructure](#)
- [C3. Access to information and knowledge](#)
- [C4. Capacity building](#)
- [C5. Building confidence and security in the use of ICTs](#)
- [C6. Enabling environment](#)
- [C7. ICT Applications:](#)
 - [E-government](#)
 - [E-business](#)
 - [E-learning](#)
 - [E-health](#)
 - [E-employment](#)
 - [E-environment](#)
 - [E-agriculture](#)
 - [E-science](#)
- [C8. Cultural diversity and identity, linguistic diversity and local content](#)
- [C9. Media](#)
- [C10. Ethical dimensions of the Information Society](#)
- [C11. International and regional cooperation](#)

Each year, the WSIS Action Line Facilitators:

- Provide reports on the year's activities on their respective Action Lines
- Organize Interactive Action Line Facilitation Meetings on their respective Action Lines.

Interactive Facilitation Meetings



WSIS Action Line C7 E-Environment: Weather, Climate and Environmental risk management: every life counts, every digit helps

ITU/WMO

Monday, 8 April 2019

09:00 – 10:45

Room H2 – ITU

- I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11 C7 E-Environment**
- II. Key achievements, announcements, launches, agreements, and commitments**

The action line facilitation meeting provided an overview of different activities and initiatives related to Multi-Hazard Early Warning Systems that organizations such as IFRC, WMO and ITU are developing. This includes the Forecast based Financing and its Early Action Protocol that IFRC uses to provide a faster response in ahead of a predicted disaster. WMO shared the improvements on MHEWS and the check list and the importance of implementing them at a national level. ITU presented a new study on disruptive technologies and their use in disaster risk reduction and management.
- III. Main outcomes highlighting the following:**
 - 1) Debated Issues**
 - Efficient preparedness with a community based approach is part of Early Warning systems, in addition to the warning itself.
 - Weather forecast-based financing for mainstreaming early warning into early action.
 - Early Warning System and its benefit from the growing and high performance technology for Weather and Climate data collection, processing, forecasting and dissemination.
 - Disruptive technologies for improving disaster risk reduction as well as disaster management by allowing the spread critical information in a timely manner, faster

data collection, analysis and decision making processes, providing faster response and reducing economic impact.

2) Quotes

- *We need an anticipative rather than reactive approach in dealing with disasters. The forecast-based financing approach helps us systematize the decision making process to act early ahead of disasters.*, **Kara Devonna Siahaan, IFRC**
- *Climate is changing, we need to be prepared to see tropical cyclones in areas where we haven't seen them before*, **Taoyong Peng, WMO**
- *The world is experiencing extreme weather events it is therefore crucial to use emerging technologies to that can facilitate monitoring and early warning and at the same time improve decision-making processes to save lives*, **Maritza Delgado, ITU.**

IV. Overall outcomes of the session highlighting

- The improvements in disaster risks related services rely on science progress, such as the science of climate change and extreme events as well on technology innovation and the use of cutting-edge ICT technology for observation, data processing, product generation, services and dissemination.
- MHEWS are increasingly leveraging ICT as a means of communication of warnings therefore there is a growing need for communities to have access to affordable ICT technology.
- There is a need for efficient capacity building strategies that involves education for vulnerable communities to increase their resilience and protect themselves from the impacts of hazards and to understand national disaster management plans (e.g. evacuation, prevention).
- Disruptive technologies, technological advancement and innovation are creating new opportunities for enhancing resilience of societies and communities in managing disaster risks.
- There is a need for strong partnerships at global and regional level so as between public and private sector to drive positive impacts on the communities.
- Evacuations as a response to the warnings can significantly benefit from mapping of prioritized evacuation areas based on risk assessment.
- WMO, ITU and IFRC ready for enhancing their partnership in dealing with MHEWS, and serving communities and reaching the last mile.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

Information on weather, climate and environment and the associated risks and early warning helps taking preventive and preparedness actions and carry out operations for managing risks associated with high impact events of short and long term nature. The session links particularly to **SDG 11**, for making cities safer and more resilient by reducing the number of deaths, the number of people affected and economic losses

associated with hydro-meteorological related disasters, to **SDG 13** with respect to adaptation to climate change and induced extreme events. Also provision of information and services on drought, floods, heat stress and pollution in an anticipatory manner using efficient MHEWS contributes to reduce poverty and hunger (**SDG1, SDG2**) and health risks (**SDG-3**).

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

- Building on the impact-based forecasting methodology, forecast based financing will help in ensuring early preparedness, allocation of resources in an optimal way, e.g. when and where it is needed at a sufficient time allowing communities to take proper action in anticipation of a prominent disaster.
- Innovative ICT technology such as disruptive technologies are emerging and making a paradigm shift in the full value chain of MHEWS. Including data collection, processing and alerting messages to the end users.
- Development of Standards for cataloguing hazardous weather, water and climate events with inter-operable databases for extreme events and loss and damage records will improve understanding of past trends and allow for more accurate projections of impacts on people and livelihoods.
- Establishment of national protocols for disaster risk reduction to enable communities to effectively respond to natural hazards like tropical cyclones.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

- Harvesting the Sun and Weather power for sustainable development.
- Predicting Space Weather global impact.
- Leveraging ICT for the Weather Enterprise.
- People, processes, technologies –components for early warning.
- Ensuring non-discontinued warning information and services under extreme weather circumstances.

Interactive Facilitation Meetings



WSIS Action Line C3 and C7 E-Science: Access to Scientific Information
– Are we ready for the Global South and SDGs?

UNESCO

Monday, 8 April 2019

09:00 – 10:45

Popov Room – ITU

11:00 – 13:00

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

C3. Access to information and knowledge
C7. ICT Applications (22. E-Science)

II. Key achievements, announcements, launches, agreements, and commitments

Launch of **Global Alliance** of Open Scholarly Communication Platforms (**GLOALL**)
In **Inclusive Knowledge Societies**, people have ready access to information and communications resources, in languages and formats that suit them, the skills to interpret and make use of them. Within this framework, promoting strategies for enhancing access to scientific scholarship to the all regions of the world has remained a central challenge to most Member States. UNESCO, with its partners, continues to pursue this objective through its own programmes on open science as well as in partnership with other organizations and UN agencies.

At a session organized by UNESCO on 8th April at the WSIS Forum 2019 in Geneva, coordinators of six platforms – AmeliCA - based in Mexico, AJOL - African Network based in South Africa, Érudit - based in Canada, J-Stage - based in Japan, OpenEdition - based in France, and SciELO Network covering Latin America, Portugal and Spain agreed to join forces to improve the democratization of scientific knowledge following a multicultural, multi-thematic and multi-lingual approach.

GLOALL will pursue the following objectives :

- Leverage and share the deep, extensive and varied experience and knowledge of each platform
- Provide global visibility to the research outputs that are communicated through community-based and publicly-funded open access publication

- Improve research assessment practices by focusing strongly on content, and by using metrics only when their presence is clearly appropriate and justified.
- Support free circulation of knowledge to allow citizens to address local, regional and global challenges
- Foster a true diversity of languages, cultures and perspectives across scholarly communication, following the principle of bibliodiversity
- Help redress power imbalances in the current knowledge production system, and, in particular, its neglect of important issues, by fostering a more "glocal" approach to real world challenges

III. Main outcomes highlighting the following:

1) Debated Issues

- **What are the principles that drive the Global Alliance of Open Scholarly Communication Platforms?**

The members of the Global Alliance acknowledge that their common action is driven by these principles:

- The scientific knowledge generated with public funds is a public good and access to it is a human right.
- Public economic investment in open access must be consistent with its benefit to society and its contribution to the Sustainable Development Goals.
- Open science depends on collaboration and cooperation, and it remains focused on sustainability in its research processes. To these ends, open science needs scholarly communication to remain under the control of research communities.

- **What is the future roadmap for the alliance?**

The allied platforms agree to work together in the following direction: More efforts are needed to structure the Alliance, which will include mapping the governance structure, establish the method of participation, outline further activities, in particular coordinated work plans. It also includes a clear strategy to fund future projects:

- To develop a collaborative space to share experience, technology and know-how that can enhance and foster the development of tools, contents and practices for inclusive Open Access.
- To develop interoperability among platforms to pursue the aim to build, eventually, an Open Index usable by all
- To define the specifications needed for the implementation of multilingualism in international scholarly communication systems
- To create collections across the platforms to highlight and curate content that addresses the SDGs and are directly useful for citizens in their concrete life.

2) Quotes

“I would like to underscore that a collaboration of these regional open access platforms can provide a stronger advocacy for some of the underrepresented lifesaving information and research. An example is Ebola, it was an area of discussion in small journal and then it exploded when the crises hit. So we need glocalisation to give visibility to local journals.” – Susan Murray, AJOL, South Africa

“In the JST SDG library we have compiled articles related to SDGs and brought them together. Your proposal is to do that at a Global Scale and then classify that by SDG Goals. That is a splendid idea as it will give visibility to our research and support research around SDGs.” - Yasushi Ogasaka, J-Stage, Japan

“We need advocacy for open science and open access that is more inclusive and balanced between different cultures. It should be ‘Glocal’ that is global and local at the same time. We need mutual help to understand what we have, where are the gaps and how we can help each other. Finally, we need indexation tools to improve the credibility of our indexing mechanism. We can work from now to do a design concept and then we will develop this index together with more resources.” - Pierre Mounier from OpenEdition, France

“I imagine the global alliance as an informal space where we converge to learn more than we give. We could imagine that we have three functions: First, advocacy about Open Access. Second, how we could develop methodologies, tools, services and solutions for platforms. Third, the most important is to provide mechanisms, tools, and policies to give visibility to research so what we need to do is interoperability between different communities and societies.” - Abel Packer from SciELO, Brazil

“In the case of AMELI, we can provide technology. We are offering the tech to be used by other countries, we provide training courses, webinars and know how. We do not have the infrastructure. We have technology for indexed full search.” - Arianna Becerril Garcia from Redalyc, Mexico

“We have very concrete things to contribute including engagement and knowledge based on our experience. We can identify our strengths, the gaps and then sitting together to come up with a bigger goal. We can sit and make an inventory of existing strengths and initiatives.” - Tanja Niemann, ERUDIT, Canada

“The stakes are high: such an alliance has the potential of being the largest publishing entity in the academic publishing world. Its weight would immediately be felt, and more and similar groups would undoubtedly join.” Jean-Claude Guédon, Member of the Expert Group to the European Commission - Future of Scholarly Publishing and Scholarly Communication

“There is a genuine need from Open Access community for such a global alliance. This alliance will help democracticise and improve access to scientific knowledge thereby strengthen efforts to achieve Sustainable Development Goals. All stakeholders have to come together, leverage their mutual strengths and drive this alliance forward.” – Bhanu Neupane, UNESCO

IV. Overall outcomes of the session highlighting

- Launch of the Global Alliance (GLOALL) of Open Scholarly Communication Platforms.
- Agreement on the preliminary objective, principles and a future roadmap for the Global Alliance of Open Scholarly Communication Platforms.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

GOAL 17: Partnerships to achieve the Goal

GOAL 16: Peace and Justice Strong Institutions

GOAL 9: Industry, Innovation and Infrastructure

GOAL 4: Quality Education

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

- Need to develop collaborative space to share experience, technology and knowledge to foster the development of tools, contents and practices for inclusive Open Access.
- Need to develop interoperability among platforms to pursue the aim to build, eventually, an Open Index usable by all.
- Need to define the specifications needed for the implementation of multilingualism in international scholarly communication systems.
- Need to create collections across the platforms to highlight and curate content that addresses the SDGs and are directly useful for citizens in their concrete life.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Role of Artificial Intelligence in Openness and Access to Information

Interactive Facilitation Meetings



WSIS Action Line C4 Capacity Building: New teaching approaches for higher learning in the digital era.
Academia Roundtable

ITU

Monday, 8 April 2019

11:00 – 13:00

Room K2 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/133#>

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

Action Line C4

II. Key achievements, announcements, launches, agreements, and commitments

Not Applicable

III. Main outcomes highlighting the following:

1) Debated Issues

Highlights of the main issues debated and interactions with audience

This year the focus was on new teaching methods under the theme “New teaching approaches for higher learning institutions in the digital era.” Around 40 participants attended the session. The session focused on how capacity building, using ICTs, supports the achievement of Sustainable Development Goal 4 (SDG 4) on ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all by 2030. The session specifically contributes to target 4a, which aims at ensuring, building and upgrading education facilities that are child, disability, gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all. The session was conducted in the form of a roundtable for academia and was moderated by Professor Tim Unwin from the University of London.

The panel consisted of 3 speakers from Oslo and Akershus University College in Norway, United States International University Africa in Kenya, Academy for Scientific Research and Technology in Egypt. The session also featured guest experts from the Georgetown University, Freie University Berlin, Pinar Del Rio University, Xiamen University, ICT Research Institute of Iran. The panelists and guest experts discussed research findings presented in a paper developed through exploring studies on the use of technology in a traditional classroom, and the use of traditional pedagogies in highly technological classrooms.

In presenting the paper for discussion Professor Anthony Giannoumis highlighted that for many students, the auditorium is the room that most embodies Higher Education. However, recent studies and developments in teaching methodologies in higher education, such as blended learning and the flipped classroom, have challenged this conceptualization of the auditorium. Results from a recent case study on blended learning at Oslo and Akershus University College, showed how the auditorium as a room challenged the implementation of the course and influenced the students' choice in how they wanted the curricular material presented to them. Furthermore the universal design of the traditional auditorium should not be one size fits all, to accommodate different needs of the learners, diverse cultural backgrounds and learning abilities. The presentation highlighted the need to enhance cooperation with students to achieve common goals, that learning from social interaction promotes innovation and how creating an international network of professional collaborators can help sustain institutional partnerships between the university, industry, government and civil society.

In his presentation Dr Collins Odour shared a case study of the teaching facilities used at the US University Africa. He highlighted that classes are carried out on transparent glass computer labs of different sizes and lectures are delivered through Blackboard e-learning platform and the teaching method is blended. Due to the setup of the classrooms the students are able to interact and carry out group work using new technologies such as Lan School which enables sharing of presentations. The presentation emphasized that implementation of ICT based pedagogies ought to begin from basic ICT training of faculty and students, procuring hardware, software and maintenance of the equipment.

Professor Ahmed El Sherbini presented a background of the education system in Egypt which is composed of 12 years of pre University studies and 4 years of graduate studies. The presentation highlighted that Egypt has put in place modernization efforts to improve education which include provision of high speed broadband access, redesign of curricula, e-exams and e-grading. The presentation noted the need to introduce training of teachers on new technologies especially non ICT faculty members, as well as the need to adapt curricula to new ICT tools and interactive technologies.

Highlight key achievements and challenges shared by the audience and/ or panellists

- Universities are introducing information theory and coding in their curriculum
- E-management of classrooms (attendance, assignments, teaching materials, appointments)
- Introduction of E-office hours in the education sector.

- Interactive lab simulation
- ICTs are means to engage students, to provide students with skills, to deliver courses and enhance them
- Introduction of digital syllabi and curriculum, which provides teachers with greater flexibility to design courses
- Online feedback from students provides immediate updates to teachers

Challenges highlighted are:

- Higher education is under increasing competition from other forms of learning and knowledge production
- Teachers in developing countries are not empowered or remunerated appropriately to be competitive with teachers in the developed world
- Not modernizing pre-university education system leaves students unprepared once they reach the university system
- It is difficult to measure knowledge received from the virtual classrooms
- Traditional classrooms only manage to capture the attention of students temporarily but not in the long term and there is no immediate established alternative to the current lecture style
- There is no alternative for large classes but the traditional classroom. Managing large classes with online solutions becomes challenging for one teacher
- Traditional classrooms do not always support the teaching of critical thinking and other necessary working skills
- Collaborative education should be greater
- Commodification of higher education

2) Quotes

- “ICTs are tools institutions can use to enhance the capacity of all students” Dr Ahmad El-Sherbini, Academy for Scientific Research and Technology, Egypt
- “An auditorium is in conflict with the learning process” Prof. Anthony Giannoumis, Oslo and Akershus University College of Applied Sciences, Norway

IV. Overall outcomes of the session highlighting

- create an international network of professional collaborators that can help sustain institutional partnerships between the university, industry, government and civil society
- introduce training of teachers on new technologies especially non ICT faculty members
- adapt curricula to new ICT tools and interactive technologies
- ICT based pedagogies should begin from basic ICT training, procuring hardware and software as well as ensuring maintenance of the equipment
- explore how ICTS are used in education
- ICTs are just one way of enhancing education
- developing and developed countries cannot have the same solutions due to the different level of digital penetration and therefore need different ICT approaches in

education

- curricula should be designed to ease students' entry into the workforce
- main purpose of teaching is to inspire students to develop critical thinking and research skills while traditional method of teaching can be efficient, it limits the instructor as to what students can learn
- teachers need training, both ICT and non-ICT faculty
- increasing role of citizen science: you don't need a degree to make an impact in the world

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

SDG 1, Focus of the action line C4 includes development of domestic policies to ensure that ICTs are fully integrated in education and training at all levels, including in curriculum development, teacher training, institutional administration and management, in support of the concept of lifelong learning. Creation of policy frameworks requires stakeholder engagement, analysis and interpretation of data for targeted policy interventions which can be achieved through skills development programmes.

SDG 2, With the emergence of e-agriculture and the growing need for the knowledge in the use of ICT's, capacity building interventions focused at development and promotion of programmes to eradicate illiteracy using ICTs at national, regional and international levels, will contribute to knowledge growth and inclusion. It also focuses on building the capacity to use ICT tools to increase crop production, adopt modern farming methods, predict weather patterns, and in the process work towards eliminating hunger and creating food security.

SDG 3, To support research and strengthen capacity of developing countries for early warning, risk reduction and management of national global health risks, activities include design of specific training programmes in the use of ICTs in order to meet the educational needs of information professionals, such as archivists, librarians, museum professionals, scientists, teachers, journalists, postal workers and other relevant professional groups which focuses not only on new methods and techniques for the development and provision of information and communication services, but also on relevant management skills to ensure the best use of technologies.

SDG 4, Action line C4 focuses on development and promotion of programmes to eradicate illiteracy using ICTs at national, regional and international levels, with the aim of increasing the number of people with relevant ICT skills and to facilitate employment and entrepreneurship in the ICT sector.

SDG 5, Work on removing the gender barriers to ICT education and training and promoting equal training opportunities in ICT-related fields for women and girls, is part of the action line, with early intervention programmes in science and technology targeting young girls with the aim of increasing the number of women in ICT careers as well as promotion the exchange of best practices on the integration of gender perspectives in ICT education.

SDG 6, Development of distance learning, training and other forms of education and training as part of capacity building programmes, is part of the capacity building initiatives that supports countries interventions giving special attention to developing countries and especially LDCs in different levels of human resources development.

SDG 12, Raising awareness on sustainable consumption and production in today's era

requires the use of technology. The action line therefore impacts on this SDG by enhancing technological capacity of countries through training and development initiatives that target ICT's and related areas, as well as building a more inclusive information society.

SDG 13, Action line C4 promotes creation by governments, in cooperation with other stakeholders, of programmes for capacity building with an emphasis on building a critical mass of qualified and skilled ICT professionals and experts.

SDG 14, Empowering communities in ICT use and promoting the production of useful and socially meaningful content is a capacity building intervention that can increase scientific knowledge and promote innovation and research.

SDG 16, The C4 action line focuses on promotion of international and regional cooperation in the field of capacity building, including country programmes developed by the United Nations and its Specialized Agencies.

SDG 17, Capacity building initiatives contributes to the SDG through the design and implementation of regional and international cooperation activities to enhance the capacity, notably, of leaders and operational staff in developing countries and LDCs, to apply ICTs effectively in the whole range of educational activities. Also through the launch of pilot projects to design new forms of ICT-based networking, linking education, training and research institutions between and among developed and developing countries and countries with economies in transition.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

- The need to take technology to those who need it, and teach them how to use it continues to be a priority in many parts of the world
- Innovation of education, both in its pre-university and university tracks

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

N/A

Interactive Facilitation Meetings



WSIS Action Line C2 ICT Infrastructure: Hybrid Infrastructure and technologies for affordable broadband access

ITU

Monday, 8 April 2019

11:00 – 13:00

Room H2- ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/134#>

I. Relevance with the WSIS Action Lines

C2

II. Main outcomes highlighting the following:

1) Debated Issues

In this session, panelists discussed different approaches broadband infrastructure implementation. The discussion focused on increasing accessibility and affordability of broadband services to connect the 4 billion unconnected. The discussion was centralized around discussing connectivity projects that aim on connecting those are left unconnected and ensuring affordability and accessibility of the connectivity. The panelists all present different aspects of affordable accessibility and connectivity through their unique views and experience.

- **Ms. Doreen Bogdan-Martin**, Director of BDT delivered the opening speech. She highlighted the importance to cover the unserved and underserved area. For developing nations, this represents a major challenge, because broadband network deployment necessitates huge capital investments, as well as complex issues around choice of technology, spectrum availability, licensing and more, she said.
- **Mr. Kemal Huseinovic**, as the Moderator of the Session, highlighted that the event focuses on achieving affordable access using hybrid technologies and that the session features experts representing the public sector, the technical community and the private sector. The discussion focuses on best practices and innovations to

increase accessibility and affordability of broadband services to connect the unconnected.

- **Ms. Maria-Manuela Catrina**, President of the Social Democratic Women Organization – Bucharest branch, State Secretary, Ministry of Communication and Informational Society and Executive Director of the “Ovidiu Sincai” Social Democratic Institute, shared her views and the experience of Romania in promoting affordable and accessible connectivity. She highlighted that in her country, everybody can have access to Internet. Within the EU Digital Europe program the inhabitants are involved in “Wi-Fi for you”.
- **Mr. Masanori Kondo**, Deputy Secretary General of the Asia-Pacific Telecommunity, presented *Broadband access in Asia-Pacific*. He presented some activities of APT related to building affordable infrastructure. His presentation focused on technology, human capacity and financing, where he discussed the universal access funds. According to Mr Kondo, the needs are: holistic approach, public private demarcation, insights on markets whereas what are not needed include: a catalogue of new technologies, individual projects without coordination and “out of pocket, out of mind”.
- **Ms. Davina Egbuna**, UAS Solutions Engineer, Airbus Defence & Space presented *Zephyr High Altitude Platform Station (HAPS)*. She discussed the Zephyr-Connectivity which uses satellite technology, but flies at 20km altitude and targeted to the unconnected. According to Ms. Egbuna, Zephyr can be tailored to support communications services for use in direct connectivity, fixed Broadband and cellular Backhauling. Zephyr can provide 100s of Mbps covering 400km diameter / 125,000 km² area per aircraft or up to 1Gbps over 70km diameter. At the end of its original task the Zephyr can either fly to the next requirement/location or be returned and re-equipped with a different payload.
- **Dr. S. Ismail Shah**, ITU Area Representative for Southeast Asia and other Member States in Asia and the Pacific presented a general view on “Hybrid Infrastructure and Technologies for Affordable Broadband Access”, spanning infrastructure, technologies, policies and applications. The goal is “Use of ICTs for making lives better”. For this the requirements are: Technologies (for connectivity), Policies, Affordability (devices and connectivity) and Applications (Communication/Entertainment, services, skills development and innovation). He provided an overview on the Last Mile technical innovations.
- **Ms. Atsuko Okuda**, Chief, ICT and Development Section, United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) talked about the challenges and opportunities in narrowing the digital divide in the face of emerging technologies and the regional broadband initiative, Asia-Pacific Information Superhighway (AP-IS), as a response to this challenge. The Asia-Pacific Information Superhighway initiative aims to increase the availability and affordability of broadband Internet across Asia and the Pacific, by strengthening the underlying Internet infrastructure in the region. It also promotes terrestrial and submarine fibre-optic connectivity and provides a regional intergovernmental platform focusing on the missing fibre-optic links between ESCAP countries. The initiative is based on 4 Pillars: Connectivity, Internet Traffic & Network Management, E-Resilience (to provide disaster relief), Broadband for All (purpose and achieving the SDGs). In the ASP region there is a big prominent divide in the Fixed Broadband Access.

Affordability is an issue (Broadband commission: <2% of GDP is affordable). Data is expansive on the fixed broadband. She highlighted the fruitful cooperation between ESCAP and ITU on the implementation and update of the ITU Broadband map.

- **Mr. Stefano Vaccaro**, Managing Director of Viasat Antenna Systems, presented *Viasat Community Wifi*. The presented platform supports more than 3,000 hotspot sites in Mexico, connecting over one million people within walking distance of these sites. Viasat is also working on a platform for value added services such as education, financial inclusion, health and medicine.

2) Quotes

- **Ms. Doreen Bogdan-Martin**, BDT Director: “We clearly need to find new approaches that can promote infrastructure deployment – through new kind of financing models, new types of hybrid partnerships, and more effective infrastructure sharing that helps service providers reduce capital costs.”
- **Ms. Atsuko Okuda**, ESCAP, “The Asia-Pacific Information Superhighway initiative aims to increase the availability and affordability of broadband Internet across Asia and the Pacific, by strengthening the underlying Internet infrastructure in the region.”
- **Marc Zuckerberg, quoted by Ms. Davina Egbuna**, “Connectivity just can't be for people in the richest countries. We believe that connecting everyone in the world is one of the great challenges of our generation.”

III. Overall outcomes of the session highlighting

- main conclusions reached during the discussion
 - 1) The discussions concluded that we need:
 - i. Good policies;
 - ii. Affordable and accessible sustainable connectivity;
 - iii. To go beyond connectivity: enabling environment;
 - iv. Human resources;
 - v. Technology layers;
 - vi. Funding mechanisms (e.g. USF);
 - vii. Sustainability
 - 2) AI development is linked to connectivity

Interactive Facilitation Meetings



WSIS Action Lines C1 (The role of governments and all stakeholders in the promotion of ICTs for development), C7 (E-government), C11 (International and regional cooperation): Digital Government for Empowering People and Ensuring Inclusiveness and Equality

UNDESA

Monday, 8 April 2019

11:00 – 13:00

Room H1 - ITU

I. Key achievements, announcements, launches, agreements, and commitments

- UNDESA announced that the 2020 Edition of the United Nations E-Government Survey is currently being developed, portal assessments will take place in summer months of 2019, and the report will be available during the first two quarters of 2020.
- UNDESA also announced that the deadline for the Member States Questionnaire (MSQ) in preparation for the 2020 UN E-Government Survey is extended until the end of April 2019.
- OECD announced that they will be launching a new index called “Digital Government Index” in the coming months, as well as “E-Leaders without Borders” initiative.
- Arab Digital Economy Strategy Towards a Sustainable, Inclusive & Secure Digital Future by the Arab Federation for Digital Economy.

II. Main outcomes highlighting the following:

1) Debated Issues

- C1 - The role of public governance authorities and all stakeholders in the promotion of ICTs for development
 - Need for governments at all levels, the private sector, international organizations, civil society, the technical and academic communities and other relevant stakeholders to be aware of the impact of the latest developments in new technologies in achieving the Sustainable Development Goals.

- Roles of public policymakers in amplifying transformative impact of rapid technological changes in public service delivery (e.g. blockchain, AI and big data)
- Preparing public institutions for the ongoing transformation, Kind of capacities needed for institutions and officials
- Key challenges of rapid technological changes and how to overcome those and their impact on the most vulnerable people and countries
- **C7 - ICT Applications: E-government**
 - How the United Nations E-Government Survey best contribute to the realization of the SDGs for all segments of society
 - Main modalities for delivering services in digital government
 - Critical trends in digital government and main issues and challenges
 - Historical look at the United Nations E-Government Survey evolution.
- **C11 - International and regional cooperation**
 - Areas that need urgent international and regional cooperation to promote universal access and bridging the digital divide
 - Internet Governance Forum (IGF)
 - Ways WSIS community work together against threats that may hinder the further development of information society
 - Areas that require cooperation in transnational issues regarding ICTs
 - SG's High-Level Panel on Digital Cooperation

2) Quotes

- “Digital government and new technologies are already indispensable and universal resources for the whole humanity but must be equally distributed within and among countries and be always available for everyone or every government, no matter its own level of development or capacity.” Mr. Vincenzo Aquaro, Chief of Digital Government Branch, UNDESA
- “In order to successfully implement the Arab Regional Digital Economy Strategy, there must be strong partnership among governments, international organisations and the private sector.” Mr. Richard Kerby, Richard Kerby LLC

III. Overall outcomes of the session highlighting

Promotion of ICTs (C1)

- The adoption and use of emerging technologies (namely AI and blockchain) in the public sector is also critical. And again issues of governance, regulation, citizens digital rights and application to service delivery policies are more and more a concern.
- Data is the biggest asset, if not the CORE asset, of digital transformation. But we must recognize the importance of collecting the right data, not all data.

- Multi-dimensional regulations are needed to protect data security and privacy issues, especially those triggered by emerging technologies.

E-government (C7)

- How to measure digital government maturity? In other words, try to move beyond online presence and focus on digital government key characteristics such as digital by design, government as a platform or data-driven public sector (in line with our Digital Government Survey and our Digital Government Concept Note that we will publish soon).
- Governance of digital government as a critical dimension recognized by countries for a sound digital transformation of the public sector. Questions such as leadership, institutional settings, coordination, policy levers and legal and regulatory frameworks are essential for a coherent and sustainable transformation.
- EGDI and online services development is highly correlated with other variables such as the GDP per capita (in PPP), the Ease of Doing Business, and Corruption in the Public Sector. Further explore the output e.g. use of e-services, emerging technologies, increasing gap between low and high income countries.
- Among the countries that progressed most between 2003 and 2018, a number of Middle Eastern and ex-USSR countries stand out (i.e. UAE, Bahrain, Kuwait, Russia, Belarus, Kazakhstan)
- Policy and strategy focus seem to be a key factor in accelerating OSI improvements.
- Make TII technology agnostic e.g. look at telephone and internet access only, cap score at 100%.

Partnerships (C11)

- Labs and Pilot initiatives. There is the need to experiment and lead regional and cross-border initiatives in data-driven technologies. The use of regulatory sandboxes to study multi-stakeholder co-regulation, co-design of technology use and policy frameworks on digitalization.
- Private-public partnership will be key for the realizations of digital transformational plans
- Importance of regional collaborations such as the Council of the Arab Economic Unity adoption of the first draft of the joint Arab Strategic Vision for digital economy
- Importance of prioritizing the transfer of digital government knowledge between different national contexts. Increased interest of governments to exchange and transfer knowledge through global or regional peer learning

(in line with OECD “E-Leaders without Borders” initiative, that for example OECD expects to work together with DESA in the future).

IV. Main linkages with the Sustainable Development Goals (SDGs)

WSIS action lines (C1, C7egov and C11) are linked with all Sustainable Development Goals (SDGs). Action line C7 e-government contributes to the Goal 16 specifically to promote peaceful and inclusive societies for sustainable development, and to provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

V. Emerging Trends related to WSIS Action Lines identified during the meeting

Moving from e-government to digital government, Role of regional partnerships specifically the Arab Digital Economy Strategy Towards a Sustainable, Inclusive & Secure Digital Future Arab Federation for Digital Economy, and the OECD initiative called “E-Leaders without Borders”,

VI. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

UNDESA recommends to align the theme of WSIS Forum 2020 with the theme of the High Level Political Forum (HLPF) 2020.

Interactive Facilitation Meetings



WSIS Action Line C7 E-Health: Towards health sector Digital Transformation

WHO/ITU

Monday, 8 April 2019

11:00 – 13:00

Popov Room 1 - ITU

Interactive Facilitation Meetings



WSIS Action Line C6 Enabling Environment: Collaborative regulation for digital transformation

ITU

Monday, 8 April 2019

14:30 – 16:15

Room H2 - ITU

I. Key achievements and announcements

The work done by ITU on collaborative regulation focuses on the interplay between ICT markets and regulation and the innovative regulatory tools and processes at hand to support Membership and stakeholders to further enable digital transformation. Information and tools are available at the ITU Regulatory and Market Environment website (<https://www.itu.int/treg>).

II. Main outcomes highlighting the following:

1) Debated Issues

- Today, digital transformation is sweeping across whole economies, changing our outlook forever. As mobile phones have become even more ubiquitous in their coverage and use, they have also become portals to a host of online services. Regulators find themselves grappling with an ever-growing array of challenges associated across different sectors – including digital identity, data protection, new technologies, etc.
- We are now in the process of creating the ambitions for the next future. When building a shared vision for the future, it is important to consider prices, access for all, interconnection and future technologies.
- Specific regulatory tools for development can be useful if applied by all stakeholders at national, regional and international level.
- Considering collaborative regulation, telecommunication/ICT regulation should not only focus on competition and consumer protection, but integrate additional goals such as economic development, equitable prices for consumers, and access for all. Governments should ensure they have the tools by which they can have a mature dialogue among all regulators from all sectors.

- Regulation is a key instrument to enable markets and countries to build the digital economy. In Africa, one of the biggest issues is still broadband deployment, it is important to address fiscal issues and incentives to facilitate manufacturing and deployment to enable the achievement of SDGs.
- Gender responsive policies are relevant - women are less connected and not representative in the digital economy. A gender inclusive regulatory response should be considered as a priority for governments.
- Regulation based on data is becoming a digital priority for many regulators and the challenge in the coming years is quality of data. It is essential to define tools to analyze the data – need to bring in academia and private sector to collaborate.
- Trust in the system is needed and this requires transparency and improved accurate information. Since companies and major digital platforms are cross border, it is important to define the measures to collect and process the data at national and regional level. User participation is also very important in this process to build valuable and accurate data sets.
- Users must be better informed with better quality information to increase transparency.
- Collaborative regulation is yet mature in the African region, but countries are working on this. As a first objective, it could be useful to gather stakeholders to defining their concerns and solutions and anticipate the future including by developing collaborative actions and regulatory measures.
- Quality regulation is needed and transparency is key to achieve it. There is a need for consultation and collaboration with multiple stakeholders so that they can commit to a common vision and goal.
- Collaboration also means regional collaboration, where ICTs can build bridges with other countries to bring investment and development in the regions.
- Collaborative regulation must be a multi stakeholder based activity, which must include consumers. Bringing all together to collaborate is a good exercise.

2) Quotes

- Mr Michel Van Bellinghen, BIPT, Belgium
 - ✓ *“The future of collaborative regulation is multistakeholder dialogue and cooperation”*
- Mr Serge Abiteboul, ARCEP, France
 - ✓ *“The key issue for all stakeholders to be able to endure in this digital world is to have the key and right information”*
 - ✓ *“We need to change our hierarchical culture and be more crosscutting”*
- Mr Adolfo Cuevas, IFT, Mexico

- ✓ *“ICTs are also important to bridge with other countries to bring investment and development in the regions”*
- ✓ *“We are facing all these global platforms – we want our children to be protected, our consumers not be abused, and our privacy to be respected”*
- Ms Miriem Slimani, ATU
 - ✓ *“We need regulation to push development to enhance not to block and to be another barrier for developing countries”*
- Mr Serafino Abate, GSMA
 - ✓ *“Bringing all together to collaborate is a good exercise”*
- Ms Nnenna Nwakanma, A4AI
 - ✓ *“Trust and evidence are key for regulation”*
 - ✓ *“National regulators have policy and regulatory frameworks but do Global Platforms have a full mandate? Global collaboration is something that is key”*
 - ✓ *“Global collaboration rather than global regulation”*

III. Overall outcomes of the session highlighting

- There are common principles that can be the basis for international cooperation – we can advance based on those principles to collaborate and regulate as appropriate.
- Regulation is not always necessary but sometimes it is necessary and we need to know what we need to achieve and where we want to go further.
- One of the main challenges of collaborative regulation at national and regional level is to break across silos, to bring together the expertise and the enforcement power needed to level the playing field across borders.

IV. Main linkages with the Sustainable Development Goals

Session's link to the Sustainable Development Process:

Goal 9: Industry, innovation and infrastructure

Goal 11: Sustainable cities and communities

V. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

There are still many digital points that regulators and stakeholders need to work together, such as market competition policy, digital taxes, GDPRs, fake news, privacy, security, new technologies.

Interactive Facilitation Meetings



WSIS Action Line C7 E-Learning: Open Solutions for digital skills development with a focus on the use of emerging technologies

UNESCO

Monday 8 April 2019

14:30 – 16:15

Popov Room 1 - ITU

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

C7. ICT Applications (E-Learning)

II. Key achievements, announcements, launches, agreements, and commitments

The session provided an opportunity to revisit the five strategic challenges of OER and restate UNESCO and its partners' combined commitment to leverage the power of frontier technologies and AI, maximize on the existing opportunities and address challenges. The session also provided an opportunity to review progress made to generate a set of indicators to assess OER uptake.

III. Main outcomes highlighting the following:

1) Debated Issues

The 2030 Agenda for Sustainable Development sets ambitious global goals, demanding unprecedented actions and efforts across multiple interconnected social, economic and environmental issues. Technologies have a significant potential to accelerate progress and support the development of inclusive Knowledge Societies based on human rights and achievement of gender equality and empowerment. From this perspective Open Education Resources (OER) - learning materials available on an open license which can be shared, modified and developed - is critical for progress towards the achievement of all 17 Sustainable development goals, and in particular Quality education (Goal 4), Gender equality (Goal 5), Reduced inequalities within and across countries (Goal 10) and Partnerships for goals (Goal 17).

Artificial Intelligence (AI), and emerging technologies such as Blockchain and Learning Analytics have immense potential to meet the five strategic challenges to mainstream OER as outlined in the Ljubljana OER Action Plan and Draft OER Recommendation. Namely the five strategic challenges are: building the capacity of users to find, re-use, create and share OER; language, and cultural issues; ensuring inclusive and equitable

access to quality OER; developing sustainability models; and developing supportive policy environments.

Taking these issues into consideration, the session noted:

- AI and frontier technologies have a very prominent role to play to mainstream OER and to ensure its maximum impact for the creation of inclusive Knowledge Societies.
- As demonstrated by ongoing initiatives such as X5GON, AI enabled platform can help in aggregation, curation, personalization and creation of OER contents.
- There are still many challenges that are hindering efficient OER uptake. Especially, the lack of OER-friendly education policies require urgent attention.
- Although digital skills are being imbibed in teaching and learning processes, but their uptake is slow and inconsistent with the efforts put in place.
- That developing indicators to measure progress, monitor and evaluation are extremely important. The panelists impressed on developing a multistakeholder mechanism for developing and implementing OER indicators.
- The session reemphasized an urgent need for capacity enhancement and addressing multilingualism in OER especially in the developing countries.

2) **Quotes**

- *“In upscaling OER and associated technology, it is important to note that data isn’t consistent and data is the primary source of uncertainty” Colin de la Higuera*

IV. Overall outcomes of the session highlighting

- Review of the five strategic challenges of the OER recommendation.
- Importance
- Agreement on the preliminary objective, principles and a future roadmap for OER indicators.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

GOAL 17: Partnerships to achieve the Goal

GOAL 16: Peace and Justice Strong Institutions

GOAL 4: Quality Education

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

- Need to develop collaborative space to share experience, technology and knowledge to foster the development of tools, contents and practices for inclusive Open Educational Resources.

- Need to define the specifications needed for the implementation of multilingualism in the OER domain.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Role of Artificial Intelligence in Open Educational Resources

Interactive Facilitation Meetings



WSIS Action Line C8 Culture for a Sustainable Digital Environment: How can culture help shape the digital environment and why is it so crucial today, with the advancement of Artificial Intelligence, for ICTs to embrace culture fully?

UNESCO

Monday, 8 April 2019

16:30 – 18:15

Popov Room 1 - ITU

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

Action line C8 “Cultural diversity and identity, linguistic diversity and local content”.

II. Main outcomes highlighting the following:

1) Debated Issues

- In what ways are new 3-D scanning methods supporting the rehabilitation of destroyed cultural heritage in post conflict situations, and allowing communities to restore their pride, identity and history?
- How are ICTs fostering cultural entrepreneurship in the cultural and creative industries, notably in developing countries and at the local level?
- How is access to creative content and cultural heritage, through the internet, virtual tours, interactive technology, being expanded to reach wider audiences and have a more inclusive effect, and what challenges remain?
- People drive new development models, creativity and innovation, but what national policies and infrastructure do we need governments to put in place to close the digital divide, foster the diversity of cultural expressions and better enable ICTs to embrace culture fully?

2) Quotes

- **Toussaint Tiendrebeogo, UNESCO** “AI and ICTs in the culture sector are bringing creative and economic opportunities but as they develop we must have government support, guidelines and clear answers on artist remuneration and copyright.”

- **Emo de Medeiros, Artist** “Digitally documenting the tangible and intangible cultural heritage of communities should be innovative, to tell their story and access their past.”
- **Bastien Varoutsikos, Director of Development, ICONEM** “With massive datasets and investment in R&D, we can create 3D models of heritage sites at risks, facilitate access to researchers and architects through online tools, or to a broader audience by creating museum exhibitions – but we need to better harness the potential of AI to serve the communities themselves.”
- **Paul Chaine, Head, Digital Development Department, Palace of Versailles** “Innovation has always been important in Versailles and in the cultural domain, and with ICTs we have innovative means of transmission of information and of culture to a much wider public, in ways that fit specific public needs and today’s usage.”

III. Overall outcomes of the session highlighting

- AI offers a lot of potential in the Culture sector but there are practical issues to resolve including copyright, barriers to access, barriers to sharing, and lack of political, ethical and scientific management.
- Local populations are both creators and consumers of cultural content in the digital age, yet as AI transmits from broad frameworks and trickles down to local populations there is a disconnect between AI, culture, people, and public policy and governance that needs to be addressed.
- More innovation and strategies are needed with the support of national governments in order to ensure increased access, infrastructure, and a sustainable innovation ecosystem.
- ICTs and AI are increasingly incorporated into the cultural and creative sectors. This offers new ways to document, preserve, create and access culture, including cultural industries (eg. art, film and music), cultural sites and living cultural heritage traditions but the process should be more inclusive. Furthermore, cultural policies need to be linked to policy development in other domains.
- Access to creative content and cultural heritage, through the internet, 3-D scanning, virtual tours, and interactive technology is expanding to reach wider audiences. However, more and varied platforms should be established and in developing countries accessibility by all remains an important challenge.
- There is a need to further engage the public in order to access their heritage. ICTs and AI are changing the experience of citizens of heritage, and in this regard integrating people into the production process to ensure inclusiveness and access remains crucial to ensuring that AI systematically benefits communities at the local level.

IV. Main linkages with the Sustainable Development Goals (please specify the SDGs)

The use of ICTs when linked with cultural heritage and the diversity of cultural expressions advances social cohesion and employment through cultural and creative industries and preservation and transmission of cultural heritage. This contributes to SDGs 4, 8, 11 and 12.

V. Emerging Trends related to WSIS Action Lines identified during the meeting

AI and algorithms are impacting diversity, and what digital platforms may or may not offer to consumers with regard to cultural content.

There are positive innovative models emerging, including 3-D imagery and virtual reality, and through social networks and numerous digital platforms more of this cultural content is shared.

Increasing initiatives in digitization of cultural content and heritage help protect culture, make it more widely accessible, and preserve it for future generations. This can allow marginalized groups to be engaged, share knowledge (also traditional knowledge) and foster social cohesion. Furthermore, this positions local communities as producers and not only consumers of AI and ICTs.

Cultural and creative industries are increasingly using ICTs, and the treaty framework provides a balance eg. copyright system to remunerate creators balanced with limitations and exceptions for use of the work. Policy development by national governments must keep up with new advancements.

Interactive Facilitation Meetings



WSIS Action Line C7 E-Agriculture: Community of Practices and Integrated Platforms - Knowledge Sharing in Food and Agriculture

FAO/ITU

Monday, 8 April 2019

16:30 – 18:15

Room K2 - ITU

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

Action Line C7. ICT Applications: E-agriculture

The guidelines of the C7 line aim to: ensure the systematic dissemination of information using ICTs on agriculture, animal husbandry, fisheries, forestry and food, in order to provide ready access to comprehensive, up-to-date and detailed knowledge and information, particularly in rural areas; and public-private partnerships should seek to maximize the use of ICTs as an instrument to improve production (quantity and quality). The session presented cases which the use of ICTs and innovative solutions for agriculture, livestock, water and others sectors are playing a decisive role in terms of access to information, knowledge, improving productivity and ensuring new incomes as well as social inclusion for the people in rural areas.

II. Key achievements, announcements, launches, agreements, and commitments

The emerging technologies related to algorithms and data analytics can transform the traditional food and agriculture communities of practices into digital platforms able to bring farmers, suppliers, governments, private partners, civil society and the Organization together based on a human centered design approach. The platforms will facilitate the exchange of data, information and knowledge across the value chain, facilitating collaboration and capacity building within and across community of practices through engagement, insights on best practices and innovative cases, and connecting practitioners in different countries and regions.

Designing a platform based on an integrated and participatory approach will increase the availability, exchange, and reach of cross cutting information and knowledge, empowering authorities and extension workers to provide better services to smallholder and family farmers, pastoralists, and fishers. Also the platforms serve as a forum to discover and share innovative solutions to common challenges faced by geographically distributed practitioners. Increased dialogue, debate, and collaboration

on digital innovation and case studies will help strengthen and amplify successes.

III. Main outcomes highlighting the following:

1) Debated Issues

By 2050, world population is projected to rise to around 10 billion and agriculture in 2050 will need to produce almost 50 percent more food, feed and biofuel than it did in 2012; however, yield increases are slowing, despite overall improvements in agricultural efficiency. Estimated yield gaps, expressed as a percentage of potential yields, exceed 50 percent in most low-income countries. 821 million people go hungry today and malnutrition affects 1 in 3 people and all nations. Rapid urbanization, together with income growth in low- and middle-income countries, is accelerating the dietary transition towards higher consumption of meat, fruits and vegetables, relative to that of cereals, requiring commensurate shifts in output and adding pressure on natural resources.

Digital Innovation as the central driving force to transform food systems and help the world to achieve the SDGs. Innovation in agriculture cuts across all dimensions of the production cycle along the entire value chain – from crop, forestry, fishery or livestock production to the management of inputs and resources, to organization and market access. Digital Innovation is about social, economic, institutional/organizational and policy processes, and having an impact on the lives of family farmers. A shift from interventions focusing on single components of agricultural innovation towards a systemic approach, including knowledge sharing and networking.

In 2007, in collaboration with 13 founding partners, FAO launched the e-Agriculture Community of Practice, where people from all over the world exchange information, ideas, and resources related to the use of ICT for sustainable agriculture and rural development. With over 14,000 members from 170 countries and territories, the e-Agriculture Community includes individual stakeholders such as information and communication specialists, researchers, farmers, students, policy makers, business people, development practitioners, and others. The e-Agriculture members have a common interest: improving policies and processes around the use of ICT in support of agriculture and rural development, in order to have a positive impact on rural livelihoods. Like this, the organization maintains several other communities and hubs exchanging information and knowledge, reaching various targeted audiences. The most known are Farmer Field Schools, Global Forum on Food Security and Nutrition, Family Farming Knowledge Platform, and the Pastoralist Knowledge Hub.

At the same time, the World is promoting digital transformation through platforms integration. This work involves unified solutions based on four main components:

1. **Business model:** able to “sell” and deliver products or services (in a broad interpretation in terms of governments and policies) as well as allow users to manage micro-sites and community of practice channels and share and exchange information, providing and receiving feedback on issues of interest.
2. **Platform as a service:** the number of products and services offered in the same platform and the complementary relation/links between each one of them.
3. **Technological features:** user-friendly IT systems, useful content/information with APIs and portals, a data collection tool (not only internet-based) and predictive

data analytics (including Artificial Intelligence), all adhering to mobile-first and Human-Centered Design (HCD) approaches.

4. **Analytics:** maximize the user experience through social engagement by collecting and measuring personal data, preferences and behaviour of users using available algorithms, such as social networks and news.

2) Quotes

“The different needs that characterize each step of the food and agriculture value chain are the result of the interaction between heterogeneous players. Technologies are the key element that allow to disrupt the whole value chain and facilitate the sharing, aiming at transparency, intermediation and simplification.”, Giulia Silenzi, Deloitte

“The transformation of Communities of Practice into Digital Platforms open new technical opportunities to design the future of the knowledge sharing and how we can use these tools to contribute to achieving Zero Hunger”, Cezar Santos Alvarez, Digital Innovation Team FAO

IV. Overall outcomes of the session highlighting

Applying innovative ways to use ICTs in the rural domain, with a primary focus on agriculture (including farming, fisheries, livestock, forestry, etc.), can boost agricultural and rural development. Improving access to valuable information help agricultural stakeholders to make informed decisions and use the resources available in the most productive and sustainable manner. In a sector that is becoming increasingly knowledge-intensive, having access to the timely information, in the right format, and through the right channels makes a crucial difference in the livelihoods of people involved in agriculture and related fields.

Debate innovative solutions, find new approaches and exchange experiences it's a moment to make good connections to change the reality of the rural communities, achieving the SDGs because bridging the digital divide and information gaps, farmers can better decide their crop selection and choice of markets. This session will discuss how ICTs can improve rural livelihoods and increase income through lower input cost and improved productivity. There is a huge opportunity to scale up these innovative digital services (provided by ICTs) and drastically increase their impact by bringing them closer to more farmers.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

From ending poverty and hunger to responding to climate change and sustaining our natural resources, food and agriculture lies at the heart of the 2030 Agenda for Sustainable Development and the SDGs. Over the coming years, the FAO will focus its efforts in assisting all countries and relevant actors in implementing and monitoring

the SDGs. FAO's Strategic Framework draws five main strategic objectives to support the SDG implementation and help farmers, fishers, collectors, pastoralists, women, youth and traditional communities to be more productive, sustainable and resilient. Today, nearly 800 million people are extremely poor and chronically undernourished, while another 1.9 billion are overweight, of which 600 million are obese. In rural areas, the reality is most dramatic, considering that 80% of the world's hungry and poor live there. FAO believes that food security can be the common thread that links the different challenges the world faces in building a sustainable future.

Goal 1: End poverty in all its forms everywhere

Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Goal 5: Achieve gender equality and empower all women and girls

Goal 10: Reduce inequality within and among countries

Goal 12: Ensure sustainable consumption and production patterns

Goal 13: Take urgent action to combat climate change and its impacts

Goal 14: Conserve and sustainably use the oceans, seas and marine resources

Goal 15: Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

- Digital Integrated Platforms
- Artificial Intelligence applied to Communities of Practice

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

- AI in food and agriculture
- Open innovation to transform rural communities

Interactive Facilitation Meetings



WSIS Action Line C9: Harnessing Artificial Intelligence to Strengthen Journalism and Media Meeting Action Line C9: Development in line with UNESCO's Internet Universality ROAM principles

UNESCO

Thursday 11 April 2019

11:00 – 13:05

Popov Room 2 - ITU

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

Action Line C9

II. Key achievements, announcements, launches, agreements, and commitments

- UNESCO took the occasion to present the major outcome of its policy report “Steering AI and Advanced ICT’s for Knowledge Societies: A ROAM Perspective,” which sheds light on the human rights implications and opportunities and challenges for journalism and media that advanced ICTs are bringing, under the prism of the ROAM framework;
- Journalists and media development are being profoundly impacted by AI and advanced ICTs, and journalists and media actors should be more engaged as a key stakeholder at the policy discussions at WSIS Forum.

III. Main outcomes highlighting the following:

1) Debated Issues

The interventions underlined many challenges brought about by AI, including how media diversity and pluralism can be endangered by the phenomenon of personalization brought by AI. The issue of polarization was highlighted in this regard, as well as automated disinformation. Excessive “flagging” could also undermine freedom of expression. The issue of AI in interference with the election process was also discussed, as well as questions of privacy and mass surveillance. The issue of AI being used to harass journalists, in particular female journalists, was raised.

Debates also underlined opportunities brought by AI. These include helping journalists with reporting by analyzing data to find correlations and the identification of deepfakes. Interventions from the audience highlighted issues in terms of AI impacting job losses in journalism, linked to the question of the need to train journalists to be prepared for the impact of AI. Other interventions mentioned the need to protect every user of the internet and user of ICT's and the need for an international response.

2) **Quotes**

- Ms. Elodie Vialle, Reporters Sans Frontieres: The press cannot be free if journalists and their sources are under surveillance all the time.
- Mr. Michael Oghia, Global Forum for Media Development: AI in journalism can save resources and time for journalists so they can spend more time to investigate and hence have a greater social impact.

IV. Overall outcomes of the session highlighting

Solutions identified revolved around several elements:

- UNESCO's ROAM (Rights, Openness, Accessibility, Multi-stakeholder) principles and ROAM-X indicators serve a comprehensive framework to guide the exploration of AI's multiple impact and formulation of responses;
- The need to have multistakeholder discussions with journalists having a seat at the table was highlighted. UNESCO was commended by panelists as being a good facilitator between those on the ground impacted by algorithms and those who created them;
- The importance of the business model: media should have sustainable business models. There is a need to examine the human rights impact of the targeted advertisement business model of some internet companies, which also undermines public-service media that don't collect readers' data;
- Regarding elections, it is key to have a strong judicial system to condemn manipulation by corporations of information for political purposes. However, this should not be done by censoring information;
- No single actor can handle all the challenges mentioned, but there are key actions that can be followed. Some of them are outlined in the UNESCO "Steering AI and advanced ICT'S for Knowledge Societies" publication. For example, member states, in their regulation regarding AI, must follow a human-rights based approach. Equally, the media actors must investigate and report on abuses and biases of AI as well as the benefits, and harness AI to strengthen journalism.

The vision for implementation of WSIS Action lines beyond 2015

More journalists and media actors should be involved in the implementation process of Action Line C9 media, so as to facilitate an inclusive policy dialogue with other key actors including governments, regulators, companies, etc, in order to harness the good opportunities and tackle the tremendous challenges brought by AI and advanced ICTs.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

C9 media supports SDG 16.10.1 and 2

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

The policy discussion of ICTs has gone beyond technical connectivity, and increasingly address soft aspects of ICTs, ranging from rights, content, language, to media, capacity and literacy issues, which can further widen the existing digital divide.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

To mainstream a human rights approach and enhance the sustainability of Journalism and media in the AI era.

Interactive Facilitation Meetings



WSIS Action Line C7 E-business: Going Digital, getting formal: how e-Business supports greater formalization of business in developing and least developed countries

UNCTAD/ITC/UPU

Thursday 11 April 2019

14:30 – 16:15

Room C1 - ITU

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

C7. Applications and Services – e-business

II. Key achievements, announcements, launches, agreements, and commitments

ITC presented its publication “Joining Forces on E-Commerce: How Small African Firms Succeed with Collaborative Business Models”, which tackles formalization as one of the barriers to e-commerce and explores the cooperative model to connect African MSMEs to cross-border e-commerce (<http://www.intracen.org/publication/joining-forces-ecommerce/>).

ITC, UPU, and UNCTAD are all Partners of the eTrade for All initiative, which channels technical assistance to developing countries to leverage e-commerce for development (etradeforall.org). The eTrade for All initiative launched the eTrade for Women Network (MyeT4Women) to support women involved in e-commerce in developing countries by collecting, nurturing and showcasing their experiences, providing them with opportunities to network, and amplifying their voices in domestic and international policy processes (<https://etradeforall.org/etrade-for-women-network/>).

III. Main outcomes highlighting the following:

1) Debated Issues

While the informal economy is a permanent and unavoidable reality in developing countries, the move of growth-oriented micro-, small and medium sized enterprises (MSMEs) into the formal sector has many advantages for enterprises as well as for governments. ICTs can be a tool for formalization, but the prospect of participation in e-commerce and the digital economy is also an incentive for MSMEs to formalize.

ITC showed the importance of formal processes in e-Commerce and the potential of formal business structures for collaboration. For MSMEs to engage in e-Commerce and

international trade there needs to be a significant shift of business practices to more formal processes. If businesses want to trade online, they will need a digital catalogue of products, a digital inventory, a clear process to manage orders and customer services and efficient logistics operations. This requires a shift in formalization and operation procedures but also of mindset.

ITC also highlighted the importance of being a registered business to engage in services of e-Commerce, such as payment solutions, shipping companies, custom services and international marketplaces. Collaborative business structures can simplify the administration and reduce costs for registering a business. In fact, collaborative business models (cooperatives, associations and consortiums) are key for improving the competitiveness of MSMEs in e-commerce. By joining forces with other companies, MSMEs are able to access e-Commerce in a more efficient way by sharing costs, knowledge and resources.

Botswana shared its experience in how they are developing a strategy to grow e-commerce. Although the national backbone is well developed, the local access network still needs to be developed, and high-speed broadband is not affordable for most citizens. Mobile penetration for 2G is around 95%, 3G at 65% and 4G at 56%, so it is the main gateway for Internet access. Mobile money has thus the largest potential as a driver for e-commerce, although e-commerce is still very low. Less than 5% of citizens buy goods online, mostly imported, and few enterprises sell local goods and services online.

Barriers to e-commerce in Botswana include lack of suitable content, lack of skills, lack of trust, and expensive, slow, unreliable ICT connectivity. MSMEs in developing countries need government and regulatory intervention to incentivize them to go digital and go formal. Botswana recognizes that going digital might help MSMEs to overcome their major challenge of access to market and is considering developing an e-commerce platform for them. More availability of eGovernment services will also encourage MSMEs to go digital, such as vehicle license renewals being offered through Botswana Post. Regulation should allow the growth of innovative, affordable, and secure payment platforms and help reduce the financial inclusion gap.

Wajenzi, a crowd-funding diaspora investment platform present in various African countries, explained its objective of funding growth-oriented African start-ups with global ambition. Seventy percent (70%) of African MSMEs do not have access to finance, mostly in the informal sector. But investors such as those in the Wajenzi platform want to engage with actors in the formal economy, registered businesses. Government has an important role to play in providing incentives to MSMEs and entrepreneurs to formalize, by offering in exchange access to financial services, access to infrastructure and technology, access to business development services, and access to markets. All of these can be facilitated by ICTs. In addition, to help African entrepreneurs become more innovative, there must be financial support of incubators and education, and access to other innovators worldwide. The untapped market for investment in Africa is made up of growth-oriented enterprises with global ambitions but modest, five-figure turnover. Crowd-sourcing investors are looking for enterprises that have a social impact, a strong entrepreneurial team, a scalable business model, proof of market, and promising sectors such as tech in services (agriculture, financial, legal).

Finally, grassroots organizations and the private sector asked how they could raise the

awareness of policy makers about the importance of facilitating the digitalization and formalization of MSMEs, and whether they could influence policy making from the bottom-up. For example, a Colombian SME offering digitally-delivered sign-language services was unable to sell to other Latin American markets, while a Jamaican entrepreneur lamented the lack of dialogue or a formal mechanism in the Caribbean for MSMEs to leverage e-commerce.

2) Quotes

- “The potential to collaborate in e-Commerce is already present in every country. It is therefore recommended to promote awareness, engage in support programs and actively share what works between local enterprises and institutions.” – James Howe, Senior Adviser at International Trade Centre
- “To enhance the adoption of the e-commerce there is a need for Government services to be online. E- Government will act as a catalyst for e-business since consumers will get used to getting services online.” Mr. Tshoganetso Kapaletswe, Chief Technology Officer, Botswana Communications Regulatory Authority.
- “We need to increase global opportunities for entrepreneurs, not only traders, because entrepreneurs solve problems.” Mr. Alain Nkurikiye, Founder and CEO, Wajenzi.

IV. Overall outcomes of the session

The session showed that ICT can be valuable tools for business facilitation and MSME formalization. For governments, formalization increases its taxation base and the ability to measure and develop the private sector. For MSMEs, formalization increases their visibility, access to markets and social protection. To ensure that formalization is a win-win step in developing countries, governments must minimize the administrative and fiscal burdens to registered MSMEs, and ensure an enabling environment for the digital economy, including through measures to increase trust.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

The action line on e-business contributes to targets in SDGs 1, 2, 5, 8, 9, and 17.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

Cooperatives are emerging as the most suitable collaborative business model for African MSMEs to cross-border e-commerce. Diaspora crowd-sourcing is opening avenues for financing an underserved market of African tech entrepreneurs, mostly in the services sector, that are starting small but dreaming big.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

n/a

Interactive Facilitation Meetings



WSIS Action Line C5: Importance of measurement in Cybersecurity

ITU

Thursday 11 April 2019

14:30 – 16:15

Popov Room 1 - ITU

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11
Action Line C5

II. Key achievements, announcements, launches, agreements, and commitments

Launch of the Global Cybersecurity Index (GCI)

KSA announced their investment in Cybersecurity

UNIDIR announced their Global Portal on Cybersecurity

III. Main outcomes highlighting the following:

1) Debated Issues

The questions discussed during the session were:

1. Do you consider important measuring the level of commitment on cybersecurity and why?
2. What are the key elements to be measured, and what do you think is more relevant between quantitative and qualitative analysis?
3. Having scanned the current efforts undertaken by several entities in this domain, we have noticed possible overlaps. What can be done to improve coordination among the various stakeholders and what is the best way to capitalize on the huge amount of data gathered?

Highlight key achievements and challenges shared by the audience and/ or panelists

Saudi Arabia (NCA): KSA considers Cybersecurity as a key priority. Kingdom already has cybersecurity act, is drafting data protection act. Scholarship initiative in partnership with Ministry of Education provided to over 2000 students. Measuring compliance, based on national and international standards, best practices. ECC - Essential Cybersecurity Controls assessments were planned. NCA evaluates compliance with ECC through assessment, report of compliance tool and on site audit starting Q3 this year.

Oxford Martin School, Oxford University: Oxford is carrying out a Cyber maturity model. To understand what works and doesn't and why in areas of cyber capacity.

Complements the GCI. CMM to increase efforts to cyber capacity building. And identify gaps and measure how to fill them. CMM reviews together in SIL, Tonga, Samoa, Vanuatu. Added value of CMM is on thematic areas - Incident response capacity, NCS.

UNIDIR: UNIDIR has established a repository of National Strategies and Policies: <https://cyberpolicyportal.org/en/>

2) Quotes

- “Cybersecurity is a crisis and is something governments should address, and they are addressing it in many ways.” (Giampiero Nanni, Government Affairs - EMEA, Symantec)
- “In 2009, there were 2.3m unique versions of malware per year. In 2017, we found 2.1 million per day. 730m in the whole year.” (Giampiero Nanni, Government Affairs - EMEA, Symantec)
- “Another angle to the problem – really important also to deliver the data to proper target audience and it's sometimes a challenge.” (Mr. Oleg Demidov, Researcher, Security and Technology Programme, UNIDIR)
- “What you cannot measure, you cannot manage” (Ibrahim Malick, Major Account Manager, Fortinet)

IV. Overall outcomes of the session highlighting

- main conclusions reached during the discussion
Cybersecurity is a critical challenge for all. There are a lot of ways to cooperate in order to measure countries commitment to cybersecurity.
- the vision for implementation of WSIS Action lines beyond 2015
Cooperation amongst stakeholders will bring significant results

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

- a. SDG 4, 9, 11, 16, 17

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

- b. Collaboration
- c. Data Sharing
- d. Avoidance of overlapping

WSIS Action Line Facilitators' Meeting



Twelfth Meeting of WSIS Action Line Facilitators

Friday 12 April 2019

14:45 – 16:00

Room Popov

Captioning

(E/F/A/C/S/R)

Action Line Facilitators

Pursuant to Article 109 of the Tunis Agenda, the twelfth meeting of the WSIS Action Line Facilitators took place within the framework of the WSIS Forum 2019. The purpose of the meeting was to assess the general progress made within the WSIS Action Lines, as well as to identify measures to strengthen the overall WSIS implementation process. In addition, this year's meeting focused on the topic of the High Level Political Forum 2019 which is contributing towards empowering people and ensuring inclusiveness and equality.

Format:

This session was moderated in a dialogue style format engaging all WSIS Action Lines Facilitators to identify the key priorities, opportunities and challenges for their respective WSIS Action Line towards the achievement of the SDGs.

Moderator: • Ms Gitanjali Sah, ITU.

No.	Action Line	Question	Answers
1.	C1, C7, C11 (UNDESA)	What is the role of Action Line C1 in promoting ICTs for development to ensure inclusiveness and empowerment of people?	<ul style="list-style-type: none"> The Secretary-General's strategy on new technologies. This was launched in September after the WSIS meeting in 2018. It is to define how the United Nations system will support the use of new technologies like Artificial Intelligence, biotechnology, blockchain and robotics to accelerate achievement of the 2030 Agenda, and there are already many interesting initiatives from the UN family in this area such as ITU's AI for good global summit. The importance of data and the adoption and use of these emerging technologies in the public sector; such as chat bots.
2.	C2 (ITU)	How can emerging technologies	<ul style="list-style-type: none"> Had some discussions on the different technologies where we can connect the

		contribute towards inclusiveness and equality?	<p>rural areas and especially the last milestone</p> <ul style="list-style-type: none"> • Had two sessions during the WSIS Forum 2019: hybrid infrastructure and technologies for affordable access, and 5G. • Going to have a big project where we can collect all the possibilities and we can provide some guidance to the countries. Based on the guideline they can decide what is the best solution. It can be technical, regulatory, financing.
3.	C3 and C7 e-Learning (UNESCO)	Both these Action Lines are extremely crucial for inclusiveness. Can you please share some of the activities that you have been conducting in this area?	<ul style="list-style-type: none"> • Have launched our global observatory of science and technology called ghost bin. This is an online platform intended to backstop and support Governments in developing policies that support technology and innovation that can accompany them in the elaboration of their digital transformation strategies. • Every year we celebrate the International Day for Universal Access to information on the 28th of September. • Continued to support our work on the open scholarly initiative which looks to encourage open access to scientific information at an international level • Projects that concerns software heritage and software source code as heritage for sustainable development • In line with Action Line C3, we have continued our youth mobile program which looks to equipping young people with the necessary digital skills as consumers but also as producers of local content. • As it concerns Action Line C7 with regards to e-learning and e-science we have been building on the King Dao Declaration which was adopted in 2015 on leveraging ICTs for education and was followed by the King Dao statement which is designed to guide implementation of strategies for unleashing the potential of ICTs to reach SDG 4. • Developed gender assessment tools for teacher education to help Governments and ministries of education identify gender gaps in your educational strategies and in their educational programs.

			<ul style="list-style-type: none"> Continued the flagship mobile learning week to allow the intersection of emerging technologies and the changing role of education in everyday life.
4.	C4 (ITU)	<p>There were some discussions on how the educational system is going to adapt with the emerging technologies.</p> <p>Please tell us a bit more about is it excluding people? What is happening in this area?</p>	<ul style="list-style-type: none"> Social exclusion which is caused by the use of technologies by young people, and second form of exclusion suggests relating to modernization of the classrooms. Encouraging the ITU specifically to assist members to be able to address the negative impacts that can be brought about by introduction of ICTs in the education sector
5.	C5 (ITU)	<p>Can you please share some of the work that's done in this area to ensure that the confidence and trust is being developed makes the environment more inclusive?</p>	<ul style="list-style-type: none"> We need reliable metrics and indicators to measure how well we are doing and how much we can improve. Working on quantum key distribution and on foraging meaningful partnerships to help countries define the national cybersecurity strategy. Shared issue with regard to trust in AI.
6.	C6	<p>How does collaborative regulation contribute to inclusiveness and equality?</p>	<ul style="list-style-type: none"> We need to be innovative and we need to be collaborative. And we need to be flexible yet offer stability. We need to balance innovation with incentives. Need to connect use and trust. Connectivity and data are essential. ICT regulatory tracker and measuring regulatory society. All of those tools can really help to achieve better data and better evidence based decision making.
7.	C7 e-Business (UNCTAD)	<p>Could you please give us some more examples of what you are doing in this area?</p>	<ul style="list-style-type: none"> Collaboration is the most viable model for advancing quickly in inclusive e-commerce and to maximize the contribution of our Action Line to empower entrepreneurs e-trade for women network which aims to support female digital entrepreneurs in Developing Countries by sharing experiences and peer mentoring and sharing a voice in domestic and international policy processes
8.	C7 e-Agriculture (FAO)	<p>What kind of e agriculture strategies are you planning to help fight hunger?</p>	<ul style="list-style-type: none"> Digitalization can strengthen the food and agricultural sectors in terms of viability, resilience and consumer orientation.

			<ul style="list-style-type: none"> • Data analytics adds to the traditional food, able to bring farmers, suppliers, Governments, private partners, Civil Society and international organizations together based on human centered design approach. • Focus on inclusive development and closing the digital gap
9.	C7 Government (UNDESA)	e- How eGovernment services can actually play a role in being inclusive and providing an inclusive and equal environment. Can you please share some of the activities that are planned in this regard?	<ul style="list-style-type: none"> • UNDESA launched the United Nations e-Government survey in which where we look at eGovernment development of 193 UN Member States. • E-participation in three stages: e information, e consultation and e decision making.
10.	C7 e-Health (WHO and ITU)		<ul style="list-style-type: none"> • Collaboration and cooperation between different stakeholders is growing. Lots of projects and initiatives to promote digital health at scale and how to introduce the digital transformation for the health sector services and products is ongoing. • The delivery of health services on platforms one backed with the support from Government and public/private partnership is the future for a sustainable model. • Promote the new technologies in transforming health at the grassroots level.
11.	C7 Environment (WMO)	e- What are the actions that are taking place in this Action Line?	<ul style="list-style-type: none"> • Initiatives related to multi hazard early warning systems, ICTs as a means of communication of warning. • Focused on enhancing all our activities in reaching the last mile. • There is a need for efficient capacity building strategies that involved education for vulnerable communities, to increase their resilience, protect themselves from the impact of hazards and to understand National Disaster Management and for their actions
12.	C8 (UNESCO)		<ul style="list-style-type: none"> • UNESCO continues its work through specific recommendations that were adopted by the Member States regarding the preservation of indigenous languages online.

			<ul style="list-style-type: none"> • Ensure that the digital potential of access to creative industries is harnessed not only to promote the flourishing of creative exercises in developing countries but at the international level.
13.	C9 (UNESCO)		<ul style="list-style-type: none"> • Developed a framework called International Universality Framework, based on the idea that the Internet should be rights based, open access and multi-stakeholders. • Work on Freedom of Expression – develop capacity building, open -- massive open online courses of young people so that they can engage in the critical way not as media -- not only as media consumers but also as media producers.
14.	C10 (UNESCO)		<ul style="list-style-type: none"> • Discussing with our Member States the possibility of developing an international standard setting instrument as it concerns the ethical dimensions of Artificial Intelligence. • Publications by UNESCO: (i) World Commission on ethics of science and technology report on the ethical dimensions of Artificial Intelligence; (ii) AI ROAM primer that looks at translating this international universality framework in to the development of an ethical AI.
11.	C11	Could you please let us know about the work that is happening in the area of international and regional cooperation?	<ul style="list-style-type: none"> • One big new development in this area is the Secretary General's high level panel on digital cooperation. • The upcoming Internet Governance Forum which will take place in November in Germany, November 25 to November 29 in Germany.

The Meeting also noted some suggestions, as follows:

- 15 years after the Geneva plan of action, maybe it is time to consider in each Action Line what are our results of our work for each Action Line in comparison with the goal and target that we had from Geneva or three from WSIS+10 Forum, overall review in '15.
- It is important that on each facilitation track we should have some measures in order to achieve the SDGs.
- That we need to identify areas or zones where we can have champions. Some countries can access champions to help others carry them along. In doing this we will be able to monitor periodically to see where achievements have been made.

- To evaluate what we make after the Geneva plan and to evaluate that with macro economic models or economic models.

UN Regional Commission Meeting Round Table

ITU/ UNECE / UNECA / UNESCWA / UNESCAP

Thursday 11 April 2019

16:30 – 18:15

Room G1

This outcome will be made available soon.

Interactive Sessions (IS)

Interactive sessions provide workshop style interactions amongst the participants and panellists. The panellists provide an introduction to the framework of the session and act as moderators, while the participants are encouraged to drive the discussion of the session.

Interactive Session



Measurement of Progress towards the SDGs through ICT Indicators
Partnership on Measuring ICT for Development.

Monday 8 April 2019

14:30 – 16:15

Room K2 – ITU

I. **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11**

C11. International and regional cooperation

The Partnership on Measuring ICT for Development's work is closely linked to the World Summit on the Information Society (WSIS), which called upon countries and international organizations to work together to develop appropriate indicators and produce official statistics to monitor the Information Society.

II. **Key achievements, announcements, launches, agreements, and commitments**

The current SDG indicators framework needs to be supplemented by indicators to more fully capture the contribution of ICTs to achieving the SDGs. The Partnership Task Group on ICT for SDGs presented the final draft of a thematic list of ICT indicators, which can be used by countries to measure ICT availability and use in sectors relevant to the SDGs that are not covered in the global SDG indicators framework. The indicator list will be open to feedback from the WSIS stakeholders, during and after the WSIS Forum 2019, after which the list will be finalised. Feedback can be provided by making comments in the following document: <http://bit.ly/ictindicators> before the 30th of April 2019.

III. **Main outcomes highlighting the following:**

I. **Debated Issues**

ICTs are recognized as key enablers for sustainable development. ICT indicators are important in monitoring progress to achieving the 2030 Agenda. The Partnership on Measuring ICT for Development is in the process of developing a thematic list of ICT indicators which can be used by countries to measure ICT availability and use in sectors relevant to the SDGs that are not covered in the global SDG indicators framework. The Partnership is planning to finalise the thematic list in May 2019, present it at the Inter-agency and Expert Group on SDG Indicators in November 2019, and have it discussed during the 2020 Session of the United Nations Statistical Commission.

The current proposed list of ICT indicators for the SDGs contains 29 indicators, covering 26 SDG targets in goals 1, 2, 3, 4, 5, 8, 9, 12, 16 and 17. Data disaggregation

in order to leave no-one behind is an integral part of the list. Agencies that are compiling data for these indicators at the international level include ITU, UNCTAD, WHO, OECD, and UIS.

Countries face challenges in populating the thematic list of ICT indicators, including irregular data collection and the absence of interagency collaboration for data generation and sharing. Other challenges include the lack of methodological understanding, missing legal frameworks for data sharing, reporting, and privacy, as well as missing data standards and interoperability framework. Various solutions are possible, such as capacity building, with as example the Massive Open Online Course (MOOC) from Brazil, which covers a variety of topics such as ICT infrastructure, AI, ethical considerations, e-government, ICT in health and ICT in education. Another solution is establishing multi-stakeholder coordination mechanisms at the national level. NSOs will have to play an important role in this. Alternative data sources, in particular big data and data from private companies, can help to supplement existing data collection mechanisms.

II. Quotes

- “If you don’t know where you are, how can you know where you want to go, or how to get there? Without good data, we cannot establish roadmaps to support countries.” Ms. Doreen Bogdan-Martin, Director, Telecommunication Development Bureau, ITU.
- “We have to strengthen the NSOs to do new things in a new way, especially in developing countries.” Mr. Anir Chowdhury, Policy Advisor, Access to Information Program, ICT Division, Bangladesh.

IV. Overall outcomes of the session

The thematic list of ICT indicators for the SDGs will be an important tool for countries to assess their progress towards achieving the objectives of the 2030 Agenda for sustainable development. Nevertheless, countries are facing challenges in compiling data for all indicators. Capacity building, the use of alternatives data sources and multi-stakeholder coordination mechanisms can help overcome these challenges.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

The thematic list of ICT indicators for the SDGs by its very nature link to all SDGs. The current list of indicators are linked to targets in SDGs 1, 2, 3, 4, 5, 8, 9, 12, 16 and 17.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

The use of big data as an alternative data source was highlighted during the session to produce real-time indicators to address current problems.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

“Use of big data for Measuring the Information Society”

“Reporting on the thematic list of ICT indicators for the SDGs”

Interactive Session



WSIS Stocktaking and WSIS Prizes

Friday 12 April 2019

09:00–10:45

Room Popov 1– ITU

The Interactive Session on WSIS Stocktaking and WSIS Prizes took place on the last day of the WSIS Forum, in the Popov Room 1 at the ITU HQ. The session aimed at highlighting the key points and factors shaping the WSIS Stocktaking Process which were presented by the moderator Mr. Vladimir Stankovic, coordinator of the WSIS Stocktaking. The session concentrated on the achievements and the future of WSIS Stocktaking and WSIS Prizes. Events and a wide range of memories were organized during the WSIS forum 2019 and a brief overview was presented. Statistics, graphics, and the publications (e.g., success stories report, global report) linked with WSIS Stocktaking and WSIS Prizes were introduced. The Interactive Session ended with a round of questions from the audience and a brief summary of what have been accomplished during this edition, the special 10th one of the WSIS Process.

The main outcome of this session was the message summarized by the WSIS Stocktaking team on the way forwards, as the following:

- The International Telecommunication Union (ITU) remains committed to the World Summit on the Information Society (WSIS) process, and to implementation of the WSIS goals beyond 2019.
- ITU recognizes and highly appreciates the extremely valuable contributions made by stakeholders to enable the continuation of WSIS monitoring and reporting.
- There can be no doubt whatsoever that, in today's fast-moving world, sharing good ICT practices based on innovation and efficiency is vital to achieving SDGs.
- Accordingly, the WSIS Stocktaking reporting continues to serve as the key international repository of ICT projects and initiatives that are serving communities around the world and enabling social impact in all segments of life.

WSIS stocktaking has been evolving to be the unique global process for collecting information on actions implemented within WSIS framework, aligning the WSIS process with the 2030 Agenda for Sustainable Development, highlighting the crosscutting contribution of ICTs to the SDGs. The United Nations Economic and Social Council (ECOSOC) resolution 2018/28 on "Assessment of the progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society", which reiterates the importance of sharing best practices at the global level and recognizes excellence in the implementation of the projects and initiatives that further the goals of the World Summit, encourages all stakeholders to nominate their projects for the annual World Summit project prizes, as an integral part of the WSIS Stocktaking process, while noting the report on the WSIS success stories.

This Interactive Session updated the participants on overall functions and the new features of the WSIS Stocktaking platform and its growing database, since it was

launched in 2010, and invited all to continue using it and promoting it further within their networks and communities. The platform continues to serve as a good practice for WSIS community, enabling anyone to contribute by sharing an ICT-SDG related projects and activities (by providing all the essential information). It is also a learning tool about the connections between WSIS Action Lines and SDGs (Sustainable Development Goals) showcasing examples from the ground and making the WSIS-SDG Matrix more comprehensible in real life practices.

Having acknowledged the opportunities given by the Stocktaking Database, the audience also got to learn about the WSIS Prizes 2019 in itself – comprised of many phases since it was launched on 2 July 2018, ending successfully during the WSIS Forum 2019, 8-12 April 2019.

This year we had a remarkable number of the projects submitted for WSIS Prizes – 1,141 out of which 1,062 got nominated for the Online Voting. The voting process ended with more than 2 million votes cast and it gave us the final results – five top projects in each category were claimed as Champions and the one with most votes as a Winner. The Winners were officially announced during the WSIS Prizes Ceremony (9 April 2019). A complete list of all the 90 awarded projects (72 Champions and 18 Winners) can be found under the following link:

<https://www.itu.int/net4/wsis/stocktaking/Prizes/2019/Champions>.

Several key points on this year's WSIS Stocktaking and WSIS Prizes process were delivered:

- The WSIS Stocktaking Platform continues to foster implementation of the WSIS outcomes and to facilitate exchange of information among more than 350,000 members representing governments, the private sector, international organizations, civil society, and other stakeholders.
- ITU continues to maintain and improve the WSIS Stocktaking Database, which contains more than 1,000 entries this year, bringing the total number of entries to more than 12,000 since its inception.
- Promotion of the WSIS Stocktaking and WSIS Prizes as a supporting instrument for evidence-based policy making, contributes to leveraging ICTs in building information and knowledge societies for achieving the Sustainable Development Goals (SDGs).
- WSIS community is looking for an increased visibility of the WSIS Stocktaking publications, including promotion of individual entries and testimonials from former awardees.
- In order to further improve the WSIS Prizes contest, strengthening the Nomination Phase is required in the future through detailed analysis of submitted entries, thus reflecting the most impactful projects, making the Online Voting phase more user-friendly for voters.
- Increasing better networking opportunities for WSIS Prizes awardees during the WSIS Forum events was much appreciated, including utilizing WSIS TalkX podcasts and evening talks.
- New WSIS Prize Ceremony format was welcomed by all WSIS Forum participants, including the WSIS Prize Winners, especially for being provided with an occasion to address the audience and deliver brief statements.

WSIS Prizes Focus Group

Wednesday 10 April 2019
CICG

10:00-12:00



I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

- This meeting was designed with the intention of soliciting feedback from WSIS Prizes participants (past and present Winners and Champions) to improve the promotion of the WSIS Prizes and WSIS process as a whole. It is relevant to all Action Lines.
- The Group extensively discussed how to make the contest and its phases more user friendly and efficient; including on how to make voting process more accessible and equitable for all participants.

II. Key achievements, announcements, launches, agreements, and commitments



- The meeting of this group was extremely successful. The room was full with more than 50 participants contributing actively; and there were participants from the 2019 contest and previous years. Moreover, there was unanimous support for the creation of a group that would further promote WSIS Prizes and ICT as technology that advances SDGs, as participants were pleased to have a platform to raise their concerns for the Prizes contest's efficiency, quality, etc.
- The meeting agreed to the creation of a group that would be named WSIS Prizes Network and expressed a firm commitment to the continuation of this initiative at the WSIS Forum 2020 and so forth.
- The group agreed to create committees responsible for executing the work (communications, data sharing) — however, the group activities will be overall coordinated by the WSIS team.

III. Main outcomes highlighting the following:

1) Debated Issues

- The WSIS Prizes voting process was a highly contested issue. Multiple participants expressed that the voting process is too difficult given the large amount of projects one has to theoretically sift through to vote. Moreover, many thought that they

should be able to track the progress of the votes throughout the voting season so they know how much they have to campaign for sufficient votes.

- Too many projects were included in the voting phase. The nomination phase doesn't exclude many projects, which is why there are over 1,000 to vote for.
- One participant expressed that the project's impact should be one factor accounted for when determining winning projects. This would be considered to be included on the form in the future when submitting the project for consideration.

2) Quotes

- Dr. Alnajem: "Regarding the communication channels, let me suggest a communication tool we use with Microsoft...Normally, we use Yammer which is one of the e-collaboration systems used to communicate...If we could use something like SharePoint, Microsoft, or Yammer to have this kind of discussion that is indexed, searchable, and present a kind of knowledge base that can be searched. Also, we can divide this communication tool according to WSIS Action Lines...For each Action Line, we should have a group for people who are working with these kinds of Action Lines."
- Zahir Qasrawi: "I wanted to ask about the impact of the project. We saw yesterday that the majority of the [winning] projects has impacted a large number of people— 5 million or 1,000. Is this the key point for the winning of the project? As for a small country—for example, I'm from Palestine and it has 2 million people — if I did a project and it affected 10,000 it's a very large number. But when we hear for large countries, it seems [to be] a little impact. I think we need to concentrate more [on] the idea of the project."

IV. Overall outcomes of the session highlighting

- The WSIS Prizes Network will continue to contribute in future WSIS sessions.
- Membership is to include past and present WSIS Prizes Winners and Champions. Regarding other participants of the WSIS Process, it has not yet been determined if there will be a possibility for their membership but the proposal has been vocalized.
- The draft strategic plan will be adopted prior to the WSIS Forum 2020 articulating what was discussed and agreed upon during the meeting.
- The voting process for the WSIS Prizes contest ought to be amended to be more accessible.
- The WSIS Prizes Network will use LinkedIn, Yammer, or some other communication tool to stay in contact and connect members with events, ideas, etc.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

The WSIS Prizes Network is concerned with amending and improving the promotion of the WSIS Prizes contest, as this thereby improves the WSIS Process at large. Consequently, this is relevant to all SDGs and promotion of ICTs.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

The WSIS Prizes Network is especially relevant to WSIS Action Line 1 and it encourages cooperation among different stakeholders and governments in the promotion of ICTs for development. This group will continue to collaborate with one another to brainstorm and implement necessary modifications and additions to the Prizes contest and its various stages. In the physical meeting during the WSIS Forum 2019, there were multiple instances of productive discourse geared towards finding a common ground on what is best for the WSIS Prizes contest.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

- For the WSIS Forum 2020, it is highly advisable to appoint different roles to different members of the WSIS Prizes Network to better retain engagement and involvement. While committees were decided to be created during this meeting, further division of roles is one way to crowdsource involvement from network members.
- Communication among the WSIS Prizes Network should be year-round and not simply restricted to its annual physical meeting at the Forum.
- A change in name to the group ought to be confirmed and agreed.

World Café



Celebrating 10 years of the WSIS Forum – Evolution & Future Implementing Best Practices and Addressing Challenges in Advancing SDGs

Wednesday 10 April 2019

12:15 – 14:00

Reception Area, Montbrillant Building, ITU

Following the previous years' success practice World Café has been launched during the WSIS Forum 2019 in ITU Montbrillant Lobby. Celebrating the 10 year anniversary of the WSIS Forum World Café hosted the WSIS Prizes Winners and Champions.

World Café is another ideal multi-stakeholder platform which brings together stakeholders from the private sector, civil society, from academic and governmental sections in order to boost their efforts, exchange their experience in favour of achieving the Sustainable Development Goals (SDGs). This collaborative format facilitates brainstorming trends, challenges and opportunities in the ICT Ecosystem and further development of the Information and Knowledge Societies.

During the World Café “Celebrating 10 Years of the WSIS Forum - Evolution & Future”, participants had the opportunity to discuss and explore the insights, to discuss the last 10 years challenges and propose future collaboration, to speak about the actions taken for the promotion of their projects in their homeland.

This World Café gave a glimpse into the success stories around the world as delivered by the WSIS Prizes 2019 Winners and Champions in which ICTs are used to enable grassroots enhancement and how they are paving the way to achieving development in all segments of life.

It has also provided a platform to discuss the trials and triumphs of implementing ICT4SDG, focusing on the mechanisms that will further enhance “taking stock” of ICT progress and implementation of effective policies from the multi-stakeholder perspective. Highlighting the importance of identifying good practices around the world, discussions were enriched by the presence of WSIS Prize Winners and Champions, who had share and present their innovative projects and ideas.

This was also unique opportunity to meet the Winners and Champions and learn from their valuable experience. This exchange has also yield insights into concrete ways in which WSIS can help them to promote their project on their platform.

The World Café was moderated by Mr. Vladimir Stankovic, ICT Policy Analyst, ITU.

WSIS Prizes 2019 Networking Event

Wednesday 10 April 2019

14:30 – 16:00

CICG Exhibition Space

The main purpose of WSIS Prizes 2019 Networking Event was to award all the WSIS Prize 2019 Champions with their certificates. This event was a unique opportunity for the awardees to meet and take photos with Mr. Houlin Zhao, Secretary-General of ITU. It was also an opportunity for all WSIS Prizes 2019 awardees to meet each other and celebrate their global recognitions while being greeted by Mr. Zhao during the special photo session.

Furthermore, the inauguration of the WSIS Prizes 2019 Exhibition with displayed posters of the winning projects took place and was greatly appreciated by all WSIS Forum 2019 participants. The Exhibition will continue to be exposed in the ITU HQ. This Exhibition was another way of presenting ICT-related success stories from the ground advancing SDGs.

The networking event was moderated by Mr. Vladimir Stankovic, ICT Policy Analyst, ITU.

Finally, this event was an overture for the WSIS Prizes 2019 Ceremony that took place later the same day during the High-Level segment of the WSIS Forum 2019.

Please, visit ITU Flickr page and look for WSIS Forum 2019 albums to see photos from this event.

Hypertext Café



WSIS Forum 2019

Friday 2 April 2019

12:00 – 14:00

Reception Area, Montbrillant Building, ITU

I. Key achievements, announcements, launches, agreements, and commitments

a. Game:

- i. The purpose of the Hypertext Café was to understand how technologies impact your life and identify the topics of particular interest for you. This is a space intended to listen to the many voices of the youth. Hypertext refers to a network of interlinked pieces of information, and we wanted participants to connect their pieces of knowledge in order for us all to expand our shared understanding of the Digital Age.
- ii. There were 2 sets of discussions. Participants were free to join the table of their choice, for each part of the game.
- iii. Each table hosts at least one “professional”, enriched the discussion. But the aim was to use existing knowledge and understanding to conceptualise what living in the digital age entails. Playing cards were given on the table to keep the discussion going and to help participants make links between elements, ideas, actors and ICTs. Overall, the discussion was aimed to be led by students, and professionals to participate in this debate as an added value.

b. Presentations

- i. **Jasmina Byrne**, UNICEF
- ii. **Stephenie Rodriguez**, WanderSafe
- iii. **Nyree Oman**, digital skills for youth and mental health
- iv. **Ahmed Riad**, ITU, AI for Good

II. Main outcomes highlighting the following:

I. Debated Issues

We have explored the following interconnected themes:

- Privacy, Security and Big Data, Freedom on the Internet. How to gain better ownership of our internet activity and presence?
- Social Networks, Connectivity. What are the possibilities for better connections and connectivity offered by the Digital Age?

- Government 2.0 - Digital Rights & Democratisation. How can we transform systems for more equitable, just and democratic governments and access to services?
- Capacity Building & Training. Along which lines should education and skillbuilding develop?
- The Future of work in the AI era. What aspects of the labor market are becoming obsolete and how to prepare for the opportunities offered by greater automation and the rise of AI?
- ...and their interconnections with ICTs such as 5G, blockchain, cryptocurrency, nanotechnology, AI, VR/AR etc...
- We have developed and tested our HTTP Game prototype - a card game that helps ideation, associative thinking and trend forecasting along the lines of ICTs, stakeholders and various applications of technology.

II. Quotes

- In terms of capacity building, more efficient matching of skills on the labor market is desirable. AI could reduce the recruitment bias, but cannot solve it completely. AI could help people find skills in short supply to learn.
- 5G will enable the biggest big brother!
- Technology as a way of grouping and ideas sharing but not the place where the action take place. This online idea sharing should be regulated as often subjected to fake news. How can there be (e-)democracy without a common truth? -- Government 2.0 Table.

III. Overall outcomes of the session highlighting

- Youth should be more assertive in furthering their interests, concerns and understanding of the digital age. This should be done transversally, whether in professional situations, in defining new directions and methods for education, or in addressing questions of privacy and security on the internet.
- Scaling engagement should be done through interactive events that bring together a diverse range of stakeholders for further dialogue, exchange and collaboration with a strong focus on the intersection of WSIS Action Lines C3, C4, C5, C8, C10 and C11.

IV. Main linkages with the Sustainable Development Goals (please specify the SDGs)

- The Hypertext Café succeeded by providing an open platform for university students, where participants shares ideas to attempt to reinvent the ways we see jobs opportunities and society in the digital age of the internet (SDG 8 & 9).
- In that way, students and professionals exchanged about their thoughts and ideas about their future careers (SDG 8).

- The use of sustainable materials in technology production (SDG 6, 8, 9 & 14) was discussed at length. The global sand crisis is impacted by the extensive, unregulated use of sand and other minerals in the production new technologies and devices such as smartphones. A shift to more sustainable methods of production is integral to achieving SDG 9.
- Stephenie Rodriguez presented her project WanderSafe centered around helping enhance the sense of security in public spaces for women, through easy-to-use signaling equipment. Her project provided an example of the ways in which ICTs can help gender equality (SDG 5).
- The Café achieved its aim of enhancing education (SDG 4), as its participative and horizontal format gave the chance for participants to learn from each other, with the help of “elements cards” given to engage the discussion. The interactive play that the session took also We also want to push for new viewpoints and ways to view today's issues, to collaboratively anticipate future professional issues and opportunities. This participated in the achievement of SDG 9 as an innovative practice to engage the discussion. Additionally, the whole session was formatted with the usage of the app/website “Mentimeter”, to get live feedback and thoughts from the participants. This enhanced engagement and innovative thoughts from them (SDG 9).
- The game at hand has engage the debate around the actors of each table, including the institutions that are involved in particular problematics. For that reason, strong institutions were discussed (SDG 16).
- The AI for Good Summit presentation provided an additional element to link the session with the SDG, particularly linking all issues together, ensuring the SDG 17 for partnerships for and in between the goals.

V. Emerging Trends related to WSIS Action Lines identified during the meeting

- The role of youth is central in the promotion of ICTs for development (C1)
- Access to information and knowledge (C3)
- The need for robust cybersecurity and data protection (C5), through an appropriate regulation of the use and ownership of data was tackled in various roundtable discussions.
- ICT applications: benefits in all aspects of life (C7). The potential benefits and human rights implications of 5G were considered.
- The implications of AI and for 5G for consumer protection (C6) were considered. A student noted that privacy should not be an acceptable upended in exchange for access to internet.
- The issue of the ethical dimensions of the Information Society (C10) was tackled in all roundtable discussions. Jasmina Byrne (UNICEF) has noted youth engagement in policies processes is essential to ensure that internet remain a common good. was discussed in all the roundtable discussions.

- Development of platforms that encourage intersectional exchange and collaboration (C11).

VI. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

- The WSIS Forum 2020 might benefit from an emphasis on further democratisation of ICTs and the impact on youth.
- A stronger focus on interactivity and horizontal knowledge exchange could be integrated into workshops, encouraging both professionals and young people to learn from each other.

Country Workshops



During Country Workshops, countries provide updates and reports on the implementation of the WSIS Action Lines in their respective countries. These sessions provide an opportunity for all participants to learn and share their country level experiences on the implementation of the WSIS Action Lines.



Country Workshop



Saudi Arabia vision for Cybersecurity, Digitization and Emerging Technologies

NCIS, CITC, NCA, STC and Elm

Monday 8 April 2019

11:00 – 13:00

Room A - ITU

This outcome will be made available soon.

Country Workshop



Emerging technologies for digital transformation – how to maximize benefits for societies and economies

UKE/ITU

Monday 8 April 2019

11:00 – 13:00

Room C1 - ITU

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

Theme of the session and its substance was linked directly to Action Line C1. The role of public governance authorities and all stakeholders in the promotion of ICTs for development, C2. Information and communication infrastructure, C3. Access to information and knowledge, C4. Capacity building and C6. Enabling environment.

II. Key achievements, announcements, launches, agreements, and commitments

The session allowed for discussion between the panelists and participants of the workshop, which was a great achievement especially because of the opportunity for the High-level representatives of ITU, governments, scientists and other stakeholders from the private sector to meet in one place. The session allowed to discuss the issues and see the challenges with point of views presented by various stakeholders.

III. Main outcomes highlighting the following:

1) Debated Issues

- Presented project touched upon issues of how the emerging technologies can create new opportunities for start-ups and SMEs to address digital transformation of the society, what are the challenges to scale up disruptive technologies in the global market and how start-ups and SMEs can be supported in order to facilitate their growth in the ICT centric innovation ecosystem.

2) Quotes

- *Digital transformation is an ongoing process, which was triggered by the adoption of “mature” technologies and significantly enhanced the way businesses operate and the way societies function.*
- *At the brink of the next stage of digital transformation, businesses, governments and societies stand in face of seeking opportunities arising*

from the application of Internet of Things, Big Data, robotics and machine learning.

IV. Overall outcomes of the session highlighting

- Maximizing benefits for societies and economies is an important task for all stakeholders. It is strictly connected to the modern infrastructure and education including building digital skills as well as access to knowledge. The session also showed the impact of the digital transformation and opportunities from it for the modern society, business and governments. Proper quality education is also an important part of maximizing benefits for societies and economies. Capacity building and building infrastructure can affect promotion of sustainable economic growth in the future.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

This session theme linked to the Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all, Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all and Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

In today's world, digital and emerging technologies become more and more important. In reference to maximizing the benefits there are fields of services especially important to develop. This is the role for public governance authorities and all stakeholders in the promotion of ICTs for development, roll-out of broadband infrastructure, access to information and knowledge, capacity building and enabling environment.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Focus on consumer safety through the capacity building in the area of ICT.

Country Workshop



OMAN's Progress toward Achieving SDG's 2030

Oman

Monday 8 April 2019

14:30 – 16:15

Room M - ITU

I. Key achievements, announcements, launches, agreements, and commitments

In gender equality,

- Oman has already achieved this goal in all aspects (ex: we have three women ministers, equal wages, no discrimination) and in
- Some government organizations women staff are more in numbers.
- Many women are CEO's in private sector.

In education sector,

- Eradication of malaria
- Mortality rate is very low beside child mortality.
- UNESCO acknowledge Oman's achievement in childcare.
- Artificial Intelligence is being used currently for breast cancer.

In employment sector:

- The ministry provide more than 55 e.services for different segments.

II. Main outcomes highlighting the following:

1) Quotes

- "Oman is active partner in WSIS and committed in cybersecurity" Mr. Houlin Zhao, the SG of ITU.
- " recently ministry of Health started using AI in breast cancer" Mr. Raqadi, DG of IT in Ministry of Health, Oman

2) Overall outcomes of the session highlighting

- Oman is implementing WSIS action plans and guidelines in its digital

III. Main linkages with the Sustainable Development Goals (please specify the SDGs)

Goal 3: Good health and well-being

Goal 4 : Quality education

Goal 8 : Decent work and economic growth.

Goal 9 : Industry, innovation and infrastructure

IV. Emerging Trends related to WSIS Action Lines identified during the meeting

Artificial Intelligence (AI) is now going to be used to diagnose breast cancer in the hospitals in Oman. This project is part of a strategic vision to employ 4th Industrial Revolution technologies to improve the national services provided in Oman.

V. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

- Harnessing ICT for people with disabilities.
- Emerging Technology

Country Workshop



Saudi Arabia success stories in providing digital Financial and commercial Services

NCIS, CITC (Etimad Portal, MOF) and STC

Thursday 11 April 2019

09:00 – 10:45

Room C1 - ITU

This outcome will be made available soon.

Country Workshop



Government efforts to deliver breathtaking customer experience

United Arab Emirates

Thursday 11 April 2019

11:00 – 13:00

Popov Room 1 - ITU

Main outcomes highlighting the following:

Talk 1

Bashr – Starting Business in 15min

The workshop provided details on what went into making Bashr a reality which involved a collaborating across the whole of government involving more than 54 Federal & Local entities.

Bashr which is unified online service launched by Telecommunications Regulatory Authority (TRA) in collaboration with local and federal government, enables investors to establish a business within 15 minutes without the need to visit any government entity. The investor receives:

1. Business license
2. Membership certificate
3. Establishment Card
4. Partner Agreement digitally signed ,
5. Approval to hire 3 individuals to commence the business

The service can be accessed by visiting <https://services.government.ae>

Talk 2

HE Ohoud Shehail, Director General of Ajman Digital Government, participated in the session held today at the WSIS Forum in Geneva.

H.E talked about digital transformation journey in Ajman, and how it's playing a major role in achieving Ajman vision 2021 that focuses on having a happy society involved in

building a green economy, all with the help of a motivating government that is in line with the spirit of the union. In addition, she presented various initiatives of Ajman Digital Government such as Ajman Living lab and Block Chain technology which are first of its kind in the world. Blockchain is used to unify land and properties ownership on the Emirate's level and digitalize the process of issuing Site Plans & Title Deeds. Moreover, she introduced Ajman Digital Government 3D approach which is used in digital transformation (co-design, deliver and disseminate).

The Ajman Digital Government participates in the forum as part of the delegation of the United Arab Emirates, along with several leading local ministries and institutions.

Talk 3

E- Police in Your Mobile

The application has been launched since last OCT, 2018. It is aiming to allow specific society segments to practice their right by reporting the incidents through the smart phone. These society segments might face difficulties in reaching the police station to report their incident that is why this application has been innovated.

The targeted segments are: Women, Elderly, Special needs; or as we called them in the UAE; The people of determination, and finally the Adolescents. Yet, all society segments can use the application (visitors, residents and citizens).

The application main goals are the following:

- a. Achieving security, justice, and equality for all
- b. Reduce the carbon footprints
- c. Reduce the traffic congestion
- d. Decrease the client present in the Police Stations

One pointed raised by the audience is how can you assess the clients desire to use the application rather than the paper-based transaction?

Well based on the statistics from the application, the number of electronic reports posted through the application since it was launched in OCT, 2018 until end of MAR 2019, the number of electronic reports is 19, 279 reports posted through the application which good indicator that the people in the UAE is willing to use the application and find it useful.

The application is pioneer in the field, and the statistics shows that the percentages of society segments using the application is achieving the application targets. For example, the percentage of women using the application is 41%.

The application helps to reduce CO2 emitted by 269 ton by reducing using the transportation to reach the service station, and save around 24 trees by using the electronic transaction instead of using papers.

Moreover, it saves the government cost by around 790,439 AED, and saving 6,426 working hours. Finally, it assists the clients to save more than 32,000 hours of his/her time and more than 4 million AED.

Talk 4

In alignment with its vision and strategic goals, the Ministry of Human Resources & Emiratization (MOHRE) seeks to boost the Participation of the national human resources in the priority strategic sectors. The ministry has launched the National Program for Emiratization (Tawteen) to support UAE Nationals to take up jobs in the private sector.

The program objectives:

Enhancing the participation of the National Workforce in the private sector

- To qualify, in collaboration and coordination with the stakeholders, the national human resources in alignment with the demands in the labour market.
- Provide a seamless, accessible, and smart e-platform, built to the world's best practices, to attract targeted candidates.
- Provide privileges and incentives to the private sector entities, registered with MOHRE, that support qualifying, training, and empowering of the national human resources.

The Ministry executed multiple initiatives and applications to achieve the program objectives. The main two applications are:

1. Tawteen Gate Application

It's an employment portal for recruiting national job seekers in private sector. It has multiple modules and build in more agile methodology to adapt market changes and technical changes.

2. Open Days Application

It's a career fair management solution. Were the ministry invites job seekers and private companies to participate and it assure the quality of the event through the client's feedback.

Talk 5

ICT Rating Initiative

Telecommunication services have become an integral part of social and business life. Many industries and sectors depend on such services to satisfy the needs of their customers.

The ICT rating Initiative is a unique program aiming to enhance the customer experience relating to the ICT services offered by different industries and sectors. It measures and quantifies the ICT services based on a special methodology that takes the customer experience and customer happiness as a prime aspect.

The initiative builds on the collaboration and cooperation between more than 80 government and private sector entities to elevate the level of delivered services. It is based on a specially designed methodology to suit different sectors such as the hospitality and entertainment industry, the transportation industry and the retail industry to name a few. The methodology consists of an assessment, mystery shopping visits, customer surveys and IT teams interviews. The assessment adapts to the relevant industry focusing on the speciality of that sector.

The UAE shared its experience from conceptualising the idea to mobilising and realising it on ground. Learnings were presented with the recorded impact and enhancements throughout the different cycles of the initiative.

The key points stressed were that collaboration and cooperation is a key for success. Engagement with the stakeholders is another important factor and building the capabilities of internal teams in the different sectors helps achieve the long term goals.

Country Workshop



Program 3/12 - Early Detection for People of Determination (Persons with Disability)

United Arab Emirates

Thursday 11 April 2019

14:30 – 15:15

Popov Room 2 - ITU

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

C1. The role of public governance authorities and all stakeholders in the promotion of ICTs for development

C7. ICT Applications e-Government

C7. ICT Applications e-Health

II. Key achievements, announcements, launches, agreements, and commitments

The program 3/12 is an early detection and screening system for newborns and children with disabilities. It uses data and technology to help diagnose potential disability. It leverages technology and integrates multiple stakeholders to connect children with disabilities and their families with the services they need, through an integrated and proactive approach.

III. Overall outcomes of the session highlighting

- We concluded that any feedback on the system from organizations who are participating in the forum will ensure on program improvement after analysis.

IV. Main linkages with the Sustainable Development Goals (please specify the SDGs)

1. Innovative Character and Potential for Scalability

3/12 program helps children with disabilities and highlights the importance of early detection. The governance model and technical aspects can be adopted and adapted to specific contexts, depending largely of the healthcare system in place.

2. Impact and Benefits to Children with Disabilities

3/12 Program ensures early access to treatment that can lay solid foundations for success. The early years of a child's life are the most critical in terms of learning and development.

3. *Benefits to Families*

3/12 program helps and support to empower families who often experience frustration, stress, disappointment, and helplessness as a result of their situation

4. *Better Planning and Cost Efficiency for Government and Service Providers*

3/12 Program allows for integrated governance, planning and service provision by identifying the number of children with disabilities who would require special services and the type of services needed across the various geographic locations in addition to plan for appropriate resources.

5. *Supporting Human Rights of Children with Disabilities*

Part of ZHO mandate is to ensure the fulfillment of the rights of children with disability in accordance to the Convention on the Rights of the Child (CRC) and the Convention on the Rights of Persons with Disabilities (CRPD) by providing access to appropriate support.

6. *Focus on Behavioral Functioning (Not Labels)*

3/12 Program takes a more intelligent and sensible approach, focusing on behavioral functioning rather than diagnostic labels

7. *Benefits to Research and Development*

3/12 program is an integrated platform that collects appropriate information, including statistical and research data, to enable government and key service providers to formulate and implement evidence based-policies

8. *An Integrated, Multi-Stakeholder Approach*

3/12 Program has brought together multiple stakeholders in an integrated governance model and coordination mechanism.

V. *Emerging Trends related to WSIS Action Lines identified during the meeting*

None

VI. *Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020*

More results achieved and improvement on the program

Country Workshop



Bridging the Digital Divides: The Rwandan Digital Journey

MINICT/RISA/RURA

Thursday 11 April 2019

14:30 – 16:15

Room M - ITU

Bridging the digital divides was the theme of the workshop organized and conducted by the Republic of Rwanda to the WSIS Forum 2019 on 11th April 2019.

The session was introduced by Jean de Dieu IMANISHIMWE from Rwanda Utilities Regulatory Authority by highlighting the importance of bridging the digital divides and the link of the session to WSIS action line 2 and 3 in accelerating the implementation of SDG 8 and 9.

He recognized the presence in the room of H.E. Ambassador Dr. Francois Xavier Ngarambe, Ambassador of Rwanda to Switzerland and Permanent Representative to the U.N, WTO and other International Organizations in Geneva.

He also stated that, “in the past 20 years, we have seen new technologies and innovations which have generated tremendous economic wealth and social benefits around the world, however, to ensure that no one is left behind in our increasingly digital society or prevent from increasing inequalities within and across countries due to the emerging technologies, much more needs to be done to address this trend and overcome the digital divides”.

He also shared the brief bio of the four respective speakers at the session, Mr. Jose Manuel Toscano from Intelsat, Mr. Turhan Muluk from Intel Corporation, Mr. Desire Karyabwite from ITU-BDT, and Mr. Andrew Rugege from ITU Regional Office-Africa.

The session was moderated by Mr. Innocent Bagamba Muhizi, the Chief Executive Officer of Rwanda Information Society Authority (RISA) who first invited Ms. Claudette Irere, the permanent secretary in the ministry of ICT and Innovation to share a brief journey of Rwanda in regard to the digital transformation and flagship initiatives to bridge the digital divides.

The four panelists shared with an involved and dynamic audience their experiences, the challenges in respect to digital growth and how obstacles can be overcome.

On the issue of bridging the digital divides, as stated by Mr. Andrew Rugege, the Africa

regional has come out with a framework which shows a list of priority areas as follows: digital economy in fostering innovation, promoting emerging broadband technologies, trust and security in network and people, human and institutional capacity building and managing spectrum. On this basis Africa needs to transform its economy into digital economy but to do that Africa needs infrastructure which is primarily broadband not only infrastructure but its associated broadband services.

He continued stressing that Africa needs to ensure that network and applications are secured so that citizens will be having confidence in using these networks and applications. There is a need for capacity building for Africa to be able to develop these technologies, networks and applications and to improve the existing regulations in accordance with the digital era. All countries are also recommended to follow the directive that are coming from ITU to deal with the issue of managing broadband through spectrum management.

H.E Ambassador, Dr. Francois Xavier Ngarambe, emphasized that for digital transformation to happen we mainly need four (I) drivers which are: Initial stage “baseline”, Investment “either infrastructure, human resources, etc”, Innovation and Institution “to ensure proper laws and regulations”. He also added that there is a need for inspirational leadership, which has a vision, which walks the talk and determined for development.

The session also studied on the importance of new technologies to narrow the digital divides in our respective countries and share the following recommendations:

- Update regional and national ICT/Broadband/Digital Economy plans (strategies) and include 5G, IoT, AI and other new technologies.
- Develop digital divide programs and integrate new technologies.
- Allocate sufficient amount of spectrum bands for 5G and new Wi-Fi technologies (licensed and unlicensed bands).
- Develop capacity building and digital skill programs for new technologies.

Moderator, Mr. Innocent Bagamba Muhizi, the Chief Executive Officer of RISA concluded the session by offering the Rwandan coffee to the audience and thanked speakers for bringing an authentic narrative that acknowledges that things must be done differently.

Hackathon



A Hackathon is traditionally an event where computer programmers get together to collaborate on the development of various types software projects. At WSIS, the Hackathon track is composed of all of WSIS multi-stakeholders, from various nationalities and backgrounds, getting together to “hack” development issues related to ICTs in a collaborative manner.

This year, the Hackathon format was introduced to the WSIS Forum and it will continue to evolve as a permanent component of the Forum.

Hackathon



Hackathon - Hack For Education
ITU and UNESCO, facilitated by Impact Hub Geneva

Sunday 7 April 2019	08:00 – 21:30
Monday 8 April 2019	07:00 – 14:00
Reception Area – ITU Montbrillant	

Hack4Education is a general effort by the International Telecommunications Union (ITU) and The United Nations Educational, Scientific and Cultural Organization (UNESCO) to find innovative solutions to address challenges around Lifelong learning and sustainable Livelihoods.

#Hack4Education is a 2-days sprint-like event that took place on April 7-8 in International Geneva during the World Summit for the Information Society (#WSIS) Forum 2019, the world's largest annual gathering of the 'ICT for development' community. The mission of the hackathon brought teams from around the world, to develop their concrete solutions through a creative and highly collaborative approach for designing and implementing inclusive digital solutions for the users who need the most support.

Thematic Workshops



Thematic Workshops are interactive sessions based on the requests received from stakeholders during the Open Consultation Process. These workshops are organized and designed by the aforementioned stakeholders and are therefore a true testament to the inclusive spirit of the WSIS Forum 2019.



Thematic Workshop



Inclusive Innovative Technologies and machine learning for outreach, engagement and impact

ITU/VUME/RECAPP/INTERPREFY

Monday 19 March 2019

09:00 – 10:45

Room A - ITU

This outcome will be made available soon.

Thematic Workshop



Multi-stakeholder's Approach in Combating Hoax and Disinformation in the Digital Age

Indonesia Ministry of Communication and Information Technology (MCIT) and the Indonesian Digital Literacy National Movement Siberkreasi

Monday 8 April 2019
Room C1 - ITU

09:00 – 10:45

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/Forum/2019/Pages/Agenda/Session/208#intro>

I. Key achievements, announcements, launches, agreements, and commitments

The interactive session was fruitful with several worth-noting statements or questions from both attending and remote participants. One striking question was about how Ministry of Communication and Informatics representing Indonesian government could play its role in filtering digital contents without being too inclined to a certain political agenda. It is an easy answer, because the MCIT always takes other stakeholders into account. Stated by the representative from MCIT, Ms Rizki Ameliah, The MCIT has been and is now working closely with academia, private sector, CSOs, and local communities; it is shown with its persistent support for Siberkreasi as national movement in digital literacy. Indonesia is a huge country, the work of educating people and diminishing the negative impact of the technology cannot be done without multi-stakeholder approach or in other words: to involve as many hands as possible. Director of Services for Business Entities, Agency of Telecommunication & Information Accessibility, MCIT, Indonesia, Mr Dhia A. Febriansa, highlighted the national backbone connectivity plan, the Palapa Ring project of connecting the whole country through fibre-optic network and providing connectivity through satellite. Febriansa shared that the Universal Service Obligation Fund (USOF) is being used by the government to connect unconnected remote villages and develop communities by using the Internet. Currently 200 villages are connected to this programme and through USOF, they are also trying to tackle misinformation in rural areas. From the business sector, Mr Budi Mulia Hasibuan as a Chief of Union Telkomsel Indonesia said that digital literacy initiatives undertaken by his organisation to fight fake news, reiterating that the private sector is actively involved to fight fake news. He spoke about the content filtering approach adopted by his organisation and the process to raise concern of content mistakenly flagged as fake news.

II. Main outcomes highlighting the following:

I. Debated Issues

The forum considered about one statement from the audience that the implementation of digital

literacy education run by non-government organization in several countries has a difficulty on making collaboration with related ministry. Accordingly with the statement, panelists have explained based on the Indonesia's case, to resolve that issue, Siberkreasi already created policy agenda with the Indonesian Ministry of Education and Culture supported by the MCIT. Siberkreasi formulated digital literacy curriculum and would be implemented in the formal curriculum for primary education system in Indonesia operated by the Ministry of Education and Culture. Moreover, We would like to underline a statement from Dr. Stephani Borg-Psaila about the collaborative work between Siberkreasi and the MCIT. She spoke very highly about our effort in combating hoax and disinformation, which not only curbing the negative excess of the Internet, but also emphasizing on the benefit of it or to better say: creating a norm for practicing the informed way to use technologies. Despite the praise given to us, we are very humbled as the challenges before us cannot be labeled as simple. These days of national election, false informations are weaponized and are deliberately used to delegitimize governmental bodies, electoral institutions, as well as political figures. Racial and religious sentiments are often utilized in order to gain more attention. That way, hoax and disinformation can be very harmful.

II. Quotes

- Dr. Stephanie Borg Psaila (Interim Director, Diplo Foundation)

Fake news is not a new phenomena, and it becomes problem today affecting different sections of the society due to the use of Internet. Internet is amplifying this phenomena and making it easier to spread fake news. The threats of fake news during the elections is more dangerous because it can make public confuse to distinguish between the real and fact news. Responding to a question on approaches to tackle fake news, Psaila highlighted the importance of understanding the various actors and their roles and cooperation between different stakeholders.

- Ms Ivana Maida (Executive Secretary of National Movement Digital Literacy Siberkreasi, GNLD Siberkreasi)

Digital literacy training and advocacy carried out by GNLD Siberkreasi not only aims to reduce the tide of disinformation, but also seeks to emphasize the benefits of the Internet and its potential for create a positive and innovative content, and increase productive activities.

III. Overall outcomes of the session highlighting

- main conclusions reached during the discussion

The rapid development of sophisticated ICT in the digital age today is shadowed by developing discussions on the potential of digital transformation of news media functioning as a means to spread fake news (or precisely: disinformation). To depress the number of hoaxes or fake news, digital literacy should be evenly and massively spread throughout the nation, which is magnified by the collaborative support from multi-stakeholder. This session highlighted initiatives to engage young adults and rural people to combat fake news, protecting rights children online, and the redressal process for content taken down by mistake.

- the vision for implementation of WSIS Action lines beyond 2015

Conduct strong actions, such as legal implementation of the laws, digital literacy education and clear community guidelines that prohibit the spread of hoax, disinformation and dangerous content with accountable approach as well as respecting freedom of expression and online rights.

IV. Main linkages with the Sustainable Development Goals (please specify the SDGs)

- Partnerships for the Goal (Goal 17): Government of Indonesia, CSOs, academics, business sectors, communities and media have reached an agreement in creating a collaboration namely “Siberkreasi” which aims to be an umbrella for the community-based and grass-root level movement on digital literacy.
- Quality of Education (Goal 4): Indonesian National Digital Literacy Movement Siberkreasi leads the formulation of digital literacy curriculum which will be implemented by the Indonesian Ministry of Education and Culture, in the purpose to increase the awareness of young adult people about the threats and opportunities of the existence of internet.

V. Emerging Trends related to WSIS Action Lines identified during the meeting

The meeting showed that there were a strong commitment from Indonesia’s multi-stakeholders to tackle the spread of hoaxes and disinformation in Indonesia by establishing “Siberkreasi”. Yet, combating fake news and disinformation also need international collaboration, especially to provide investment fund, ecosystem (technological and non-technological), and transfer of knowledge and technology.

VI. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

The next WSIS Forum by should emphasize in the role of international level of governments and stakeholders collaboration to tackle the hoaxes and disinformation. The lack of international support in terms of funding and transfer of technology and knowledge should be considered as a crucial issue to be discussed in this respective forum. Moreover, The National Commission on Violence Against Women (Komisi Nasional Perempuan) says that there are 65 cases of online gender-based violence against women in 2017 only. This is an alarming number since the social interaction and public sphere are transferred into the cyber space nowadays. Government efforts to tackle this is aligned with the fifth SDG on gender equality. In 2016, Indonesia obtained rather low overall score of 40% in Internet access and women’s empowerment, based on a report by World Wide Web Foundation. There is an urgent need for international cooperation in enhancing Indonesian women’s participation online and also providing safety for them in order to be more productive on the Internet. Therefore, we suggest to focus more on women’s issues online for the next WSIS Forum in 2020.

Thematic Workshop



1969-2019 Experiences, challenges and enlightenments from 50 years development of the Internet

Communication University of Zhejiang/CyberLabs

Monday 8 April 2019

09:00 – 10:45

Room C2 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/118#>

- I. **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11**
C3, C4, C5

- II. **Key achievements, announcements, launches, agreements, and commitments**

The speakers and audients in the workshop agreed that we should follow the spirit of internet pioneers to keep the internet open, and also learn from the history to make related policies.

- III. **Main outcomes highlighting the following:**

1) Debated Issues

Highlights of the main issues debated and interactions with audience

Security problem of today`s internet is one of the main problem of the internet, how to make it safer, and how to make the connection of the internet of the rest population is of great importance.

How the internet changed people`s life

What kind of challenges the internet is facing?

What is the most crucial element that led the success of the internet

Highlight key achievements and challenges shared by the audience and/ or panellists

Security is quite important to the network, but we may also realize that the network is

much safer than before, we should have confidence in it. To get the remaining population connected to the internet, we need to develop skills for them to acquire internet, it is more of a capacity building issue than infrastructure issue.

2) Quotes

- Marc Weber (curatorial director of the Internet History Program at the Computer History Museum in Silicon Valley):
So why does remembering the past of the online world matter? How can that affect its future? The online world is now transforming society as fundamentally as the telegraph, the printing press, or even writing itself. Today's companies, government agencies, and NGOs are now making some of the permanent decisions that will determine how society deals with information for decades and even centuries to come. Those decisions are about regulatory structures, economic models, civil liberties, publishing, and more. Yet policy makers, entrepreneurs, and thought leaders know few of the lessons to be learned from earlier online systems – alternative business models, knowledge navigation features, mobile payment methods, educational tools.
- Liu Chuang (Professor of the Institute of Geographical Sciences and Natural Resources, Chinese Academy of Sciences (IGSNRR/CAS))
Ladies` lives were greatly changed by internet, especially in China, women`s position were improved a lot and the one who lead the first program of the internet in China was Madam Hu Qiheng, a lady who have a long vision to brought internet into China. Internet is important to women`s modern position and it saved lots of lives in China.

IV. Overall outcomes of the session highlighting

- main conclusions reached during the discussion
 - We need to learn from history to make more reasonable policies
 - We need to keep the internet open and available to everyone
- the vision for implementation of WSIS Action lines beyond 2015

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

End poverty in all its forms everywhere-to develop the internet and improve its coverage, with the advanced technology, hardware and applications for the poor, and provide proper skills they need, to effectively reduce poverty

Achieve gender equality and empower all women and girls-internet could greatly improve women`s position and capacity and earn a better space for women and girls.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

To learn from the history of the development of the internet, we can know what kind of lessons and experiences different countries experienced and dealt with when they first adapt internet and construct infrastructure, which could be a good way for countries that haven't deployed and developed internet well. Then it could be good for the other half people who haven't get connected.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Technological ethic
Smart city

Thematic Workshop



**Emerging Cyber Security Law and its impact on Information Society /
Cyberlaw Trends of 2019**

International Commission on Cyber Security Law/Cyberlaws.Net

Monday 8 April 2019

09:00 – 10:45

Room K1 - ITU

This outcome will be made available soon.

Thematic Workshop



Technology for Sustainable Development and Impact in an Ever-changing World

Horyou Group

Monday 8 April 2019

09:00 – 10:45

Room K2 - ITU

This outcome will be made available soon.

Thematic Workshop



Harnessing Technology for Refugees

WSIS

Monday 8 April 2019

09:00 – 10:45

Room L1 - ITU

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

Action Line C4: Capacity building

Action Line C6: Enabling environment

Action Line C8: Cultural Diversity and identity, linguistic diversity and local content

Action Line C9: Media

Action Line C11: International and Regional Cooperation

II. Key achievements, announcements, launches, agreements, and commitments

This Thematic Workshop explored how technology is being harnessed to respond to the needs of vulnerable populations aligning with the Sustainability Development Goals of the 2030 Agenda and in particularly focusing on making sure no one is left behind while promoting interagency cooperation. It was joined by representatives of the United Nations Development Programme, the International Organization for Migration and the NGO Jesuit Worldwide Learning. Each of them shared specific case studies with the objective of deepen the understanding of today's key issues and trend related to forced displacement.

III. Main outcomes highlighting the following:

1) Debated Issues

- Issues faced by displaced populations such as poverty, legal identity, lack of information pre-journey, food insecurity, lack of education, etc.
- How to increase people's awareness of the risks of irregular migration.
- Potential of Blockchain technology and its risks

Sample Projects

Problem: Lack of information

IOM - Use of Social Media as a way of empowering displaced populations. Running a peer to peer messaging platform project through smartphone kits. This very simple but impactful technology helps refugees to become field officers that collect testimonies

from fellow migrants and which later on get distributed through social media channels. Real time feedback provided great impact evaluation and it reached over 5 million people.

Problem: High Transaction Costs of Humanitarian Aid

WFP – As a solution to the problem of huge transaction costs WFP explored the use of blockchain technology through their project Building Blocks. Blockchain is a digital ledger technology used as a trusted way to track the ownership of assets without the need for a central authority, which speeds up the processing and settlement of transactions while lowering the chance of fraud or data mismanagement. Crucially, its peer-to-peer nature removes the need for the involvement of costly intermediaries such as banks or other institutions. By harnessing the power of blockchain, WFP also aims to better protect beneficiary data, control financial risks, improve the cost efficiency by reducing fees to financial service providers, and set up assistance operations more rapidly in the wake of emergencies.

Issue: Lack of education

JWL uses a blended model of online learning which is student centered, IT, connectedness and online learning are not driving the model but supporting the model of multiple levels of support and accompaniment of the student. Students in a refugee camp, a remote village or dispersed over a big city come together to form a cohort to study together, to exchange and they are being supported and accompanied by an onsite tutor or coordinator of the learning community. This model is flexible and adaptable, global and local with students being formed into virtual classroom communities, not later than 15 -20 from different countries and cultures forming a global community.

2) Quotes

- WFP – “The real potential of blockchain is when the distributed networks and the data are shared across agencies. It has a potential to be the genesis of a closer and more effective interagency collaboration. Increasing level of self- sufficiency, the ability to control their own circumstances and provide humanitarian aid in a way that is dignified for the displaced populations.”
- UNDP – “There is no single agency that can address all of the challenges and there is no monopoly on the solutions. Solutions are everywhere and we can leverage impact more strongly if we connect”

IV. Overall outcomes of the session highlighting

- New ways of running information campaigns that are more accessible and accurate.
- Continue building on the Commitments of the UN Group of Information Society.
- Promote the use of technology in a way that empowers displaced populations.
- Technology is not enough, we technology that is built for the community to assess a specific need.

- Role of sustainability in the response to humanitarian issues.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

SDG1 – Eradicating poverty

SDG2 – Zero Hunger

SDG4 – Quality Education

SDG 8- Decent work and economic growth

SDG 16 – Promote peaceful and inclusive societies

SDG 17- Global Partnerships

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

Scalability and impact measurement and evaluation.

Training opportunities

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Suggest to discuss further Policy issues and include Governments in the discussion.

Thematic Workshop



Tech Start-Ups for SDGs

WSIS

Monday 8 April 2019

09:00 – 10:45

Room M - ITU

This outcome will be made available soon.

Thematic Workshop

WSIS Accessibility Day



Digital Technologies and Accessibility: From Rhetoric to Reality

UNESCO Chair in ICT4D, Royal Holloway, University of London, and Inter-Islamic Network on Information Technology

Monday 8 April 2019

09:00 – 10:45

Room T103 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/131#>

- I. **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11 C3, C4, C8, C10**
- II. **Key achievements, announcements, launches, agreements, and commitments:**
This highly interactive workshop focused on identifying the most important priorities for action so that the rhetoric around using ICTs for empowering people with disabilities can be turned into reality. It generated an outcome document (<https://ict4d2004.files.wordpress.com/2019/04/what-must-we-do-to-turn-rhetoric-into-reality-so-that-people-with-disabilities-can-be-empowered-through-digital-technologies-1.pdf>) that indicates the ten most important areas for action, by governments, the private sector and civil society
- III. **Main outcomes highlighting the following:**
 - 1) **Debated Issues**
 - The session began with three contrasting short statements from civil society, government and academia:
 - Monica Halil Lövblad (Head, Accessible Books Consortium) on [The Marrakesh Treaty and the Accessible Books Consortium](#)
 - Alex Jones (Head of Emerging Futures and Technology, DFID) on *DFID’s activities at the interface between “digital” and “accessibility”*

- Akber Gardezi (Inter-Islamic Network on IT) on *ICT accessibility: data, good practices and gaps*
- This was followed by a detailed interactive discussion that identified ten important areas that should be prioritized to help ensure that people with disabilities are indeed empowered through ICTs:
 - The need for governments to adopt holistic approaches that integrate the expertise of different Ministries
 - Enabling voices of people with disabilities
 - The continued development of policies, whilst recognising that legislation is essential if action is to be taken
 - The need for partnerships that draw on existing good practices to be created with disabilities groups
 - The need for experienced leaders and champions
 - Differentiation between universal inclusion and assistive technologies
 - The development of training, awareness and capacity building both for people with disabilities and also the wider community
 - Building appropriate technologies with and in support of people with disabilities
 - Ensuring that appropriate financing is available
 - Ensuring that we deliver on our commitments

2) Quotations

- *“Access to appropriate Assistive Technology is key to achieving the SDGs, enabling users to participate in education, work, family, and community life. Markets for these commodities are complex and do not automatically function effectively, particularly in poorer countries. So we need to bring to the AT space the market shaping approaches that have dramatically transformed access and affordability for medicines, vaccines and other life-saving health commodities over the last decade”* Alex Jones (DFID)
- *“One of the key things that keeps coming up in every discussion we have had during our research in OIC member countries is affordability and dignity. Many of our respondents felt that in most cases accessibility was considered a privilege with passive aggressive overtones of charity rather than as a right. The costs of living increase substantially for people with disabilities, especially in developing countries in the absence of systems of standardized provision of assistive technologies or support in general. The lack of access to technology in turn impacts dignity thereby fostering further marginalisation”* (Dr. Akber Gardezi, Inter-Islamic Network on Information Technology, INIT)
- *“Mada Center is working in line with Qatar’s E-accessibility Policy to make all digital platforms accessible, to align with Qatar’s national vision 2030. We recognise the need for the necessary procedures to drive organisations to comply with the E-accessibility standards and we emphasise the importance of localizing technologies and innovations to become more inclusive”* (Aljazi Nasser Al Jabor, Mada Center, Qatar).

IV. Overall outcomes of the session highlighting

- The ten action areas noted under (i) above comprised the main conclusions. However, participants concluded that four commitments were especially important:
 - i. We should advocate for greater action on empowering people with disabilities through ICTs in all contexts and at every opportunity
 - ii. Universal inclusive design is really important so that people with disabilities are not further marginalized through technology. We must ensure that innovative technologies (such as AI, Blockchain and IoT) do not disempower people with disabilities.
 - iii. Bilateral and multilateral donors can play a very significant role in shaping policies and ensuring that actions are implemented in countries where they are working.
 - iv. Appropriate legislation is essential if policies and strategies are to be turned into effective practice.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

These outcomes are especially relevant to: SDG 4 (Quality Education) – ICTs are invaluable in enabling people with disabilities gain transformative knowledge through education; SDG 8 (Decent Work and Economic Growth) – ICTs can enable people with disabilities to access gainful employment, thereby enhancing their lives and self-respect; and SDG 10 (Reducing inequalities) – inclusive technologies can have a very significant impact by enabling people with greater disabilities to participate on an equal par with those who have fewer disabilities.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

This session drew links that are relevant to all of the Action Lines, but especially: C3 – recognising that ICTs are important for enabling people with disabilities to gain access; C4 building capacity amongst policy makers and practitioners so that they put in place the necessary policies and legislation; C8 supporting the cultural diversity and identity of people with disabilities; and C10 emphasising the moral agendas that are important in contributing to their empowerment.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

The value in having a specific day at the WSIS Forum focusing on accessibility was thoroughly commended. It is recommended that this practice is continued throughout future WSIS Forums, and that all sessions are encouraged to include aspects of accessibility and disability in their deliberations.

Thematic Workshop

WSIS Accessibility Day



Safe Listening

ITU/WHO

Monday 8 April 2019

09:30 – 11:00

Popov Room 2 - ITU

I. Key achievements, announcements, launches, agreements, and commitments

Following the launch of the ITU-WHO *Safe Listening Toolkit* in February 2019, the panelists reiterated the need for all of us – governments, industry, civil society and the general public – to advocate for safe listening practices and the implementation of the WHO-ITU H.870 international standard on safe listening devices and systems.

II. Main outcomes highlighting the following:

1) Debated Issues

- Exposure to loud sounds (both in an occupational and recreational context) can lead to irreversible hearing loss. A billion teenagers and young adults are at risk of developing hearing loss because they listen to music too long and too loud.
- Domain experts in health (WHO) and ICTs (ITU) collaborated to develop two complementary global standards for safe listening devices and systems.
- To ensure successful implementation of the global standard and protect people's hearing, the *Safe Listening Toolkit* was developed to provide implementation guidelines for different stakeholders (government, industry, and civil society)
- Panelists discussed next steps (i.e. developing a standard for safe listening venues) and topics for future study in ITU-T standard H.870 (which include a similar standard for related devices, like gaming devices, headphones, VR/AR, and personal sound amplifiers).
- Perhaps the number of safe listening devices used in a city can be a new KPI for safe and sustainable cities.

2) Quotes

- “Around the world, there are more than a billion young people who are at risk of hearing loss.” – Dr. Bilel Jamoussi, Chief, Study Groups Department, ITU-T
- “Hearing loss due to loud sounds is irreversible – but it is also completely preventable.” – Dr. Shelly Chadha, Medical Officer, WHO
- “The prevalence of hearing loss is rising, and will continue to rise, if we don’t take action. If the current situation continues, 900 million people will have disabling hearing loss by 2050.” – Dr. Shelly Chadha, Medical Officer, WHO
- “We put together all the relevant stakeholders and asked them to bring their piece of the puzzle – their experience and work – to put together this knowledge to develop a standard and a toolkit [containing] guidelines to implement the standard.” – Ms. Roxana Widmer-Iliescu, Senior Programme Officer, Digital Inclusion Division and ITU-D Focal Point for ICT Accessibility, BDT/ITU/

III. Overall outcomes of the session

- The panelists reaffirmed that a concerted effort by government, industry, civil society and the general public is necessary to raise awareness about the risks loud sounds pose for our hearing, and that government, industry and civil society must work together to ensure successful implementation of the standard and thereby protect people’s hearing.
- The work that has already been accomplished by setting an international standard for safe listening devices and systems will be built on to formulate similar standards for safe listening in public venues and other audio-enabled devices.

IV. Main linkages with the Sustainable Development Goals (please specify the SDGs)

SDG 3: A billion teenagers and young adults are at risk of developing hearing loss because they listen to music too long and too loud. Rising incomes and greater access to technology are increasing the numbers of people at risk. Once hearing loss due to loud sounds sets in, it cannot be reversed: such hearing loss, if unaddressed, can greatly impact one’s ability to communicate, gain education or find and hold suitable employment. The implementation of a standard for safe listening will ensure that devices will prevent users from causing hearing loss.

V. Emerging Trends related to WSIS Action Lines identified during the meeting

A growing number of people are at risk of developing hearing loss because of rising

incomes and greater access to technology. Addressing this public health issue requires the effective participation of a range of stakeholders (C1) to develop and implement standards, for people to be educated about the risks of loud sounds and how to prevent hearing loss (C4), and a regulatory framework (C6) that supports the implementation of the global standard for safe listening devices and systems, and related standards which will be developed in the future for public venues and other audio-enabled devices.

VI. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

N/A.

Thematic Workshop

WSIS Accessibility Day



Workshop on Accessibility for Emerging Technologies

ITU

Monday 8 April 2019

11:00 – 12:30

Popov Room 2 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/147#>

- I. **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11**
C1, C2, C3, C4, C6, C8, C9
- II. **Key achievements, announcements, launches, agreements, and commitments**
This workshop session highlighted accessibility by design for emerging technologies. New technologies should not create new barriers for persons with disabilities. Leading players in this area explained their experiences in accessibility considerations, various accessibility solutions and features that can be taken into consideration for new technologies. Collaboration will be expected for mainstreaming accessibility.
- III. **Main outcomes highlighting the following:**
 - 1) **Debated Issues**
Following examples were presented as accessibility for emerging technologies
 - Voice interfaces can offer opportunities, eliminating barriers for persons with vision disabilities and those who have a dexterity disability. Having a speed variation in the output of the interfaces is a key thing so that persons with vision disabilities can speed up the output like they often do so on their screen readers. A sufficient volume control is considered for persons with hard of hearing. A secondary interface of a screen for the voice interfaces are considered for persons who are deaf.
 - In Egypt, much efforts have been made since seven years, in supporting innovations in the area of assistive technologies developed for Arabic speaking persons with disabilities. Persons with disabilities are always on board for the testing of Projects

and technologies. Examples include: unified sign language and development of the dictionary utilized by all schools for persons who are deaf and persons with hard of hearing.

- Automatic captioning and automatic Alt Text are introduced using machine learning. The Google AI team recently developed a neural network that can do real-time dictation on a mobile device using only 80 megabytes.
- For visually impaired persons, a secondary audio program is considered.
- Accessible software design training for students of higher education is provided by Teach Access that is an industry partnership.
- For web and smartphone accessibility, ALT text and focused structure are keys so as a screen reader program work properly. An online service to inspect if mobile applications comply with accessibility standards was presented.
- ITU-T Standards on IoT Accessibility: ITU-T Rec. Y.4204 “Accessibility Requirements for the Internet of Things and Applications” (02/19) focuses on accessibility requirements that may arise from the new features of the IoT, including interfaces and interconnectivity issues. ITU-T draft Rec. Y.Acc-PTS “Accessibility requirements for smart public transportation services” is under development.
- ITU-T F.921 (08/18) “Audio-based indoor and outdoor network navigation system for persons with vision impairment” specifies how audio-based network navigation systems can be designed to ensure the inclusiveness and meet the needs of persons with visual impairments. Next step is to ensure such services available to everyone, everywhere with beaconless technology and an open digital platform. The technology utilizes some artificial intelligence and take sensors in the smartphones, to navigate users with more accuracy everywhere.

2) Quotes

Highlighted by several speakers:

- Once an application, software, service are fully developed, altering it to comply with the accessibility requirements is much more difficult.
- Feedback on services is important. Persons with Disabilities should be included in the process of development of emerging technologies.

IV. Overall outcomes of the session highlighting

- Several speakers touched on some emerging technologies already using Artificial Intelligence to provide accessibility features. AI may become a key technology to ensure accessibility in the near future. It was pointed out that a common platform for gathering user response would be desirable. It would be necessary to gather more use cases on the use of AI for accessibility features, and develop guidelines documents so that accessibility is appropriately considered from the design of such new technologies. It was also agreed that common criteria for these new

technologies, especially AI, need to be set up so that they are appropriately evaluated as they are applied to accessibility.

Thematic Workshop



Community Networks and Connecting the Last Billion

ISOC

Monday 8 April 2019

11:00 – 13:00

Room K1 ITU

This outcome will be made available soon.

Thematic Workshop



ICT and low-carbon economy

EverComm/Gridcure/KWIQLY/Novameat/Orange

Monday 8 April 2019

11:00 – 13:00

Room L1 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/Forum/2019/Pages/Agenda/Session/157#intro>

I. Main outcomes highlighting the following:

1) Debated Issues

- The general applicability of a low carbon economy to the SD goals was emphasized in that the effects of climate change can be seen to drive global refugee and famine crises, challenge food production and natural resources and thereby threaten peaceful co-operations between nations, these are in addition to the broadly understood impacts of climate change on society. The implications for the entire value chain from energy generation, though distribution, utilization and alternatives to consumption were underscored.
- Jean-Manuel Canet (Orange) introduced the high level quantitative achievements necessary and associated challenges faced in addressing emissions reduction to the 2030 1.5°C targets and reported on findings of Study Group 5 “Environment, Climate Change and Circular Economy” in the ITU-T.
- The range of opportunity using new and established technology in addressing goals was enthusiastically elucidated by Emiliy Basileo (GridCure).
- Ted Chen (Evercomm) explained the work conducted in Singapore to establish a globally applicable framework approach to highlight areas of priority and opportunity.
- Example technologies to facilitate the search for and the existence of actionable opportunity at scale were given based on existing building stock

and technology with illustrations from Universities, Residential and commercial buildings by James Ferguson (kWIQly).

- Opportunities for substitutive food production technologies were explained together with the potential impact on Food waste, Methane production, transport and supplementary nutrition by Dr Guiseppe Scionti (NovaMeat).
- Challenging questions from the floor ranged from, the applicability of energy saving technology, whole life energy impact of technologies, and the need to motivate and enable not only private citizens and particularly young people through simple technology. Strong emphasis was placed on the essential and growing role of major commercial, industrial and political organizations to enable change where energy is may not be a primary commercial driver.
- Closing the session, appreciation was expressed to the organizers, panel participants, and particularly to the attendees both in reality and on-line.

2) Quotes

- Emily Basilleo GridCure: *'It is not only possible but exciting and essential that ICT solutions continue to enable change, in surprising and often imaginative ways'*.
- Dr Guiseppe Scionti: *' We should remember that we are not only the first generation to confront the challenges of climate change, but also that we have the opportunity to be remembered as the generation, that first understood the need for action and took it for the benefit of future generations.'*

II. Overall outcomes of the session

- There is a challenge, and also real opportunity to achieve low carbon goals.
- Commercially attractive, action is possible given existing infrastructure and technology. It is not only that technologies must become more efficient, but that management of these technologies and awareness of alternative solutions, many novel, already exist and must be more effectively exploited.
- Major impediments to change include access to existing and new sourced of data, awareness of capabilities, and effective communication to responsible parties.
- Implementation of WSIS Action lines require more effective exchange of know-how, greater openness in terms of data and finer resolution between what is confidential and what can be shared to prevent broad-brush restrictions debilitating action.
- The role of major and multinational entities to explore, evaluate and communicate findings and success stories and engage in collaborative partnerships is essential.

- Protocols & APIs together with open exchange of data are a key enabler.

III. Main linkages with the Sustainable Development Goals (please specify the SDGs)

Low carbon, is an exceptional subject domain in that it reflects and impacts on all sustainable goals. It is noted that there is no 'magic-pill' that will somehow solve all problems but a myriad of actions and tasks that will and must effect all aspects of society in 'every corner' of the earth.

IV. Emerging Trends related to WSIS Action Lines identified during the meeting

Emerging trends are well-known and in the public eye including ever greater sources of data (of varying quality) and these involve (IoT, data capture, storage and communication, analysis, diagnosis and action) as enabled by all ICT domains (eg AI, Cloud, Protocols, etc).

V. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

The domain of low carbon economy is very broad. It is important that diverse representation from innovative sources is encouraged. Representation from developing and challenged environments should be considered, as any panel will otherwise not be exposed to the many diverse and important perspectives that need to be considered. Greater representation from major players could benefit the exchange of information.

Thematic Workshop



Media and Information Literacy empowered by Artificial Intelligence for Diversity and Disaster

IFIP and UNESCO

Monday 8 April 2019

11:00 – 13:00

Room M - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/146#>

I. **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11**

- C2: Information and communication infrastructure: an essential foundation for the Information Society
- C3: Access to information knowledge
- C4: Capacity building
- C7: ICT Applications (E-learning, E-health, E-employment, E-environment and E-science)
- C8: Cultural diversity and identity, linguistic diversity and local content
- C9: Media
- C11: International and regional cooperation

II. **Key achievements, announcements, launches, agreements, and commitments**

We have agreed with the following points:

- For diversity, we need to be aware the barriers between us as we have the culture, language and time differences. What we need is to understand and respect the others in those terms.
- IT specialists should know that they can contribute to society and peace.
- We can look at children as media for people to learn media and information literacy; i.e. people without literacy may well learn through children
 - It could happen when we look into the elderly. They learn through communications with children.
- Care for the children and the youth after the disaster requires some programme to recover.

- It is important to look at how media literacy could help the emotional aspect of children to recover.
- Fintech could be a great tool for women under some circumstances without any bank account to have an account, based on the work done by UN Women on the use of blockchain for issuing IDs and insurance to refugees.
 - This aspect was discussed in another workshop on Thursday:
 - ✧ Session 297: Enabling access to connectivity for refugees: inclusion in national frameworks organized by United Nations High Commissioner for Refugees
- The above issues might have been missing out from SDGs

III. Main outcomes highlighting the following:

1) Debated Issues

- Highlights of the main issues debated and interactions with audience
 - The audience from South Africa showed her interest in the museum project presented by Yumiko Mori with NPO Pangaea.
 - About AI:
 - We use AI all the time and accessible. However, AI might be over height. We need to be sure the difference between automation and AI; in many cases we have automation without AI.
 - There was a discussion that people might expect too much about AI without reality. We need to see pros and cons of AI and discuss to what extent we could utilize AI.
 - About elderly:
 - We had a question from an audience in Japan whether there is any project to solve the solitary death problem of elderly after disaster or not. The moderator explained what happened during the disaster response and recovery phases as follows. In the first three months or so victims would live in a shelter where they live too closely and in an uncomfortable way. After three months they would move to temporary housing which would last for up to two years. Finally, they would move to disaster recovery public housing which is supposed to be a usual apartment and should be expected to be comfortable. What happened was that more people many of them were elderly, committed suicide as they felt so lonely, whereas, when they are in shelter and temporary housing, the living condition was so uncomfortable that people would get together having tea and all that in a common space.

- We also pointed out there are some attempts to let the elderly and children in a kindergarten so that the elderly get comfort through communications with those kids. Moreover, when we set out a shop unattended in a temporary housing in the disaster area eight years ago in northern Japan and let them shop using a prepaid card, initially the elderly would not dare to use the prepaid card but use cash. When the children started using the prepaid card, they taught those elderly people how to use the card and they made it. What we call grandchildren interface works to introduce new technology to the elderly.
 - One of the audiences suggested to think about issues in terms of information and knowledge societies rather than in terms of Information Society.
 - Trust and confidence could be considered in terms of SDGs, but those issues may not be on the same level. We could look more into security and safety not only in technical terms but in more general terms as well as education and ethics.
- Highlight key achievements and challenges shared by the audience and/ or panelists
 - Instead of AI, we are sure of the possibility of the use of FinTech, such as blockchain technology to help the disaster situations including for refugees and the gender problems by issuing IDs as well as on cash transfer: e.g. UN Women's initiatives.
 - We do have barriers between us as we have the culture, language and time differences. What we need is to understand and respect the others in those terms.
 - IT specialists should know that they can contribute to society and peace in terms of Peace Engineering: e.g. Pangaea's challenge.
 - Media and information literacy could expand to social literacy such as therapy for children at disaster, by looking into the children's emotion transition; e.g. UNESCO's Media and Information Literacy (MIL) Expansion (MILX) on #MIL Cities where we can resolve real social problems by mixing real and virtual MIL implementations. Presumably such an emotional part might be missing out of the current SDGs.
 - Trust including confidence would be the important concept which we need to look into when we talk about Information and Knowledge societies.

2) Quotes

- Yumiko Mori (NPO Pangaea)
 - "We do have barriers between us as we have the culture, language and time differences. In NPO Pangaea, we have

been working on last 17 years, is trying to make a little hole so that we can see people who are on the other side of the hole. We try and identify what are the bricks that line between us.”

- “There are many things to contribute to society. Peace Engineering is for the people with ICT skills to make social contribution.”
- Toshihisa Nakamura (UN Women)
 - “If we use the ICT in a right way, we can close gender gap and inequality in many situations, including humanitarian and disaster context.”
 - “Blockchain technology could be used to empower women in humanitarian context, for instance through securing their ID and ensuring access to financial means.”
- Yumiko Mori: “M-Pesa in Kenya[1] has made a low price phone and all that.”
- Masatoshi Hamada (Université Paris VIII)
 - “ICT comes from marketing. Moral-based ICT is required. Next SDGs: ICT beyond marketing is required.”
 - “MIL expansion can have good opportunity for refugees and children to use their emotion more so that they could reach to have positive emotions out of difficult situations.” In disaster, people in community and teachers are also affected by disaster and cannot help children to have positive emotion.
 - “AI, ICT and SDGs can come only after children could come to get positive emotion with social literacy. UNESCO’s MIL expansion is intended to provide this social literacy such as children therapy.”
 - “The emotional aspect is missing in media and information literacy to help out children at disaster so that we look into this aspect.” Therapist with ICT may well be in need. Current SDGs do not address this sort of things. “

References:

[1] Wikipedia: M-Pesa: <https://en.wikipedia.org/wiki/M-Pesa>

IV. Overall outcomes of the session highlighting

- **main conclusions reached during the discussion**

- 1) Children and youth could be viewed as media to provide the grown-up people with literacy. This is how one can learn literacy in certain circumstances.

2) Fintech is definitely a tool to help out the people not only at disaster but also in the normal situations.

- **the vision for implementation of WSIS Action lines beyond 2015**

1) C2. Information and communication infrastructure

2) C3. Access to information and knowledge

3) C4. Capacity building

4) C5. Building confidence and security in the use of ICTs

5) C7. ICT Applications: E-learning

6) C7. ICT Applications: E-health

7) C7. ICT Applications: E-environment

8) C7. ICT Applications: E-science

9) C8. Cultural diversity and identity, linguistic diversity and local content

10) C9. Media

11) C10. Ethical dimensions of the Information Society

12) C11. International and regional cooperation

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

- GOAL 1: No Poverty

- i. Target 1.4 is: to ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance. UN Women's initiatives to use of blockchain technology introduced at the workshop is related to this target.

- ii. Target 1.5: to build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters. Our workshop is concerned with disaster and diversity so that it is related to this target. Our panelist, Toshihisa Nakamura from UN Women pointed out that mortality rate for women at disaster tend to be higher than that of men.

- iii. Target 1.a: to ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions. Our panelists, Yumiko Mori from Pangaea has been working on education using IT for children from various parts of the world. One example in Viet Nam is that the farmers would learn more on farming knowledge through children who obtained the knowledge from the experts in Japan by

Pangaea's trial on the use of ICT for communications on understanding the others. This is an example of use of children and the youth as media to people to obtain the knowledge. It may well lead eventually to save the people from poverty.

Moreover, UN Women is working in this aspect with drought Forecast Based Financing (FbF) to identify preparedness actions by various stakeholders for water, sanitation and hygiene as well as food security and livelihoods in Viet Nam.

- GOAL 2: Zero Hunger
 - i. Target 2.3: by 2030, to double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.
 - ii. Target 2.4: by 2030, to ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.
 - iii. The work by Pangaea and initiative by UN Women, both introduced in SDG1 could apply here as well to help sustainable agriculture.
- GOAL 3: Good Health and Well-being
 - i. Our workshop's basic concept is to use ICT for disaster and diversity is closely related to this goal because providing the people with the information and knowledge on health and disease is important. Education on how to use ICT by Pangaea, UN Women and UNESCO on media and information literacy (MIL) activities are important in this aspect.
- GOAL 4: Quality Education
 - i. The workshop is concerned tightly with this goal. In particular, Pangaea is working specifically for target 7 --- i.e. SGD4.7. UNESCO's work on MIL has been contributed definitely to this goal.
- GOAL 5: Gender Equality
 - i. UN Women is working in this aspect and Toshihisa Nakamura presented their initiatives for gender equality at our workshop.
- GOAL 6: Clean Water and Sanitation
 - i. As introduce in our workshop, drought is being dealt with by UN Women's initiative so that there could be better management of water supply.
- GOAL 7: Affordable and Clean Energy
 - i. It is essential that one has access to energy such as electricity to use information systems and tools for communications, in particular, at disaster. In terms of sustainability, this goal is related closely to our

workshop issues, although this time we have not discussed in this aspect. At disaster, we have had problems such as Fukushima and Chernobyl. In terms of disaster management, we will need to look at this aspect.

- GOAL 8: Decent Work and Economic Growth
 - i. At our workshop, UN Women's pilot initiative on leveraging block chain technology for cash transfer for women at refugee camps was introduced.
- GOAL 9: Industry, Innovation and Infrastructure
 - i. At disaster business continuity issues are one of the important aspects related to our workshop, although we have not looked into this time.
- GOAL 10: Reduced Inequality
 - i. UN Women's initiatives presented at the workshop is targeted to this goal. Also at disaster mortality rate for women is higher than the one for men, so that this issue is important in terms of disaster as well as diversity, which are our workshop themes.
- GOAL 11: Sustainable Cities and Communities
 - i. This is the main SDG, disaster issues are usually categorized, so that our workshop is related tightly.
- GOAL 12: Responsible Consumption and Production
 - i. Education to the youth is important to support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production including recycle issues. We have discussed how the workshop presented the education to the youth by Pangaea and UNESCO, we could look more into the contents of education such as SDG12.
- GOAL 13: Climate Action
 - i. UN Women presented their initiative in Viet Nam on drought forecasting to help women.
- GOAL 14: Life Below Water
 - i. At disaster, water and sea might be contaminated, so that this goal is related to our workshop, although we have not discussed on this issue.
- GOAL 15: Life on Land
 - i. Protection of land and environment is closely related to disaster as well, although this time our workshop did not look into this issue.
- GOAL 16: Peace and Justice Strong Institutions
 - i. In our workshop, Yumiko Mori from Pangaea introduced the case of communication between children to get over the difference, which led to the feeling of peace. Also, such a way of communications might well bring peace to communities. She introduced "Peace Engineering" so that ICT specialists could contribute with their skills to peace.
- GOAL 17: Partnerships to achieve the Goal

- i. Pangaea and UNESCO have been implementing educational communication frameworks so that the work presented at our workshop contributed to education for children and the youth who would contribute partnerships for the next generations.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

- C3. Access to information and knowledge
 - i. children and youth could be of help for grown-up people to gain literacy
- C5. Building confidence and security in the use of ICTs
 - i. Fintech such as blockchain could be of great help to the people and women in need as well as those in disaster such as refugees.
- C9. Media
 - i. It is important to give children and youth in normal situations as well as in disaster to get chances to get media and information literacy
- C10. Ethical dimensions of the Information Society
 - i. Ethical aspects could be looked into for trust and confidence of information knowledge societies.
- C11. International and regional cooperation
 - i. As in the case of NPO Pangaea, global communication activities youth would provide the world with peaceful and understanding environment.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

- Use of Fintech to help people in the developing countries as well as those in disaster
- Diversity and peace engineering
- Implementing trust and confidence for information and knowledge societies
- SDGs for next generation: From ICT towards Social Literacy
- Disaster and Energy Supply issues

Thematic Workshop

ICT and Sport



Creating Value in the Sport Industry: The Role of IPRs

WIPO

Monday 8 April 2019

11:00 – 13:00

Room C2 ITU

I. Key achievements, announcements, launches, agreements, and commitments

Participants agreed to further consider and submit collaborative activities relating to intellectual property (IP) and Sport, under WSIS and WIPO auspices, in cooperation with the private sector. This would entail awareness raising policy and capacity building activities with member states and the private sector for optimizing/deriving benefits from the linkages between IP and sport.

II. Main outcomes highlighting the following:

1) Debated Issues

The session showed the linkages between IP and sport, IP as a major contributor to the enhancement of performance equipment in the industry as well as IP being a means of optimizing economic benefits in the sport industry – from sport federations to athletes to sport fans – and sustain the development of global sports. The session discussed modern information and communication technologies (ICTs) based on IP that are fueling sports innovation.

Panelists presented the different financial models of the sport industry based on IPR's and the various IP based revenue streams (i.e. broadcasting rights, branding, licensing, sponsorship, etc.).

Panelists also highlighted how those rights support the global sports ecosystem. In that context, the importance of broadcasting and media rights was highlighted. The sale of broadcasting and media rights is now the largest source of revenue for most sport organizations. The impact of digital technology on the media landscape was also considered. Unlike other creative industries, sport is different because it provides content. New platforms and new devices for the dissemination of sport events have emerged for the benefits of sport fans. At the same time piracy has increased, hence an increased need to protect broadcaster's signals against unauthorized uses on all platforms.

Panelists advocated for the importance of safeguarding the economic value of IPR's in sport through effective enforcement as well as the need to lobby governments to update broadcasters rights and support respect for IP rights. Some public policy challenges such as integrity in sport were also touched on.

The panel heard about a real-life experience of a former Olympic athlete on why IP was important to athletes and how they can benefit from IP. It also touched on the use of athletes as brand ambassadors and the need for synergies between the athletes and their brands.

The panel recognized the huge potential of IP and sport to drive social and economic development through national IP based strategies and how IP can be used to build a sport industry. In that context, it considered the successful development of the Jamaican sport policy, which has led to a thriving sport sector in the country.

2) Quotes

"The commoditization, globalization and development of sport is increasingly nourished and driven by intellectual property rights. The global or regional application of these rights to sporting events is not synchronized. It is therefore imperative for WIPO as the global institution, which administers intellectual property rights to initiate a harmonized approach towards the IP or sui generis protection of sport. This will not only fast-track development in this sector but will also infuse integrity and fair play in sport". Oira Hezekiel, Mount Kenya University.

"To ensure long-term protection of the integrity and values of sport in its various dimensions, it is absolutely critical to adopt a coordinated approach at a global level to respect and protect IP rights. IP Rights play a central role beyond the financial sustainability of major sport events, as it is directly linked through patents, copyrights, trademarks, designs, trade secrets and so forth to the very essence of both sport and IP, which is fair competition. We must strive to work together, addressing the multiple challenges with optimism, creativity and ambition so sport continues delivering to society in the unique way it does, as wanted and legitimately expected from citizens". Diogo Guia, Director, Sports Public Policy, International Center for Sport Security

"As a small developing state, Jamaica has a considerably strong international reputation and brand, of which sport is a major pillar. Jamaica's National Sports Policy recognises the value of Sport for Economic Development and that the development of the economic potential of sport will depend on the steadfast protection of intellectual property rights as a fundamental resource. The income generated from sports is invaluable for the growth of athletes, their families, clubs and communities, the national sports programme and the national economy as a whole. However, the lack of international protection for country names in the IP system continues to hamper us, as we grapple with domain names and websites which seek to pass off Jamaica-branded sportswear as authentic Jamaican goods". Marcus Goffe, Deputy Director, Jamaica Intellectual Property Office (JIPO).

III. Overall outcomes of the session

The session provided an overview of the various IP considerations in the sporting arena. It also provided a forum for airing the perspectives of various stakeholders involved in the sporting industry. It contributed to enhanced awareness amongst WSIS stakeholders on the relationship between sport and IP. It provided an opportunity to share best practices on the strategic use of IP in sport, particularly as regards broadcasting rights and deals with media platforms. Panelists identified public policy areas of intervention, notably as regards WIPO on the need to create greater awareness and facilitate the strategic use of IP in the sport sector among member states. The session also addressed the need to protect broadcaster's signals against unauthorized uses as well as their investment in acquiring rights and bringing sport events to the public was highlighted. The need for sporting bodies to coordinate and set up integrity groups so as to address the issues of betting and gambling associated with sports was mentioned. Finally, the session demonstrated that, the entire industry of sport as it is today is increasingly being seen as a contributor to the economic, social and cultural development of countries.

IV. Main linkages with the Sustainable Development Goals (please specify the SDGs)

SDG 9

Thematic Workshop



Artificial intelligence and data privacy – the importance of a diverse engineering and technical workforce

International Women in Engineering and Science

Monday 8 April 2019

13:15 – 14:00

Popov Room 2 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/153#>

I. Key achievements, announcements, launches, agreements, and commitments

The workshop discussed several ideas which we will investigate further:

- Education and outreach: We are looking at regional and local events based on AI, such as potential workshops and events in Benin, Romania and Ukraine

- Trust: we will be looking at the labellisation of AI systems and robots against gender bias and other potential biases; and at the potential for a code of conducts of engineers and the tech sector, such as the hipocratic oath in medicine; work with regulators and ministries on how to best regulate fur the interest of the public, including regarding the gender issues

II. Main outcomes highlighting the following:

1) Debated Issues

- The issues debated included the importance of all stakeholders to be involved in the discussions regarding artificial intelligence.
- The issue of privacy, data protection and the impact of culture on data ownership were debated.
- Regulations, the implementation of GDPR, and the right balance to allow the development of applications useful to the people, while not
- The benefits of AI were discussed with the example of teachers' support in remote areas.

2) Quotes

- “As woman, as African, depending on where you are in the world, Artificial Intelligence is seen has having different impacts. What we have to do now to be part of the conversation. We need to work on how we make sure that regulations we put in place are aligned with people’s needs and expectations.”, Aurelie Ilimatou Adam Soulé, Ministre de l'Économie Numérique et de la Communication, Bénin
- “One threat of artificial intelligence (AI) is not having consistency. From the programming world, where I am from, if you feed in AI inconsistent data, if you don’t have enough data, the decision taken won’t be the right decision.” Maria Manuela Catrina, State Secretary at Ministry of Communication and Information Society, Romania

III. Overall outcomes of the session highlighting

The session was a great opportunity to discuss the ways artificial intelligence would help society and answer people’s needs, when the individual is considered at the heart, and biases are removed. The development of AI systems require trust. This trust is based on the confidence in data, its consistency, reflection of society. Anonymisation is also important to ensure data privacy.

In this process, the importance of recognising and addressing biases, in data collection, storage and use are key. Culture plays an important role into understanding the nuances which may exist in the concept in data ownership, and privacy. Therefore the implementation of regulations and any scheme should also include the cultural elements, and diversity in society.

The workshop discussed several ideas which we will investigate further:

- Education and outreach: We are looking at regional and local events based on AI, such as potential workshops and events in Benin, Romania and Ukraine
- Trust: we will be looking at the labellisation of AI systems and robots against gender bias and other potential biases; and at the potential for a code of conducts of engineers and the tech sector, such as the hipocratic oath in medicine; work with regulators and ministries on how to best regulate fur the interest of the public, including regarding the gender issues

IV. Main linkages with the Sustainable Development Goals (please specify the SDGs)

This session addresses the important role of artificial intelligence in the development of tools and solutions which will help taking decisions based on large sets of data. The session will discuss the importance of the quality of the data set, the use of the data in order to ensure that the solution is trustworthy.

The specific SDGs concerned are 3, 4, 5, 8, 9, 10, 11, 16, and 17.

V. Emerging Trends related to WSIS Action Lines identified during the meeting

- Trust in AI
- Education in AI
- Regulations
- Labellisation

Thematic Workshop



Commonwealth Coordination on ICTs for SDGs

Ghana and United Kingdom

Monday 8 April 2019

13:15 – 14:00

Room A - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/151#>

I. Key achievements, announcements, launches, agreements, and commitments

- Commonwealth countries will renew their coordination on issues at the International Telecommunication Union and on ICTs for SDGs.
- There will be a Commonwealth Spectrum Management Forum on 19 – 21 June to discuss Commonwealth approaches to the World Radiocommunications Conference (WRC) 2019.
- 47 Commonwealth countries have benefited from capacity-building activity following the Cyber Declaration of the Commonwealth Heads of Government meeting. 28 countries have so far undertaken a voluntary national cybersecurity capacity review.
- There will be further Commonwealth meetings at ITU Council, ITU Telecommunications Standardisation Advisory Group and WRC-19.

II. Main outcomes highlighting the following:

1) Debated Issues

- H.E. Mr Julian Braithwaite noted that Commonwealth Ministers had agreed last year that Ghana and the UK should co-chair Commonwealth coordination at the ITU.

- Unfortunately the Hon. Minister from Ghana, Mrs. Ursula Owusu-Ekufu, was not able to attend the WSIS Forum this year due to other business. He welcomed the fact that the Commonwealth Telecommunication Organisation was providing secretariat support to this work.
- Malcolm Johnson, Deputy Secretary General of the ITU, said that there was a long tradition of Commonwealth coordination at the ITU. The ITU welcomed this, noting that it could help build consensus at ITU meetings because Commonwealth countries were active in four ITU regions and Commonwealth countries were very diverse, for example in terms of development and geography. Even if countries did not always agree, the Commonwealth was an invaluable platform for sharing views and experience and building understanding and shared goals.
- Leonard Obonya (Commonwealth Telecommunications Organisation) described the programme of work for 2019, including coordination at the Conference Preparatory Meeting for WRC-19 and a Spectrum Management Forum to be held in London 19 – 21 June. There would also be coordination meetings in the margins of ITU Council in June and TSAG in September, as well as coordination during WRC-19 itself.
- Nigel Hickson (ICANN) described the Commonwealth meetings that take place at the Governmental Advisory Committee (GAC) of ICANN, currently chaired by Australia. The GAC membership included 178 governments and 30 observers. The Commonwealth discussed issues such as cybersecurity and data protection and it was a valuable platform for countries to get their points across.
- Ryder Thomas (UK) described follow up work to the Cybersecurity Declaration from last year's Commonwealth Heads of Government Meeting. All 53 Commonwealth States signed the declaration, and implementation continues ahead of Rwanda 2020. 47 countries have benefited from capacity-building activity. 28 countries have so far undertaken a voluntary national cybersecurity capacity review. Multistakeholder cooperation will deliver policymaking toolkits, best practice guides and sustainable, local online safety websites.
- WSIS Forum participants from Singapore, Sri Lanka, Kenya, the UK and Ghana raised issues such as online hate speech and freedom of speech, especially following the recent tragic shootings in New Zealand, as well as the impact of AI and block chain, child online protection, cybersecurity and connecting the unconnected. These were recognised as issues where the Commonwealth could strengthen collaboration and share experience. The UK Government announced that it had published that day a White Paper on Online Harms and said it was keen to work with other countries on this important agenda.

2) Quotes

- “The strength of the Commonwealth is its diversity. When the Commonwealth can coordinate a position, it is likely to lead to a successful outcome” (Malcolm Johnson, Deputy Secretary General, ITU)

III. Overall outcomes of the session highlighting

- Commonwealth countries will strengthen their collaboration and coordination on

- ICTs for SDGs
- Topics for future collaboration should include online hate speech and freedom of speech, the impact of AI and block chain, child online protection, cybersecurity and connecting the unconnected

IV. Main linkages with the Sustainable Development Goals (please specify the SDGs)

- Commonwealth countries will strengthen their collaboration and coordination on ICTs for SDGs
- Topics for future collaboration should include online hate speech and freedom of speech, the impact of AI and block chain, child online protection, cybersecurity and connecting the unconnected

V. Emerging Trends related to WSIS Action Lines identified during the meeting

The 53 members of the Commonwealth share the values and principles set out in the Commonwealth Charter and work collaboratively with one another in a range of areas that contribute to the WSIS, including development, governance and technical assistance. This kind of international and regional cooperation (Action Line C11) is critically important to the achievement of all WSIS Action Lines.

VI. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Further examples and best practice regarding international and regional cooperation.

Thematic Workshop



Innovation 4 Digital Literacy

American Tower Corporation

Monday 8 April 2019

13:15 – 14:00

Room C1 - ITU

Please find in the link below, more informations regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/154#>

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

Digital literacy is considered an essential set of skills needed to find information and communicate in today's world. This is key to achieving the WSIS vision of the people-centred, inclusive and development-oriented information society, and the 2030 Agenda plan of action for people, planet and prosperity.

Accordingly, promoting innovation 4 digital literacy links directly with Action Line C1 as it encourages the promotion of ICTs for development. While digital literacy initiatives link to Action Line C3 and C4 as they increase prosperity through enabling access to information and knowledge, as well as building capacities by enabling people to improve and retain the skills, knowledge and tools needed to do their jobs competently or to a greater capacity. To gain full advantage from this potential, an enabling environment is required (Action Line C6), supported by international and regional cooperation to foster innovation in bridging the digital divide (Action Line C11 and C2).

II. Key achievements, announcements, launches, agreements, and commitments

The panel emphasized the importance of the multistakeholder approach in facilitating innovation and digital literacy. It was noted that – bridging the digital (gender) divide and equipping citizens with the skills needed to embrace the Fourth Industrial Revolution requires an extensive, multifaceted, collaborative framework.

III. Main outcomes highlighting the following:

1) Debated Issues

- Effectiveness of digital literacy initiatives and their importance in bridging the digital divide;
- The multistakeholder governance model of the telecommunications ecosystem;

- Private sector as a key enabler of increased connectivity;
- The ITU's role as a neutral platform for policy discussions.

a. Highlight key achievements and challenges shared by the audience and/ or panellists

- ATC highlighted its 'Digital Villages' program, the company's flagship philanthropic initiative. Digital Villages are computer-equipped centers/kiosks that use the uninterrupted power supply and broadband link from ATC's tower sites to provide host communities with free education and training in ICTs.
- MTN Group shared with the audience statistics on the impact of its 'Internet Bus' – a mobile telecentre where a computer lab is installed in a bus to be driven around to underserved communities.
- The Uganda Communications Commission expressed a challenge in ensuring last mile connectivity and emphasized that the Commission taking all efforts to foster a regulatory environment, which encourages investment in infrastructure.

2) Quotes

- "Regulators must find the right balance between hard and light regulation of telecommunications companies." Dr. Eun-Ju Kim, Chief Innovation and Partnership Division, International Telecommunications Union.
- "Telecommunications infrastructure providers are and will continue to be key enablers of last mile connectivity" Mr. Ravi Suchak, Vice President, Public Affairs – EMEA, American Tower Corporation.

IV. Overall outcomes of the session

- Multistakeholderism is essential to bridging the digital (gender) divide.
- Capacity building and digital literacy are key to survival in the Fourth Industrial Revolution
- More efforts are required to spur collaboration on building capacities and digital literacy.
- The session reaffirmed the importance of promoting and maintaining gender equality and women empowerment, guaranteeing the inclusion of women in the emerging global ICT society.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

Digital literacy initiatives bolster access to quality education for all (Goal 4), increases gender parity, and facilitates access decent work (Goal 8), which in turn can reduce inequalities (Goal 10) and uplift people from extreme poverty (Goal 1), enabling governments to dedicate more resources to ensuring peace, justice and strong institutions (Goal 16). Maximizing benefits of digital literacy initiatives and enabling a knowledge-based society requires multistakeholder cooperation as aligned with (Goal

17) on smart partnerships.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

N/a

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Infrastructure for Sustainable Development.

Thematic Workshop



Blockchain and Data Protection

University of Geneva

Monday 8 April 2019

13:15 – 14:00

Room C2 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/155#>

I. Key achievements, announcements, launches, agreements, and commitments

Blockchain was identified by Jörn Erbguth (a consultant) as a technology that can also be a tool to provide better privacy, but – if improperly used – also a threat to privacy. Katrin Kirchert (a lawyer) gave a summary about how blockchains can comply with privacy regulation. She reported about a workshop at the University of Geneva held that same morning. (See <https://wsis.erbguth.ch> - The audience asked that a link to the morning workshop be included in this report.) The panelists identified and emphasized the need for creating best-practices on this topic. Martin Adolph (ITU) described the efforts of ITU, ISO and JPEG in this field whereas Anja Grafenauer (privacyblockchaindesign.com) spoke about the German DIN SPEC 4997 that is focused on blockchain and privacy.

II. Main outcomes highlighting the following:

1) Debated Issues

- Jörn Erbguth (independent consultant, University of Geneva and certified DPO) introduced the topic by pointing out that huge centralized data collections controlled by powerful private or government actors are a threat to privacy. We need to decentralize control and blockchain is a tool that can help to do that. Blockchain can foster privacy by empowering individuals rather than big players. Immutability of blockchains does not have to be a contradiction to the right to be forgotten if used correctly. Best practices for using blockchain in a privacy enhancing way are needed.
- Katrin Kirchert, LL.M. (lawyer for privacy and data protection law and certified DPO) summarized the outcome of an in-depth workshop on this issue the same

morning at the University of Geneva and the different presentations held there. She also reported about the position of the French data protection authority CNIL that alone has issued a detailed statement on this topic. Furthermore, Katrin presented five different ways how blockchain can be used in a data protection regulation compliant way as a conclusion of the participants' discussion in the morning:

- **Do not put any personal data (at all) on a blockchain.** However, this is easier said than done, since the definition of personal data under GDPR is very broad.
- **Use privacy enhancing technology and ensure that no personal data can be derived from the blockchain.** Technology like hashes or zero knowledge proofs – if used correctly – can securely protect personal data. However, there remains legal uncertainty whether this will still be considered personal data.
- **Obtain a justification that is permanent. Don't rely only on consent!** Consent can always be withdrawn, so it should not be used as a basis for putting information on an immutable blockchain. However, when the processing is needed for the performance of a contract with the data-subject (e.g. a Bitcoin-payment) or there is a legal obligation to publish something permanently, you can put that information on a public blockchain.
- **Let users put their data on a public blockchain themselves.** GDPR wants to empower the users. So, if you put users in direct and informed control and they store their personal information on a blockchain themselves, this is GDPR-compliant.
- **Build specialized blockchains that forget.** Of course, this sounds like a contradiction. When a blockchain can forget anything at any time, you should rather use a conventional database. However, a special blockchain can be built that can store only part of the data forever or can keep immutability only for a limited time – for example in order to implement a book-keeping blockchain that forgets after a fixed retention period – e.g. 10 years.

It is sufficient to follow one of these five ways or they can be combined in a privacy enhancing application.

- Martin Adolph (study group advisor at the ITU) introduced the standardization activities of ITU in that field. He highlighted the work of the ITU-T Focus Group on application of distributed ledger technology (FG DLT) that will conclude and publish its deliverables later this year. He explained the difference between ITU-T focus groups (pre-standardization open to non-members) and study groups, which develop international standards (ITU-T Recommendations). For instance,

study group 17 is developing several standards that address various security aspects of DLT. Martin also mentioned activities by other standards bodies like ISO and JPEG.

- Anja Grafenauer (Co-Founder at privacyblockchaindesign.com) presented the newly founded DIN SPEC 4997 Privacy by Blockchain Design: a standardized model for processing personal data using blockchain technology. She co-initiated a light standard on privacy-compliant blockchain applications at the Deutsches Institut für Normung (the German standards organization), to be published by the end of this year. The DIN SPEC aims at providing practical guidelines and best practices to achieve privacy by design (art. 25 GDPR) in blockchain scenarios. In particular, the group will focus on creating a common language between law and IT as well as using design patterns derived from law to facilitate the work of IT professionals.

2) Quotes

- “Blockchains used correctly can foster privacy. Immutability and the right to be forgotten do not have to be contradictions”, Jörn Erbguth (independent consultant, lecturer at the University of Geneva, certified DPO)
- “Don’t be afraid to use the blockchain technology in your company because of data protection regulation like the GDPR. There are possible ways to secure privacy on a blockchain”, Katrin Kirchert, LL.M., lawyer for privacy and data protection law and certified DPO
- “All interested parties are welcome to review and comment on the draft deliverables of the ITU Focus Group on Distributed Ledger Technology. The protection of personally identifiable information is an important point to be considered at this early stage of blockchain’s development”, Martin Adolph, study group advisor at the International Telecommunication Union (ITU)
- “Blockchains can help us raise levels of data sovereignty in the digital world. However, we first need to start bridging the gap between law and IT and put the principle of privacy by design (art. 25 GDPR) at the core of IT architecture.”, Anja Grafenauer, co-founder at privacybyblockchaindesign.com

III. Overall outcomes of the session highlighting

- Blockchains can foster privacy.
- There are different ways to achieve GDPR compliance, however, not every blockchain application use case can be made GDPR-compliant.

- Privacy needs to be taken into consideration from as early as the design stage of a project (privacy by design).
- There is still a lot of legal uncertainty.
- Best practices for privacy enhancing use of blockchains are needed.
- There are activities on distributed ledger technology and blockchain in different standardization bodies. Only few of these activities address privacy and protection of PII.
- There exists coordination between different standardization activities.

IV. Main linkages with the Sustainable Development Goals (please specify the SDGs)

Privacy is a human right and required for achieving many SDGs. To name just some of them:

- SDG 8 Decent work and economic growth: Privacy at the workplace is important for providing a decent work environment.
- SDG 9 Industry, innovation and infrastructure: Many see blockchain as one of the main future information infrastructures. Companies and governments need to make sure that this infrastructure is not a threat to privacy but that it fosters it.
- SDG 11 Sustainable cities and sustainable communities: Blockchain is often debated in the context of smart cities and IoT. Smart cities need to protect everyone's privacy in order to be sustainable.
- SDG 12 Responsible consumption and production: Responsible industries do not invade people's privacy and do not abuse their personal data.

V. Emerging Trends related to WSIS Action Lines identified during the meeting

Emerging Trends are blockchain, privacy, privacy by design and user empowerment.

VI. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

The discussion on blockchain and privacy has just started. It will be an important topic in future governance forums like the EuroDig 2019, the IGF 2019 and the WSIS forum 2020

Thematic Workshop



Techpreneurs tackling the SDGs

World Summit Award

Monday 8 April 2019

13:15 – 14:00

Room C2 - ITU

Please find in the link below, more informations regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/156#>

I. Key achievements, announcements, launches, agreements, and commitments

WSA Call for Applications 2019 – opened during the workshop!

<https://www.worldsummitawards.org/contest/>

Invitation of all delegates to join the WSA Global Congress – a transformative learning conference – March 9-11 2020, Vienna, Austria

II. Main outcomes highlighting the following:

1) Debated Issues

- highlights of the main issues debated and interactions with audience

The ITU SG Houlin Zhao stated at the WSIS forum that the benefits of emerging tech for our societies and economies will come through innovation. A lot of these innovations come from entrepreneurs, developing digital solutions tackling the UN SDGs. International institutions and UN agencies can be key in order to add knowledge, insight and data, they can help to give their blessings, but they can also make relevant connections to stakeholders in the respective regions and countries.

Yet it is complicated for young entrepreneurs to get access to international organizations and understand how they work.

Jon Mark Walls from GovFaces and Jordi Serrano Pons from UniversalDoctor shared their experiences working with the UN. Arsene Tungali shared the perspective from developing countries and relevant data from the DR of Congo – how should young entrepreneurs set up their business, if there are so many challenges – in terms of knowledge, access,

language barriers. A digital start-up can't succeed if there is only 15% internet penetration.

- highlight key achievements and challenges shared by the audience and/ or panellists

There is a need for a global platform within the UN system where digital solutions and best practice projects can be shared – a global knowledge database.

2) Quotes

- Jon Mark Walls, “Manage your expectations”
- Prof. Peter A. Bruck, WSA Chairman “As an entrepreneur – never make yourself dependent – not on one partner, revenue stream or organization”

III. Overall outcomes of the session highlighting

- main conclusions reached during the discussion

International organizations and start-ups/young entrepreneurs could benefit each other's work and objectives, but it's very hard to find the right ways of collaboration, understanding each other's needs and managing the expectations.

WSA is a global community for all stakeholders, interested in WSIS action line C7 and global knowledge exchange – it could be a great innovation pipeline for many existing UN initiatives.

- the vision for implementation of WSIS Action lines beyond 2015

WSA will continue its work and build on the community built over the past 16 years. WSA will select according to UN principles best practice solutions in interactive applications and high quality content, impacting society from all UN member states.

IV. Main linkages with the Sustainable Development Goals (please specify the SDGs)

WSA's categories cover SDGs:

Goal 1: No poverty

Goal 2: Zero hunger

Goal 3: Good health and well-being for people

Goal 4: Quality education

Goal 5: Gender equality

Goal 7: Affordable and clean energy

Goal 8: Decent work and economic growth
Goal 11: Sustainable cities and communities
Goal 13: Climate action
Goal 17: Partnerships for the goals

V. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

It's wonderful that more and more stakeholders want to talk about start-ups and entrepreneurs tackling the UN SDGs, but today 3 very similar sessions were organized – it might be a good idea to combine these sessions, in order to bring these networks and ideas together.

Thematic Workshop



Role of ICT in Academia – Reaching the unreachable

ASDF International

Monday 8 April 2019

13:15 – 14:00

Room K2 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/157#>

Commitments / Announcements

ASDF will reach the Academia Globally to foster the Intellectual R&D Activities.

Key Achievements

Establishment of Numerous Center of Excellences in 20 Developing Countries for ICT outreach has been approved.

Session

The session moderated by Dr Kokula Krishna Hari Kunasekaran (Secretary General, ASDF) focused on the role of ICT in enhancing community outreach, academic and research collaboration, and education and support services in an academic setting. Kunasekaran believes that the education will use more artificial intelligence (AI) and robotics to improve the learning experience in the future. According to him, many students use mobile phones during classes and it is important to deal with that in an educational way. Kunasekaran said that India is launching many satellites with educational purposes. Finally, he talked about the differences between Massive Open Online Courses (MOOCs) and the online courses offered in non-large colleges. Dr Kunasekaran added that most of EDUSAT launched by Republic of India are catering numerous member states of the United Nations in reaching the Educational Programme for rural civil society.

Mr Abdulla Musthaq (Chairman, AVID College, Maldives) started by talking about how the educational system works in Maldives and also about the AVID College and its programs. In his speech, he spoke briefly in his mother tongue, Divehi, and explained the importance of this language for the country's culture. Musthaq believes that education quality can be enhanced by ICT, but, at the same time, it is difficult to retain good quality in an online course. He explained the system used in the AVID college, where students can study through the Internet, accessing lecture notes and doing the activities. Government and Private Education providers are now establishing Atoll/Island campuses in various regions across Maldives to give fare access to quality higher education. These

establishments are costly and Institutions also face the difficulty in accessing to trained human resources. To combat these issues, few private higher education providers are opting to provide higher education through online mediums. This again is a costly investment but are crucial in helping Maldives continue to develop a sustainable education system. In order to reinforce national coordination and implementation mechanisms and to strengthen international cooperation through foreign partnerships, Maldives is keen in learning from other's experiences and excel through joint initiatives ensuring complementarity and synergy in our efforts to provide and sustain quality higher education across the nation. When asked by the moderator, Musthaq agreed that open universities are an interesting approach, but he stated that Maldives is not investing in this idea yet.

In his participation, Dr Gunasegaran Sengodan(Chairman & Managing Director, Vidyaa Vikas Institutions, Republic of India) talked about the Indian initiative to build rockets and satellites. According to him, satellites produced in India are the cheapest in the world and the country is 'number one' in this field. Sengodan believes that the launching of satellites is a good strategy to provide the Internet to the educational system and to the end users in education. Also, he explored the concept of smart classrooms that use ICT to provide a better learning experience. Sengodan said that there are many commercial solutions that can be used to promote different approaches in the educational area.

On delivering the concluding remarks His Excellency Kunasekaran added that the novel methods are now coming up, and Information and communication technology (ICT) has contributed immensely to social and economic improvements, such as higher employment and productivity, increasing access to a higher quality of life. Benefits of ICT can be achieved directly, through improved healthcare provision and disease prevention, or indirectly, through improved social infrastructure, economic growth, or other broader determinants of population health. In the context of public health, ICT, if properly designed and implemented, can generate many positive outcomes: improved access for communities in rural or remote areas; support of healthcare professionals; real-time disease surveillance; data sharing; and data capture, storage, interpretation, and management.

Quotes

“ICT is next to Food in the current world, which cannot be skipped!” – Kokula Krishna Hari Kunasekaran

“Digital Devices to Kids should be provided and the art of parenting starts there!” – Kokula Krishna Hari Kunasekaran

Thematic Workshop



Reinventing Organizations - Paradigm Shift for Digital Transformation and SDG

ArboLife

Monday 8 April 2019

13:15 – 14:00

Room L1 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/152#>

I. **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11**

<https://www.itu.int/net/wsis/stocktaking/help-action-lines.html>

- The role of governments and all stakeholders in the promotion of ICTs for development
- Capacity building
- Enabling environment

II. **Key achievements, announcements, launches, agreements, and commitments**

During this presentation, we declared that SDG's won't be attained with technology alone. It takes a cultural transformation to create the context in which humans are empowered to make SDG's a priority in their lives and in their businesses. Once this is attained, then ICT can be a very powerful tool to shift the future of our societies and our world. The presentation explained how our organizations have evolved through paradigm shifts throughout history of the past 10'000 years.

III. **Main outcomes highlighting the following:**

1) **Debated Issues**

- Is there such as thing as “digital transformation”? Does a company that implements a chatbot really transforms itself? Not really.

2) Quotes

- “We need a shift from a technological mindset to a more human mindset: the human and cultural context in which ICT comes to play is critical for achieving SDG.” – Marc Mathys

IV. Overall outcomes of the session highlighting

- Main conclusions reached:
 - i. We are living a cultural transformation in a digital world.
 - ii. ICT can become the tool to transform business and our society towards SDGs, but we need to drive the cultural transformation first, which will serve as a context in which individuals in organizations are bringing purpose to their workplace and are empowered to take actions towards SDGs.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

In order to reach SDGs (all of them), we need to onboard the world of businesses. The fastest way to do this is to enable the cultural transformation that creates a new paradigm in which employees find purpose, leadership is shared, and the organizational model is distributed. In this context, people who care about SDGs will take actions for themselves, their department, and eventually their entire organization.

Thematic Workshop



Digital Economy Transformation, experience digital life in China

Posts&Telecom Press Co.,LTD

Monday 8 April 2019

14:30 – 16:15

Room A, ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/168#>

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

C1, C2, C3, C4, C5,C6, C7 E-government and C7 E-business, C11.

The session not only provides practices in digital economy, like infrastructure. construction, capacity building and so on, which are highly related to specific WSIS AL, but also provides replicable mode and framework which can be applied and adjusted to different situations. We also emphasize on the confidence in using digital technologies and try to full display the development of digital economy in China and the implementation of WSIS AL in China.

II. Key achievements, announcements, launches, agreements, and commitments

China ties great emphasizes on the development of digital economy and insists on “innovation drives development” strategy. China is trying to bridge the digital divide from the furthest way and is promoting the digital economy transformation. Digital Technology has been applied in different fields in China, leading great transformation in all sectors around the country. Reports show that China's digital economy maintains steady growth, we not only provide theoretical framework but also provide specific applications in this workshop.

III. Main outcomes highlighting the following:

1) Debated Issues

Highlights of the main issues debated and interactions with audience

- Security issues concerning AI technology applied in new business model and other aspects.

Highlight key achievements and challenges shared by the audience and/ or panelists

- E-commerce gains actively growth in China in recent years and is gradually permeating into daily life which brings great convenience. However, it also brings some security issues to the public which needed to be studied and solved. We want to promote some practical suggestions in dealing with the problem. To solve the issue of spam in digital life, China Mobile uses AI technology to prevent spam in cyberspace and has made significant achievements.
- As an emerging trend, China is promoting the development of Smart City, which is built upon digital technologies. Smart city construction based on the concept " Innovation, Cooperation, Openness and Sharing", which aims at promoting the integration of city and ICT.
- In embracing new technologies, China promotes the training for ICT high-skilled workers and gains great success. We will provide examples of this practice, hoping to provide replicable mode. With these practices, China Communications Technology relies on the resources gained from itself to help the realization of digital economy transformation in different districts.
- As a new trend, 5G gains great attention these years, we will also provide contents relating to the 5G application in operators, enterprises and so on. This will include the application in social sector and the influence it brings. China Unicom uses 5G technology to promote the deep integration of Internet, big data, artificial intelligence and various industries to help the development of the digital economy and create a smart and beautiful life. Huawei has also tried in this field.
- Cyber space has become an integral part of people's digital lives. However, its development goes hand in hand with the spread of various forms of spam, undermining the rights and interests of users as well as the sustainable development of the digital economy. We also provide solutions to this aspect. CNCERT has made great effort in combating with the security issues relating e-commerce.

2) Quotes

- Xinzhe WANG

Chief Economist, Ministry of Industry and Information Technology of the People's Republic of China

Quote: China ties great emphasizes on the development of digital economy and insists on "innovation drives development" strategy.

- Guangquan Wang

Director of Network Technology Research Department, China Unicom Network Technology Research Institute

Quote: China Unicom uses 5G technology to promote the deep integration of Internet, big data, artificial intelligence and various industries to help the development of the digital economy and create a smart and beautiful life.

IV. Overall outcomes of the session highlighting

- main conclusions reached during the discussion

Digital Economy represented by emerging digital technology is becoming the driving force leading the development of new industry and pushing the transformation of traditional industry. Chinese Government puts great emphasizes on this new trend and is willing to working with multistakeholders all around the world in facilitating the development of digital economy.

To conclude, this session is like a panorama of digital life in China. We hope to represent outcomes and to gain experience from other countries.

- the vision for implementation of WSIS Action lines beyond 2015

This session provides a brief introduction of Chinese stories in developing digital economy, thus, to draw a picture of the digital economy transformation of China. This is also to reveal the benchmark of Chinese Digital economy transformation, thus advancing to the future as well as towards 2025 and the WSIS AL as well as the SDGs. This session is also to build a platform for communicating with other countries in these aspects from higher level and boarder field.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

SDG 3, 4, 5, 8, 9, 10, 11, 12, 16, 17

With the innovations provided in this session, we are advancing the implementation of SDG in all aspects, these outcomes are also long-term practices towards 2025. We provide sustainable solutions from training the accessibility to ICT tools and digital technology to the realization of smart cities, in which people will live more inclusive

and sustainable life. We also introduce the emerging technologies and new mode of business, which will shape the sustainable society in different ways. Importantly, the development of these practices needs the cooperation between different stakeholders and different countries, we also show the possibility and linkage for the win-win collaboration.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

This session provides overview of future digital world from different aspects, including WSIS AL implementation in different sectors all around the society. The main outstanding ones maybe the new business model suggested, and new technology infrastructure provided.

Thematic Workshop



Fostering ICT-Centric Innovation Culture to Accelerate Achievement of SDGs

ITU

Monday 8 April 2019

14:30 – 16:15

Room C1- ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/169#>

- I. **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11**
All
- II. **Key achievements, announcements, launches, agreements, and commitments**
 - Innovation has risen at the top of policy agendas and has the means to address social economic benefits for society. Many organizations are taking an active role in leveraging innovation for this purpose.
 - There is a need for a new type of partnership to design, prototype and scale innovation.
 - You need an innovation culture to allow innovation to scale.
 - Silos are the primary source of responsibility for the lack of the culture of innovation.
 - Innovation policies and programs need to be holistic to achieve impact.
 - Innovation needs to be a catalyst to make change but in a way that is more socially responsible
- III. **Main outcomes highlighting the following:**
 - I. **Debated Issues**
 - [Ms. Amy Rhoades, Community Engagement Programme Manager, Media & Communications Division, International Organization for Migration](#), shared an insight on how IOM uses innovative partnership to enhance staff security with [a solution](#) that enables staff to alert security personal when at risk, empower staff to send and receive life-saving information, travel, 24/7 communication with SSU (security operation). Through UN-Academia

partnerships they designed prototyped and scaled this solution that today has more than 5800 users in 153 countries.

- [Mr. Pradeep Kakkattil, Director of Office of Innovation, UNAIDS](#) mentioned New partnerships with global health and financing entities, [the Health and Rights innovation Exchange](#), which will showcase innovation that are likely to deliver scale impact for countries reaching the SDGs targets. He also said that “culture must change to take innovation to scale. “ He highlight that there is a need for cultural change for innovation to scale, especially targeting HIV/AIDS. Financiers, for example, deliver their interventions in silos from the health providers which inhibits culture which, in turn, inhibits innovation.
- [Dr. Suddha Chakravarti, Head of Research, EU Business School, Switzerland](#) said that the informal sector has a huge potential for social economic impact and policy measures to foster innovation in the sector often fail because they may be misguided in what problems they are solving. Therefore, it is important to understand the real root cause before taking policy measures that fosters innovation. In his opinion, “Brand India” as a policy measure was seen as a fail policy, but the new “digital india” program takes a more holistic approach and has better chances of succeeding.
- [Mr. G. Anthony Giannoumis, Professor, Researcher in Oslomet](#) spoke about universal design and the need for innovation to be a catalyst to make change but in a way that is more socially responsible. He expressed three ways to diversify and create a more inclusive innovation through a culture of: doing more with less, learning to innovate and connecting globally. He shared his insight, from the regional innovation forum they hosted in Oslo in November 2018, a lack of collaboration even for more developed ecosystems like Norway, through the regional innovation forums of ITU.
 - <https://www.itu.int/en/ITU-D/Regional-Presence/Europe/Pages/Events/2018/IF/InnovationForum.aspx>

II. Quotes

- **Mr. Pradeep Kakkattil**, Director of Office of Innovation, UNAIDS: “If you do not change the culture you will never take innovation to scale. “
- **Ms. Amy Rhoades**, Community Engagement Programme Manager, Media & Communications Division, International Organization for Migration, “Innovation is about bringing together different perspectives. If we cooperate always with the same group, it is hard to get new initiatives.”

IV. Overall outcomes of the session highlighting

- Building an innovation culture requires breaking down silos, forming new partnerships and taking holistic approaches to solve the problem.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

- SDG 9, 17

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

- a. Culture of innovation
- b. ICT- centric innovation ecosystems
- c. Cooperation among stakeholders
- d. Multi Stakeholder Partnership (MSP)
- e. Public/Private Partnerships (PPP).
- f. Multi-purpose community public access points

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

- Concrete knowledge sharing on building an innovation culture.

Thematic Workshop



Regional Implementation of WSIS

ITU/UN Regional Commissions

Monday 8 April 2019

14:30 – 16:15

Room G1 - ITU

This outcome will be made available soon.

Thematic Workshop



Capacity Building for governments on technical Internet Issues

ICANN

Monday 8 April 2019

14:30 – 16:15

Room H1, ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/166#>

This outcome will be made available soon.

Thematic Workshop



E-Learning for Refugee Children and Youth

Geneva Tsinghua Initiative and UNIGE

Monday 8 April 2019

14:30 – 16:15

Room K1 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/170#>

I. Relevance with the WSIS Action Lines

With emerging ICT innovations, the possibilities of providing education by means of digital gears have been enlarged to address the limitations of traditional learning methods. In this respect, e-learning (C7) has enabled the fulfillment of portable, self-initiative, and tailored contents of education, through which different learners are able to have access to information and knowledge (C3) for individual capacity building (C4). E-learning for underserved communities has been recognized to engender immense potential as education can be personalized to each individual environment, and life situation (C8). With the goal of providing educational opportunities to underserved communities through ICTs (C2), we seek to facilitate local, national, international, and transnational cooperation (C11), while taking into account ethical dimensions and context-specific data (C10).

II. Key achievements, announcements, launches, agreements, and commitments

The panelists agreed that:

- Digital education (e-learning, online education) cannot completely replace traditional education.
- In-depth needs-assessments and listening to the target group is an essential stepping stone before embarking on an e-learning project.
- E-learning has huge potential and there is a massive need but reaching all refugees and underserved communities poses many challenges.
- The panelists which were from diverse fields realized that incentives to refugees children are important since they help to remove barriers. However, the term “incentives” contain different connotations for people from different fields.
- In order to implement digital education in educational curriculums, governments

are amongst the most important stakeholders.

III. Main outcomes highlighting the following:

1) Debated Issues

- Providing standardized education and tailored education both carry advantages and disadvantages. Therefore, an appropriately balanced educational curriculum which embraces both of the educational methods should be well-planned and considered with deliberation.
- Providing “incentives”, such as free meals and even certificates, for children should be designed in a constructive way with pedagogical supports. Additionally, the wording itself should be thought from the start, as it may not be a neutral term from the perspective of target groups.
- Intrinsic and extrinsic motivation of target groups are both important. A key to a successful humanitarian and developmental project is to bring about intrinsic motivation by making use of extrinsic means of motivation.
- Quality and quantity of e-learning education and materials with regard to scalability is a crucial aspect to think critically before designing any digital education contents, because contents matters.

2) Quotes

- “Blended-learning is about how to teach children in a completely different way with a mixture of tools (...) Assisting children to understand what their internal motivation is saying, helping them to build ‘confidence’ and cultivate their strengths. People have different motivations for different things.” Dexter Findley, Performance and Project Development Lead, Xavier Project.
- “There are enough education providers in the world to teach every refugee, but the issue is, it is nowhere in the top priority.” Govinda Upadhyay, CEO & Founder, LED Safari.
- “Access to Information should be a fundamental right for children and adults.” Govinda Upadhyay, CEO & Founder, LED Safari.
- “Assessing the needs? Are you really doing that? Ask the children, give them the voice, and see what they need.” Virginie Morel, Executive Director and Founder, Innovative Trauma Relief Access.
- “Online learning is not going to solve all the problems of education, especially for refugees.” Hannah Bond, Instructional Design and Development at King’s Online, and Project Lead at PADILEIA Project.
- “E-learning is not a quick-fix solution. It has to be done correctly to work.” Paul O’Keeffe, Post-Doctoral Researcher, InZone.
- “Humanitarian education is not a service, it’s a right.” Virginie Morel, Executive Director and Founder, Innovative Trauma Relief Access.

IV. Overall outcomes of the session highlighting

- main conclusions reached during the discussion
 1. E-learning is not a replacement to a traditional classroom.
 2. Contextualization, scaffolding and support of courses are essential to provide quality digital education for viable scalability.
 3. Before providing any e-learning programs, one should take into account of three basic human needs of refugee children and youth, namely, safe environment, trusted relationship, and freedom to talk.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

With the commitment of leaving no one behind ICTs for education can contribute to bridging the gap of access to quality education and lifelong learning opportunities (SDG 4) by catalyzing partnerships on digital learning technologies (SDG 17). Innovating and scaling up a variety of e-learning technologies for underserved communities will endorse more just and inclusive societies (SDG 16), provide employment opportunities.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

Regarding action line C7.17 on ICT applications for E-learning, some digital learning providers are beginning to explore gamification technologies to engage children in education. Furthermore, the panel agreed on the use of bottom-up approaches for the creation of appropriate contents and teaching methods in digital education. The role of public governance authorities and all stakeholders in the promotion of ICTs (C1) for development is crucial for the implementation in national curricula of digital learning technologies.

Building confidence and security in the use of ICTs among refugee children (C5) and youth can be a catalyst in exploring and identifying their talents, strengths, and potential.

Such an environment that inspires both project organizers and refugee children and youth functions as an enabling environment (C6) for learning for both sides: service provider and target group.

Cultural diversity and identity, linguistic diversity and local content (C8) is currently an aspect which the online courses are taking into consideration during the development of online courses.

As technological revolution commences, diverse levels of ethical dimensions of using ICTs (C10) for human enhancement is facing criticisms from many different actors. To address critical questions, one would have to think about ethical implications of any project, especially its impact on social, environmental, and economic spheres. International and regional cooperation (C11) is essential for the provision of quality content and services in e-learning and a current trend is the creation of partnerships amongst various stakeholders.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Futuristic aspect on education can be an interesting addition next year, as education field is going through a rapid change in the era of Fourth Industrial Revolution. Representation and leadership from government and international government organization re important on the issue of education for marginalized communities.

Gamification for e-learning technologies and more emphasis on bottom-up approach should deserve more spotlights they deserve in every humanitarian, developmental, and welfare projects.

Global legislation, regulations, and standards regarding e-learning can be a good contribution, as it was missing from the panel discussion.

It would be interesting to learn about how e-learning for refugees is contributing to cultural diversity, individual identity formation, linguistic diversity, and empowerment within local communities.

Finally, ethical dimensions of the Information Society should be taken seriously in every step of project plan, implementation, assessment, and evaluation.

Thematic Workshop

ICT and Sport



Sport as an enabler of SDG

ITU

Monday 8 April 2019

14:30 – 16:15

Room C2 ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/167#>

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

New sport track

II. Key achievements, announcements, launches, agreements, and commitments

For the first time in the 10 year history of the WSIS Forum, a new track was introduced on sport as an enabler of sustainable development, highlighting the aspects of youth empowerment and innovative technologies.

During the WSIS Forum we were able to celebrate the International Day of Sport for Development and Peace, which is an annual celebration on 6 April, declared by the United Nations General Assembly in 2013, and has been celebrated each year ever since.

The conversation about sport, development and ICTs has been successfully launched during the WSIS Forum 2019. We were able to show that ICTs also enhance sport to be a key enabler to achieve the SDGs.

III. Main outcomes highlighting the following:

1) Debated Issues

Many different international players around the world are helping move forward the agenda of sport for development and peace, especially with the implementation of different actions at the policy and grass roots level. At the WSIS Forum 2019, three different sport related workshops on sport and SDGs, intellectual property and domain

names were carried out, where a diverse group of panelists shared for the first time at the ITU Headquarters, their knowledge and current initiatives.

A large group of stakeholders such as the International Olympic Committee, the Olympic Refuge Foundation, UEFA, UNESCO, ILO, WIPO, the Real Madrid Foundation, Right to Play, Think Sport, Peace and Sport, World Taekwondo Federation and the Centre for Sports and Human Rights shared with the participants of the workshops their experiences, the opportunities, challenges and lessons learned, as well gave examples of how there are using ICTs in an innovative way to promote sport for development and peace.

2) Quotes

- “The conversation about sport, development and ICTs kicked-off this year at the WSIS Forum. We were able to show their key role in development. We look forward to carrying this important conversation forward to ensure that ICTs and sports help to achieve the SDGs.” Sylvia Poll, ITU.
- “In September 2017, the International Olympic Committee launched the Olympic Refuge Foundation to support the protection, development and empowerment of children and youth in vulnerable situations through sport. Sport has shown to be a key enabler for development and peace.” Jojo Ferris, Head of the Olympic Refuge Foundation (ORF), IOC.

IV. Overall outcomes of the session highlighting

- main conclusions reached during the discussion

Sport remains a firm fixture on the United Nations and international agenda. In the past years, many United Nations organizations and other intergovernmental stakeholders have taken bold actions to promote attention to sport as a platform and a catalyst for sustainable development. ITU has joined the conversation.

- the vision for implementation of WSIS Action lines beyond 2015

To further continue the dialogue within WSIS and ITU on sport as an enabler of sustainable development, highlighting the aspects of youth empowerment and innovative technologies.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

Sport is linked to SDGs 3, 4, 5 and 17. ICTs will be an enabler for sport and the SDGs.

VI. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Make the sport track a permanent track at WSIS.

Thematic Workshop

WSIS Accessibility Day



Special Recognition Ceremony & Workshop on telecom relay services

ITU/The Nippon Foundation

Monday 8 April 2019

14:30 – 16:00

Popov Room 2 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/171#>

- I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11 C1, C2, C3, C5, C8**

- II. Key achievements, announcements, launches, agreements, and commitments**

Telecommunications relay services are essential telecom services that enable persons who have hearing or speech disabilities and who otherwise would be unable to engage in voice telecommunications, to make voice telephone calls to other persons using four common types of relay services: text relay; video relay; captioned telephone service relay; and speech-to-speech relay. ITU-T F.930 “Multimedia telecommunication relay services” describes them.

The session focused on how to promote implementation of telecom relay services worldwide. This is especially important for developing countries. There is a need to identify specific challenges in various phases in implementing relay services.

The workshop session introduced various experiences from different countries, such as Japan, Colombia, Egypt, and Canada, in trying to initiate, run and encourage relay services. The discussion highlighted some barriers, considerations and needs in promoting implementation and in addressing regulatory framework.

III. Main outcomes highlighting the following:

1) Debated Issues

- Only 25 countries in the world have an official telecom relay service. And even these countries have different standards of service.
- Communications using text cannot completely take the place of telephony.
- Not all persons, including persons with disabilities, have enough reading and writing skills, thus video relay service is important.
- Challenges include, regulatory framework, social, technical, operational and financial challenges.
- Telecom relay service based on Web Real-Time Communication (RTC) would be a low-cost solution, contributing to reducing the financial barrier in launching and implementing. Standardization would be expected in this area.
- Voice recognition is not yet at a sufficient level for a practical use. Standardization in this area is necessary.

2) Quotes

- “A telecom relay service is a telecommunications issue, not a welfare issue. Telephony is essential for communication in modern society, for hearing people and for deaf people.” Ms Tomoko Tsutsui, The Nippon Foundation.
- “To implement a telecommunication relay services, empowerment of the Deaf Community is essential. It should be ensured that they participate in all phases of decision making processes and political advocacy.” Mr Henry Mejía Roget, FENASCOL.

IV. Overall outcomes of the session highlighting

- Further standardization work in the area of telecom relay services is expected to promote telecom relay services worldwide, especially in developing countries. During the discussion, it was pointed that TRS based on web-based technologies, such as WebRTC, will be important for especially emerging economies. How these new technologies can be used along with the existing telephone service infrastructure is expected to be important standardization issue. These are the possible areas for new work items in ITU-T.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

All SDGs. ICT Accessibility is a cross-cutting issue, and the SDGs would not be achieved without ensuring ICT Accessibility by design.

Thematic Workshop

WSIS Accessibility Day



Universal Design for Sustainable Development

Oslo Metropolitan University

Monday 8 April 2019

16:00 – 17:30

Popov Room 2 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/202#>

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11 C3, C4, C6, C7, C8, C9, C10, C11

II. Key achievements, announcements, launches, agreements, and commitments

Universal design is an approach to creating information and communication technologies (ICT) that ensures everyone can use ICT equally, no matter their disability, age, ethnic identity, gender, or any other characteristic. This track focuses on how the principles of universal design, as articulated in the United Nations Convention on the Rights of Persons with Disabilities, can be adopted in practice, and how social innovation and technology transfer between the Global North and Global South can promote equal participation for everyone in society.

III. Main outcomes highlighting the following:

1) Debated Issues

Key Debates focused on

- *Capacity building for universal design in the Global South*
- *Operationalizing the intersection between disability and other forms of social disadvantage*
- *Mainstreaming universal design in WSIS Action Lines*

2) Quotes

- “Universal design provides a tool for nations to accelerate progress towards the SDGs while simultaneously preserving human rights and promoting equality for everyone” G. Anthony Giannoumis
- “in this context of universal design, which applies to any products and services ... high-tech, low-tech, I believe the participation of persons with disabilities...is very important” Shadi Abou-Zahra
- “as we seek to bridge the digital divide we have taken a 2D perspective, but no one is average and we live in a 3D world...but we haven’t taken into account everyone in the equation of how we ensure access to ICT” Ayanna Samuels

IV. Overall outcomes of the session

Universal design provides a useful basis to examining the inclusion of persons with disabilities in sustainable development where ICT can act as a mechanism for realizing the SDGs

New knowledge is needed to understand the intersection among overlapping forms of discrimination and disadvantage. E.g. the experiences of women with disabilities.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

With a particular focus on the role of universally designed technology in realizing the Sustainable Development Goals (SDGs), panelists will present state-of-the-art that address SDG 10 Reducing Inequalities, SDG 3 Good Health and Well-Being, SDG 5 Gender Equality, SDG 9 Industry, Innovation and Infrastructure, and SDG 4 Quality Education.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

By considering the barriers that everyone including persons with disabilities experience accessing and using technology, the WSIS Action Lines can ensure that no one will be left behind.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Continued focus on UD as a mechanism for SD

Operationalization of UD principles in reference to specific SD goals and criteria

Operationalization of UD principles in references to WSIS action lines

Thematic Workshop



Bottom-up innovations in technology for Achieving the SDGs: Ideas from South Asia

Kalinga Institute of Social Sciences / University of Cambridge

Monday 8 April 2019

16:30– 18:15

Room A- ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/197#>

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

- C1. The role of public governance authorities and all stakeholders in the promotion of ICTs for development
- C3. Access to information and knowledge
- C4. Capacity building
- C6. Enabling environment
- C7. ICT Applications
- C10. Ethical dimensions of the Information Society

II. Key achievements, announcements, launches, agreements, and commitments

High level panel discussed the role of technology in achieving the 2030 Agenda in South Asia.

Panellists include:

Dr Nitya Khemka (Chair), Affiliate Lecturer, Center for Development Studies, Cambridge

Dr Soumya Swaminathan, Chief Scientist, World Health Organisation.

Mr. Nikhil Seth, Assistant Secretary-General of the United Nations and Executive Director of the United Nations Institute for Training and Research (UNITAR).

Mr. Sanjay Mathur, Regional Director, UNOPS Asia Region

Mr Mukul Bhola, Deputy-CEO, The Defeat-NCD Partnership

Dr Haruo Okamura, President, Global Plan Inc., and the Japanese National Institute of advanced Industrial Science and Technology

Dr Suraj Kumar, Senior Adviser, Kalinga Institute of Social Sciences

Mr Sanjay Thade, Department of Tribal Welfare, West Bengal.

III. Main outcomes highlighting the following:

1) Debated Issues

This session focused on technological innovations to accelerate progress on the SDGs in South Asia. It examined the potential for leveraging technology trends to strengthen implementation mechanisms. The panelists talked about the current state of play and highlighted opportunities, challenges and risks. The panel examined the role of a range of stakeholders: governments, private sector, and international organisations to promote growth that is pro-nature, pro-women and pro-jobs.

2) Quotes

- 'With sufficient preparation and strong policy responses, it is possible to ensure that automation doesn't contribute to global inequality but instead facilitates practical situations to the most pressing concerns of our time, including climate change and pandemics.'- Mr. Sanjay Mathur, Regional Director, UNOPS Asia Region.

IV. Overall outcomes of the session highlighting

- main conclusions reached during the discussion

South Asia has the potential to become a hub of innovation in the 4th Industrial Revolution with its young population well connected to global technological developments, the opportunities created by new technologies and a large labour market. Access to technology by citizens will have a profound effect on the rate of economic, political and social change in the region. More and more people will solve real problems using e-government apps, voter information tools, open education platforms and health monitoring tools.

At the same time, new challenges will emerge as local leaders struggle to keep up with the demand for services, conflicts arise, and innovation disrupts old economies. There are several challenges to bear in mind

Dr Soumya Swaminathan, Chief Scientist, World Health Organisation.

"Broad scientific debate is necessary on emerging technologies like AI and how they can be used to overcome barriers in health care while avoiding pitfalls and risks."

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

Goals 1,2,3,4,5 ,8,10,17

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

C1, C7, C10

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

- Gender and technology in South Asia
- Impact of technology on access to essential service in South Asia

Thematic Workshop



National Experiences in Strengthening the ICT-Centric Innovation for SDGs

ITU

Monday 8 April 2019

16:30 – 18:15

Room C1 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/198#>

- I. **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11**
 - ALL

- II. **Key achievements, announcements, launches, agreements, and commitments**
 - ICT-Centric innovations has become a priority at a national, regional and global level. Countries realize the need of collaboration and partnerships between public-private and academic systems. In the European Union, innovation is a common goal for which countries are leading close collaboration initiatives.
 - Governments have a big role to play in developing the enabling environment for digital transformation. They are building e-services initiatives that are accelerating digital transformation and digital literacy.
 - High level education institutions are crucial in the construction of digital culture, skills and business growth.
 - There is need for an innovation culture to allow innovation to scale.
 - In a digital world with no borders, cybersecurity is a high priority for European countries and has become an active component of digital transformation.

III. Main outcomes highlighting the following:

- **H.E. Ms. Maria-Manuela Catrina**, State Secretary, Ministry of Communications and the Information Society, Romania, introduced the topic by explaining how Romania instated the ICT-Centric Innovation priorities. Romania has three priorities such as innovation, to encourage Europe to compete in the global competition and benefit from all the forces it has, cybersecurity to set security in a digital world that has no border, and to develop the necessary skills required for new technologies. Last year, two tech [start-ups](#) reached the Unicorn status. H.E. Ms. Maria-Manuela Catrina also emphasized on the importance of including women in technology to reduce the gender divide.
- **H.E. Ms Anna Korka**, Ambassador, Permanent Representative, Mission Of Greece, emphasized on the role of ICTS as cross cutting enablers and accelerators for all SDG goals. There are multiple ways to induce the ICTs and introduce them in the communities. Greece has implemented the [NGA plan](#) (The National Broadband Next Generation Access Plan) that aims to ensure the availability of high capacity, security and reliable connectivity for all citizens in rural and urban areas. Another initiative, the [National digital strategy 2016-2021](#), focuses on 7 areas of intervention being: development of national infrastructure for new generation networks, digitization of economy, boosting ICT industry, empowerment of people and digital skills, performance of a robust review of the methodologies of public services, illuminating the exclusions and diffusing the benefits of digital economy, enhancing security and trust.
- **Mr. Konstantinos Masselos**, President of the Hellenic Telecommunications & Post Commission (EETT), Greece, introduced the topic by explaining that due to the economic crisis that the country has faced the last ten years, the environment was not favorable for ICT and innovation development. Yet, unexpected foreigner investments were introduced from 2012 to 2016, allowing to develop the entrepreneurial ambitions of the country, creating more than 500 start-ups and 20 incubators and accelerators up to this date. Greece has several projects and plans to enhance digital transformation and to reach the SDG goals by 2030 from which, the [2014-2020 National Research and Innovation strategy for Smart Specialization](#), focusing on smart specialization, research on big computing and big data. Also, the country had introduced a Start-up Greece platform for networking and collaboration to create a New Greek generation of entrepreneurs. In April 2018, Equifund, a fund aiming to bring 400 million Euros for new businesses in Greece was launched.
- **Mr. George Michaelides**, Commissioner, Office of the Commissioner of Electronic Communications and Postal Regulation (OCECPR), Cyprus, started by emphasizing that innovation was a cultural aspect that had to be embraced by a whole community. In Cyprus, the entrepreneurial mindset is in the process of

becoming. The country is developing an innovation culture that should mainly cover cybersecurity, broadband, 5G, digital skills of the country. Initiatives towards digital transformation and innovation should be part of a collaborative strategy. As a result, Cyprus has taken advantage of its maritime situation to build a [cybersecurity plan for maritime ecosystem](#). This is an international ecosystem because Cyprus, alone, does not have enough capacity. Anyone can participate either virtually and onsite.

- **Mr. Vladica Tintor**, Director at Regulatory Agency for Electronic Communications and Postal Services (RATEL), Serbia highlighted the need of better regulations to foster the practices in terms of ICT centric innovations. Serbia already has developed [several frameworks](#) such as documents and strategies for improving broadband, IT Industry and e-government services. The initiatives have shown results in terms of education, where ICT is taught in 40 high education institutions across the country, in-line with international standards. Also, the country shows good results in digital technology integration with software development: computer software is one of the Serbian main export. The outcome of the initiatives are leading to the implementation of 5G by 2020 and the development of a cybersecurity national system in the next few years.
- **H.E. Ms. Anneli Vares**, Deputy Permanent Representative of Mission of Estonia introduced her topic by stating that over the last 25 years ICT have been the main development driver yet, the digital gap remains and bridging the gap is a common effort of all stakeholders. Inclusive partnerships are the most successful leadership models and Estonia's success story is based on partnerships with governments, innovators, investors and tech-savvy population. Today, there are more than 200 thousand [e-services](#) available; the most used is medical prescription. The e-tax port became a driver of e-services: it saves a person one week a year to use digital signature and 2% of GDP/year (because they save time and work more).
- **Mr. Anir Chowdhury**, Policy Advisor, Prime Minister Office, Bangladesh, spoke about the cultural changes in his country. Digital entrepreneurship is growing. Indeed, 5'000 [Digital Centers](#) have been created the last 4 years and are run by women and men entrepreneurs. Those centers allowed to save 1.2 billion \$ to all users every year. ICT's radically improved education through the creation of a new portal in 2018. That portal allowed more that 40'000 teachers to connect. This main use was a peer learning portal where teacher could help each other. This initiative has been improving digital literacy, also encouraged by the developing infrastructures and e-services. The more autonomy people are having in terms of dealing with administration tasks and banking services, the more they are developing their digital skills.
- **Hon. Mr. Oleksandr Danchenko (MP)**, Chairman of the Committee for Informatization and Communications, Parliament of Ukraine, highlighted the area of Cyber Security as being a priority in Ukraine as well as in all Europe. Recently, Ukraine signed an agreement on single digitalization market. Mr Danchenko

reminded that Ukraine is the number 1 country in the area of IT export in Europe. The [next steps](#) regard the implementation of 4G and 5G as well as the Digital Infrastructures construction. Ukraine is now working on building a strategy towards developing the digital economy and has the ambition of becoming the next European Silicon Valley.

II. Quotes

- “The world cannot afford not be digital.” - H.E. Ms. Anneli Vares, Deputy Permanent Representative, Estonia
- “What is not innovation? Innovation is not a flu. It is not something you catch one day and you don’t know where it came from or why it came to you. Innovation is a cultural thing.” - Mr. George Michaelides, Commissioner, OCECPR, Cyprus
- “Innovation is not an accidental thing, it is done by design.” - Mr. Anir Chowdhury, Policy Advisor, Prime Minister Office, Bangladesh

III. Main linkages with the Sustainable Development Goals (please specify the SDGs)

- SDG 4, 8, 9, 10, 17

IV. Emerging Trends related to WSIS Action Lines identified during the meeting:

- Private/Public partnerships are ongoing and strengthened
- Information and communication infrastructures are essential to an inclusive information society
- Countries are promoting capacity building
- International and regional cooperation generate higher capacities and stronger knowledge exchange

V. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

- Partnerships on the national and international level, startup success stories (startup entrepreneurs discussing their innovations and experiences).

Thematic Workshop



Regional Implementation of WSIS

ITU

Monday 8 April 2019

16:30 – 18:15

Room G1 - ITU

This outcome will be made available soon.

Thematic Workshop



ICTs for Safety & Security: International case study

EC MEDICI

Monday 8 April 2019

16:30 – 18:15

Room H1 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/187#>

I. **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11**

- C1. The role of public governance authorities and all stakeholders in the promotion of ICTs for development
- C2. Information and communication infrastructure
- C4. Capacity building
- C5. Building confidence and security in the use of ICTs
- C6. Enabling environment
- C7. ICT Applications: E-government
- C7. ICT Applications: E-health
- C7. ICT Applications: E-environment
- C10. Ethical dimensions of the Information Society
- C11. International and regional cooperation

II. **Key achievements, announcements, launches, agreements, and commitments**

- 1) First achievement: ICT is playing key roles in a number of “risky” scenarios from health and children abuse to homeland security and law enforcement, crimes, trafficking (humans, drugs, weapons, artefacts, etc.), natural and human disasters recovery and management, and even safety on working places and mobility. However, there is more to be done and WSIS may play a key role in this sector becoming the reference point for all those working in these sectors and those who may take advantage from their outcomes;
- 2) Second achievement: promote a multi-stakeholder forum on social, economic, ethical impact of the Information Society;
- 3) Third achievement: Recognising (1) and (2) there is a need to seek public buy-in and reassurance of the positive benefits of utilising technology;
- 4) Fourth achievement: Foster a culture of safety and security through aimed actions

and initiatives ranging from kids to elderly people (a first suggestion is included in paragraph VI.

III. Main outcomes highlighting the following:

1) Debated Issues

On the occasion of the recent past editions (2018, 2017, 2016, 2015, 2014) of the WSIS Forum, MEDICI organised different workshops to showcase the richness of applications and services provided by ICTs in the field of safety, security and disaster recovery and management and to contribute to provide a reference point for all those working in these sectors and those who may take advantage from their outcomes. Looking from a different perspective the aim was to promote a risk assessment approach in the field of cyber technologies.

This year, we continued this path, selecting international case studies that have aided both safety and security. The panel of experts also highlighted new sectors and the need to enrich the platform of skills and competencies involved. Speakers looked at the need for training across the area of ICT and educational development across technological areas. Panellists also identified some ongoing and unresolved challenges providing an overview of current trends. In addition, they widely discussed the aspect of trust, media influence and political will/willingness.

Safety and security are integral part of human rights; the panel of experts reinforced that we must provide all the efforts in order to guarantee such rights (as stated in art 3, 22, 25 - The Universal Declaration of Human Rights). In addition, panellists discussed that a number of SDGs are tightly connected or rely on safety and security: SDG 2, SDG3, SDG6, SGD6, SDG7, SDG8, SDG9, SDG11, SDG16, SDG17. Some of the specific fields are: food & water security, human security, safety, critical infrastructure resilience, drugs security and more.

Nowadays, the demand for "safety & security" in all its forms has increased, especially quantitatively and qualitatively, making clear the need for new approaches to enable the entire sector to ensure better results. And work collectively together (Governments, industry, academia etc., together).

As already stated, looking from a different perspective: panellists outlined the role of ICTs in risks assessment and management. ICT plays a key role in a number of "risky" scenarios from health and child abuse to Homeland Security and law enforcement – across, crimes, trafficking (humans, drugs, weapons, artefacts, etc.) and even safety on working places and mobility.

Of course, technology it is not enough to solve problems, it is well known and demonstrated that a holistic, interdisciplinary approach and a culture of "safety & security" taking adequately into account human factors are the basis in order to obtain good results in this area.

We must promote an interdisciplinary approach and a "culture" of safety & security, they are the basis in order to obtain good results in this area; foster the exchange of experiences and best practices among countries and promote research thanks to the

WSIS. However, the panel of experts discussed the need for balance when using some technology – such as AI. Both stressed the need for appropriate governance systems.

There is a need to add reassurance to citizens that technology is being respected in terms of the potential for abuse and harm. This, going ahead, will be a challenge that governments' and manufacturers' need to recognise in terms of ensuring legislation, policies and practices are in place. For whilst new and advancing technologies can contribute to society in terms of both safety and security, misuse and purposeful negative acts will be detrimental in terms of achieving further advancements to benefit society.

Dealing with converging digital and physical security to secure Smart Cities and Citizens in Africa experts outlined that technology brings forth a number of benefits, and at the same time comes with a number of challenges such as possibilities to aid crime, terrorism, vandalism, accidents, and so forth. In large and complex environments, the use of physical security is still considered superior over digital security, particularly in protecting assets and people. Digital security is often relegated to protecting computers and information systems ignoring the fact that digital security nowadays plays a very critical role, especially in the 4th industrial revolution, where physical and cyber security cannot be separated. Applying a case study set in South Africa, this specific talk demonstrates how Physical and Digital Security can be converged in order to complement each other to protect and secure smart cities and citizens in Africa, especially where crime and terrorists' activities are on the rise. Based on the results of the use case, it is apparent that converging physical and digital security will yield positive benefits, not only in protecting data and information systems, but also detecting, responding and recovering from incidents (physical and digital) that affect people and processes within smart cities and villages.

On the occasion of previous editions of the WSIS Forum (e.g. 2014, 2015, 2016, 2017, 2018) some eminent speakers underlined the key-role played by ICTs on the occasion of natural disasters and other critical events, they said that cyber technologies have fuelled the hope of people affected by the natural disaster. This year experts also addressed the contribution of ICT in preventing and addressing natural disasters in Asia. The availability of low price - high performance devices and the proactive activity of clever developers have boosted the production of a number of smart solutions spread in different countries all-over the world.

The discussion of international case studies this year highlights first of all the trans-boundary nature of high-level security events, especially natural and climate disasters. Second, it is no longer practical to provide and distribute reactive, response technologies to impacted areas; we need to be using IT as well as grounded human knowledge during the slow-onset disasters that precede and worsen larger ones.

In conclusion due to the actual “silos” segmenting these sectors it is quite difficult to have a comprehensive vision on these resources and success stories, there is a need for a holistic approach and best practice sharing.

The Internet of things, A.I. / machine learning, grids, network of sensors, remote sensing as well as near field communication, as well as unmanned vehicles, were recognised to contribute to both safety and security, by providing a network and building blocks for safety and security in different fields But again there is a need for caution in terms of recognising some of the risks too.

2) Quotes

“As we all see cyber technology is merging every day with an increasing number of sectors, from the diffusion of smart phones always-on onward we embedded cyber technology everywhere, any sector. Through the time it become more complex to maintain an adequate level of security and preserve confidence so today and much more tomorrow we will deal with cybercrimes or cyber abuse/misuse.” Alfredo M. Ronchi (EC MEDICI Framework)

“There is an urgent need to foster a culture of security in the cyber universe starting from kids up to elderly people. Security in the cyber universe means a broader approach than cybersecurity” Alfredo M. Ronchi (EC MEDICI Framework)

“What is OSINT? Open source intelligence is the exploitation for investigative purposes of the dichotomy between personal perception of privacy and involuntary actions on the web.” Yassine Fatah (IPS S.p.A., Italy)

“While OSINT deals manly with one-to-many conversations, the today’s challenge are many-to-many conversations. SOCMINT, Social Media Intelligence, is the part of OSINT that deals only with social media and new ways of communication.” Yassine Fatah (IPS S.p.A., Italy)

“Modern fake news use many-to-many channels of communications, so it is easy for them to be spread and hard for anyone to investigate on. SOCMINT is the only way to discover and eventually prevent fake news.” Yassine Fatah (IPS S.p.A., Italy)

“Smart cities need to be inclusive, safe, resilient, and sustainable. At the same time, smart cities are a great use case to building confidence and security in the use of ICTs” Jabu Mtsweni (Council for Scientific and Industrial Research, South Africa)

“In today’s smart cities, physical and digital security are implemented and experienced in isolation, however cyber-physical convergence promotes faster decision making, and ensures that technology and physical artefacts synergize to protect and secure smart cities and citizens” Jabu Mtsweni (Council for Scientific and Industrial Research, South Africa)

“...cyber-physical security requires an integrated and convergence thinking approach that factors people, processes and technology (digital and physical).” Jabu Mtsweni (Council for Scientific and Industrial Research, South Africa)

“Even with sophisticated IT, channels of “trust” reporting from local individuals to

government and response agencies up to provincial and national levels need to be bolstered; it is not only IT accessibility and not only policy reform that can achieve this.” Lynn Thiesmeyer (Keio University Tokyo, Japan)

“There is no doubting that “cool gadgets and tools” can and are being used to “contribute added value to humanity,” but we need to recognise the potential and increasing probability of misuse and abuse and be proactive in minimising these risks. Achieving equilibrium between safety and security, and whereby systems and advancing technologies are used to benefit mankind - rather than cause harm, will necessitate governments and industries working together to provide reassurances, not least in terms of legislation, policies and practices. Inevitably, trust of citizens is key to utilising ‘perceived’ gadgets and tools to benefit mankind. However, ultimate ‘trust’ may not be wise. We need to be respectful and cautious, not least we need to be proactive in terms of recognising disadvantages and challenges, whilst welcoming opportunities.

We must not lose sight of the original concept of the Goals namely, positive development that meets the needs of the citizens – today and tomorrow.” – Sarah Jane Fox (University of East London, UK)

IV. Overall outcomes of the session

In order to build confidence and security in the use of ICTs, digital and physical security cannot continue to be implemented in isolation, especially in smart cities. Both need convergence in order to build systems, smart cities and villages that are secure-by-design, fail securely and safely, are human-oriented, and consider socio-technical systems factors, and are by default collaborative, corporate and convergent.

There is an urgent need to foster awareness about potential risks connected with the cyber world, these risks are no more impacting only our computer or personal data they involve our daily life from smart homes to mobility and news.

There is more to be done in terms of proactive measures to ensure safety and security both of and thanks to technology – for whilst advancing and developing technology can have enormous benefits, it is not without some risks (including e.g. social risks) – which need to be recognised and managed.

International disasters are on the rise, especially natural and anthropogenic disasters in less-developed regions of the world. The impacted regions are no longer simply within the capacity of a single nation-state to assist. State-of-the-art and portable IT devices are an attempt to reach such areas to provide quicker and more targeted responses. However, we need much more work on useable IT as well as human inputs during the precursor events such as slow-onset disasters.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

SDG 2, SDG3, SDG6, SGD6, SDG7, SDG8, SDG9, SDG11, SDG16, SDG17

Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Goal 3: Ensure healthy lives and promote well-being for all
Goal 6: Ensure access to water and sanitation for all
Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all
Goal 8: Promote inclusive and sustainable economic growth, employment and decent work for all
Goal 9: Build resilient infrastructure, promote sustainable industrialization and foster innovation
Goal 11: Make cities inclusive, safe, resilient and sustainable
Goal 16: Promote just, peaceful and inclusive societies
Goal 17: Revitalize the global partnership for sustainable development

More in detail:

SDG 2 END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE - > food & water security

SDG 3 ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES

3.d Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks -> Safety & Security

SDG 5 ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS

5.b Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women -> human security, safety

Border controls are rooted on the basic equality of travellers (as subjects of rights) and citizen and must be developed according to non-discriminatory lines. As well, border officers should be enabled to perform their tasks independently of any biological or cultural difference

SDG 6 ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER AND SANITATION FOR ALL

6.a By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies -> Water Security, critical infrastructure resilience, etc

SDG 7 ENSURE ACCESS TO AFFORDABLE, RELIABLE, SUSTAINABLE AND MODERN ENERGY FOR ALL

Goal 7 promotes energy for all but my case study shows that we must also take into account who actually received the energy at what price, and what environmental and health disasters may still result. It is thus Goal 16 which points to the need for more equitable, less conflict-prone decision-making about all forms of development and about management of the environment. (Thiesmeyer, Lynn)

7.b By 2030, expand infrastructure and upgrade technology for supplying modern and

sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support -> C5, critical infrastructure resilience, etc.

SDG 8 PROMOTE SUSTAINED, INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH, FULL AND PRODUCTIVE EMPLOYMENT AND DECENT WORK FOR ALL

8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services -> C5 safety & security

SDG 9 BUILD RESILIENT INFRASTRUCTURE, PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALIZATION AND FOSTER INNOVATION

9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.

9.a Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States.

9.c Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020 -> C5, critical infrastructure resilience, etc. etc.

SDG 11 MAKE CITIES AND HUMAN SETTLEMENTS INCLUSIVE, SAFE, RESILIENT AND SUSTAINABLE

11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage -> extended cooperation with UNESCO

11.5 By 2030, significantly reduce the number of deaths and the number of people affected and decrease by [x] per cent the economic losses relative to gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations -> C5 Safety and Security

11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels -> C5 Safety and Security

SDG 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

16.2 End abuse, exploitation, trafficking and all forms of violence against and torture of children -> C5 safety & security

16.5 Substantially reduce corruption and bribery in all their forms -> C5 safety & security

16.10 Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements -> C5 safety & security

16.a Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries, to prevent violence and combat terrorism and crime -> C5 safety & security

SDG 17 STRENGTHEN THE MEANS OF IMPLEMENTATION AND REVITALIZE THE GLOBAL PARTNERSHIP FOR SUSTAINABLE DEVELOPMENT

17.8 Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology -> C5 safety & security

17.16 Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries -> C5 safety & security

17.17 Encourage and promote active public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships. -> C5 safety & security

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

Mainly C5, C7

Alfredo M Ronchi (EC MEDICI Framework): Risks associated to the diffusion and pervasive role of ICTs are no more concerning our computer and data but involve privacy, safety, public opinion, governments, national security, transportations, home appliances, and more. From national security and cyberwarfare to our smart fridge and unmanned transport system we have to face security problems. There is an urgent need to foster a culture of cybersecurity starting from kids and reaching elderly people.

Jabu Mtsweni (Council For Scientific And Industrial Research): ICTs have found application across all domains, and in order to build confidence in the use and security of ICTs, digital security cannot be implemented in isolation, but needs to be converged with physical security in a holistic manner. For this to be successful, innovation drivers such as the 4th industrial revolution and smart cities need to be secure-by-design, fail safely and securely, and include comprehensive situational awareness.

Lynn Thiesmeyer (Keio Univesity, Japan): Need for wider reach of simple and portable IT, and greater human capacity to produce, receive, and understand the data, at all levels of society.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Alfredo M Ronchi (EC MEDICI Framework): As much as ICTs are becoming pervasive we must include and promote a wider range of “security” topics under the WSIS umbrella endorsing a holistic approach, in addition an aimed action has to be devoted to foster a culture of security / risk assessment and mitigation from kids to elderly people.

Alfredo M Ronchi (EC MEDICI Framework): Ethic and Juridical aspects concerning the extended use of artificial intelligence (e.g. e-Transportation, e-Health, e-Government ...).

Jabu S Mtsweni (Council For Scientific And Industrial Research): the convergence of security domains to provide a holistic approach so as to ensure the safety and security of citizens in smart cities, villages and other places.

Jabu S Mtsweni (Council For Scientific And Industrial Research): Security and privacy challenges concerning the emergence of the 4th Industrial Revolution in Digitally Divided nations.

Lynn Thiesmeyer (Keio University, Japan): How to achieve wider reach of simple and portable IT, and greater human capacity to produce, receive, and understand the data, at all levels of society?

Sarah J Fox (University of East London, UK) : To be proactive in considering actions to mitigate risks in terms of security associated with advancing technologies.

Alfredo M Ronchi (EC MEDICI Framework): We suggest to add a special event, to be held in the lobby at ground floor, devoted to young generation and why not elderly people to provide a primer on cyber risks in a broad sense and potential safe behaviours (counter measures / mitigation).

We suggest, if possible, to improve the agenda of the Forum adding a digital map of the facilities (possibly linked with the sessions) and connect the box concerning the single session to the phone agenda in order to facilitate the participant’s allocation of time. Better solution to release an APP devoted to the Forum providing the same services.

Thematic Workshop



Strengthening ICT Connectivity and Digital Inclusion of Landlocked Developing Countries (LLDCs)

UN-OHRLLS/ITU

Monday 8 April 2019

16:30 – 18:15

Room H2 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/192#>

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

- a. C1. The role of public governance authorities and all stakeholders in the promotion of ICTs for development
- b. C2. Information and communication infrastructure
- c. C4. Capacity building
- d. C6. Enabling environment
- e. C11. International and regional cooperation

II. Key achievements, announcements, launches, agreements, and commitments The meeting made some key recommendations on ICT and LLDCs.

Summary of Thematic event Strengthening ICT Connectivity and Digital Inclusion of Landlocked Developing Countries held on 8 April 2019 at the World Summit on the Information Society Forum organized by UN-OHRLLS and ITU

The meeting was moderated by Mr. Cosmas Zavazava Chief of Department of Project Support and Knowledge Management of ITU. Mr. Sandagdorj Erdenebileg, Chief, UN-OHRLLS gave opening remarks and an overview on the status of ICT development in LLDCs. The panelists included Mr. James Howe, Senior Adviser, Sector and Enterprise Competitiveness, International Trade Center; Mr. Ruddy J. Flores Monterrey, Deputy Permanent Representative, Permanent Mission of the Plurinational State of Bolivia to the United Nations and other International Organizations in Geneva; Ms. Donna Bethea-Murphy, Senior Vice President of Global Regulatory Policy and Development, Inmarsat and Mr. Genaro Cruz, Regulatory Specialist, GSMA.

The meeting was attended by over 63 participants, including from LLDCs, transit countries, development partners, private sector, academic institutions and other civil

society. Seventeen LLDCs were represented.

In his remarks Mr. Erdenebileg stressed the importance of enhanced ICT connectivity for the accelerated implementation of the Vienna Programme of Action and SDGs. He indicated that the outcome of the discussions in the event will feed into the preparations of the Midterm Review of the Vienna Programme of Action. He updated the meeting on the status of preparations for the MTR and highlighted the recommendations that were made on ICT development from the regional review meetings that were held in Euro-Asia and Africa regions.

Mr. Howe discussed how to make e-commerce work in LLDCs and used the example of Rwanda where they undertook a study and are now going to launch an E-commerce Service Centre, which combines warehousing and transportation facilities with value added services such as a digital photo studio, a showroom, a training centre and a call centre to better serve Rwandan exporters. He highlighted some recommendations to address the major constraints to e-commerce in LLDCs.

Mr. Ruddy Flores Monterrey highlighted the results of the study that was done in Bolivia by ITU in 2018. He noted that some of the key constraints the country faces include broadband prices remain relatively high in Bolivia compared with the other South American countries; limited access to internet and limited international connectivity. He highlighted that some of the recommendations that are key in enhancing ICT connectivity and digital inclusion in Bolivia include: harmonization of policies and regulations; improved open fixed-broadband access, backbone sharing; the need to operationalize the national broadband plan into digital society; establishing telecentres and improving international interconnection.

Ms. Donna Bethea-Murphy stressed that it is important that all parts of the country receive good ICT connectivity in order to address the rural-urban digital divide. She indicated that satellite technologies offer good solutions to local communities including on health, addressing disasters, learning situations and financial inclusion. She highlighted some of the lessons learnt to include: local requirements or communities should drive solutions; power/electricity and access play a role; copying regulatory regimes and roll out schemes from Europe and the US do not necessarily translate to good connectivity in LLDCs; create sustainability and economic growth particularly in agriculture, conservation, energy, mining and finance; capacity building of stakeholders is important; satellites play a unique to global connectivity; and regulations play a major role.

Mr. Genaro Cruz highlighted that the main barriers that limit demand for internet services include: Accessibility: including network coverage, handsets, electricity, agents; Affordability: handsets, tariffs, data plans and transaction fees; Usability and skills: including lack of awareness and understanding; Safety and security: harassment, theft, fraud and data protection; and Relevance: of content, products, and services. He also noted that the constraints to supply of internet services include: technology: classic technology is not always well suited for rural areas; innovation is needed in radio, backhaul, and power; and high CapEx requirements: high investments and high risk to invest in rural areas Imperfect information: lack of reliable information results in suboptimal investment decisions.

He indicated that they did a study in Ghana and the results show that all settlements with population above 5,000 are already covered and sites with population below 4,600 are not profitable using traditional technologies. He therefore recommended the need for government intervention in such situations. He also noted that a multi-pronged approach is needed. With regards to technology: a combination of different types of mobile infrastructure need to be deployed particularly in small rural sites. Different types of investment are required to achieve universal coverage beyond 94.5% coverage by CAPEX, subsidies are needed and beyond 98.1% OPEX coverage, subsidies needed.

Discussion

In the ensuing discussion, participants stressed the importance of energy. They underscored the importance of infrastructure development and stressed the need of increased investment in rural areas so as to bridge the rural urban gap. Participants discussed the importance of soft infrastructure and noted that both hard and soft infrastructures need to be addressed in order for LLDCs to make progress in strengthening ICT connectivity of the LLDCs. They also underscored the importance of cross-border collaboration.

With regard to e-commerce, participants noted the importance of building trust on the market web site and trust in the legal and payment issues. ITC indicated that on the e-commerce platform that they are working with Rwanda on, acceptable forms of payment for cross border trade is important. In that regard they are using Ecobank in East Africa. He also suggested that paypal could be used. He noted that cross border mobile money could also be used but it was a bit complicated. LLDCs were advised to focus on the products that they would like to market, even in small quantities they could start participating in e-commerce. They could also look more into how the platforms of ebay, amazon and alibaba work and learn from them.

Participants underscored the importance of the role of the government. They stressed that the government is very important in creating a conducive environment to support the private sector through supportive policies and regulatory frameworks. They also stressed that government should work together with private sector to improve coverage. Once coverage has been improved, the meeting stressed that applications should be utilized – e-governance, e-health, e-commerce etc and to have the applications harmonized.

The meeting noted that although satellite technologies offer good solutions, they were expensive. The meeting suggested consolidation of satellite use among many countries in order to cut costs. The meeting emphasized the need for capacity building in order to enhance increased demand for internet services.

III. Overall outcomes of the session highlighting

- main conclusions reached during the discussion

LLDCs face challenges that prevent them from fully harnessing the developmental potential of ICT and digitalization. These include infrastructural gaps, relatively high cost of ICT services, in particular broadband services, low digital literacy rates, poor quality

regulation and the high cost of accessing submarine cables.

- the vision for implementation of WSIS Action lines beyond 2015

IV. Main linkages with the Sustainable Development Goals (please specify the SDGs)

It was noted that in order for the LLDCs to achieve the SDGs they need strengthened ICT connectivity.

V. Emerging Trends related to WSIS Action Lines identified during the meeting

- LLDCs are encouraged to create appropriate enabling environment including the necessary policies, legal and regulatory framework to support ICT development. In particular, the reduction of costs of broadband access, digital skills, increased adoption and utilization of ICT applications and services are strongly recommended.
- LLDCs are encouraged to provide for mechanisms to facilitate the deployment of networks and services in non-profitable area, including rural areas through public investment, public private partnerships, or other incentives.
- The international community should provide financial and technical assistance to support accelerated ICT development in LLDCs. In this regard all key partners including development partners, the United Nations system, and other international organizations, the Regional Development Banks, and Regional Economic Communities are encouraged to strengthen their support.

VI. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

How to expand e-commerce in LLDCs.

Thematic Workshop



Harnessing the Potential of VR and AR for Sustainable Spaces

ITU/GTI

Monday 8 April 2019

16:30 – 18:15

Room K1 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/200#>

- I. **Relevance with the WSIS Action Lines: C1; C2; C3: E-Environment, E-Health and E-Science; C4; C5; C6; C7; C8; C9; C10**
- II. **Key achievements, announcements, launches, agreements, and commitments:**
 - Presentation of “Inflection: VR Climate Action” project prototype by **Maria Mruk** and **Yvain Tisserand**. Inflection is the collaborative work between UNIGE, GTI, SDG Solution Space, Confucius Institute, and Scaphe Robotics.
 - Panel discussion (**Moderator: Alexandra Mackey** (GTI)):
 - **Touradj Ebrahimi** (EPFL, JPEG Committee)
 - **Jennah Kriebel** (Scaphe Robotics)
 - **Marc Lee** (independent artist)
 - **Stéphanie Mermet** (Hôpitaux Universitaires Genève)
 - **Salar Shahna** (World VR Forum)
- III. **Main outcomes highlighting the following:**
 - 1) **Debated Issues**
 - The main debate focused on the relation between VR/AR technologies and sustainable processes; ways to guide the diffusion of VR/AR technologies in ethical, responsible and democratic directions; the exploration of potential uses of VR/AR in political spheres and the importance of education in directing VR/AR development and diffusion.
 - The Inflection: VR Climate Action project (a GTI and Campus Biotech collaboration) was presented as an example of emerging technologies at the forefront and intersection of Sustainable Development Goals and WSIS Action Lines.

- Anthony Sahakian, the CEO of Quantum Integrity SA, an audience member, challenged the hypothesis that VR/AR can enhance sustainable development by questioning the overall sustainability of these technologies. Stéphanie Mermet (panellist), noted that VR applications for pain/stress management in pediatric emergencies present an all but exclusively beneficial alternative to a number of sustainability issues in hospitals, addressing the wellbeing of young children and their families and medication waste management.

2) Quotes

- “I think the most important aspect is to educate everybody, including ourselves--those who create such technologies. In particular we need to understand and highlight what are the impacts of these technologies on us as well as on the society. In VR/AR, similar to many other technical solutions, education has a very important role. This includes but is not limited to ethical issues.” Professor Touradj Ebrahimi, EPFL, JPEG Committee
- “Je pense que la difficulté est beaucoup plus chez l’adulte parce qu’il n’a pas grandi avec ça, alors que l’enfant, on pensait qu’on allait en surprendre quelques uns. Mais en réalité très peu. Les questions un peu plus inquiétantes sont beaucoup plus chez l’adulte qui lui n’a pas grandi avec ça et a peur de perdre le contrôle. (...) Les enfants ont une capacité d’adaptation qui est bien meilleure que celle de l’adulte.” Stéphanie Mermet, HUG

IV. Overall outcomes of the session

- With VR and AR, as with all technologies, they can be used for good or for more nefarious ends. The key is to have an ethical framework in order to use these technologies responsibly. Education is one of the primary ways to ensure that ethics considerations participate in the design and diffusion phases.
- The JPEG Pleno standardization framework is an enabler of the emerging era of virtualization, where atoms are replaced by bits. The trend of image coding is towards increased immersion and virtualization of physical spaces, with new technologies maturing and becoming widely available, such as, light field, point cloud and holography.

V. Main linkages with the Sustainable Development Goals: direct links of the discussion to specific SDGs: 3; 4; 7; 8; 9; 11; 12; 13; 17.

- The Sustainable Development Goals provide an overall, holistic framework for development cooperation. To do so, engaging cross-disciplinary debates are needed on the challenges and pitfalls of emerging technologies for sustainable development.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

- The role of public governance authorities and all stakeholders in the promotion of ICTs for development (C1) has been effective in the panel, as it was a multistakeholder and interactive meeting.
- Information and Communication Infrastructure (C2), Access to information and knowledge (C3) and Media (C9) were largely reflected during the panel. This was emphasized by Salar Shahna and Marc Lee regarding their work in media and art. Jennah Kriebel proposed that the archive of UN meetings be presented into a virtual immersive archive, which would enable stakeholders to gain a fuller understanding of the nuance of important sessions. The UNESCO-recognized archive of the Montreux Jazz Festival incorporation of new media was pointed to as an outstanding example of such an endeavor.
- Enabling environments (C6) have been suggested throughout the panel, as the main theme was to define and contrast the different definitions of “sustainable spaces” according to the different backgrounds of the panelists. Jennah Kriebel considered the many types of boundaries, understood in terms of framework rather than only physical structures, to create safe spaces.
- The potential of VR for E-Health (C7.18) was considered through the HUG pilot project presented by Stéphanie Mermet as it relates to pain mitigation for children.
- E-environment (C7.20) and E-science (C7.22) have been discussed in depth as it relates to the conditions necessary to make a space, virtual or physical, sustainable.
- Cultural Diversity and Identity, linguistic diversity and local content (C8) was present, and well-manage throughout. Stéphanie Mermet brought a local perspective to VR at hospitals in Geneva and the global aspect was brought up by Salar Shahna with the World VR Forum for instance. Interpretation from French to English was achieved.
- Ethical dimensions of the Information Society (C10). Professor Ebrahimi noted that education was a fundamental pillar for an ethical use of new technologies. Stéphanie Mermet, as a medical professional, emphasized the importance of operating within an institutional ethical framework.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

- Further investigate the possible applications of VR/AR in politics and governments
- The democratization of this type of emerging technologies, especially in the development field. Can the potential of empathy creation of VR/AR be used to benefit poorer communities? Might this enhance global inequalities rather than contribute to eradicating them?

- Better understand the overall energy needed to produce, use and maintain emerging ICTs.

Thematic Workshop



Cybersecurity and Artificial Intelligence: how to allocate liability between the Stakeholders?

UNIGE

Monday 8 April 2019

16:30 – 18:15

Room L2 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/186#>

Cybersecurity and Artificial Intelligence: How to allocate liability between the stakeholders

Artificial Intelligence may be used by companies to enhance their security, as well as by attackers to better breach security. Today, white hat hackers are also skilled professionals with serious jobs and human resources teams. The number of players (manufacturers, operators, programmer, trainer, end-users) makes it consequently difficult to allocate liability. The discussion will thus focus on the following challenges: how to identify all players, how to allocate the liability between them (in the light of current legal frameworks such as the GDPR and the product liability laws), what are the insurance options and finally, what are the regulatory challenges?

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

- C1. The role of public governance authorities and all stakeholders in the promotion of ICTs for development
- C2. Information and communication infrastructure
- C4. Capacity building
- C5. Building confidence and security in the use of ICTs
- C10. Ethical dimensions of the Information Society
- C11. International and regional cooperation

II. Key achievements, announcements, launches, agreements, and commitments

-Announcement of the Cybersecurity and liability conference held at the UNIGE in June

20, 2019

-Announcement of the Internet Law School and Internet Colloquium at the University of Geneva in June 2019.

III. Main outcomes highlighting the following:

1) Debated Issues

A. Mapping the challenges and the stakeholders

- Brief explanation of technological features of AI used in cybersecurity; what makes AI different from other disruptive technologies? Who are the stakeholders (manufacturers, operators, programmer, trainer, end-users)
- The responsibility of software developer: How are the EPFL / UNIGE experts using ML techniques to enhance cyber security and fix the vulnerabilities?
- The challenges of AI in cybersecurity and the most common cyber security mistakes: Who takes more advantage of AI: the cyber-criminals or the security-engineers?

B. Civil liability: current legal challenges

- Use-case of self-driving cars: there are many incidents (in the US) where self-driving cars that rely on applications and training data to operate have caused fatal accidents when confronted with unfamiliar sensory feedback or inputs their guidance systems couldn't interpret. Who should be accountable in these circumstances?
- Can the role of each stakeholder be easily distinguished? Also, with deep ML / unsupervised learning methods?
- What are the liabilities and for which stakeholder in this case? What is the interface between the liability regimes?

C. Insurance

- Insurability of certain types of cyber risks, such as fines for breach of regulations, state sponsored cyber-attacks, ransomware payments, terrorism, physical harms
- The role of regulators (including conflict of laws, mandatory insurance for certain industries): What are the various policy options regulators could take to ensure that the cyber insurance market gradually matures while enhancing effective cyber posture and policies across businesses? Codifying cybersecurity best practices into statute (thereby creating certain safe harbors and other exceptions to cyber liability)?
- Other tools available for allocating liability between stakeholders beyond cyber-insurance (e.g. financial guarantees, class action law suits, self-insurance, federal government as a reinsurer, international cyber torts).
- Perspective of the Industry

D. Regulatory challenges and next steps

- Issues in the context of AI's impact on national or international governance, rules or policies: What will be the next steps for AI & Cybersecurity-related discussions? How

should government officials facilitate discussions and the use of AI-powered applications for government services?

- EU-perspective (incl. Product Liability Directive, the future pan European certification scheme for cybersecurity and the High-Level Expert Groups on AI and on Liability)
- US-perspective
- Israeli-perspective
- Further ideas: technical experimentation with safe-harbor (such as Fintech Sandbox and white Hat hackers attacking organisations without prior co-ordination and consent in order to promote better security)

2) Quotes

- “The ethical part must be taken into account. The autonomous car could decide to hit one person to protect another person. Which rules are we ready to accept?” by Olivier Crochat, Executive Director, C4DT, EPFL
- “Policy makers need to accept that there is always a certain amount of missing information, and still it is important to make decisions and advance innovation. We need to adapt our policies and legislation to that type of situation. Solution? The entity most efficient to prevent harm and influence good practices will be the main liable, and at the right circumstances we employ strict liability. Also, at initial stages, consider immunity by “Regulatory Sandboxes”. By Adv. Limor Shmerling Magazanik, Managing Director, Israel Tech Policy Institute.

IV. Overall outcomes of the session

Legislators and policy makers need to take into account the complexity and sophistication of computerized control systems and update the current civil liability framework. GDPR could be a useful tool to this end. For example, the automated vehicle manufacturer can act as a “data controller” and be accountable if he fails to provide safety standards to the consumers. Another idea is to have courts specialized for technology issues with judges who have been trained in technology.

On Autonomous Vehicles and Automobiles insurance:

- a. The statements from Volvo’s CEO (2015) and the Managing Director of Volvo Australia (2017) seems to suggest a move toward strict liability for manufactures when an accident occurs and the car is in full autonomous mode. This has also been the position that many scholars have adopted. The manufacturer is best placed to contract out liabilities with other stakeholders along the supply chain.
- b. The recent U.K. Automated and Electric Vehicles Act (which received royal assent in July 2018) adopts a different model. The Driver of the automated vehicle should be held liable, and will be indemnified by his or her Insurance

Company. The Insurance company could then litigate with the manufacturer and other stakeholders for the costs of the claim.

- c. Certain manufacturers are considering bundling their automated cars with an in-house insurance scheme, so that insurance is part of the overall price for the car.

There are many technological challenges; interpretability and transparency of the Artificial Intelligence technologies used by the industry are two prominent challenges.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

SDG 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

Ethics are quite important to regulate the challenges of the use of Artificial Intelligence in our life (connected to C10 Action Line)

Thematic Workshop



Older persons and new technologies: a smart mix

ITU/AARP/CSEND

Monday 8 April 2019
Room M - ITU

16:30 – 18:15

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/190#>

I. **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11**

C2: Encourage the design and production of ICT equipment and services so that everyone has easy and affordable access to them including older people, and promote the development of technologies, applications, and content suited to their needs, guided by the Universal Design Principle and further enhanced by the use of assistive technologies.

C3: Promote research and development to facilitate accessibility of ICTs for all, including disadvantaged, marginalized and vulnerable groups, such as older people.

C7: e-health and e-employment.

C10: ethical dimensions of the information society.

II. **Key achievements, announcements, launches, agreements, and commitments**

The panelists agreed on the need to dispel myths and stereotypes about older persons and new technologies, and recognized that ICTs can be solutions for empowering older adults and enabling healthy ageing for all of us.

III. **Main outcomes highlighting the following:**

1) **Debated Issues**

- Aging populations: between 2015 and 2030, those aged 60 years or over — in the world is projected to grow by 56 per cent, from 901 million to more than 1.4 billion (1 in six globally).

- Healthy ageing entails creating the environments and opportunities that enable people to be and do what they value throughout their lives, and ICTs can be empowering in that regard.
- ICT solutions for empowering older adults need to consider: inclusive design and user experience, consumer awareness and adoption, sustainability and policy, and measurable impact at scale.
- Examples of ICT opportunities for older adults (e.g., ‘sharing economy’ platforms, VR tourism, mHealth, social media, teleworking, monitoring sensors, ride-hailing tech...)
- Videoconference-based neuropsychological assessments: remote cognitive consultations to diagnose Alzheimer’s disease (among other neurodegenerative diseases), as an alternative to the hospital pathway.
- ICTs can make housing more flexible and adaptable to older persons’ needs and preferences by enabling choices and social contact, giving greater access to information and communication and acting as a prosthetic interface when mobility is reduced.
- Digital applications for older persons must respond to their particular needs, and as end users they need to be involved in their design.
- ICTs can also be used to facilitate the work and wellbeing of caregivers, whose work can be very stressful and socially isolating. Caregivers are a secondary audience that should be considered when designing ICTs for older persons.

2) Quotes

- “ICTs can contribute to healthy ageing by contributing to the process of developing and maintaining the functional ability that enables wellbeing in older persons.” – Mr. Raymond Saner, Co-founder, Centre for Socio-Economic Development (CSEND)
- “Considering the growing number of older persons in the world, we should have more consideration for design for senior people.” – Mr. Alfonso Di Ianni (retired top manager Oracle; head of LongLifeJoy for Seniors)
- “ICTs are important for building interfaces for habitats, and enabling choices and contacts for older persons.” – Mr. Bill Boulding, architect and designer of environments for older people

IV. Overall outcomes of the session

The session affirmed:

- The importance of affordable quality access to the Internet for older persons wherever they live to bridge digital divides.
- The importance of digital skills and lifelong learning opportunities for older persons to facilitate full participation in and continual adaptation in the digital age.

- The need to dispel myths and stereotypes about older persons and new technologies that risk excluding them from opportunities for employment, investment in their businesses, etc., and recognize that older persons are also consumers and creators of ICTs.
- That there is huge potential for ICTs to have a positive impact on older persons' lives, but that the development of ICTs for older persons must be done with their participation to ensure it meets their needs and is accessible to those with varying levels of functional limitations.
- That mastering ICT allows older persons to be resilient when facing hardships and isolation and to seize opportunities to contribute to society.
- That ICT provides opportunities for older persons to continue to learn and to share their many years of accumulated tacit knowledge and insights.
- That innovative ICT solutions require investment from and collaboration with a variety of organizations to be successful in the long term.
- ICT is useful for caregivers providing care and safety to older persons suffering from dementia. It can help the caregivers get organize across distance and coordinate with hospital staff by external care givers.
- ICT can be a useful supportive technology giving older persons more opportunities to co-manage their living space.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

SDG 3: Accessible ICTs and new technologies can ensure healthy lives, healthy ageing and promote wellbeing for all, including older people.

SDG 4: Accessible ICTs can help ensure inclusive and equitable education and opportunities for lifelong learning for all, including older persons, through universal design principles that ensure information is delivered and communication is enabled in a way that corresponds to any learner's needs.

SDG 8: Accessible ICTs can connect persons with disabilities with employment opportunities in the digital economy, thereby providing a pathway to full and productive employment and decent work.

SDG 10: Greater ICT accessibility promotes the social, economic and political inclusion of all people, irrespective of age or ability, thereby reducing inequalities within countries.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

The ageing world population will increase the need for accessible ICTs and new technological solutions for the empowerment and inclusion of older persons.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

N/A.

Thematic Workshop

ICT and Sport



.sport – a trusted ecosystem of information and communications for the community

GAISF

Monday 8 April 2019

16:30 – 18:15

Room C2 ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/206#>

This outcome will be made available soon.

Youth Junior Track STEAM Day

WSIS STEAM Day

Techlabs Switzerland

Thursday 11 April 2019

09:30 – 17:00

Reception Area, Montbrillant

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

C3 and C5

II. Key achievements, announcements, launches, agreements, and commitments

All the schools who participated in the session manifest that they really enjoyed and were really happy that the ITU and Techlabs provided their student the opportunity to attend to this Steam Day.

III. Main outcomes highlighting the following:

Debated Issues

The students were really implicated in the workshops showing their interest in this new technologies and their capabilities in helping them in their learning process

Quotes

“We loved it” - All the participants

IV. Overall outcomes of the session highlighting

The schools showed interest in repeating this event next years

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

SDGs 4 and 5

VI. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Expand the STEAM day to welcome more schools from Switzerland and abroad

Thematic Workshop



Enabling access to connectivity for refugees: inclusion in national frameworks

UNHCR

Thursday 11 April 2019

09:00 – 10:45

Popov Room 2 - ITU

- I. **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11:**
C1, C2, C6, C8, C10, C11
- II. **Key achievements, announcements, launches, agreements, and commitments:**
 - Release of Global Broadband Plan for Refugees Inclusion, Broadband for Refugees
 - Publication of Displaced and Disconnected and the related country reports, UNHCR Innovation Service
- III. **Main outcomes highlighting the following:**
 - 1) **Debated Issues**
 - **Please capture highlights of the main issues debated and interactions with audience:**
 - Reflection on UNHCR's Connecting Refugees vision from 2016 to provide *“access to available, affordable and usable mobile and internet connectivity for all refugees, and the communities that host them, in order to leverage these technologies for protection, communications, education, health, self-reliance, community empowerment, and durable solutions”* and how this fits in the context of UNHCR's Global Compact on Refugees and UNHCR's Comprehensive Refugee Response Framework.
 - Connectivity, and mobile, as one of the tools to rethink humanitarian aid delivery and what it means to provide dignity, and dignified aid, at a time when global displacement is at its highest since World War II.
 - A number of barriers that limit access to connectivity for refugees remain and need to be addressed to realise universal connectivity, namely information, adoption, access and utilization gaps.
 - For aid to be delivered more efficiently, and considering that services are increasingly digitised, beneficiaries need to have access to a mobile and they need to do so in their own names. However, identity requirements and verification standards (Know Your Customer and SIM registration) are often hard to meet for the

displaced and this significantly limits their access to connectivity.

- A refugee who cannot legally activate a mobile connection, open a bank account or access a mobile money wallet in his or her own name may be further marginalized and disempowered as access to information, communication, cash assistance, and transfers is severely limited.
- Collaboration between UNHCR, host governments and regulators is needed to facilitate the provision of ID credentials to refugees and their inclusion in national policies and frameworks.
- Focus on the collective effort and crucial role of partnerships - across governments, humanitarian agencies, and the private sector - in enabling access to connectivity for refugees and addressing existing barriers and gaps.
- Case studies, successful practices, and examples of collaborations around connectivity by the Uganda Communications Commission and the GSMA.

• Please highlight key achievements and challenges shared by the audience and/ or panellists:

- Key challenges in access to connectivity remain and they are of diverse nature. The discussion explored how different policies, legal frameworks and regulations can restrict access to connectivity for displaced populations.
- Other challenges that need to be addressed pertain to affordability (of device, data plans, charging options), digital literacy, and the gender divide in accessing connectivity.
- Advocacy and consultations are vital and should be conducted both at a national and international level.

2) Quotes

• Please provide two important quotes from the session and the names & organisation of the person you are quoting

- *“This is essentially a collective action problem. Every one of the stakeholders would benefit from universal connectivity (...). But no individual entity has either the financial capacity or the political authority to achieve that vision. And therefore, the most important thing is to create an international coordinating committee to achieve the vision that UNHCR set out a couple years ago and which can be achieved.”* - Mr Blair Levin, Executive Director, Broadband for Refugees and ex-Head of National Broadband Plan in the FCC
- *“Legal uncertainty creates a lot of inefficiencies (...). I think we can do better in terms of providing explanations to stakeholders on what are the requirements, including humanitarian organizations but also service providers and others”* – Dr. Aaron Martin, Legal and Regulatory Consultant, UNHCR
- *“Some of the settlements in Uganda now have connectivity, but this doesn’t serve the refugee populations alone. It benefits the community.”* Mr Enoch Barata, Board Member, Uganda Communications Commission

III. Overall outcomes of the session

• main conclusions reached during the discussion

- Importance of continuing to leverage key collaborations and partnerships to address the connectivity gaps highlighted during the session and in the reports presented during the panel.
- Transparency and communication about good practices when it comes to facilitating access to connectivity for the displaced, but also openness to share lessons learned and what doesn't or did not work.
- Role of advocacy in bringing all stakeholders together and aligning on the opportunities of providing connectivity for refugees and their host communities.
- Necessity to think about inclusion and the many intersections with connectivity, including gender, ability, and diversity.
- Connectivity represents an opportunity and a gateway to a more holistic approach to protection and to many lifesaving services for displaced populations.
- UNHCR believes that dialogue between governments, aid and development actors and industry is vital to facilitate better outcomes around telecommunications for refugees and hosting communities: every stakeholder has a role to play in providing connectivity for refugees and individual as well as collective actions are crucial.

• the vision for implementation of WSIS Action lines beyond 2015

- Renewed emphasis on the role of national and international cooperation, as well as partnerships and collaborations between stakeholders in providing access to connectivity for refugees, in line with WSIS Action Line C1 and C11.
- Research and advocacy around enabling environments for refugees to access connectivity legally and in a secure manner (WSIS Action Line C6).

IV. Main linkages with the Sustainable Development Goals (please specify the SDGs)

Refugees' access, right, and choice to connectivity is deeply interlinked with several Sustainable Development Goals. The discussion in particular touched upon Gender Equality (SDG5); Industry, Innovation and Infrastructure (SDG9); Reduced Inequalities (SDG10); Partnerships for the Goals (SDG17); and Sustainable Cities and Communities (SDG11).

V. Emerging Trends related to WSIS Action Lines identified during the meeting

A number of the recommendations discussed on the panel are correlated to the WSIS Action Lines, including the following:

- Role of governments and stakeholders in the promotion of ICTs for development, effective participation and cooperation, partnerships (Action Line C1)
- Enabling environment (Action Line C6)
- International and regional cooperation (Action Line C11)
- Information and communication infrastructure: an essential foundation for the

Information Society (Action Line C2)

VI. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

- Financial inclusion for displaced populations: Leveraging technological innovation
- Digital ethics in humanitarian interventions
- Addressing gender disparities in mobile ownership and usage

Thematic Workshop



5G socio-economic impact

Nokia

Thursday 11 April 2019

09:00 – 10:45

Room C2 - ITU

Main outcomes

The Fourth Industrial Revolution is expected to create enormous economic and societal value through use cases such as robotic process automation and flexible human-machine collaboration. It will be underpinned by ultrafast and ultrareliable 5G. A switch to 5G promises to catalyze various societal benefits and economic growth, involving job creation, income growth/disparity, consumer cost/time savings, pollution/greenhouse gas reduction and quality-adjusted life years gained. As 5G rollouts are starting globally, this WSIS session discussed its upcoming impacts, and how to assure its most inclusive nature.

The session started with a presentation from Marc Vancoppenolle, Global Head of Government Relations at Nokia, who introduced what will be unique 5G capabilities (bandwidth, latency, reliability) and how those translate into new opportunities for our economy. 5G is enabling digitalization of physical assets, e.g. in the energy, transport, digital health networks with preventive care, manufacturing. New efficiencies in those sectors will create a tipping point enabling a jump in productivity in the coming years. Some use cases that were presented include enhanced security with drones, automated factories and precision and remote applications (machines reacting on real time data analytics), reduction of fatalities on the roads with introduction of assisted and in the future autonomous driving. However, concrete policy and regulatory actions are needed to make 5G a reality. It concerns release of new spectrum for 5G, facilitation of deployment of infrastructure (e.g. small cells and fiber - by getting permits faster), enabling of new business models by the introducing balanced net neutrality rules, and data friendly policies, providing privacy and security and allowing data flows.

A discussion followed with Mark Spelman, Head of Thought Leadership at WEF. He presented WEF's focus on creating a sustainable and trustworthy future and how 5G will enable that. 5G will change how value is created in the industries – macro level – but it will also deliver concrete benefits for individuals – personal level. If you reorganize transport, you can reduce the amount of accidents on the roads but also decrease pollution and traffic intensity (impacting the time wasted in the traffic jams). For individuals, increased lifespan thanks to micro-robotic in our body will bring tangible benefits. However, Mr. Spelman reminded that there are also risks of a technology backlash, therefore it is important to be inclusive in debating the new technology impact. WEF intends to moderate such an inclusive, cross-sectorial and global debate around 7 priority objectives: business models, supporting early adopters building 5G use cases,

establishing cooperative models for infrastructure investment, demonstrating 5G socio-economic benefits, preparation for future cyber-security scenarios, creation of an enabling regulatory environment, prioritization of sustainability and inclusiveness (to avoid new digital divide).

Ben Wreschner, Chief Economist at Vodafone, talked about emerging proofs of 5G benefits from early deployments conducted by Vodafone in Milan, Italy. As an example, with a connected ambulance, care became more efficient thanks to early gathering of medical information transmitted immediately to the hospital from the ambulances. However, it won't be an easy ride, as there are many challenges ahead:

- 1) huge spectrum prices, e.g. in Germany, in Italy. If governments want pervasive 5G, then extracting huge value out of operators before rollouts is defeating that purpose.
- 2) cost of deploying infrastructure – the time it takes to get permits, to start digging (2 years delay for a single base station).
- 3) regulatory fragmentation: currently there are different regulatory frameworks in every industry where 5G would be deployed; that prevents reaching scale.

Mr. Wreschner also spoke about concerns around privacy and data. A balanced approach is needed to allow some innovation and exploitation of data while safeguarding our privacy. What if four of our senses can be controlled simultaneously – huge amounts of personal insights could be collected. It is governments' responsibility to make sure a framework exists preventing infringements of our privacy.

Marcin Cichy, President of the Office of Electronic Communications, Poland and Vice chair of BEREC started his remarks with commenting on spectrum rollout plans for 5G, including in low, mid and high bands. Other issues to be addressed are health and electromagnetic compatibility, standardization and level playing field between all economic participants. It is a difficult task to agree a common approach, e.g. in the EU there are many different viewpoints how 5G should be rolled out. There are some tensions between conflicting goals, e.g. maximizing budgetary income and delivering predictable framework and timeline for investment payback. 5G will bring a huge density of new networks. The current standard for Poland was developed in 1984 and this regulation is still in place and it caps the maximum capacity of the networks, below the needs of users. By 2025 Poland may lack network capacity if this issue is not addressed.

Questions that followed focused on the digital divide - not just between Western economies and developing countries, but also within the EU between urban and rural areas. Panelists expressed concern with a slowdown in connecting the unconnected. It should be addressed by dedicating more investment funds to the digital sector. The audience was also interested in how 5G will be different from 4G in delivering socio-economic benefits and would it ultimately replace 4G. Panelists reminded that with 5G a lot of new applications can be unlocked, also relevant for rural areas (such as smart agriculture). The debate also stressed that 5G is not just mobile access but a complete revisiting of the network architecture with a big portion of fiber. Another question from the audience touched upon spectrum licenses duration and technology migrations.

Panelists also commented on the European net neutrality rules and the need for those rules, when implemented, to allow for new use cases. Finally, a moratorium on 5G rollouts in some Swiss communities triggered a discussion about the importance of education and open communication with citizens on new technologies and their socio-economic impacts.

Main linkages with the Sustainable Development Goals (please specify the SDGs)

SDG 8, 9, 11, 17

Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

How to support regulators and other stakeholders to communicate on new technology impacts to broader society.

Thematic Workshop



Women Leaders in Blockchain

Shule

Thursday 11 April 2019

09:00 – 10:45

Room H1 - ITU

Shule

<https://shule.io/>

- Encourage girls, women and those affected the most by the digital divide to continue forward with their passion in tech! @womenwhocode @sowcoders @girlswwhocode @blakcgirlscode @momscancodepgh @railsgirls @girlsintech are great places to start.
- Participate in blockchain and get to know this new economy. BUIDL, earn a bounty, engage! Connect with @ETHGlobal and put on a blockchain hackathon in your community.
- Engage with @shule_io at www.shule.io and tell us experiential learning opportunities that are in your community. Let's make the pursuit of science, technology, engineering, ARTS, and Science verified and accessible to all again.

SeaForm Media

<https://www.seafoam.media/>

- Sea Form Media, DLT.Dev & TeamDistro are currently seeking seed investment. Be the first to invest in our fully bootstrapped ecosystem(since 2017) to help us speed up innovation & empowerment across global markets.

EmpirEquip

- Join Women of Color in Blockchain
- Partner with EmpirEqual on new Open Diversity Equity, and Inclusion Data Framework
- Get involved in BUIDLBoston

Bounties Network

<https://explorer.bounties.network>

- Fulfill the “Synopsis & takeaways from blockchain events around the world” Bounty and earn some Eth.<https://explorer.bounties.network/bounty/2484>

Celo

<https://celo.org/>

- www.GiveDirectly.org/campaign/CeloAndGiveDirectly

Thematic Workshop



Artificial Intelligence and Cyber Security

Access Partnership

Thursday 11 April 2019
Room H2 – ITU

09:00 – 10:45

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

AI-powered solutions can positively contribute to all aspects of life (WSIS Action Line 7) and increase confidence and security in the use of ICTs (WSIS Action Line 5). Realizing the benefits of AI in cybersecurity, however, requires international and regional cooperation (WSIS Action Line 11), capacity building efforts (WSIS Action Line 4) and discussions on the ethical dimensions associated with the use of the technology (WSIS Action Line 10).

II. Key achievements, announcements, launches, agreements, and commitments

The panel emphasized the importance of the multistakeholder approach in facilitating innovation and encouraging the development and application of AI-powered technologies. It was noted that public private partnerships are likely to increase robustness and resilience of governments in cyberspace.

III. Main outcomes highlighting the following:

1) Debated Issues

- AI as a transformational technology with massive impacts on social and economic welfare.
- The potential benefits of the use of AI in the cyberspace domain.
- The need for light regulatory regimes to encourage investment in AI.
- The importance of capacity building initiatives to increase awareness about the use of AI in Cyberspace.

a. Please highlight key achievements and challenges shared by the audience and/ or panellists

- The panel highlighted that huge capacity gaps exist between the public and private sectors in the development and use of AI.
- Multiple panelists reflected on the key challenges associated with the malicious use of AI in cyberspace.

- Multistakeholder efforts for the development, use and regulation of AI were applauded as key achievements.

2) Quotes

- “We need people who build bridges.” Jean Rickli, GCSP
- “Light regulation that fosters investment is key to realizing the benefits of AI-powered applications.” Antonio Amendola, AT&T.

IV. Overall outcomes of the session

- Multistakeholderism is essential to fostering the investment in and the use of AI-powered applications.
- Light regulatory frameworks will be beneficial to the development of AI applications.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

AI in cybersecurity is an innovative way of increasing the resilience of infrastructure and help promote sustainable industrialization (Goal 9). It could also strengthen and promote just, peaceful and inclusive societies (Goal 16). Realizing the benefits of AI in cybersecurity, however, requires international and regional cooperation and smart, sustainable partnerships (Goal 17).

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

N/a

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

N/a

Thematic Workshop



United for Smart Sustainable Cities (U4SSC)

UNU-EGOV/ITU/UN-HABITAT

Thursday 11 April 2019
Room K1 - ITU

09:00 – 10:45

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/Forum/2019/Pages/Agenda/Session/157#intro>

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

C2, C3, C5, C6, C7, C8

II. Key achievements, announcements, launches, agreements, and commitments

Presentation of U4SSC Initiative and Blockchain for Cities (B4C) Project, discussion about opportunities to use blockchain technology for smart and sustainable cities and villages.

III. Panelists:

Mrs. Cristina Bueti (ITU) – Moderator
Mr. Malcom Johnson (Deputy Secretary General, ITU)
Mr. Graham Alabaster (UN-Habitat)
Mrs. Soumaya Ben Dhaou (UNU-EGOV)

IV. Main outcomes highlighting the following:

1) Debated Issues

Highlights of the main issues debated:

- Mr. Malcom Johnson

- There is interest around blockchain, especially because of cryptocurrencies.
- It is necessary to increase transparency and efficiency of cities.
- It is essential to address not only smart city but also smart villages and communities, improving service delivery, productivity, healthcare, education, etc.
- The United for Smart Sustainable City Initiative has more than 15 UN bodies involved, and they are integrating skills and efforts to achieve more goals.

- Mr. Graham Alabaster

- UN-Habitat is investing in circular cities, waste management, etc. It is necessary to promote the efficiency of services, to improve the management of resources, considering air pollution and other aspects.
- Blockchain technologies offer many opportunities. It is necessary to include society in the challenges and in the solutions to create a strong governance. In many countries there is the opportunity to use it for recycling, waste management, to support the economy around it and to legislate appropriately.
- About the SDGs, data is available but is not possible to collect, integrate it and analyze it appropriately. It is necessary to invest on to support city managers in the main decisions.
 - It is necessary to improve resource allocation, the management of water (it is a huge challenge for some cities) and to analyze how blockchain can be used to support it. City managers should use this system to be able to benefit from it.
 - The aggregation of information is essential.
 - Smart sensors are being used and partnerships with universities were created to monitor areas, to support health and environmental challenges.

- Mrs. Soumaya Ben Dhaou

- United Nations University (UNU) focus on contributing, through collaborative research and education, to efforts to resolve the pressing global problems of human survival, development and welfare that are the concern of the United Nations, people and Member States.
- UNU-EGOV is dedicated to Electronic Governance (core centre of research), advisory services and training; a bridge between research and public policies; an innovation enhancer; a partner within the UN system and its Member States with focus on sustainable development, social inclusion and active citizenship.
- Its main activities are policy-relevant research related to managing eGov for digital transformation and technologies for a sustainable government and digital governance evolution.
- UNU-EGOV is contributing directly to SDGs and it promotes scientific and policy development.
- UNU-EGOV promotes advisory and consultancy services, like training on-demand in different countries and fields (smart cities, digital transformation and electronic governance). It also has a Program to integrate UNU-EGOV with multi-disciplinary teams, with governments and academic fellows.
- UNU-EGOV coordinates the ICEGOV Conference.
- U4SSC is an initiative launched by ITU and UNECE, to promote smart and sustainable cities. Some ongoing projects are related to use of blockchain and artificial intelligence, mechanisms to finance projects, etc.
- UNU-EGOV is leading the deliverable on Blockchain for Cities (B4C). The goal is to understand and to assess the effective contribution of blockchain to smart and sustainable cities, present the potential of the technology, identify benefits, risks, challenges, opportunities and provide policy guidelines. The project has a social-technical perspective (technology,

context, resources and capabilities).

- The target audience of B4C is Municipalities, to support their decisions about the main challenges faced.
- There are more than 60 multi-disciplinary experts involved in the project, from different countries around the world.
- The final document of the project, that will present the use cases, benefits, challenges and opportunities of blockchain for cities will be concluded at the end of the year.
- The objective is to provide a framework for city manager and officials to assess their effective needs in Blockchain.

- Mrs. Maria Cristina Bueti

- Everybody is invited to participate in the U4SSC, the goal of the initiative is to be as inclusive as possible. Most of the meetings are online, to facilitate participation. Please, share the information and any knowledge about proof of concepts, pilots and expertise that the countries have and invite them to participate. U4SSC is open to include more use cases in the ongoing project and report. It is important to receive the feedback about the initiatives created by the countries.

Here are the **key achievements and challenges** shared by the audience and/ or panelists

- Mr. Malcom Johnson

- Energy consumption is a major challenge and the interoperability between blockchain and other systems also.
- It is important to develop international standards to support the use of blockchain.
- It is necessary to take into consideration security aspects and to create appropriate policies for the use of blockchain.

- Mr. Graham Alabaster

- The way urbanization is evolving is a huge challenge. We need to have data aggregated to support the appropriate management of SDGs.

- Questions from the participants

- The participants asked questions about (i) what are the expectations about the use of quantum computing and its influence on blockchain technologies; (ii) the possibility of participation of other countries and experts in the B4C project; (iii) the focus of not only smart cities, but also smart villages; (iv) smart cities index.
- The panelists answered that it is necessary to have more information to evaluate the impact of quantum computing in blockchain, (ii) contributions of other countries and experts are welcome; (iii) it was clarified that smart villages are also considered relevant and part of the initiative; (iv) there is an ongoing initiative to create a Smart Sustainable City Index. A research is being performed with others UN Agencies. It is expected that at the end of the year, the first draft will be available.

2) Quotes

- It is essential to promote sustainability and to address not only smart city but also smart villages and communities, improving service delivery, productivity, health care, education, etc (Mr. Malcom Johnson - Deputy Secretary General, ITU).
- About the SDGs, data is available but is not possible to collect, integrate it and analyze it appropriately. It is necessary to invest on in, to support city managers in the main decisions (Mr. Graham Alabaster).
- It is necessary to evaluate relevant use cases, to assess real benefits and challenges, to support the creation of appropriate policies and to support municipalities in the decision to use blockchain technology (Mrs. Soumaya Ben Dhaou).

V. Overall outcomes of the session highlighting

Main **conclusions** reached during the discussion:

- All the panelists consider there are many challenges that can be addressed by blockchain, it is necessary to integrate efforts to understand the more important benefits that the technology offers and the main areas which it can be used.
- It is also important to better understand the implications and the cost for the developing countries in adopting blockchain technologies.
- Cristina and Soumaya reinforced that it is not easy to find information about concluded blockchain projects. ITU would like to invite everybody that have cases, to share the lessons learned, the benefits achieved and the challenges faced, to support the use case collection and the analysis of the framework that is being created.

VI. Main linkages with the Sustainable Development Goals (please specify the SDGs)

11, about smart cities.

VII. Emerging Trends related to WSIS Action Lines identified during the meeting

C2, C3, C5, C6, C7, C8

VIII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Among the suggestions is to monitor city managers and official in the use of blockchain for important and urgent issues such as waste and water management by identifying the main user and recording the use and the waste of water to provide more insights and balance,

Relationship between Quantum computing and Blockchain technology

Thematic Workshop



WSIS Regional Group Meeting: emerging technologies with no one left behind in Asia and the Pacific

UN ESCAP

Thursday 11 April 2019
Room K2 - ITU

09:00 – 10:45

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/318#>

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

C1, C2, C3, C4, C6, C11

II. Key achievements, announcements, launches, agreements, and commitments

The Asia-Pacific region is one of the regions going through the wide-ranging digital transformation. Driven by the development and rollout of emerging technologies, such as artificial intelligence, Big Data, IoT and blockchain, the region has been benefitting from more accurate data, analysis, and insights into social, economic and environmental development for informed decision making.

However, the development is not taking place at the same speed in all countries. In fact, it seems that the divide between advanced and developing countries is widening. While the underlying digital divide among countries has not been addressed fast enough, new technological capabilities are driving the advanced countries further ahead.

In this background, speakers and experts shared their views and initiatives on how regional cooperation could add value to the theme-based WSIS action line implementation. In particular cooperation and collaboration among countries and partners would facilitate information and knowledge sharing as well as initiating regional and subregional initiatives.

III. Main outcomes highlighting the following:

1) Debated Issues

- ESCAP shared its research findings on the widening digital divide, in view of emerging technologies in Asia and the Pacific, and some of the means to reduce infrastructure development costs, such as

infrastructure sharing and co-deployment of fibre optic cables along highways, railways, power grids and oil/gas pipelines.

- Asia-Pacific Telecommunity (APT) highlighted its efforts, especially considering lessons learned from its past experiences, to support member countries in Asia and the Pacific with training, workshops and regional cooperation and initiatives.
- DESA's E-government Survey was found instrumental in assessing the progress member countries made in advancing the e-government agenda, while identifying regional trends, challenges and opportunities.
- UNCTAD presented its work on e-commerce and information economy through normative and analytical work, supported by projects and other operational activities in Asia and the Pacific.
- Some of the questions asked during the session include a possible business model which provides connectivity to under-served and un-served areas in a sustainable manner and how emerging technologies would impact the efforts towards SDGs.
- Limited capacity among government officials was identified as one of the persistent challenges in building the information society and taking advantage of emerging technologies for SDGs.

2) Quotes

- NA

IV. Overall outcomes of the session highlighting

- The importance of regional dimension in WSIS action line implementation was emphasized.
- Partnership was identified as an essential mechanism to the WSIS action line implementation, as demonstrated during the session where each agency brought its unique expertise and capabilities.
- How to take advantage of emerging technologies for SDGs and at the same time narrow the digital divide would continue to be a challenge in the future.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

SDG 9, 10 and 17

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

The importance of digital technologies for sustainable development has been widely and well recognized. However, some of the challenges developing countries

have been facing are not addressed in a sustainable and comprehensive manner. For instance, lack of affordable and resilient broadband access remains to be a major challenge to inclusive development, together with limited capacity among government officials and other stakeholders. As society and economy increasingly depend on the availability and utilization of digital technology and applications, such a foundational gap may further widen not only the digital divide but also wider socioeconomic inequalities.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

It would be beneficial to organize a regional group meeting and regional review on an annual basis as part of WSIS action line implementation. The identified challenges and opportunities may transcend national boundaries or learning from each other within and across regions may prove to be helpful. How to systematically integrate WSIS action line implementation in the work of the UN agencies, partners and member countries could be featured in the WSIS Forum 2020.

Thematic Workshop



Benchmarking corporate contribution to digital inclusion and SDGs

World Benchmarking Alliance

Thursday 11 April 2019

09:00 – 10:45

Room L1 - ITU

I. **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11**

This session discusses a company-level digital inclusion benchmark. The benchmark defines digital inclusion broadly to include mitigating not only access gaps, but also skills, use, and innovation gaps, within and between countries. As such it is closely linked to the ethical dimensions of the information society as inclusion is itself an ethical issue. At the same time, the session's topic is also linked to the role of all stakeholders in the promotion of ICTs for development, not just public governance authorities. Action lines: C1 and C10

II. **Key achievements, announcements, launches, agreements, and commitments**

Launched the World Benchmarking Alliance's Digital Inclusion Benchmark Scoping Report. Obtained multi-sectoral feedback and input on methodology for measuring corporate contribution to the four dimensions of digital inclusion: access, skills, use, and innovation.

III. **Main outcomes highlighting the following:**

Debated Issues

- Interactive workshop where participants discussed and identified specific actions that can be taken by ICT companies to further digital inclusion. Actions identified varied according to the layer in the ICT ecosystem which the company operates in: Layer 1 networked elements (e.g. device manufacturers), Layer 2 network operators (e.g. telecom firms), and Layer 3 (e.g. content and platform providers). Each action was classified according to whether it contributed to closing the access, skills, use, and innovation gaps.
- Participants supported the initiative to provide free and open benchmarks on corporate contribution to SDGs and to benchmark the ICT sector on their contribution to digital inclusion as a cross-cutting tool for achieving SDGs. Participants also welcomed the workshop approach to the session where they had more opportunities to contribute ideas and views.

- There was a highly engaged discussion surrounding how to different leaders from laggards and how benchmarks can encourage a race to the top.

Quotes

- “Cybersecurity – this is a very difficult issue that certainly one you should address in your benchmark”
- “Provide content in local language”

IV. Overall outcomes of the session highlighting

- There are concrete ways in which ICT companies can contribute to closing the access, skills, use, and innovation gaps. For example, providing affordable services to low-income and underserved communities is an important contribution.
- Improve private sector efforts towards meeting WSIS Actions Lines and that ICT companies have a role in raising awareness about benefits and applications of technology for SDGs.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

This session discusses a company-level benchmark that will assess and compare how ICT companies are contributing to ensure that benefits from digital technologies are broadly enjoyed, given that these technologies are considered to be cross-cutting tools for the achievement of sustainable development.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

Growing focus on the ethics of ICT business models, the importance of collaboration between different stakeholder groups, between different companies, civil society and private sector, and government and everyone.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Private sector contribution to SDGs, ethical business models

Thematic Workshop



Cyber Ethics, Education and Security: Serving Humanity with Values

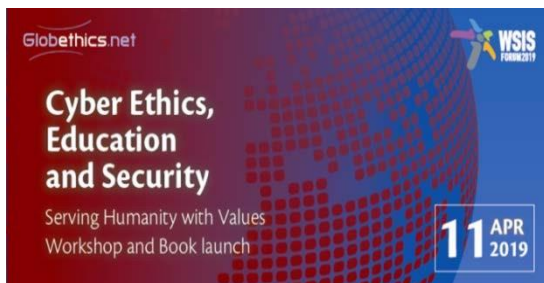
Globethics.net

Thursday 11 April 2019

09:00 – 10:45

Room L2 - ITU

Guiding Framework



What are the main concepts/themes emerging from the presentation or discussion?

Around which aspects do participants experience energy, challenge or resistance?

Which seem to be the breakthrough insights that may enhance the impact of ethics in higher education, cyber security/ethics or information ethics?

First Speaker Dr Mariana Bozesan

We need to transform the way we think about ethics. An example of this is the way we perceive the SDG's: working on SDG 1, to end poverty, for instance, has an effect on the environment because we use natural resources for this. We need to work on driving the SDGs within the planetary boundaries.

- 5 Transformational Policies proposed on the increase of renewable energy, productivity in food chains, inequality, development and gender equality. It is proven that these work and have the potential to transform our world.

The SMART Way 5 Transformational Policies that Work

- Accelerated renewable energy growth: halving emissions every decade from 2030 on
- Accelerated productivity in food chains: +1% p.a. better productivity
- New development models in developing countries: copying features of S-Korea, Chinese, Ethiopian successes
- Active inequality reduction: ensuring 10% richest < 40% of income
- Investment in education, gender equality, family planning, health stabilizing the world population improves well-being with reduces ecological footprint

Source: Randers J, Rockström J et al (2018) *Transformation is feasible*

- But: these implemented only on a very small scale. Why do we still do what we do?

- Because everything is driven by money and traditional philanthropy is also caught in this framework.
- Proposal: develop investment structures that take into account financial gain and social impact. 'Integral investing', as proposed by the speaker, will take the driving of the SDG's into account as well as our planetary boundaries.



Source: © 2019 M. Bozesan. All rights reserved.

- Need to change mind-sets and move from money driven to eco driven investments.

Question from the participants to the workshop on this topic: How do you convey this message to the people?

Answer from Dr Bozesan: We need to translate this into tools, in a positive, playful way. Need to include young people in the development of these tools to reach the people.

Second Speaker Dr Pavan Duggal

- There are ethical implications to the current developments in AI, intelligence/data collection and sharing and information technology. Three examples for all these fields were shared (AI and Space research, AI and Privacy: Whatsapp owning all data that goes through this platform, AI and the Darkweb)
- Breach of data in India: 15 million biometrics compromised. The cost of such a breach in 2019 is evaluated at over 2 trillion dollars; in 2021 the cost of cyber-crime would be over 6 trillion dollars.
- These developments indicate that we need legal frameworks and ramifications, as well as ethics that guide us in the developments of law and jurisdiction.
- Moreover, when developing these frameworks we need to question which values are most important to us and how we balance different interests from different actors. In other words: what and who will define our ethical standards?
- Policy makers and governments are responsible to implement this.

Question from the participants to the workshop on this topic: What is the share between governments' and individuals' responsibility in data usage (in deleting data in social media and messaging apps for instance)?

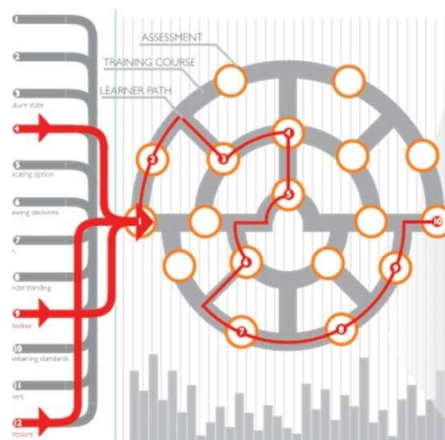
Answer by Dr Duggal: we need to be careful as individuals, read terms and conditions, don't post family pictures and personal information on where we live.

3rd Speaker Dr Alexander Libin

- Cyberethics in educational and life contexts: as technology and information evolves, humans' usage and attitudes towards it evolve as well. Paradigm shift to technology centred worldview to human-centred.

Global Digital Transformation
CyberEthics as an applied educational framework
Effective Dashboard
Role-playing Simulation as an Ethical Game

- How do we make sure that the risks of increasing tech development are avoided?
- Education and responsible usage is (one of) the answers, but how do we implement this? Through learner paths that have different educational activities focused on knowledge, ethical reasoning, the usage of a values-driven SDG framework, critical thinking and raising self-awareness.
- Two examples: A role-playing simulation as an ethical game (decision making) and 'HtV', a YouTube channel with videos that stimulated individuals to demonstrate critical thinking skills in ethically-charged situations



Source: A. Libin, PhD. Research Dashboard

- Challenges in these projects were the translation of the ethical knowledge into digitally supported education, data analysis (big variability in performance) and the inclusion of additional information in the scoring of the knowledge acquisition.

Remarks from the participants to the workshop on this topic: a) Echoes the need for education on/in cyber ethics and is currently working with the United Arab Emirates to promote tolerance in the digital world.

b) Human intelligence vs. artificial intelligence. AI should be further developed as a tool or means for human and personal development, not as a goal *per se*: need to balance economic market centred interests and person focused integral development.

4th Speaker Dr Siobhán Martin

Is mass surveillance legitimate or a violation of our democratic values?

- It is important to first remember the context in which we are asking this question: a context of heightened security ever since 9/11. It also depends on the scale and precision of the information collected. Since the whistle blow of Snowden, we are figuring out a grey area of what is intelligence: information gathering that is not always lawful, there is convergence between AI and intelligence service aims. There is a spectrum of possible mental and physical harms to those whose information is gathered (the (mis-)usage of personal intelligence has the potential to cause harm to individuals on the level of the violating of human rights, privacy as well as physical harm). Yet the business of the intelligence agencies which collect that information revolves around protecting.
- These agencies face ethical dilemmas: individual vs. public security. If public security is compromised, how many individuals are we willing to forego; if an “important” individual is compromised do we lose a little public security?
- In an era of ‘*conflictual peace*’, what ethics are we talking about?
- Ethical considerations vs. effectiveness: considering and pondering on the ethical considerations is thought to hinder effectiveness as it slows down actions. It is usually easy to see when balancing harm to benefit, but the result comes after the fact or event. What is needed is *just* intelligence, intelligence that would be well assessed. Governments are entangled in the comprehension of what is legal. Government acts do not worry about ethics but about law to facilitate surveillance (the US Patriotic Act which became the Freedom Act). Can that reconcile surveillance or is it a violation of our values? As the Snowden case shows, mass surveillance goes on and is made legitimate through law, not through ethics.

Axes of normative tension are:

- The balance between individual freedom and public security is something that constantly needs to be reviewed and it is surprising to see how much personal freedom we are already used to ‘give up’ in exchange for the feeling of being protected against terrorism.
- There is a risk of governments taking advantage of fear to implement policies that gather intelligence and limit individual privacy even more.
- There is a trend of resurgence: protests against big-data usage and on rights to privacy

Dr Siobhán Martin finds it interesting to see how societal norms are evolving and the public is becoming more accepting of surveillance/data collection/security measures that limit our individual freedom or impose on our privacy.

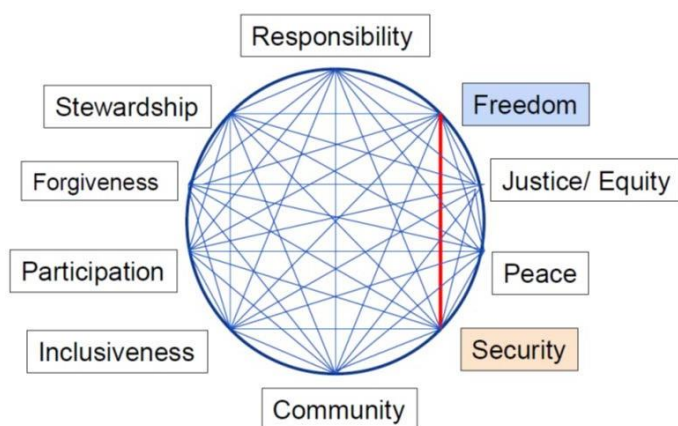
Question from the participants to the workshop on this topic: surveillance, also from commercial enterprises, plays a bigger and bigger role. Ethics determines what we think is normal, also in the commercial sphere. How does this influence our attitude towards government surveillance?

Dr Siobhán's answer: Yes, correct. Commercial usage of data is normalizing the way the public accepts governments' approaches as well.

5th Speaker: Dr Christoph Stückelberger

He starts by reassessing ethics as practical and helpful to solve every-day dilemmas. Every decision involves ethics: from which products we use to brush our teeth to which careers we move into. How can we define a human centred technology?

“Globalance, balancing opposing values”. Values interact as a system – an organism– that is also interconnected. The example is here the relation between freedom and security.



Source: Christoph Stückelberger, Globalance, balancing opposing values, April 2019.

Those two values are positive but in tension one against the other. On a scale from total freedom (free market) to almost all security (maybe a dictatorship), what choice do we want to make? More freedom but no security (leaving us to danger), or high security (so very little freedom)? Where would be equilibrium, the balance be? In cyber-ethics, there are different values to balance: freedom to security, individual to communities, transparency to privacy, freedom to equality. It is up to the humans to assess it.

- This also counts for governments: if we ask our citizens to be completely transparent in terms of sharing data, but we are not transparent at the same time with how this data is used, what message does this convey to society?
- Cyber ethics can be seen as a constant balance between different values that sometimes are contradictory. Example: freedom and security in cyber ethics. Are we prepared to give up our freedom for the sense of security? Or give up some security for much more freedom? We need to find a middle way that respects both sides: regulated freedom with optimized security.

Question from the participants to the workshop on this topic: was there a reason to not include dignity?

Answer by Dr Stückelberger: human dignity as a precondition for all values (i. e. should not be used in a dialectical way, opposing it to other values)

Remark. The role of finance and financial gain as a reason and driver in technological progress: the importance we need to give, alongside to that, to ethics and care for our planet. The role of power as a driver in technological progress on AI specifically: AI as the new power game/dynamic between the great geostrategic players of our multipolar world.

Other observation of remote participant at the workshop: need to establish a “universal legislative protocol”, through Internet we have to generate awareness of responsible freedom of expression that involves a limitation on defamation by anonymity/false identity.

CONCLUSION

We believe that ethics in the cyberspace enables the following outcomes:

- It helps to develop a language of tolerance and the “young” could translate the issues into solutions. There should be an ethical model that is both top-down and bottom-up. Ethics in cyberspace can help education/literacy of the cyberspace.
- We need to enter into a critical dialogue where we discuss the underlying and, possibly, opposing values of any IT/AI innovation that impacts humans and our planet.
- Pointing out critically a tendency of ‘sticking one head in the sand’ and be compliant with governmental and commercial practices that are either violating human rights or contributing to global warming.

It is our wish that the Globethics.net will help us realising the following “ethical dreams” in the understanding and security of the cyber spa

- Questions arose regarding the role of dignity in cyber ethics, how to react to our change in attitude (normalization of surveillance), how to spread the message wider and who holds the responsibility between individuals and governments? What should be a universal ethical or legal framework, how do we help individuals to remain conscious of the cyber elements and AI?
- Stimulating the move from ‘money-driven’ to ‘ethics-driven’ investments in technology and AI, which have a positive impact on our planet and humanity.
- Identifying the underlying (and possibly opposing) values through ‘globalance’ within every IT/AI innovation, and finding the right balance between these two.
- Using IT and AI as a tool to teach decision making- and critical thinking skills, and also teach the responsible and ethical use of technology and (social) media.

The Persons

Dr Bozesan, Mariana is Dipl.-Inform., AQAL AG Founder, AQAL Foundation and President, International Club of Rome Member, Germany.

Dr Duggal, Pavan is the Founder & Chairman of International Commission on Cyber Security Law, the president of Cyberlaws.Net, has been working in the pioneering area of Cyber Law, Cyber Security Law & Mobile Law. While a practicing Advocate, Supreme Court of India, Pavan Duggal has made an immense impact with an international reputation as an expert and authority on cyber law, Cyber Security Law and e-commerce law.

Dr Ike, Obiora, Prof. Dr, Executive Director of Globethics.net in Geneva and Professor of Ethics at the Godfrey Okoye University Enugu/Nigeria.

Dr Libin, Alexander is Professor at the Georgetown University and a Scientific Director for the Translational Science consortium in Washington DC, as well as Chief Analyst for the Federal University of Humanities in Moscow, Russia.

Dr Siobhán, Martin is Deputy Head, Leadership, Crisis and Conflict Management, Geneva Centre for Security Policy. She joined the GCSP in 2006 and is currently the Director of the 8-month Leadership in International Security Course, and Co-Director of the Master of Advanced Studies in International and European Security (MAS), jointly run by the GCSP and the Global Studies Institute of the University of Geneva.

Dr Stüchelberger, Christoph, Professor, is Founder, was Executive Director (2008-2016) and is President (since July 2016) of the global network on ethics "Globethics.net Foundation", based in Geneva/Switzerland and with ten offices on four continents. He is Executive Director of Geneva Agape Foundation in Geneva, mainly with partners in China. He is Prof. (em.) at the University of Basel, Distinguished Professor at the Technical University MEPhI in Moscow, Visiting Professor at GOU University in Enugu/Nigeria and at Kingdom Business College in Beijing/China. He got his doctor honoris causa (Dr. h.c.) from the UPC University in Kinshasa/DR Congo for his long-term engagement in Africa.

Thematic Workshop



See the Future to Be the Future: 2030 Game Changes Impacting Our Work and Our Lives

The FutureWork Institute, Inc. and DEI Futures

Thursday 11 April 2019

09:00-10:45

Room M - ITU

I. **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11**

C10-Ethical Dimensions of the Information Society

II. **Main outcomes highlighting the following:**

1) **Debated Issues**

(NOTE: There were no issues debated—just presented because of rescheduling the session and a lack of time)

2) **Quotes**

We need to focus on three technologies that will be game changers and how they lead us to the ethical questions of what it means to be human and the meaning of personhood.

- AI-Artificial Intelligence
- ESI-Enhanced Singular Individuals
- CRISPR-Clustered Regularly Interspaced Short Palindromic Repeats

III. **Overall outcomes of the session highlighting**

- main conclusions reached during the discussion
Every day, we are also confronted with the issue of AI and Bias. In the US, AI facial recognition software failed on iconic black women including Oprah Winfrey, Serena Williams and Michelle Obama. Amazon REKOGNITION falsely matched 28 members of congress to mugshots from convicts. The NY Times recently carried an article and photo on AI Experts questioning and protesting Amazon's facial recognition software which is sold to police departments and is showing bias against ethnic minorities in the US. We also learned from another study that humans are likely to perceive an anthropomorphic robot to have race and then bring their race-related prejudices with them. Shouldn't we assess the wider impact of new AI system by mapping out its life cycle risks before releasing it? Shouldn't we ensure

an inclusive approach to design with diversity in development teams and training for designers and development on human rights responsibilities and unconscious biases?

- the vision for implementation of WSIS Action lines beyond 2015

As we approach 2030, we get closer to the radical fusion of the human body and technology, where we will meet the ESIs or Enhanced Singular Individuals. What will race, gender, disability, etc. mean if others are enhanced and you are not? Will we introduce new forms of discrimination between the ESIs and the NORMS. We will also see the tiny new world of designer babies changing once again the definitions of being human as the non-enhanced struggle for equality with the ESIs. What are the ethical implications of the fusion of humans and technology? Shouldn't we have policies where countries agree on standards?

IV. Main linkages with the Sustainable Development Goals (please specify the SDGs)

SDG#4 Quality Education and SDG#8 Decent Work and Economic Growth --AI replacing many jobs done by humans-- By 2030, over two billion jobs will have disappeared, freeing up talent for many new fledgling industries. We can expect backlashes with cries of "destroy the robots" but we need to have policies that encourage organizations to retrain their people for the new roles as we move from the information network economy where AI and Machines are better, to the creative network economy where humans can excel with Creativity, Curiosity, Empathy, Passion and Humor.

V. Emerging Trends related to WSIS Action Lines identified during the meeting

Some law firms are using ROSS, the AI Lawyer and others are announcing the first AI member of her Board of Directors this year. We also saw the humanoid robot, Sophia, now a Saudi Arabian citizen, open last year's Munich Security Conference and become the UNDP's first non-human Innovation Champion. All this brings us to the ethical question that needs to be considered in this Action Line: Should a robot be a "person" and be entitled to rights? Are they "virtual people" or "legal persons" entitled to personhood?

VI. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

By 2030, CRISPR will revolutionize genome engineering delivering stunning advances in human therapeutics, agricultural biology and scientific research. Some of this is already happening. But, as we look at gene editing in human beings and its ability to reverse some genetic defects and diseases, what are the ethical implications here? What will be the ripple effect passed down to other generations as we continue down this road? Will the entire species eventually bear the marks of genetic editing? Will we allow genetic editing for aesthetic or non-illness related reasons? Will parents craft their child in minute detail creating

a true designer baby? Once again, this raises questions of what it means to be human. And then—the unthinkable...will authoritarian governments edit genes to create an underclass to serve the political elite?

The debates about the ethics of CRISPR lag well behind the realities of scientific and technological progress. Shouldn't this be part of our conversation around ethical dimensions of the information and knowledge society?

Thematic Workshop



Smarter Cities enabled by citizens, private and public sector, collaborating in open Innovation

OpenGeneva.org

Thursday 11 April 2019

11:00 – 13:00

Room C1 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/307#>

**SMARTER SUSTAINABLE
CITIES**

**WSIS SESSION
REPORT
APRIL 11TH 2019**



WHAT WAS DISCUSSED ?

In a rapid urbanising world, **SMART CITIES** are evolving towards a higher sustainability focus where their citizens' engagement is central to the city progress. The public sector must collaborate with the private sector and the academics to co-design and co-innovate its future together with its citizens in an Open collaborative process.

How can Smart cities tackle the SDGs, mobilizing citizens and society innovation for sustainability and prosperity ?

The panel shared specific insights from Open Geneva, the open city innovation festival for science, technology and society that took place between March 18th and 24th in Geneva. This yearly event gathered 1500 participants over 30 Hackathons, conferences and open doors throughout the city. The panel shared the key learnings from the Geneva ecosystem that was able to mobilize the energy of local citizens

PANELISTS

Vincent Subilia	GENEVA CCIG
Cyril Hollenstein	MICROSOFT
Stephane Gorjut	HPE
Thomas Maillart	OPEN GENEVA
Giovanna Di Marzo	UNIGE
Dimitri Konstantas	UNIGE
Pierre Mirlesse	SMART CITY CONSULTANT

from all backgrounds, young and old, women and men, volunteering and co-creating together for a more sustainable city. **The "behind the scenes" ingredients needed to promote Innovation and citizens engagement in addressing the SDGs challenges** was primarily driven by motivating volunteers rather than paid professionals. We discussed the role of the public sector in supporting such an initiative and the role of Open Innovation and open data in the process. We discussed how public consultations and debates about key sustainability topics are important to the city's development agenda.



PUBLIC SECTOR

Should identify and support grass root citizen initiatives that mobilize citizen-born initiatives for the city's SDG11 plan.



IDEA

The Private sector has a keen interest to address the city sustainability challenges when the public sector provides an engagement framework for it. See SDG17.



WHERE TO START

The SDG11 and the ITU SSCC frameworks are a good place to start. one can also contact www.OpenGeneva.org for more best practices.

WHAT WAS RECOMMENDED ?

The learnings shared by the panel from Geneva and transferable to any city, even those with little resources.

The use of technology is important, but it should be seen as a "mean to an end" not as an end in itself: For a smarter & more sustainable city the city should have a clear and published plan with integrated objectives, budgets and time-lines within which the private sector can contribute with it's own technology innovation proposal.

The panel noted that there are plenty of citizen born initiatives in every city, "grass root innovation," that can be energized & accelerated with proper recognition and support.

The Public sector **facilitation is important** as a support when promoting citizens engagement initiatives that wish to improve the city condition. Key to a more sustainable city is the **collaboration between the Private, Public and Academic sectors.**

Academia (university and schools) are a great source of innovation when engaged and promoted early in the process.

Trust & support your citizens quality of life innovation initiatives for them to trust and support you.

Formalize a sustainable city Plan across | your functional departments, with the help of ITU's sustainable Smart City framework. Reach out to Geneva and/or other cities to leverage best practices.

Thematic Workshop



EQUALS inTech: actions taken and results achieved in connecting women and girls with ICTs

EQUALS/ITU

Thursday 11 April 2019
Room C2 - ITU

11:00 – 13:00

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/306#>

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

WSIS Action Lines C1, C4 and C11

C1: To advance on the SDGs, further cooperation is needed globally to speed up and increase efficiency. The EQUALS Global Partnership for Gender Equality in the Digital Age is a global movement, a multi-stakeholder partnership bringing together international organizations, private sector companies, governments, NGOs, regulatory agencies and academic institutions with a common goal: to bridge the gender digital divide. This network ensures that women and girls are given access, equipped with skills, and develop the leadership potential to work and succeed in the ICT sector.

C4: One of the Coalitions of EQUALS (the Skills Coalition) is specifically dedicated to promote capacity building in ICTs for women and girls;

C11: Coordinated multi stakeholder action is essential to close the gender digital divide. EQUALS Global Partnership counts on more than 90 members from every corner of the world, including regional and international organizations, acting both on a global and local scale.

II. Key achievements, announcements, launches, agreements, and commitments

Here listed are some of the achievements presented by EQUALS partners, panelists of the session:

- GSMA: the Digital Ambassador Program in Rwanda (#CaseForChange), a success story made possible by EQUALS and its partners
- ISOC: the Online Sexual Harassment and Blackmail Awareness for Palestinian Schoolgirls program (ISHA-PS) awarded at WSIS as Champion of category 5

- ITC: Results on the webinars providing technical capacity to more than 350 women , and a live call from Botswana by Agang Ditlhogo, founder of the The Clicking Generation and beneficiary of the webinars.
- UNU-CS: the Research Group’s comprehensive report has received very positive feedback, and the video displayed at the panel confirmed its impact and potential to make a more rapid progress toward the goal of gender digital equality.

Announcements

Along with the outcomes of the partnership today marks ***the opening of the nomination phase for the EQUALS in Tech Awards.***

III. Main outcomes highlighting the following:

1) Debated Issues

- There is evidence that the Gender Digital Gap is generated by lack of digital literacy, skills, access and resources. How EQUALS is addressing these issues
- How far the Partnership has come
- How the Coalitions are acting from both, global and regional scale
- What the partners are doing to make a difference, what actions have been undertaken and what impact they had
- Panelists discussed what is next for the Partnership

2) Quotes

- *“Every woman is a man’s mother, sister or daughter. There are no men without women”* **Mr. Andrew Rugege**, Regional Director for Africa, ITU
- *“Women, for their cultural environments or other circumstances, do not have the time or the money to attend formal education. Online courses and webinars offer women entrepreneurs to close those education gaps”* **Mr. Juan Hoyos**, Adviser Sustainable and Inclusive Value Chains, International Trade Centre
- *“[...] and guys, we are responsible!”* **Prof. Tim Unwin**, Royal Holloway, University of London & Lanzhou University, China

IV. Overall outcomes of the session highlighting

- Acknowledgement of the successful strategies that have been implemented under EQUALS Global Partnership and renewal of the commitments by each of the Coalitions.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

SDG 5 Achieving gender equality and empower all women and girls. Our EQUALS partners are pursuing several equally innovative and impactful initiatives. Collectively, we can create a comprehensive action plan to help women unlock their full potential, succeed and lead in the digital technology world

SDG 17 Revitalize the global partnership for sustainable development. Partners representing multiple sectors are essential. When stakeholders are well informed about the ecosystem of actions and initiatives towards bridging the gender digital divide and understand how to work together, they are leveraging the support provided, maximizing results, strengthening the ecosystem and, therefore accelerating the closure of the gender digital divide.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

The influence that a Partnership can have if it includes governmental entities alongside academia and private sector companies (C1), the need to provide equal opportunities in skills development to both boys and girls to grow healthy societies (C4) and the impact that international organizations can have when coordinated in action with regional entities (C11).

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

N/A

Thematic Workshop



Road-testing Governance models with the Secretary-General's High-level Panel on Digital Cooperation

Secretariat for the High-level Panel on Digital Cooperation

Thursday 11 April 2019

11:00 – 13:00

Room G1 - ITU

This outcome will be made available soon.

Thematic Workshop



Digital Transformation as Sustainable Development Pathway

UNDP / Estonia

Thursday 11 April 2019

11:00 – 13:00

Room H1 - ITU

This outcome will be made available soon

Thematic Workshop



AI for Good – Indicators, Trends, Opportunities & Impacts

ITU

Thursday 22 March 2019

11:00– 13:00

Room H2 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/316#>

Thematic Workshop



Blockchain for Social Good: Moving beyond the hype of Cryptocurrencies

Open Health Network

Thursday 11 April 2019

Room K1 - ITU

11:00– 13:00

This outcome will be made available soon.

Thematic Workshop



Role of digital solutions in meeting global healthcare challenges at the local level

Imperial College London

Thursday 11 April 2019

11:00– 13:00

Room L1 – ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/309#>

Need for bespoke solutions in healthcare

Clinician engagement

Policy advisors and governments to champion the drive for healthcare ecosystem.

Thematic Workshop



ICTs in the university environment – 7 case studies

University of Sheffield

Thursday 11 April 2019

11:00– 13:00

Room L2 - ITU

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

The thematic workshop revolved around ICTs in Higher Education. As such it mainly related to WSIS Action Lines C3 Access to Information & Knowledge, C5 Building Confidence & Security in the use of ICTs, and C6 Enabling Environment. Beyond this, the individual case studies related to further areas of the WSIS Action Lines, as outlined below:

Case study 1: GIS	C2, C3, C7
Case study 2: Digital divides	C2, C3, C6, C8
Case study 3: Digital research methods	C1, C3, C6, C7
Case study 4: E-learning analytics	C3, C5, C5, C7
Case study 5: Admissions	C2, C3, C6
Case study 6: Student activism	C3, C5, C6
Case study 7: ICTs & mental health	C3, C5, C6, C7

Beyond these specific links, all case studies related to issues around different digital divides and the ethics of ICT uses. In that sense, all case studies addressed WSIS Action Lines C2 Information & Communication Infrastructure, C3 Access to Information & Knowledge, and C10 Ethical Dimensions in the Information Society.

II. Key achievements, announcements, launches, agreements, and commitments

The thematic workshop highlighted a range of issues and opportunities around ICTs in Higher Education from a student stakeholder perspective. The case studies highlighted a range of advancements in the global West, but also raised issues around persisting digital divides on a global and local level (and including the global West). Issues were raised particularly around access and ethics of ICT uses. Amongst the achievements, the talks displayed some positive developments in ICTs in academia, particularly in student engagement and through social media and GIS applications, better ICT services in admissions systems, the growing realization of the important of mental health in using ICTs, efforts in bridging persistent digital divides, as well as new opportunities for learning through e-learning and new digital research methods.

III. Main outcomes highlighting the following:

1) Debated Issues

The debate that ensued covered existing gaps and pending challenges within ICTs in Higher Education. One controversial issue surrounded the ethics of data uses. Although all speakers were in favour of extending and improving ICT services and innovation at university, they were highly conscious of the ethical implications surrounding privacy and any form of exploitation following power imbalances in ICT access and uses. More information on these debates can be found in Dr. Paul Reilly's blog part 1 and part 2.

Overall, both speakers and audience expressed positive sentiment towards the progress made in Higher Education as well as the student engagement in agenda-setting and decision-making through events such as this thematic workshop. Both parties were, however, also concerned about the rapid development of ICT adoption with little trial time for tackling issues around divides and ethics, an issue that may potentially advantage Western and economically more privileged groups at a much higher rate.

2) Quotes

In response to a question on future issues to focus on (in the Q&A), Mr. Michael Pinney from the University of Sheffield raised a concern about climate change. He said: "environment is an essential long-term issue for ICTs development and across the SDGs. Let's see more on environment and climate change" (see full tweet).

Another issue that was raised in the Q&A by Ms. Tor Baskett from the University of Sheffield called to include more diverse stakeholders in the conversation. She said: "We need to hear more from people on the ground, the locals, the activists, and individuals in the global South".

3) Overall outcomes of the session highlighting

- Main conclusions:

The Higher Education sector appears to be a key area in advancing access, skills development, and innovation around ICTs across the university including teaching, learning, student engagement, services / systems / infrastructures, and mental health. While innovation has led to key developments in ICT services and applications, there remain hindrances in digital divides and ethical uses of digital data.

- The vision for implementation of WSIS Action lines beyond 2015:

Speakers in the session envisage future WSIS Action Lines to be implemented in higher education through the facilitation of additional services across different student groups (to tackle digital divides) as well as under full consideration of their ethical dimension.

IV. Main linkages with the Sustainable Development Goals (please specify the SDGs)

The session highlighted many relevant links to the SDGs through the WSIS Action Lines across the board, but with an emphasis on Action Lines C3, C5, C6, and C10. Pinned onto the SDGs, goals that appeared to be particularly prominent were SDG 3 Good Health & Wellbeing (for case study 7 on Mental Health), SDG 4 Quality Education (across case studies with focus on Higher Education learning & teaching), SDG 9 Industry Innovation & Infrastructure (across case studies due to issues around access in the education sector), SDG 10 Reduced Inequalities (especially case studies 2, 4 and 5 around persisting digital divides and inequalities), and SDG 17 through the Q&A due to the relevance of involving universities and global South stakeholders in future conversations.

V. Emerging Trends related to WSIS Action Lines identified during the meeting

One of the main trends related to the WSIS Action Lines C3 Access to Information & Knowledge and C6 Enabling Environment: Digital divides still remain a major issue to address across countries, cultures, and global contexts, but there are also efforts in addressing these through improved ICT services and applications. Enabling environment also remains an important area as universities create the future generation of ICT users and decision-makers and as such need to be involved in providing skills, access, and infrastructures.

VI. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Issues that were highlighted as important for future WSIS Forums are these:

- More focus on environmental issues and especially climate change, which although included in the agenda did not receive much coverage.
- More involvement of youth in thematic workshops. As stakeholders in ICT developments the speakers agreed that youth needed to be involved more in agenda-setting and decision-making processes.
- More global South stakeholder representation, e.g. communities at risk, activists, and civil society organisations.

Thematic Workshop



Opening new markets for tech SMEs: the ITU Telecom World 2019 SME Programme

ITU

Thursday 11 April 2019

13:15 – 13:45

Popov Room 2 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/325#>

It was informed that the ITU Telecom World 2019 will take place on 9 – 12 September 2019 in Budapest, Hungary.

Thematic Workshop



Cybersecurity Awareness (Swiss-CyberSecurity)

SCS

Thursday 11 April 2019

13:15 – 14:00

Room C1 - ITU

This outcome will be made available soon.

Thematic Workshop



(En)gendering the Smart City

Women@TheTable / ITU

Thursday 11 April 2019

13:15 – 14:00

Room C2 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/Forum/2019/Pages/Agenda/Session/157#intro>

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

- C1;
- C2;
- C6;
- C7 E-Government ; C7 E-Health; C7 E-Employment; C7 E-Environment
- C10;
- C11

II. Debated Issues

- How do we ensure Smart cities enable a more connective human experience? How do we create technology tools that have gender, 50% of the population, at their core?
- At best the technology is 'gender neutral' – neutrality that research in other technical fora (trade, standards, law) has proved to translate into an uneven playing field for women, or women being actively left behind. For many, SMART Cities have come to mean simply more efficiency as opposed to a better quality of life for all citizens. But technology can, and should be leveraged to tackle problems that affect the life of the city itself, at operations level, street level and delivery services, all of which women, 50% of the population, experience differently.

Highlight key achievements and challenges shared by the audience and/ or panellists

Caitlin Kraft-Buchman, CEO/ Founder, Women@theTable: Women need to be involved at all levels and at all phases of the planning, decision-making, design, build and upkeep of our cities. We can, and must, be more ambitious and have a vision of a smart city that goes beyond the baseline that a city be safe for women.

Smart Cities 1.0 (driven by tech companies), and Smart Cities 2.0 (led by cities)

are being supplanted by or blended with Smart Cities 3.0 (citizens and cities) that use citizen co-creation to consult, develop + iterate services that citizens truly need. We can leapfrog to Smart Cities 3.0 as we leapfrogged from no or few landlines to mobile.

Professor Tatiana Delgado Fernandez, National Vice President, Union de Informaticos de Cuba: Cuba uses a three step process of 1. awareness, 2. capacity building, 3. transformation for a human centered approach and smart city co-creation in their Urban Labs for Smart Cities. Women are targeted to engage in the process.

Ambassador Makeda Antoine-Cambridge, Permanent Representative of Trinidad & Tobago, remarked that “we often stop at capacity building and forget the transformation phase . The Urban Labs are a brilliant idea.” Women at the Urban Labs have won prizes for their innovations in intelligent transport, augmenting reality and citizen protection services.

Commissioner Adolfo Cuevas Teja, Instituto Federal de Telecomunicaciones, IFT: expressed it was an honour to be representing COMTELCA, an organization of telecommunications regulators that works to achieve connectivity in the region, and which is striving to promote gender equality and women empowerment through ICTs. Commissioner Cuevas also shared the tool developed by the *Instituto Federal de Telecomunicaciones* from Mexico, on mobile phone and internet use that displays sex disaggregated data, searchable by state and urban and rural populations. He noted that the problem will not ultimately be statistics, but big data, where it will be necessary to work to arrive at conclusions without bias. He reminded us that smart cities with their reliance on automatic processes of AI (with all their promise) risk transmitting biases of society, such as gender inequality.

Commissioner Cuevas stated that “we must include women in the design of public policy, and include them in power in executive decision making”. IFT’s proactive outreach has resulted in hiring women in a more equitable fashion. The IFT attracts new talent from inter-cultural universities to attract new talent (female students often whose second language is Spanish). For jobs there is a gender blind automatic process that scrubs marital status and other gendered indicators assigning a number to each prospective employee. Only when a first ranked candidate is chosen are they revealed to be a man or woman.

Cristina Bueti, Counsellor, ITU: Presented United for Smart Sustainable Cities (U4SSC), a global platform of 16 UN agencies for smart cities stakeholders that advocates for public policies encouraging the use of ICT to facilitate transition to smart sustainable cities. She highlighted the importance of including women in the development of international standards.

The need for both gender and the environment to be written into the conceptual phases, the DNA of new programs and platforms, was discussed so that there would no longer be policies or technology created without a human gender, and environmentally sustainable, lens.

All agreed that women need to be proactively included in the design of all public policies and executive decisions, and that structural changes, including to the conception of standards and standards making, were needed to help accomplish Sustainable Development Goal 5.

Quotes

- *“We need to require our policy makers and decision makers to do more than keep women safe in public spaces. As 50% of the population, women need to be encouraged to play a more critical role in the design, development, construction and maintenance of smart cities. Due to the Digital Divide and the disproportionate impact on women, this may require a need for capacity building and setting aside a special quota (%) to attract and encourage women of all races to participate in the decision- making process.*
- *Women bring unique and innovative contributions and solutions to new and existing problems. This diversity only makes us as a society richer. A successful company that chooses to not engage and utilize 50% of its workforce will not be functioning at its peak. It’s about time to get women involved at all levels and areas of building and maintaining sustainable smart cities.”* **Ambassador Makeda Antoine-Cambridge, Permanent Representative of the Republic of Trinidad & Tobago**
- *“We need to inspire cities and settlements in the 21st century that have gender equality, climate change resilience, and democratic values at the core of their creativity and governance.”* **Caitlin Kraft-Buchman, CEO/Founder, Women@theTable**
- *"The transition from reactive to more proactive and predictive societies implies a wide and cross-cutting collaboration of all stakeholders at local, national and global ecosystem. Women can play a significant role as innovators for the Digital Transformation, if an enablement environment is fostered. Urban Labs at local level can become enablers of the women's highest innovative potential to build smarter and sustainable cities"* **Professor Tatiana Delgado Fernández, CUJAE and Vice-president, UIC**
- *“It is important to promote an all-encompassing view of the myriad interconnected aspects that form a true smart sustainable city (SSC) – including those aspects related to women’s health, education, economic participation and prosperity, safety and public participation – in order to encourage the strategic planning and use of ICTs in a manner that will actively support (not thwart) gender diversity, equitability and inclusion within a city’s services delivery, operations and governance.”* **Cristina Bueti, Counsellor, ITU**

III. Overall outcomes of the session

The world is being reshaped by technology and our cities reshaped along with it. However old biases are being baked into new technology sets. Policies that are technology-driven in ‘smart’ cities must be holistically balanced by inclusive/bottom-up approaches that leverage local people’s knowledge and needs, and re-invent public spaces and services, particularly for women. Gender-responsive urban technology is needed.

We need to inspire cities and settlements in the 21st century that have gender equality, climate change resilience, and democratic values at the core of their creativity and governance. Science, technology and innovation can incorporate and advance these goals, but system change is needed in order for women to effectively and actively participate so that their knowledge and innovation can be harnessed.

the vision for implementation of WSIS Action lines beyond 2015

We must catalyze new alliances and design change to fully unite the dream of SDG 11 “inclusive, safe, resilient and sustainable cities & settlements” with the vision of gender equality in SDG 5, fully leveraging the global partnerships from SDG 17 to make these innovations happen.

IV. Main linkages with the Sustainable Development Goals (please specify the SDGs)

- SDG 5 Gender Equality;
- SDG 11 Sustainable Cities & Communities;
- SDG 17 Partnerships for the Goals.

V. Emerging Trends related to WSIS Action Lines identified during the meeting

- Integration of gender (gender analysis, gender budgeting, gender consultation) in the planning phases of smart cities (both new city builds and upgrades to older cities), and in the creation of standards for smart cities;
- Thinking beyond the planning phases, to the 50% involvement of women in the consultation, design, architecture, procurement, build, capacity (construction to maintenance, technology to data mining) to fully involve women and girls in the smart city of our future was needed. We need to think much more ambitiously beyond studying STEM, beyond checking the box of asking women if they like something after the product is created, and beyond the baseline concept of ‘safe’.
- In conceptual phases: holistic and early integration of gender, environment/DRR/climate change, and accountable democracy working together as an ecosystem to deliver 21st century solutions and services for Smart Cities 3.0. (Each pillar should no longer stand alone in siloes)

VI. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

- Integration of Gender, Environment, resilient Democracy as unified core impact assessment.

- Gender Analysis as a tool for innovation and delivery of services. Innovations that have resulted from Gender Dimensions being considered and included in all planning phases

Thematic Workshop



Maritime Cables: New Routes for Data

School of Economic Warfare

Thursday 11 April 2019

13:15 – 14:00

Room H1 - ITU

This outcome will be made available soon.

Thematic Workshop



Innovation through collaboration - How women led startups, blue chip brands and NGOs are breaking down barriers to deliver on SDGs

JOZU for Women Inc, WanderSafe Ltd.

Thursday 11 April 2019

13:15 – 14:00

Room H2 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/283#>

Mission: Impact 1 Billion Lives by 2025 democratizing Safety through Collaboration

17th SDG – Collaboration

Safety Programs to be Piloted and established in Nigeria, Ghana, Spain, France, Brazil, Saudi Arabia, Zambia, Barbados (June Parris), Caribbean/Jamaica, Cambodia and Philippines, Australia, New Zealand and Switzerland.

Thematic Workshop



Identity Development in Digital Era

Evolution of Mind Life Society Research Institute

Thursday 11 April 2019

13:15 – 14:00

Room K2 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/278#>

I. **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11**

All of C1 to C11. Particularly C10 Ethical dimension of Information Society and C11 International and regional cooperation

II. **Key achievements, announcements, launches, agreements and commitments**

- Key achievements
 - I presented and discussed that in the current digital world, many feel the loss of agency at all levels from individual psychological integrity, life, the future job, the long term perspective of organization / institution, the state sovereignty to the form of global society, in terms of local / global culture and techno-internet society, its global governance and the future society where each individual / society wants to create and live in.
 - I analysed the difficulties to align and integrate the multiple layers of agencies / sovereignties in unpredictable dynamic rapidly changing world. Particular areas of difficulties in issues around information, jobs, power and algorithmic culture were analysed regarding to exponential acceleration in digital societal changes.
 - I proposed approaches to tackle these challenges through aligned agency and sovereignty for globally collaborative value building for better digital society with micromacro layers of internet functions at four separate levels of governance: data, algorithmic system, platform and internet, how at each level we could actively create functions to build values in humanity, democracy, symbiosis for evolution.
- We announced our recently published report we produced for the European Parliament: “A governance framework for algorithmic accountability and transparency” (Published on 4th April 2019)
- We commit for the next publication from:
 - IEEE P7003 standard for algorithm bias consideration (aiming to internal ballot 2019, publishing 2020). We are going around for hearing the diverse concerns from the world in Asia in summer, America in autumn, after in UK and US in Feb 2019.

- ECPAIS (IEEE Ethics Certification Program for Autonomous and Intelligent System) is targeting to publish first draft certification programs in 2019.

III. Main outcomes

1) Debated issues

Highlights of main issues debated and interacted with audiences

Question: Ethics of current use of big data and concerns.

Technical standards for dealing with big data must be regulated by human centric regulatory bodies with legal binding. We touched on Issues of current business model in digital industry. Also we mentioned that positive uses of big data particularly in natural disaster operation, prevention, prediction must be collaboratively enhanced.

Question: Is it realistic to remove all algorithmic biases?

No, we are only providing best practices to ensure that developers of algorithmic systems apply due considerations to minimize unintended biases. The approach we are taking is to make algorithmic system to secure the fair functional society.

Key achievements and challenges shared by the audiences and panellists

We must become agents to build values in Humanity, Democracy, Symbiosis of lifenonline-information in functional global society through a paradigm shift from competition principle to collaboration principle by all for all at all levels. From these value building approaches, we should take structured strategic effective action plans from anywhere everyone is working now, and to show precedents with own leading expertise to convince global corporation to benefit all for mid to long-term to regulate collaboratively through dialogue. GDPR could be an example which has started legally in EU, but now spreading to the world.

Quotes

Biases are not totally removable, but we must put in place processes to give full consideration to the impacts that our technology will have on all affected people, to reduce their harms by mitigating against unjustified outcomes. By Dr. Ansgar Koene, Nottingham University

We are the agents to enhance our values of Humanity, Democracy, Symbiosis of lifenonline-information in functional global society by all for all through a paradigm shift from competition principle to collaboration. By Dr. Yohko Hatada, EMLS RI

IV. Overall outcomes of the session / Main conclusion reached during the discussion

We must be the agents and sovereignty to manage to cooperate for global algorithmic governance beyond regime differences and global north-south power politics for building the sustainable global civilization. We will continue to work on bridging and building the algorithmic policy governance framework, standards and certifications.

V. Main linkages with the SDGs

All of 3 to 17 Particularly, 17, 16, 10, 9, 5, 3.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

Ethical algorithmic system building, ethical AI use in business practice, urgent needs of AI regulation building with global cooperation. SDG17 and Action Line 1, 10 and 11 could play important roles for these issues.

VII. Suggestions for Thematic Aspects that might be included in the WSIS forum 2020

Particularly the WSIS role is important in inclusivity for debate to build dialogue between Global South-North and among diverse regime differences in tech-society nation building at technological, economical, political institution and geopolitical power structure at a global context, on top of current debates among governments of developed nations, silicon valley tech giants, NGOs, international institutions, international standards / certification making bodies. WSIS could help to bring diverse decision making parties and produce a concrete outcome with global consensus in global algorithmic governance. Our current works are definitely proposals to be debated on and improve for the next few years.

Thematic Workshop



The Economics of Wisdom 1.0 The Golden Path

LLH. Communication – Long Life in Happiness

Thursday 22 March 2019

13:15 – 14:00

Room L1 - ITU

I. **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11**

It is a new rationality of liberalism where the richness is in the human, in our differences, it is made of our human diversity.

My lines of action: 7) ICT applications: benefits in all aspects of life

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

8) Cultural diversity and identity, linguistic diversity and local content

• Cultural diversity • Cultural exchange and information • Cultural heritage • Cultural industry • Cultural policy • Digital archive • Disadvantaged and vulnerable groups • **Indigenous peoples** • Internationalized domain names • Language-related ICT tools • Linguistic diversity • Local languages • Traditional knowledge.

II. **Key achievements, announcements, launches, agreements, and commitments**

I created the Economics of Wisdom 1.0 and the Optimization Industry and the Potential Organization: Because we need to enter in a meta-economy that will rely on the valorization and construction of the human. Because our current macro-economy rests on the valuation of what is destructive for the human being and for the planet.

III. Main outcomes highlighting the following:

1) Quotes

- If I differ from you, far from disadvantaging you, I will increase you » Antoine de Saint-Exupéry – LLH. Communication
- Humanity is the contribution of all human beings to every human » Albert Jacquart – LLH. Communication

IV. Overall outcomes of the session highlighting

- the vision for implementation of WSIS Action lines beyond 2015

The 21st Century

=

A new industry + a new economy + a new biological rationality

Thematic Workshop



How to build a stable investment framework/ecosystem for Impact-driven ventures and organizations?

Hatch CoLab

Thursday 11 April 2019

13:15 – 14:00

Room M - ITU

This outcome will be made available soon.

Thematic Workshop



Synergies and Competences, factors of sustainable development

Synergies & Competences Internationales

Thursday 11 April 2019
Room K1- ITU

13:15– 14:00

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/335#>

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11 C1: The role of governments and all stakeholders in promoting ICTs for development

- And at this level, we want to play a role of harmonization and support of the Government's efforts to ensure the implementation at all levels and structures of ICTs. - Support the work done by Permanent Missions within International Organizations that need to be more effective in handling files with the sending country (intranet platform).

C2: Here, about the information and communication infrastructure: the essential foundation of an inclusive information society.

- We are an unmissable platform with a significant database of consultant profiles, entrepreneurs, but also offers partnerships and business opportunities centralized for the continent and elsewhere. - Allow access to ICTs in the most remote areas of the continent by offering products from recycled forms of computer tools. - Contribute to modernize internet access.

C4: For capacity building

- It is about offering various training courses, to advise and do virtual or on-site coaching, SME / SMI promoters, Governments, associations, schools, NGOs, etc.

II. Key achievements, announcements, launches, agreements, and commitments

- Key achievements: Partnerships in negotiation and in the process of conclusion.
- Announcements: Open to various partnership offers from both the private and the public sector - Commitments: continue to be faithful in pursuit of the objectives of sustainable development.

III. Main outcomes highlighting the following:

1) Debated Issues

Highlights of the main issues debated and interactions with audience

It was at this level to demonstrate the relevance of our business model and how it was different from the existing one. But also the management of forms of remunerations.

Highlight key achievements and challenges shared by the audience and/or panellists

the clarity of our positioning and the differentiation of our offer which is appreciated at the end of this workshop is an innovative initiative.

2) Quotes

- "The path of miles begins with a step, Pascal SPILER"

IV. Overall outcomes of the session highlighting

• main conclusions reached during the discussion :

- Through this platform, African youth can develop its impact
- It's an efficient way to join big planetary initiatives
- ICTs can help improve basic services such as processing passport applications, birth certificates, etc. through efficient online procedures.
- The establishment of simple and efficient business process.

• the vision for implementation of WSIS Action lines beyond 2015

- The vision is to be by 2025 an approved vector of value creation at the international level for the promotion of ICTs and the active pursuit of the objectives of sustainable development.

IV. Main linkages with the Sustainable Development Goals (please specify the SDGs)

- Contribution to the eradication of poverty by creating wealth and a business-friendly environment and multi-faceted and multisectoral cooperation, facilitating access to descent and online jobs. Support innovative ideas and initiatives for Southern countries (Goals 1-8-9 and 10).

V. Emerging Trends related to WSIS Action Lines identified during the meeting

- Access to innovative training and more diversified expertise, combined multisectoral skills.
- Achieve the creation of efficient synergies in the African diaspora so that it is a relevant lever for sustainable development on the African continent.

VI. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

- How to be more effective in the online implementation of new globally applicable ideas.

Thematic Workshop



Autonomous and Intelligent Systems in the Digital World: Moving from Principles to Practice

IEEE

Thursday 11 April 2019

16:30 – 18:15

Room C2 - ITU

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/237#>

I. **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11**

ICTs, particularly AI and Autonomous and Intelligent Systems (A/IS), are foundational to the implementation of the WSIS Action Lines. The use of these technologies offer tremendous opportunities to benefit humanity and to enable sustainable development, but if they do not take into consideration ethical dimensions, human values and well-being, nor the potential for unintended consequences, their full potential can be greatly hindered by a lack of trust. Ethically aligned design, on par with security and privacy by design, is a critical component when addressing the ethical dimensions of the Information Society (C10). Further, as we look at various applications (C7) of such technologies, AI and A/IS is already in use but without frameworks and tangible guidance on how to take principles to practice, these applications can be negatively impacted, as there will be a lack of confidence in the use of ICTs (C5). All impacted, including public governance authorities and all stakeholders (C1) who promote ICTs for development, would benefit from having practical and real-world examples on how to incorporate ethically aligned design into their discussions and outputs.

- C1: The role of public governance authorities and all stakeholders in the promotion of ICTs for development
- C5: Building confidence and security in the use of ICTs
- C7: ICT Applications
- C10: Ethical dimensions of the Information Society

II. **Key achievements, announcements, launches, agreements, and commitments**

- IEEE announced the recent release of Ethically Aligned Design, First Edition. Autonomous and intelligent systems (A/IS) technologies are designed to reduce the necessity of human intervention in our day-to-day lives. In doing

so, these new systems have also raised concerns globally about their impact on the well-being of individuals and societies. EAD1e sets forth scientific analysis and resources, high-level principles and actionable recommendations for ethical implementation of A/IS. It is intended to provide guidance for standards, regulation or legislation for the design, manufacture and use of A/IS, as well as serve as a key reference for the work of policymakers, technologists and educators. The report can be downloaded at no cost at www.ethicsinaction.ieee.org

- OECD announced the recent launch of the OECD AI Policy Observatory, an online hub for AI information, evidence and policy options. The OECD AI Policy Observatory aims to help countries encourage, nurture and monitor the responsible development of trustworthy artificial intelligence (AI) systems for the benefit of society. It will combine resources from across the Organisation with those of partners from all stakeholder groups to provide multidisciplinary, evidence-based policy analysis on AI and facilitate dialogue. Further information can be found at <http://www.oecd.org/going-digital/ai/oecd-initiatives-on-ai.htm>
- UNESCO (<https://en.unesco.org/internetuniversality/indicators>) discussed the four principles embraced by Internet Universality – known as the R-O-A-M principles – that are seen as fundamental to the development of the Internet in ways that are conducive to achieving the Sustainable Development Goals. The four principles are:
 - **R – that the Internet be based on human Rights**
 - **O – that it is Open**
 - **A – that it should be Accessible to all, and**
 - **M – that it is nurtured by Multistakeholder participation**

III. Main outcomes highlighting the following:

1) Debated Issues

- How are values defined?
- Does technology include overall fairness of the world?
- What needs to be done to include more women and girls?
- How can we ensure humanistic values, concretely, when talking about autonomous systems?
- How do we build systems that are open allowing participation from all and what does this participation look like?

2) Quotes

- “With the new generation of computing systems and their capabilities, we need to consider intrusiveness and safety.” Dr. Konstantinos Karachalios, IEEE Standards Association

- “Technology should support human aspirations to expand social and economic opportunity for all.” Mei Lin Fung, People Centered Internet

IV. Overall outcomes of the session highlighting

- Human rights should be incorporated from the inception stage of the development of autonomous and intelligent systems
- Governments and regulators should take an enhanced role in protecting end users of these emerging technologies
- There is a need to do more to protect children who are exposed to technology
- Digital literacy, particularly in youths and those in developing countries, is vital to ensuring equitable distribution and use of these technologies
- Regarding inclusiveness, the technologies are going to improve overall inclusiveness or deteriorate it

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

As the world evolves, fueled by significant technological advances that aid in sustainable development and enable economic and societal growth, having a human-centric perspective is imperative. ICTs, including AI and Autonomous and Intelligent Systems (A/IS), offer tremendous opportunity for enhancing sustainable development, but also introduce challenges and concerns. Working to ensure that technology development and use is grounded in ethically aligned design--design that makes human values and well-being a priority from the very beginning--is critical to the sustainable development process, as we collective work through global partnerships (Goal 17) to ensure healthy lives and promote well-being for all (Goal 3), promote inclusive and sustainable economic growth, employment and decent work for all (Goal 8), and make cities inclusive, safe, resilient and sustainable (Goal 11). As we progress the SDGs in general--from addressing access to modern energy and clean water to having just, peaceful and inclusive societies, we know that AI and A/IS will play a major role, therefore having technology that is ethically aligned designed and that promotes trustworthy solutions will greatly advance the sustainable development process.

SDG 3: Ensure healthy lives and promote well-being for all at all ages

SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable

SDG 17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

Regarding WSIS Action Line C10: Ethical Dimension of the Information Society, the panel noted that ethical dimensions should be incorporated into all aspects of

ICTs at the design phase, particularly autonomous and intelligent systems.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

The panelists noted the need to take “Principles to Practice” that could be included as a Thematic Aspect during the WSIS Forum 2020.

Thematic Workshop



Cooperation in Action to Improve People's Lives

The Broadband Commission for Sustainable Development

Thursday 11 April 2019

14:30 – 16:15

Room H1 - ITU

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

C1, C2, C3, C5, C6, C7, C11

II. Key achievements, announcements, launches, agreements, and commitments

The panel was composed of several Commissioners, including Mr. Marcin Cichy (President of the Office of Electronic Communications, Poland), Dr. Ann Aerts (Head of the Novartis Foundation), Mr. Bocar Ba (CEO of Samena Telecommunications Council), and Mrs. Doreen Bogdan-Martin (Director of the Telecommunication Development Bureau, ITU & Broadband Commission Coordinator). The Commissioners highlighted the importance and relevance of the Broadband Commission for Sustainable Development in advocating for the usage of broadband to achieve the SDGs. With its Working Groups and annual Flagship State of Broadband Reports, the Commission continues to provide recommendations and best practices for countries around the world to adopt and gather inspiration from. This multi-stakeholder high-level partnership will be celebrating its 10 year anniversary in 2020, and looks forward to the many years to come!

III. Main outcomes highlighting the following:

1) Debated Issues & Overall Outcomes

The Commissioners shared their personal experience of being part of the Broadband Commission. As a platform for high level debates and conversations, this partnership was referred to as a 'power house' of stakeholders that work together to find solutions and advocate for broadband in development. In order to achieve the Sustainable Development Goals, it will not be business as usual – strong partnerships will be required to implement new models of thinking. Panelists emphasized that we must find mechanisms to ensure that all sectors of society (public & private) are included, the consumer's demand is adhered to, and that business models are sustainable and people-centered.

With the Broadband Commission for Sustainable Development's primary goal of advocating for universal access to broadband, panelists highlighted the

importance of also ensuring population literacy & skills, and product affordability – only this can make broadband meaningful. Stimulating the demand and making sure people understand the importance and benefits of being online is a very important layer that accompanies broadband provision. Rethinking the education system in terms of digital literacy will be required. With most of the internet being in English, education systems must provide the skills and content for broadband in a local language that is adapted to the local needs.

Access to broadband can be very empowering – especially in the field of health. The scope of global health challenges is unprecedented, there is a need to reimagine healthcare. Digital health is a promising solution, and a driver in transforming health systems. It is a crucial means to deliver healthcare in an empowering, efficient, simple, and cost-effective manner. Digital health is one of the best examples of public & private partnership, as reflected in past Working Groups of the Broadband Commission.

IV. Main linkages with the Sustainable Development Goals (please specify the SDGs)

The Broadband Commission launched a new framework of Targets 2025 in support of “Connecting the Other Half” of the world's population. These targets seek to expand broadband infrastructure and Internet access & use by populations around the world, in support of achieving the Sustainable Development Goals established by the United Nations.

SDG 3, SDG 4, SDG 5, SDG 8, SDG 9, SDG 10, SDG 17

Thematic Workshop



Changing men's attitudes and behaviours to women & technology

TEQtogether/New York Academy of Sciences/Global Scribes/
UNESCO Chair in ICT4D

Thursday 11 April 2019
Room H2 - ITU

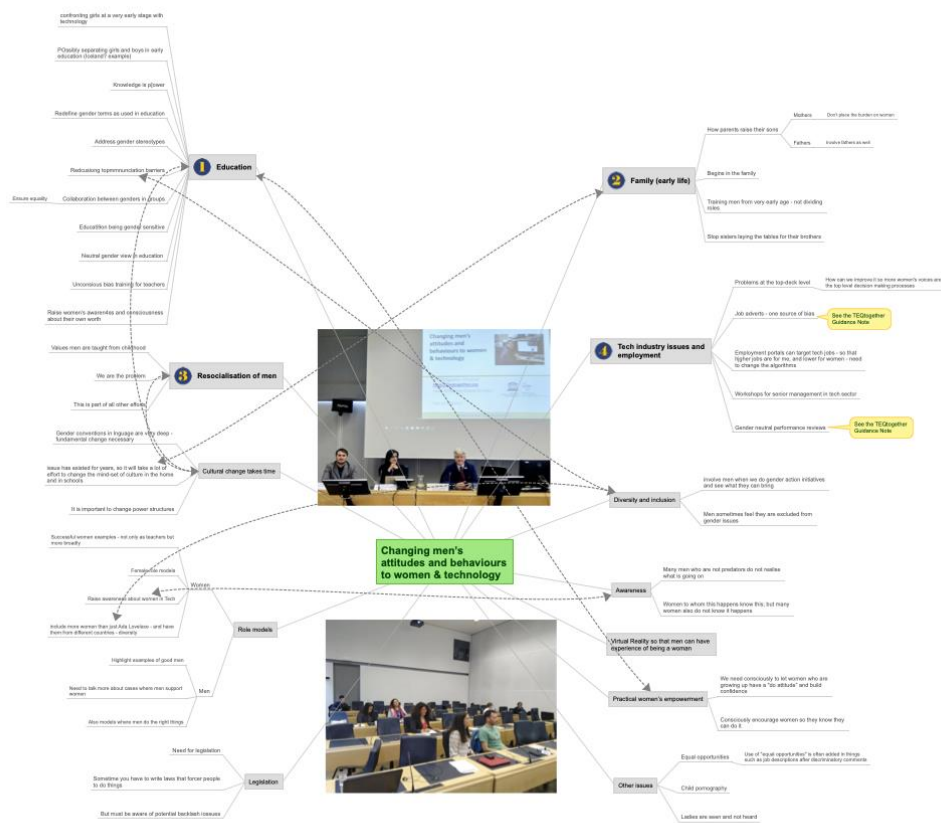
14:30 – 16:15

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

This session was cross-cutting across all of the WSIS Action Lines, but focused primarily on three of them: C4 - it addressed building capacity among men from all walks of life, to help them work better to reduce gender digital inequality; C8 - such work is inherently related to cultural and linguistic diversity as well as local content, since the development of resources to help change men's attitudes and behaviours must be related to their local context (and TEQtogether seeks to work in multiple languages); and C10 - the work also has significant relationships with ethics in the context of moral diversity and decisions that affect women's participation in the field of digital technologies.

II. Key achievements, announcements, launches, agreements, and commitments

The key output was a co-created agenda for work that should be done to change men's attitudes to women and technology, thereby helping to address gender digital equality. This is available in detail at <https://teqtogether.files.wordpress.com/2019/04/2-changing-mene28099s-attitudes-and-behaviours-to-women-technology-1.pdf>, but is illustrated below (and see 5.iii for summary).



III. Main outcomes highlighting the following:

1) Debated Issues

The session began with three short presentations:

- An overview of the work of TEQtogether
 - **informing men** about how their actions impact digital gender inequality (see our Resources and Other Initiatives pages);
 - Identifying **actions that men can take** to enhance gender equality in the tech workplace (see our Guidance Notes)
 - Recommending actions that men can take to **reduce digital violence against women**
 - Encouraging **reverse mentoring** through which women mentor men at all levels in tech organisations.
- An introduction to TEQtogether's Guidance Notes by Paul Spiesberger (ict4d.at), focusing especially on guiding for when running a computer programming workshop
- An overview of work on the use of mobiles for sexual harassment by Bushra Hassan (International Islamic University, Islamabad).

It then proceeded in the form of a lively discussion to identify the most important action agendas for everyone to take forward to make a difference.

2) Overall outcomes of the session highlighting

The four most important issues identified that require attention are:

- Education (especially gender sensitivity materials and unconscious bias)
- Family roles (especially in early life)
- The resocialization of men
- Tech industry and employment

A second tier of issues focused on:

- Cultural change takes time
- Diversity and inclusion
- Awareness raising
- Role models (both men and women)
- Virtual reality (so that men can experience the difficulties faced by women)
- Legislation
- Practical women's empowerment.

IV. Main linkages with the Sustainable Development Goals (please specify the SDGs)

This workshop related primarily and explicitly to SDGs 5 and 4. Above all, it addressed the fundamental gap that must be addressed if gender equality and the empowerment of women and girls through ICTs is to be achieved: men's and boys' attitudes to women and girls and digital technologies need to be changed. This has significant connections with education and training, from the earliest experiences that boys have in the classroom and at home to the mentoring of senior executives in global corporations. The workshop explored the many avenues of work that need to be undertaken to achieve this.

V. Emerging Trends related to WSIS Action Lines identified during the meeting

The workshop highlighted the need for all gender-related initiatives to involve men and boys, and work to change their attitudes and behaviours. TEQtogether, as a part of the UNESCO Chair in ICT4D is an integral aspect of Royal Holloway, University of London's contribution to EQUALS (<https://equals.org>) and it is committed to taking forward the ideas that emerged during the workshop.

VI. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

This year's WSIS Annual Forum did indeed address ways through which men can contribute more effectively to the achievement of gender digital equality. We would recommend that this theme is explored further at the WSIS Forum 2020,

and TEQtogether would be please to work with the organisers to carry this forward.



Thematic Workshop



Better Internet for Children

European Union

Thursday 11 April 2019

14:30 – 16:15

Room K1 - ITU

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

C4, C10, C11

II. Key achievements, announcements, launches, agreements, and commitments

Greater international cooperation, including sharing of best practices, needs to be achieved:

- The European Commission will launch next year a pilot programme with a bursary scheme for the neighbouring countries of EU, in countries benefiting from an the EU pre-accession strategy, or in other non-EU countries. The scheme will offer funding for up to 15 representatives from organisations promoting online safety to children in their respective countries as part of the growing Safer Internet Centers network originally created for EU.

- The Alliance to better protect minors online, a self-regulatory platform initiated by the European Commission, could play an important role in elevating the online protection globally through voluntary best-practice sharing, including potentially raising the required funds for further data collection and research. The Alliance uniquely brings industry players together with civil society, UNICEF and industry associations, as well as the Commission, so we can exchange, learn and cooperate with each other.

III. Main outcomes highlighting the following:

1) Debated Issues

One out of three internet users is a child. They discover internet at ever younger age, and spend online an increasing amount of time. New technologies such as artificial intelligence or virtual reality change the way we, including our children, engage and interact in society. Children online can be exposed to harmful content and behaviour such as cyberbullying, sexual harassment, pornography, violence, or self-harm.

The European Union has developed a comprehensive strategy to protect children online: The European Strategy for a Better Internet for Children dates from 2012, and comprises of three pillars: financial support for local activities and for EU-level coordination; consultation and cooperation; regulatory measures, including both legislation and self-regulation. The Commission has furthermore taken numerous steps

to bring existing legislation up to speed with the digital transformation, and in particular to tackle the online distribution of harmful content of various kinds.

Sharing of data, information and best practices has proven to be an essential but also the most effective tool for improving internet safety. The European Union created Safer Internet Centers in its Member State, which each promotes awareness raising, runs an INSAFE helpline to support victims, and a INHOPE hotline for quick removal of harmful content. The network has grown outside of the European Union, and includes now also countries such as Brazil, Armenia, New Zealand, Ukraine, Serbia, Ghana. There is potential for further expansion, including through a planned European Commission pilot project to be launched next year.

Talking about safer internet for children, we must start with the parents and educate them. Parents need to show interest in what their children are doing online. Smartphone or tablet has been viewed as a "safe parenting" tool, whereby parents believe that children at home are safe. This is not the case anymore.

Modern children know the modern technology better than their parents. We need to talk to them to understand which tools, websites, games or media they use most. Different generations have very different online behavior patterns, and this is also reflected in the corresponding campaign for online safety.

It has proven difficult to assess which online protection measures or tools have been the most effective as the technology changes so fast. Research conducted just five years ago no longer reflects the current situation, and the use of internet by children could be substantially different. More international cooperation and sharing of information, data, and best practices would benefit global internet safety; Safer Internet Day is the prime example of a useful initiative in this context, with 150 countries participating in 2019.

Online private sector (such as social media providers) could be the source for funding for the research and protection required to develop most effective online protection policies. A lot of discussion internationally has been dedicated to this question, and there are existing established practices: As an example, Brazil has introduced a scheme whereby a fee is levied from all domain-holders <.br>.

New technologies bring new threats in our society but they could also be the solution to making internet safer. There are already AI-based solutions that provide personal assistance on smartphone supporting the used (child) in protecting their online presence.

2) Quotes

"We are moving from primarily child protection to child empowerment online." June Lowery-Kingston, European Commission

"The internet is an amplifying mirror of our society. We have to think very critically of what we are projecting." Jovan Kurbalija, UNSG High Level Panel on Digital Cooperation

"Children know [about technology] often more than us, we need to talk to them to protect them better." Jiri Prusa, CZ.NIC Association, Czech Republic

"Parents need to show interest in what their children are doing online. Register on the same social media to show them that you understand the modern technology and can talk about it with them." Maija Katkovska, Safer Internet Centre, Latvia

"You are never safe again from an online mistake made many years ago." Andero Sepp, Web constable Estonia

"The new technologies bring new threats but could also be the solution to making internet safer." June Lowery-Kingston, European Commission

IV. Overall outcomes of the session highlighting

The key messages from the panelists:

- There are many existing initiatives that can be used or replicated for improving internet safety, be it the EU Safer Internet Centers and its tools (such as INSAFE hotline) or public broadcasters' initiatives such as the BBC's Own it programme.
- Comprehensive policies exist and can be drawn from: apart from the European Strategy for Better Internet for Children, a good source of information can be the Council of Europe website about children's rights, including online, their digital citizenship education and in particular their recent Guidelines to respect, protect and fulfil the rights of the child in the digital environment
- With the increasing debate of online rights and safety, our society needs to reflect what heritage we want to leave for the future generations. A profound soul-searching might be needed to avoid potential catastrophic side effects of the digital transformation similar to the climate change.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

SDG 9: Build resilient infrastructure, promote sustainable industrialization and foster innovation:

The 2030 Agenda recognizes the need to develop knowledge societies where everyone has opportunities to learn and engage with others. This highlights the need for access to Information and Communication Technologies (ICTs).

The international community must endeavor to ensure that the increasing connectivity does not bring unnecessary harm to our future generations. It is imperial that connectivity is built around safety, and that our future generations can reap the benefits of internet while being able to avoid harmful content or behavior to prevent negative consequences for their cognitive, social and emotional development.

To this end, international cooperation could be built around best practices sharing, and capacity building.

Thematic Workshop



Connecting the Circular model of E-Waste Management to the Sustainable Development Goals

ITU/BRS

Thursday 11 April 2019

14:30 – 16:15

Room K2 - ITU

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

E7, E-environment

II. Key achievements, announcements, launches, agreements, and commitments

- Two Massive Open Online Courses relevant on e-wastes and SDGs will be soon be re-launched on:

1) The role of information and communication technologies in Achieving & Measuring SDGs with Columbia University and other partners.

2) The E-waste Challenge with KU Leuven, Belgium and other partners.

Both MOOCs are developed with the contribution and in cooperation with ITU.

- -UN Habitat is launching a capacity building programme for clean cities in Africa in cooperation with UN Environment and the Government of Japan to try to raise the attention of cities in Africa on waste management.

III. Main outcomes highlighting the following:

1) Debated Issues

- A representative of the Government of Ghana shared that the Government of Ghana has adopted a law on e-waste management in 2016, and afterwards passed guidelines to set up a levy on e-waste imported into Ghana. The government was facing a challenge in setting the amount of the levy, which had provided a very low income to the fund that would be built up to support the collection, recycling and final disposal of e-waste in Ghana. Technical assistance would be required on establishing a financial mechanism to support sustainable e-waste management schemes. The speakers pointed at ITU standards and Basel Convention manuals on inventories of e-waste based on the amounts of equipment put on the market. The debate verted also on the importance of collecting robust data for SDGs targets and national policies to support policy and decision making.

- A representative of a private entity, in the audience, mentioned that in the future it will be very important to reduce the energy use of cooling systems and fans in ICT equipment. It will be important to rethink datacenters so that they can use less energy and do not require cooling systems.
- A participant asked how the Basel Convention applies to the flows of e-wastes around the world. The speakers explained that technical guidelines on the transboundary movements of e-waste are available to recognize shipments of used equipment which is functional and shipments of e-waste, suggesting documents and standards for packaging that should be followed when sending second hand functional e-equipment.
- Another participant asked the speakers about views on closed loops for e-waste and the future for cities. The speaker from UN Habitat mentioned that cities are important players for the collection and take back of e-waste and, in the experience of UN Habitat, door to door collection was the best solution to ensure close loops for e-waste in cities.

2) Quotes

- Please provide two important quotes from the session and the names & organization of the person you are quoting
 - Increasing the recyclability of ICT products by design is the mission of Huawei. (Mr. Paolo Gemma, Senior Specialist on issues related to energy saving and environmental sustainability, Huawei).
 - Collecting, recycling and final disposal of e-waste requires a deep understanding of the link between informal and formal recyclers. A good combination of informal and informal sector cooperation is the key for a performing collection and recycling scheme on e-waste in cities. (Mr. Graham Alabaster, Chief of Sanitation and Waste Management, UN-Habitat).

IV. Overall outcomes of the session highlighting

- main conclusions reached during the discussion
- the vision for implementation of WSIS Action lines beyond 2015

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

- The sustainable management of e-waste will contribute to the attainment of sustainable development goals in particular, Goal 3 (Good health and Well-being), Goal 6 (Clean water and Sanitation), Goal 11 (Sustainable Cities and Communities), Goal 12 (Responsible Consumption and Production), Goal 14 (Life Below Water), and Goal 8 (Decent Work and Economic Growth).

- Target 3.9 refers to the reduction of the number of deaths and illnesses caused by hazardous chemicals and air, water, and soil pollution and contamination. Target 6.1 seeks to achieve universal and equitable access to safe and affordable drinking water for all, and Target 6.3 aims to reduce pollution, eliminate dumping, and minimize release of hazardous chemicals and materials. Goal 14 refers to marine pollution and the protection of the marine ecosystem (Targets 14.1 and 14.2).
- Target 11.6 aims to reduce the adverse per capita environmental impact of cities, by paying special attention to air quality and to municipal and other waste management. Most e-waste will be generated in cities and it is particularly important to properly manage e-waste in urban areas, improve collection and recycling rates, and to reduce the amount of e-waste that ends up in dumpsites.
- Similarly, Target 12.4 aims to achieve the environmentally sound management of chemicals and all waste throughout the life cycle, in accordance with agreed international frameworks, and to significantly reduce their release into air, water, and soil in order to minimize their adverse impacts on human health and the environment.
- Target 12.5 aims to substantially reduce waste generation through prevention, reduction, repair, recycling, and reuse. An increasing number of people on the planet are consuming growing amounts of goods, and it is critical to make production and consumption more sustainable by raising awareness levels of producers and consumers, specifically in the area of electrical and electronic equipment and e-waste.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

- Developing countries will increase the rate of e-waste generated at a faster speed than developed countries.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

- Continue to raise awareness of e-waste and the role of green ICT standards to improve the design of products and e-waste management.

Thematic Workshop



Don't just tell them – show them

CNDG

Thursday 11 April 2019

14:30 – 16:15

Room L1 - ITU

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

The session was specifically relevant to WSIS Action Lines on e-learning (C7/17), e-health (C7/18) and e-employment (C7/19).

II. Key achievements, announcements, launches, agreements, and commitments

The workshop showed how the increasing use of VLEs to deliver education and training will have a major impact on the nature of the distribution of teaching and teaching materials in higher education globally.

III. Main outcomes highlighting the following:

1) **Debated Issues:** The panelists – five academics with extensive experience of teaching in virtual learning environments - joined the discussion as avatars from a virtual campus, to discuss the following issues:

- The role of VLEs in making education accessible to students who may find themselves challenged by their geographical location, personal, economic or family circumstances.
- How VLEs can help to create a sustainable model for infrastructure development when resources are scarce, with particular reference to their use in relieving the heavy financial and physical burden of teaching a very large course.
- The value of the “virtual field trip” to students, and how their use enhances the student experience without significantly increasing the resource burden on both the students and department.
- The ability of VLEs to bring abstract concepts to life, by looking at a case in which economics students were able to gain a greater understanding of abstract concepts in economic decision-making by role-playing them in gamified situations.
- How VLEs have been used to intrigue and attract students to STEM subjects, and have boosted enrolment and student satisfaction on challenging science courses.

2) Quotes

“The human connection between students and teachers is what creates the desire to advance knowledge and to move our understanding forward. Rather than remove the human teacher we strive to make the connection more efficient and stronger, to put teaching back into education. That’s the goal.”

(William Prensky, CEO, CNDG)

“The virtual world is very cool to work in. (The students)... have a really great time and we sneak a little bit of chemistry in with everything else. We’re still looking at scientific method, and we hold them to a really high standard, but they have such fun doing it, they don’t even know that they’re being taught.”

(Dr Stephanie Dillon, Director of Freshman Chemistry Laboratories, Florida State University)

IV. Overall outcomes of the session highlighting

- The participants proposed a future in which institutions could join together in the development and construction of virtual campuses that all stakeholders would be able to access equally and immediately, rather than by continuing the current practice of building hundreds of physical regional or national campuses, with the concomitant drains on time, energy, finances and raw materials that implies.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

The workshop demonstrated how the use of Virtual Learning Environments (VLEs) could be a key factor in achieving WSIS Sustainable Development Goal (4): by enabling high-quality, cost-effective, sustainable, inclusive and equitable education and lifelong learning opportunities for all.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

The workshop identified the importance of collaboration and pooling of resources and expertise to ensure that all learners, regardless of geographic, physical or social boundaries, can access and benefit from teaching and learning activities.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

As technology develops access to virtual spaces and activities is becoming more expensive for the individual users rather than less expensive. Finding ways to create affordable access to virtual education will be a challenge over the next decade or more. But new technologies will also emerge to help. We would welcome being a part of designing a Forum track on access and helping to promote partnerships to do that.

Thematic Workshop



5G technology for developing countries

ITU

Thursday 11 April 2019

14:30 – 16:15

Room L2 - ITU

I. Relevance with the WSIS Action Lines

C2

II. Key achievements, announcements, launches, agreements, and commitments

Commercial 5G has been officially launched in South Korea last week.

III. Main outcomes highlighting the following:

1) Debated Issues

- Panelists and participants discussed the implications of 5G. The focus of the session was on developing countries. The discussions included rural communities, affordability, alternatives, implementation challenges, implications for leapfrogging to 5G, practices on implementing flexible infrastructure, and on how to make 5G attractive for developing countries.
- **Dr Eun-Ju Kim**, Chief of Innovation and Partnership Department ITU/BDT delivered the Opening speech. She highlighted that to connect the next 4 billion people unconnected, or to achieve the SDGs for leaving no one behind, identifying existing networks and building the next generation of ICT infrastructure will allow affordable access more widely available to foster jobs, healthcare, and education - i.e., domestic, regional, and global economic growth. With this objective in mind, this thematic workshop will focus on **5G for the developing countries**. 5G holds the promises of very low latency, very high bandwidth and connecting more things, which enable AI, IoT, Big Data and more, which are all very hot even at this WSIS19
- **Mr. Istvan Bozsoki**, Head Telecommunication Network and Spectrum Management Division ITU/BDT moderated the Session. He mentioned that as the title suggests, the topic of this event is focusing on 5G technology for developing countries. As we know, infrastructure is the foundation of a digital society. In this session, participants will discuss the implications of 5G and the focus of the session is on developing countries.
- **Prof. Konstantinos Masselos**, President Hellenic Telecommunications and Post Commission, Greece. Mr Masselos talked about 5G promises to connect people and devices through intelligent networks and applications and on how to create opportunities for development. 5G is expected to evolve gradually creating new services fostering innovation and stimulating economic growth. New high speed interconnection schemes brought by 5G can benefit remote rural areas via multiple applications and use cases. Developing countries may gain a lot from

new applications and use cases. However 5G is a capital intensive investment project presenting significant challenges regarding its efficient roll out. A number of financing and technology challenges are present regarding 5G deployment. Some ideas to face these challenges were introduced, such as: Co-financing the 5G infrastructure looking at the network development; Wholesale models should consider also wholesale option; and PPP schemes to support the deployment of 5G networks in rural areas. Leapfrogging to 5G offers opportunities (future proof networks) and challenges (e.g. lack of infrastructure). Flexible infrastructures, and network sharing balanced with competition should be explored.

- **Mr. Seng Ho Choi**, representative Ministry of Science and ICT, South Korea. The presentation covered the key role of 5G technology related to the Fourth Industrial Revolution. The key technical factors determining the 4th Industrial Revolution are: data, network and AI. 5G will make all industries smart. A brief introduction of Korean 5G commercialization status was presented. In December 2016 a Mobile Communication Development Strategy was approved which was the basis of the 5G implementation. This year Korea started the commercialization of the 5G. During the Olympic Games in PyeongChang 5G showcase was introduced. It was foreseen that coverage will remain a challenge due to the lower reach of 5G in upper spectrum. In addition 50 % of small cell deployments costs will be spent on building backhaul. Government and industry are working together in test beds/events to bring up 5G cases (such as smart factory, immersive media, smart cities).
- **Ms. Elizabeth Migwalla**, Senior Director and Head of Government Affairs, Middle East & Africa, Qualcomm. 5G deployment figures were presented: To date there are over 200 operators in 83 countries involved in tests, trials and launches of 5G in 3GPP 5G bands (i.e. standardized/harmonized technology is available). Standardization is taking place following the defined roadmap. More than 20 operators have announced rollout plans, while more than 20 OEM's have announced commercial device availability.
The opportunities of 5G in developing regions are as great as in any other region around the world, and if harnessed correctly, it has the potential to drive forward economic growth, and deliver social benefits in all countries. However, the transition to 5G also introduces complex challenges and a host of options and choices that call for prioritization, planning, time and resources if a country or region is to fully benefit from the wide array of potential innovations. 5G for developing countries: the capabilities are there for rural and remote areas. National and Regional 5G strategies are needed. It should consider priorities such as: access to public assets (e.g. spectrum, rights of way). Increased regulatory harmonization, promoting economies of scale and enhancing interoperability, combating device theft, and developing backhaul infrastructure. She recommended to countries study carefully the relevant ITU-R documents on for the implementation of IMT-2020 (5G).
- **Mr. Andy Hudson, GMSA Head of Policy**, The combination of 5G, AI and IoT will usher in a new age of Intelligent Connectivity. The presentation considered the evolution of networks towards this 5G era, with a particular focus on developing markets, in terms of: Consumer expectations for the 5G era, and the implications of these new technologies; 5G adoption in different regions; Key 5G policy recommendations. According to a GSMA survey the main consumer expectation in the 5G era are the same than now: improved mobile data speed

and service coverage. For 5G implementation in developing countries the key points to consider are: infrastructure/investment, market readiness and policies.

2) Quotes

- “5G is the inevitable evolution of the mobile infrastructure, but the rate of adoption depends heavily on market conditions. Countries should think on the roadmap for 5G implementation even if the implementation are not sought in the short term” Andy Hudson (GSMA)
- “5G is a unifying connectivity fabric for society. Like electricity, you will just expect it everywhere in the future. 5G brings connectivity to devices that decentralizes intelligence, in a way that electricity did to power generation, which will spur and power new innovations.” Elizabeth Migwalla (Qualcomm)
- “5G promises to connect people and multiple devices through intelligent networks and applications. The potential to 5G is great but it is needed to find users’ cases and capitalize on experience from pioneering countries in 5G network deployment to save time and cost.” Konstantinos Masselos (EETT)
- “ITU is working on connectivity issues (including how to reach rural areas); ITU provides information, capacity building, and inviting all stakeholders to have a voice on 5G roll-out”. Istvan Bozsoki

IV. Main linkages with the Sustainable Development Goals (please specify the SDGs)

SDG 9

V. Emerging Trends related to WSIS Action Lines identified during the meeting

New technologies to connect the unconnected, 5G, key barriers to digital inclusion, Spectrum Licensing, Market readiness, power shortages (liability of power supply), affordability of terminal equipment. ITU can help engaging different partners.

VI. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

5G roll-out follow-up

Thematic Workshop



ICANN, the GDPR and WHOIS

ICANN

Thursday 11 April 2019

16:30 – 18:15

Popov Room 1 - ITU

This outcome will be made available soon.

Thematic Workshop



E-Science, Innovation and Future Universities

Iran University of Science and Technology

Thursday 11 April 2019

16:30 – 18:15

Popov Room 2 - ITU

I. **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11**

C7 – eScience

II. **Key achievements, announcements, launches, agreements, and commitments**

This workshop which was arranged by Iran University of Science and Technology, focused on different issues regarding e-science, innovation and future universities. The speakers from academia and international bodies who attended in the workshop were:

- Dr. Hadi Shahriar Shahhoseini (Workshop Organizer), Iran University of Science and Technology, Iran
- Dr. Eun-Ju Kim, Telecommunication Development Bureau, ITU
- Mr. Martin Rademacher, German Rectors' Conference (HRK), Germany
- Dr. Jean-Henry Morin, University of Geneva, Switzerland
- Dr. Alireza Yari, Research Institute for ICT (ITRC), Iran
- Mr. Ali Mansour, Vooop Company, Iran

In the opening of the workshop, Dr Shahhoseini, IUST Vice-Chancellor for International Affairs, gave general information about the workshop and introduced panelists.

Then Dr Shahhoseini delivered his own speech entitled “E-Science and Future Universities: Collaborative Creativity Hubs for Sharing Knowledge”. He defined E-Science as the use of ICT in science development, to enable local and remote communication and collaboration on scientific topics and dealing with huge scientific data. He emphasized on increasing the workloads of academics, and growing the number of researchers in research groups caused by new technologies. He said different issues in this area have been emerged in research area that almost all of them related to data science and dealing with big data. Beside with evolving research ecosystem, the learning process has been changed in universities; and many new

issues such as lifelong learning, self education and more accessible and online educational recourses have been appeared. He concluded these two dimensions transform universities to collaborative knowledge sharing hubs. He also highlighted that the Network of Universities has been currently shaped will evolve from different aspects; and in the future, the Network of Universities will have effective collaboration with other networks such as Network of Industries and we have collaborative networks of networks.

Then Dr Kim, Chief of Innovation and Partnership Department BDT, in International Telecommunication Union (ITU) presented her talk that entitled “Future Trends in Information and Communication Technology: The ITU Outlook on Research and Innovation”. She said ITU supports academia in knowledge production and training and supports the establishment of partnerships, cooperation and networking between these institutions. She added that academia is a driver for accelerating the digital transformation and plays an integral part in offering the tools for stakeholders to convert information into meaningful contributions to knowledge and innovation. She reviewed some new topics that have been covered by ITU, such as Artificial Intelligence (AI), Internet of Things (IoT), smart and green ICTs; and emphasized on works have been done by ITU to define the standards in these areas. She said all these new area needs innovation and collaborative Researches.

The third speaker was Mr Martin Rademacher, Head of Project Hochschulforum Digitalisierung (University Forum Digitalization) in German Rectors' Conference (HRK) who delivered his speech entitled “The Disruptive University: A German Perspective on Higher Education Institutions in the Digital Age”. He said digitalization is often characterized as a disruptive force and has changed the way we communicate, travel, access media and gather information. He referred to some traditional business models that are endangered or have changed radically by emerging new companies who employed technology more than the others. For instance the recording industry was affected by iTunes and Spotify, taxis and cab by Uber, and hotels by Airbnb. Then he reviewed the situation for universities and highlighted while the new technologies increasingly employed in universities but the learning as a basic principle remains unchanged through digitalization. He concluded, digitalization is not so much a disruptive factor for universities. Quite the opposite is the case: Universities themselves can and should become a disruptive factor for a digital society by helping it to continue asking fundamental questions that are increasingly precarious but nonetheless significant in an accelerating world.

Then Dr Jean-Henry Morin, Associate Professor in University of Geneva, Switzerland gave his talk that is entitled “Build to Think, Build to Learn, What Can Fabrication and Creativity Bring to Rethink Higher Education”. Firstly, he described the traditional education systems in the past, in which the most important resources to a student were professors and libraries, and in recent years the Internet has been added as easier way for access to information. Then he highlighted why creativity, critical thinking and effective communication are taught at the university and not starting at elementary school. He said idea fabrication and creativity skills are necessities in

moving forwards and should be considered in new approaches in higher education. He also shared some experiences in this regards in the University of Geneva.

The next speaker was Dr Alireza Yari, the Director for International Affairs of ICT Research Institute. The title of his talk was “The Future of ICT Research and Innovation Centers: Challenges and Opportunities”. He described innovation as one of the main factors for success of any organization in the current technological world. Regarding the innovation process in the field of ICT he raised that there is a continuous change in the structure of the society and the economy, that facing developing countries such as Iran with many challenges and they should find how to get ready for the future at the organization level, as well as in the industry level. He concluded that the answer is increase in productivity by reinforcing research, technological development, and innovation.

The last panelist who offered his talk was Mr Ali Mansour from Voop Company who develop e-learning and AR-based educational platform. The title of his talk was “Can Future Technology Act as an Equalizer in the Educational Sector?” He reviewed how families dedicate substantial component of household budgets to educational products. Then he looked at alternative supplementary resources for students as replacements for expensive educational products.

At the end, Dr Shahhoseini opened the floor for question and answer, and then he concluded the workshop by summarizing the most important points that are raised by speakers during the session.

III. Main outcomes highlighting the following:

1) Debated Issues

Following issues are raised by audiences:

- The topics that are opened in this workshop are important and need to discuss more in detail.
- One of the most unexpected impacts of the web revolution on different area is that a considerable part of intellectual professions in all societies are collapsed. While in other area such as media and show business industry we see this trend, why academia will survive?
- Is there any threat for academia and universities from the new emerged technology specially the ICTs?

2) Quotes

- Please refer to item 2.

IV. Overall outcomes of the session highlighting

- main conclusions reached during the discussion
- the vision for implementation of WSIS Action lines beyond 2015

In past two decades, ICTs have considerable impact on the science

ecosystem and universities. This subject has been called as E-Science, in WSIS documents and in WSIS Action Line 7. This workshop was focused on E-Science and future universities and research centers, and following issues are highlighted by speakers from different points of view:

- Future Universities will be knowledge sharing hubs.
- Network of universities will be a part of collaborative networks of networks.
- Academia is a driver for accelerating the digital transformation.
- Academia is a driver for converting information into meaningful contributions to knowledge and innovation.
- Digitalization is not so much a disruptive factor for universities.
- Creativity and idea fabrication is an indispensable part of future universities.
- Productivity will increase in future research centers by reinforcing research, technological development, and innovation.
- New ICT-based platforms provide affordable scientific resources and publicize the science.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

G1 – G4 – G6 - G7 – G10 – G11- G13 - G14 - G15 - G17

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

- Using Artificial Intelligence (AI) and Augmented Reality (AR) in learning and science ecosystem
- More affordable and/or open access scientific resources

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

- E-science in the Information and Knowledge Societies
- Research collaboration and innovation in the Information and Knowledge Societies

Thematic Workshop



Empowering Information Accessibility with AI

Internet Society of China

Thursday 11 April 2019

16:30 – 18:15

Room C1 - ITU

This outcome will be made available soon.

Thematic Workshop



Gender Mainstreaming – WSIS 50/50 challenge

ITU

Thursday 11 April 2019

16:30 – 18:15

Room C2 - ITU

This outcome will be made available soon.

Thematic Workshop



How to automate analysis of aerial data in the context of Aid & Development

WeRobotics

Thursday 11 April 2019

16:30 – 18:15

Room H1 - ITU

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

Evidence and data-based decision making allows for adapted and more efficient solutions for a range of aid & development issues and sectors such as disaster management, conservation, agriculture and resilient city planning. Easier availability of geospatial data through satellite and drones provides civil society with an important data source to support evidence-based decision making. However, it also creates a new bottleneck as the challenge has shifted from “no data” to “too much data”. Leveraging AI to support more automated analysis is therefore the next step to take.

II. Key achievements, announcements, launches, agreements, and commitments

In this workshop, we presented use cases of existing solutions and address the current advantages and challenges of using machine learning in conjunction with drone and satellite data, including in environments with low bandwidth. Session attendees walked away with a better understanding of today’s needs of the Aid & Development sector in terms of analysis automation on aerial. And received an introduction to existing technology solutions and use cases, as well as be able to understand challenges and discuss their questions.

III. Main outcomes highlighting the following:

1) Debated Issues

- Bias and uncertainty in use of AI for analysis
- Comparisons with AI solutions used by military

2) Quotes

- “The choice is not between automation or no automation. Rather, the choice is whether we use these emerging technologies to create shared prosperity or to create even more shocking levels of inequality.” – Patrick Meier

IV. Overall outcomes of the session highlighting

- Latest developments in AI (deep learning, transfer learning) already starting to get used in humanitarian and development projects.
- Main challenges are accuracies and reliability of AI analysis

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

GOAL 3: Good Health and Well-being

- *Automated analysis of aerial data can accelerate the detection of public health problems and priorities*

GOAL 8: Decent Work and Economic Growth

- *Localizing the analysis of aerial data creates new skills and new opportunities for jobs and economic growth*

GOAL 9: Industry, Innovation and Infrastructure

- *Industry is playing an important innovative role in building the infrastructure that enables the automation of aerial data analysis*

GOAL 10: Reduced Inequality

- *Promoting and enabling local analysis reduces the digital divide*

GOAL 11: Sustainable Cities and Communities

- *Automated analysis provides more timely feedback loop to enable cities and communities to thrive sustainably*

GOAL 13: Climate Action

- *Rapid data analysis is needed before and after major climate change related disasters. Automation is key for this.*

GOAL 17: Partnerships to achieve the Goal

- *Panel speakers represented field-based humanitarian and development organizations, industry and private sector, non-governmental organizations, universities and civil society*

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

- i. Latest developments in AI (deep learning, transfer learning)
- ii. Recognition that local capacity building is essential

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

- i. Decolonizing Data

Thematic Workshop



Digital Entrepreneurship to close the connectivity gap

ICC BASIS

Thursday 11 April 2019

16:30 – 18:15

Room H2 - ITU

This outcome will be made available soon.

Thematic Workshop



How do we maximise the benefits of Innovative 4.0 technologies, without unnecessary risks and consequences

IFIP IP3

Thursday 11 April 2019

16:30 – 18:15

Room K1 - ITU

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

Action Lines C3; C4; C5; C8; C10

II. Key achievements, announcements, launches, agreements, and commitments

IFIP IP3 are further developing partnerships with other organizations. We recently approached CSTD to determine how we can work together for mutual benefit. This collaboration will result in projects that work on Digital Skills implementation and find common models and processed.

III. Main outcomes highlighting the following:

1) Debated Issues

- As Innovative 4.0 Technologies including AI and algorithmic decision-making bring economic and societal benefits in many areas of our human endeavors, how do we maximize the benefits without exposing our Society to unnecessary consequences and risks?
- Will humans be replaced by robots? Some panelists think it will be likely, whilst others are sure that there are some qualities that will always be uniquely human.
- Although some jobs will disappear, it's estimated that there will be a net gain of 58 million jobs over the next 10 years,
- Trust as a multi-disciplinary concept.
- Although the number of ICT specialists grow in Europe and elsewhere, there is still a sever skills shortage. The role of standards in developing Digital Skills. The four pillars of the IT Profession are: Body of Knowledge; competences; Education & Training, including CPD; Professionals Ethics

2) Quotes

- “I am pleased that usability had been mentioned, because in all this we sometimes forget about the Human Computer Interface” Alreza Yari, ICT Research Institute, Iran
- “We can use AI to remove the bias from recruitment, but there might still be bias in coding.” Peter Major
- “Artificial Intelligence and Machine Learning will create upheaval in the next few years. We must prepare for this.” Stephen Ibaraki, IFIP IP3 Vice-Chair (Presenter)
- “What will the relationship be between the employer and the robot? Will a robot become a legal person in time?” – Anthon Wong, IFIP IP3 Deputy Chair
- “AI is not some unknown future technology. We use it every time we read an email or use our cellphones. “ – Moira de Roche, Chair IFIP IP3

IV. Overall outcomes of the session highlighting

- Fourth Industrial Revolution Technologies, moving into Society 5.0 bring many economic advantages, but we must ensure that the providers of the product and services are trustworthy.
- Frameworks underpin skills requirements, and there are some skills that are transversal, for example security.
- Trust continues to be the most important thing

V. Main linkages with the Sustainable Development Goals

- Considering the economic opportunities of Industry 4.0 and the 5th Machine Age, which form input to sustainable economic growth, Economic empowerment, in turn, reduces inequalities between countries. Digital Skills are essential to ensure decent work for all. This supports SDGs 8, 9, 10
- Building partnerships for trust in digital plays into SDG 17.
- Trust & Duty of Care – Intersect all SDGs because they ultimately rely on safe, secure ICTs

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

Action Line C7 – ICT and applications are affected by Industry 4.0 technologies

Action Line C3 – Security, and trustworthy computing

Action Line C4 – Capacity Building (how to develop Digital Skills)

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020.

Have we realized the potential of Machine Learning?

Thematic Workshop



Internet of Things – From idea to reality, making it happen in Africa

ITU/Smart Incubator/WaziUp/WaziHub

Thursday 11 April 2019

16:30 – 18:15

Room K2 - ITU

I. Main outcomes highlighting the following:

1) Debated Issues

Highlight of the main issues debated and interactions with audience

- The IoT ecosystem could be utilized for data mining for agriculture variables. This supports the creation of large databases of information, which could be utilized to analyze and establish hidden relationships among the attributes of agricultural data, supporting scientific decision-making. This is pertinent for agro-based economies especially in the African region.
- With a significant proportion of the population relying on agriculture and animal husbandry, technologies should be implemented to support the core functions of farmers in the economy. When dealing with issues related to theft of animals and loss of produce, wearables for farm animals and surveillance of agricultural goods using IoT-based technologies can resolve the major concerns in this domain. However, the costs relating to the use of these technologies remains to be a point of discussion between government and other stakeholders.
- To promote the use of IoT, blockchain and AI, ITU launched the Smart Incubator programme with the support of Rwanda and Saudi Arabia in September 2018. Since its creation, this programme has successfully supported digital transformation in developing countries and encouraged entrepreneurs to explore these domains of technologies for formulation of new solutions for improved quality of life.

Highlight key achievements and challenges shared by the audience and/ or panellists

- IoT offers a platform for transition from the clinic-centric treatment to in person- patient-centric healthcare, wherein each agent such as hospital, patient, and services are seamlessly connected to each other. Using IoT, smart healthcare services can be offered in remote locations with limited medical facilities. Such services can also collect different types of data in the sensing layer through sensors on wearable systems. The collected data can be transported to the cloud or servers that collect all the data through wireless

networks in the networking layer and can be accessed during emergency situations. These facilities are particularly useful in regions like Sub-Saharan Africa.

- Acting on the need to promote connectivity in the African states, WAZIUP project presented during the session, funded by the European Commission, utilizes the intersection between IoT and big data to improve the working conditions in the rural ecosystem of Sub-Saharan Africa. With the core focus on end users, WAZIUP provides an ideal ecosystem for developing and validating use-cases related to new IoT tools and good practices for sustainability, developed by start-ups and entrepreneurs in the region.

2) Quotes

- Path of least resistance to employment is information and communication technologies (ICTs) of which the ITU Smart Incubator is an ideal example.

Andrew Rugege, Director, ITU Regional Office for Africa

- The “I” in IoT has been embraced to mean “internet” worldwide. However, instead of merely relying on one specific network, we should strive to move towards referring to IoT as “Interconnectivity of Things” in a broader sense.

Innocent Bagamba Muhizi, CEO, Rwanda Information Society Authority (RISA)

II. Overall outcomes of the session highlighting

- main conclusions reached during the discussion
 - While it is essential to protect and monitor farm animals using wearables, it is also important to focus on improved quality of life for humans using wearables. These devices for humans can provide an acute connection with rural areas and provide telemedicine services as well as the monitoring of communicable diseases including tuberculosis which is wide-spread in developing countries.
 - With projects like WAZIUP funded by the European Commission, technologies are increasingly forming the baseline for cooperation. Such projects should be promoted as they not only provide developing countries with the required financial assistance for IoT adoption but also foster a unique environment for technology transfer to the region.
- the vision for implementation of WSIS Action lines beyond 2019

Following on from projects like WAZIUP, WSIS Action lines could focus on technology transfer exclusively in keeping with SDG 16 and the Connect 2020 Agenda.

III. Main linkages with the Sustainable Development Goals (please specify the SDGs)

This session covers a wide range of targets within the SDGs: 2, 3, 4, 5, 7, 8, 9, 10, 14, 15, 16 as well 17.

IV. Emerging Trends related to WSIS Action Lines identified during the meeting

Increasingly developing countries in Africa are looking at leveraging technologies to resolve issues related to urbanization and boosting innovation by providing a platform for start-ups to showcase their solutions. Such platforms are being based on an ICT infrastructure to promote regional dissemination.

V. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

- Linking Connect 2020 Agenda to the Sustainable Development Goals
- Promoting EU-Africa cooperation
- Focusing on principles of privacy and data protection (as envisioned by UN Global Pulse).

Thematic Workshop



Benefits of local connectivity initiatives for gender equity, social and economic development and viability of community network as alternative to connect the unconnected

Association for Progressive Communications

Thursday 11 April 2019

16:30 – 18:15

Room L1 - ITU

This outcome will be made available soon.

Thematic Workshop



Growing Global Challenges of Internet Addiction – Impact to the Youth and a Nation

The eWorldwide Group

Thursday 11 April 2019

16:30 – 18:15

Room L2 - ITU

This outcome will be made available soon.

Thematic Workshop



Boosting Youth Employment and Entrepreneurship in the Digital Economy

IITU/ILO/UNIDO

Friday 12 April 2019

09:00 – 10:45

Popov Room 2 - ITU

I. **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11**

WSIS Action Lines C1, C4 and C7.

C1: Digital skills development on a large scale requires the effective participation of government in cooperation with relevant stakeholders, to integrate a digital skills development strategy and curriculum in the national digital strategy and to promote lifelong learning opportunities outside of the formal education system for digital skills acquisition and re-skilling.

C4: Investing in demand-driven digital skills development will increase the effectiveness of education and training provision by making curricula more responsive to the demands of the labour market and skills needs in the digital economy at large. This will ensure more young people acquire (digital) skills that are relevant, transferable, and job-relevant.

C7: The digital transformation and Fourth Industrial Revolution can raise productivity and growth, but also drastically change the employment landscape in an increasingly digital economy. Digital skills development is crucial to ensuring that young people have the skills necessary to thrive in the future world of work, keep pace with the rate of change of evolving technologies, and seize opportunities for entrepreneurship.

II. **Key achievements, announcements, launches, agreements, and commitments**

- Awareness raised of WSIS participants on the importance of digital skills development for boosting youth employment and entrepreneurship in the digital economy
- Particular attention to the need to encourage and empower girls and young women to take on studies and careers in ICTs to overcome gendered barriers to their full participation and inclusion in the digital society and the digital economy

- All stakeholders were called on to invest in equipping young people with job-ready, transferable digital skills to support their economic empowerment
- Capacity built of all participating stakeholders on the concrete steps and actions each of them can take to contribute to the implementation of concrete actions on youth employment

III. Main outcomes highlighting the following:

1) Debated Issues

- The digital economy and Industry 4.0 represent an important employment and entrepreneurship opportunity for young people, but these opportunities are not the same across the world
- Addressing the global youth employment crisis (in the quantity and quality of jobs) requires effective, innovative and evidence-based interventions and partnership: The Global Initiative on Decent Jobs for Youth does this by building a strategic alliance, scaling impact and action, sharing and applying knowledge, and mobilizing resources
- For digital skills development to have an impact on the ability of young people to seize the opportunities available in the digital economy, it needs to include demand-driven technical skills (basic, mid-level, and advanced), digital entrepreneurship skills, and complementary soft skills
- For countries to be prepared for and benefit from Industry 4.0, they need an innovation ecosystem and a strong partnership between governments and the private sector
- Best practice: African Girls Can CODE Initiative (ITU, UN Women, and the AUC) combines coding bootcamp training for girls with assistance to policy-makers to mainstream gender and coding in national curricula
- Best practice: a2i programme of the government of Bangladesh, working with a whole-of-government approach by leveraging the rapid expansion of technologies to create the right environment for demand-driven skills development in Bangladesh
- Goodwill needs to be matched with resources: young entrepreneurs need funding to launch and sustain their enterprises

2) Quotes

- “Young entrepreneurs have a lot of responsibilities, because they are also leaders: they lead markets, products, services and the people they hire.” - Ms. Daniela Bas, Director of the Inclusive Social Development Division, UN DESA
- “Wherever there are challenges there are opportunities... the young people have told me that!”- Mr. Andrew Rugege, Regional Director for Africa, ITU

IV. Overall outcomes of the session

- The panelists reaffirmed that global and in-country multi-stakeholder collaboration between governments, social partners, the private sector, youth and civil society organizations, is key to scaling up action and impact on youth employment worldwide, and to ensure that young people are prepared for the future of work in the fourth industrial revolution.
- In complement, the panelists affirmed that to achieve this goal, there is a need for the development of an innovative ecosystem that considers awareness, the development of policies and strategies for digital skills, and the creation of decent jobs.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

Sustainable Development Goals 4, 5, and 8.

SDG 4: Digital skills (advanced, mid-level, and basic technical skills, as well as entrepreneurship and soft skills) are increasingly needed for nearly all jobs and professional careers. Understanding the skills which are needed in the global economy and 4IR is thus essential to ensure young women and men are equipped with relevant, transferable, job-relevant digital skills. This is in line with SDG 4.3, which calls for equal access for women and men to affordable and relevant education and SDG 4.4, which calls for increasing the number of youth and adults with relevant skills for employment.

SDG 5: Investing in digital skills development for young women can empower them to overcome gender-specific barriers to enter the labour market in the digital economy, giving them access to jobs which are more likely to be stable and well-paid, while also addressing skills shortages and satisfying employer demand for talent.

SDG 8: Considering the growing number and quality of jobs available for people with digital skills, investing in the digital skills development of young people will prepare them for the future of work, connect them with employment opportunities, empower them to succeed as digital entrepreneurs, and address the global youth employment crisis.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

Digital literacy has become a prerequisite for employment opportunities in nearly all sectors. 9/10 have a digital component. New technologies are changing job profiles across industries.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Digital skills development as a necessity for ALL people – regardless of gender, age, ability, location or financial means.

Thematic Workshop



The road to development and prosperity of 5G--how to cope with the new challenges of technology, security and ideology

Communication University of Zhejiang/CyberLabs/ChinaEU/Tsinghua University

Friday 12 April 2019

09:00 – 10:45

Room A - ITU

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

C2

II. Key achievements, announcements, launches, agreements, and commitments

5G development needs joint effort from all countries, ITU is a key player on this, we need to pay attention to some problems might bring by 5G, like health issues, privacy, cybersecurity issues, , environment, energy and e-waste.

III. Main outcomes highlighting the following:

1) Debated Issues

5G health concern, 5G privacy and data/cyber security issues

2) Quotes

Peter Major (Vice Chairman of UN CSTD): 5G development needs cooperation; especially those issues are beyond 5G. we need to adopt multi-stakeholder approaches to 5G and WSIS action line facilitators may take the lead in creating working groups to find solutions to concerns; Policy questions may be discussed in IGF and other fora e.g.: UN HLPF

Hui Cao (Head of Policy, Huawei technologies, EU public affairs & communication office): 5 G security question has been a hot topic for some month. I've constantly ask myself what Huawei has done wrong in the 5G, just because more operators like to choose Huawei, from China or the skin of Huawei is yellow? And there is no clearly definition about 5G cybersecurity, if there is no definition, people turn to be panic, security panic, it somehow related to vendor to operators, but actually security issues have nothing to do with vendors, we need to have expert

to define what is 5G cybersecurity.

IV. Overall outcomes of the session highlighting

- main conclusions reached during the discussion
We need to first define what is 5G cybersecurity, to have a standard global wide definition that could be adopted by all countries.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

WSIS Action line facilitators may take the lead in creating working groups to find solutions to concerns

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Social impact of 5G technology

Technological ethic

Smart city

Thematic Workshop



The Future of Jobs: Opportunities and Challenges in ICT-centric Economies

The Ministry of ICT Islamic Republic of Iran

Friday 12 April 2019

09:00 – 10:45

Room C1 - ITU

This outcome will be made available soon.

Thematic Workshop



International Child Safeguarding through ICT

Terre des Hommes

Friday 12 April 2019

09:00 – 10:45

Room C2 - ITU

I. **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11**

Sweetie 2.0 helps to build governments' ICT capacity by using ICT to help law enforcement agencies to track down perpetrators of sexual offences online [C1, 5, 10, 11].

ChildHub creates a platform for professionals to share knowledge with each other and facilitates capacity building of child protection professionals worldwide [C2,3,4,6].

Through the SaVa project Terre des Hommes builds the capacity of young people living on the street to save money from their jobs safely using an innovative banking app [C2, 4, 8].

II. **Key achievements, announcements, launches, agreements, and commitments**

It was made evident that IT has the power to support NGOs to do better and upscale their projects worldwide through low cost solutions with a global reach:

Through SaVa the first 21 children have started saving money with support of Terre des Hommes and EcoBank. Terre des Hommes would like to expand the project to other countries and incorporate child participation.

ChildHub was created as a platform for social workers in Eastern Europe to build their professional capacity. However, it has now reached professionals worldwide.

Sweetie 2.0 Achievements: Sweetie received a broad range of media attention across the world, putting the issue of online child sexual exploitation on the map. There has been increasing collaboration with law enforcement across the world. Recently the Dutch Postcode lottery announced that it will fund Sweetie for three years which will help Sweetie 2.0 employ more sophisticated technological methods. As a result of extensive lobby, the Dutch law has been amended to criminalise making a sex date with a virtual minor.

Announcements: The Dutch University of Tilburg will soon publish a scientific paper that will assess to what extent an intervention message would prevent potential predators from exploiting children.

III. Main outcomes highlighting the following:

1) Debated Issues

1. Issue: To what extent artificial intelligence violates privacy laws and whether or not we are willing as an NGO to cross the line and collect information on individuals
2. Issue: When the discussion was moved further ahead on machine learning and predictive policing the main issue that has been raised was whether we can accept labeling as a criminal intent/behavior someone who might research on a topic. If he does and the algorithm detects then he is red flagged although he has no criminal intentions. It is difficult for a machine to make the distinction. (Ahmad Alsadeh, PHD, Birzeit University, Palestine).
3. Issue: Intervention message coming from an NGO would not be as efficient (UAE, government)
4. Issue that has been raised by a panelist, to what extent an NGO is willing to offer a technology such as AI or machine learning to a government that is committing human rights violations.
5. Suggestion: Instead of sending an intervention message what would make more sense is to notify law enforcements which will consequently block suspect's access to his account (i.e Facebook) based on information we provided them with.

2) Quotes

“Without community mobilization IT tools won’t work. They are a means, not a solution.” Peggy Hermann (TdH)

“Machine learning can help stop child sexual abuse by predictive policing” UAE Government representative.

“Technology develops at the speed of light, as NGOs we need to be always informed and updated so we know how to use them to protect children” TdH representative.

IV. Overall outcomes of the session highlighting

The session demonstrated how digital innovation can help protect children worldwide by supporting social workers through strengthening child protection mechanisms, target perpetrators directly and empower children using apps. NGOs and technical innovation are not natural partners. However, ICT and digital innovation can help NGOs do better on a larger scale. AI can empower user data. It can help automate, identify partners, predict policies and strategies. It can enable humans working to protect children make better decisions based on better data available to them.

In implementing the WSIS Action Lines we need strong cooperation between governments, NGOs, private sector and Civil Society.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

SDG 8.7: Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and **secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms**

Terre des Hommes presented their projects SAP that is directly aimed at identifying children working in mines and strengthening the child protection mechanisms to protect them from labour exploitation.

SDG 16.2: End abuse, exploitation, trafficking and all forms of violence against and torture of children

The Sweetie 2.0 project uses innovative ICT solutions to find, warn and support the prosecution of perpetrators of harm against children. ChildHub is an online platform to enhance the capacity of social workers worldwide who help protect children against violence.

The importance of **SDG 17 Partnerships** was highlighted in particular. NGOs cannot do this work alone. The project presented rely on partnerships between governments, the private sector and NGOs.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

Participants highlighted the need to further advance cooperation between government, ICT and NGOs to improve and upscale ICT innovation to protect children worldwide. This requires from governments to create enabling environments (C6).

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

- Collaborative projects between ICT Private Sector and NGOs
- Achievements from WSIS 2019 to 2020

Thematic Workshop



Protecting the World's Plant Resources from Pests

International Plant Protection Convention and United Nations
International Computing Centre

Friday 12 April 2019

09:00 – 10:45

Room H2 - ITU

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

C1. The role of public governance authorities and all stakeholders in the promotion of ICTs for development - The ePhyto solution provides a global and national platform to share trade documentation, including National Plant Protection Conventions (NPPOs)

C2. Information and communication infrastructure - The ePhyto hub is a shared infrastructure and knowledge hub to support plant trade worldwide

C3. Access to information and knowledge - Allows local and national constituents to participate in global plant trade processes

C4. Capacity building - Builds capacity of country plant trade stakeholders to improve their processes and deliver faster to market

C5. Building confidence and security in the use of ICTs - Builds capacity of country plant trade stakeholders to improve deliver safer to market

C7. ICT Applications: E-government - The ePhyto solution provides a global and national platform to share trade documentation, including National Plant Protection Conventions (NPPOs)

C7. ICT Applications: E-business - The ePhyto solution provides a global and national platform to share trade documentation, including National Plant Protection Conventions (NPPOs)

C7. ICT Applications: E-health - Supports healthier eating and diet with fresher and pest-free products

C7. ICT Applications: E-employment - Supports optimised trade processes for stable employment

C7. ICT Applications: E-environment - Supports optimised trade processes for a healthier environment

C7. ICT Applications: E-agriculture - Supports optimised trade processes for a healthier agriculture utilizing digital business processes

C7. ICT Applications: E-science - Supports optimised trade processes for a scientific solutions for trade business processes

C11. International and regional cooperation - Allows local and national constituents to participate in global plant trade processes

II. Key achievements, announcements, launches, agreements, and commitments

The International Plant Protection Convention (IPPC) and the United Nations International Computing Centre (ICC) have delivered an innovative solution for developing countries to ensure plant protection in their international trade. Electronic phyto-sanitary certificates, in lieu of paper certificates, ensure safe standards in the arrival and clearance of plants across national boundaries. Trade suffers when ePhyto certificates do not use harmonized e-business standards. IPPC and ICC have developed and are operating a centralized hub to facilitate the exchange of certificates and a Generic ePhyto National System (GeNS) web-based system for countries without the infrastructure to produce, send and receive certificates.

1. Collaboration and follow-up between ITU and ICC.
2. Information sharing from global to local levels to improve plant protection.
3. Shared app dev framework, hub and best practices.
4. Proposed ICC partnerships with other UN Agencies and related organizations.
5. Announcements of partnership and updates through social media and respective organizational websites.

III. Main outcomes highlighting the following:

1) Debated Issues

1. IPPC - lessons learned
2. Capacity building (awareness, use of youth talent and skills development)
3. Standards adoption for national e-Services
4. International cooperation and public-private partnerships
5. Centralized hub to share ePhyto certificates
6. Benefits from shared hub for inter-Agency and inter-governmental trade

2) Quotes:

ICC is working with over 20 UN Partner Organizations to establish or improve delivery of shared services or solutions to governments or other organizations, as per industry best practices. The organization is keen to ensure that these best practices are reaching regional and field office locations and that the good work done can be shared across the UN family. Venkat Venkateswaran, Head App Dev Services at ICC

We are working to provide ePhyto support for plant protection including setting up platforms for national ePhyto solutions and a central hub for those without capacity

for their own systems. This is an area where we see much more possibility for knowledge sharing and collaboration. Craig Fedcock, Project Manager, FAO/IPPC

IV. Overall outcomes of the session highlighting

- main conclusions reached during the discussion
 - Expansion of ePhyto system worldwide
 - Shared app-dev framework, hub and best practices
 - Partnerships with national and country ePhyto systems
 - Wider knowledge sharing
- the vision for implementation of WSIS Action lines beyond 2015
Greater inter-Agency knowledge sharing and leveraging of UN ICT hubs for economies of scale

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

4, 7, 8, 9, 11, 13

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

Improved knowledge sharing and partnerships

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Cyber security best practices for the 2030 SDGs.

Threat intelligence network for the UN family.

Thematic Workshop



Role of the Local Implementations for Achieving a Sustainable Digital World

Habitat Association

Friday 12 April 2019

09:00 – 10:45

Room K1 - ITU

I. **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11**

Session is directly linked with WSIS Action Lines below;

C3. Access to information and knowledge

C4. Capacity building

C7. ICT Applications: E-business

C11. International and regional cooperation

The session is directly linked with access to information and knowledge, capacity development, e-business and international and regional cooperation. Habitat and Microsoft's partnership for the local digital implementations is one of the example of international and regional cooperation. On the other hand, with using peer education method; it is provided the capacity development of volunteers and women, youth, children and adults with increasing their access of information and knowledge to increase their employability with e-businesses.

II. **Main outcomes highlighting the following:**

1) **Debated Issues**

During the session, first panelist is Elif Bilge Erdölek from Habitat Association in Turkey. She talked about the localization of information and communication technologies and showed as a best example projects of their works. Second panelist is Microsoft, Mehmet Can Irhan from Microsoft Turkey. He presented the global perspective of Microsoft for local implementations of ICT. As a third panelist, Alper Özcan is a computer engineer and volunteer of Habitat Association for 10 and execute ICT trainings in the local. He talked about his experiences from the local and his personnel development. He also talked about holographic world and what he is doing in his own company with SDGs through mixed reality. He offers a platform for companies and NGOs to develop their software. At the end of the session, Mixed reality device was shown as practically with the audience.

III. **Main linkages with the Sustainable Development Goals (please specify the SDGs)**

Session is directly linked with SDGs below;

Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Goal 8: Promote inclusive and sustainable economic growth, employment and decent work for all

Goal 10: Reduce inequality within and among countries

Goal 17: Revitalize the global partnership for sustainable development

The session is directly linked with the localization of Sustainable Development Goals. The partnership model of the project is one of the most important example of global partnerships for sustainable development (Goal 17). On the other hand, dissemination model and the curriculums which are expanded by volunteers are good practices of quality education (Goal 4) to reduce inequality and bridging digital divide (Goal 10) to contribute the sustainable economic growth (Goal 8) with the success stories.

Thematic Workshop



ICT for reducing pollution: pressure from Garbage

Association of Mobile Telecom Operators of Bangladesh / CITIES Foundation / PricewaterhouseCoopers

Friday 12 April 2019

09:00 – 10:45

Room K2 - ITU

1) Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

C7.ICT

Applications

E-environment:

The panel discussed the program of “WASTED”, a mobile platform for encouraging garbage classification and reducing detrimental influences of wastes to the environment.

2) Key achievements, announcements, launches, agreements, and commitments

CITIES Foundation launched the Social Enterprise “WASTED” in the Netherlands which focuses on engaging civil society towards more conscious consumption and waste management through rewards programs connected to growing local economy. The social impact CITIES foundation achieved through “WASTED” received global recognition award by the World Economic Forum and won Pro-Bono prize for Social Impact by PricewaterhouseCoopers.

3) Main outcomes highlighting the following:

1) Debated Issues

- Main issues debated included: the challenges of starting a social venture (i.e. understanding the needs and incentives of the relevant actors, and being prepared to engage challenges as a part of the process towards more efficient success); the need for policy-makers and legislation to be included in a holistic approach towards attacking waste management.
- Key challenges mentioned by audience was the lack of access to information on starting business proposals for social ventures and how to build a network of potential partnerships.
- Key insights highlighted by panelists included that social impacts start from a strong idea with key values, cross-field collaboration, and persistent effort over extended periods without profit-driven incentives as the initial objective.

2) Quotes

- “Fighting plastic pollution by rewarding sustainable behavior.”
(Francesca Miazzo, Co-founder and Managing Director of CITIES foundation)
- “Our purpose is to build trust in society and solve important problems.”
(Stephen Bochanski, Director at Pricewaterhousecooper LLP)

4) Overall outcomes of the session highlighting

Social Impact is reached in a collaborative manner through working towards always broadening the participation starting within the local ecosystem.

5) Main linkages with the Sustainable Development Goals

SDG11. Make cities inclusive, safe, resilient and sustainable: Garbage classification and collaborative actions among government, private sectors and citizens shall contribute to sustainable and resilient cities.

SDG13. Take urgent action to combat climate change and its impacts
Improving the efficiency of plastic wastes will reduce the demand for plastic products, which will, in turn, cut down the amount of fossil fuel in the production process and reduce the emission of Carbon Dioxide.

6) Emerging Trends related to WSIS Action Lines identified during the meeting

Migration to digital currency for integrating consumers with eco-friendly local vendors

7) Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Waste Management through Reward Programs for Social Engagement

Thematic Workshop



AI for Application Security testing and Risk Scoring

ImmuniWeb AI

Friday 12 April 2019

09:00 – 10:45

Room M - ITU

State of the Art Cybersecurity ?

- Worldwide security spending will reach \$96 billion in 2018
Gartner Research
- US Halloween goodies spending hit record \$9.1 billion in 2017
Forbes
- Cybercrime Could Cost US\$5.2 Trillion Over Next Five Years
Accenture
- Cybersecurity threats to cost organizations in Singapore US\$17.7 Billion in economic losses
Microsoft
- Ransomware hackers purposefully target US Police Departments
CNBC

Fundamental Issues in AI and “AI”

- AI is highly likely to destroy humans? Elon Musk warns
- Strong AI v. AI ? A widespread misnomer
- Machine Learning v. AI ? A widespread misunderstanding
- Training data ? AI is only as good as its training data
- Economical practicality? Consider costs to develop and maintain

AI in Cybersecurity

- AI and Cybersecurity Skills Shortage ?
- Crowd Security Testing / Bug Bounties and AI?
- Application Security of FT 500 companies in a nutshell (2018):
70% of FT 500 can find access to some of their websites being sold on Dark Web
92% of external web applications have exploitable security flaws or weaknesses
19% of the companies have external unprotected cloud storage
2% of external web applications are properly protected with a WAF

AI is not to Replace Your Cybersecurity Strategy

- AI will not identify, assess and prioritize your risks
- AI will not conduct comprehensive asset inventory
- AI will not detect third-party risks and threats
- AI will not train your employees and team
- However, AI may support you in effective decision making

AI in Cybersecurity: a Use Case Scenario

Application	Responsible Party	Business Criticality	Compliance Requirements	User Data	ImmuniWeb®
admin.443 Discovered: October 26, 2018 Domain Expires: Unknown Certificate Expires: February 27, 2019 jQuery	Add	MEDIUM Hackability: 65 Attractiveness: 50	Add	PII PHI	ImmuniWeb® AI: Never Tested Request a Quote SSLScan: A+ WebScan: F
analytics.443 Discovered: October 26, 2018 Domain Expires: Unknown Certificate Expires: February 27, 2019 jQuery, React, AngularJS, Moment.js, Bootstrap, Polymer	Add	MEDIUM Hackability: 56 Attractiveness: 18	Add	PII PHI	ImmuniWeb® AI: Never Tested Request a Quote SSLScan: A WebScan: B-
asiapac.443 Discovered: October 26, 2018 Domain Expires: Unknown Certificate Expires: February 27, 2019 jQuery, Bootstrap, Adobe CQ	Add	MEDIUM Hackability: 69 Attractiveness: 50	Add	PII PHI	ImmuniWeb® AI: Never Tested Request a Quote SSLScan: A+ WebScan: F

- ImmuniWeb® Discovery AI – www.immuniweb.com
- Well-informed and risk-based application security:
 - Comprehensive application discovery
 - Hackability Score
 - Attractiveness Score

What are the Practical Takeaways?

- Strong AI, capable of fully replacing people, does not exist yet and will unlikely appear within the next decade
- AI will rather create new jobs, eliminate routine and trivial human work, and empower people to unleash their creativity
- AI will however not help fix fundamental problems, a risk-based information security strategy is requisite prior to AI implementation
- Always ask to measure and benchmark economical practicality of ML/AI solutions, related maintenance and support costs.

Thematic Workshop



Unlocking Rural Mobile Coverage and Internet of Things Capacity Building Taster Sessions

GSMA

Friday 12 April 2019

09:00 – 10:45

Room G1 - ITU

- I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11**
 - C4, C2

- II. Key achievements, announcements, launches, agreements, and commitments**
 - The sessions were designed to give participants a flavor of our full capacity building training sessions. Each course uses real-world examples to help policymakers and regulators keep up to date with the latest developments in mobile policy regulation. The sessions brought together a diverse range of interested participants from a number of national regulatory organisations.

- III. Main outcomes highlighting the following:**
 - 1) Debated Issues**
 - The main issues discussed were the importance of IoT in enhancing the quality of life of citizens and the role that government and the private sector can play in connectivity.
 - 2) Quotes**
 - N/A

- IV. Overall outcomes of the session highlighting**
 - The sessions supported WSIS action line C4

- V. Main linkages with the Sustainable Development Goals (please specify the SDGs)**
 - SDG 9,10,17

Thematic Workshop



Challenge-Based Learning: Deep Dive on Digital Education for Underserved Communities

Geneva Tsinghua Initiative (GTI) and University of Geneva (UNIGE)

Friday 12 April 2019

10:00 – 12:00

Reception Area, ITU Montbrillant

I. Description and Format

How can we bridge the gap in access to education and reach the most vulnerable groups? Various university students around Switzerland, student organizations, and expert groups have been divided into four thematic groups. Each group had one challenge to work on regarding e-learning technologies for underserved communities, one specific target group, and a facilitator with expertise. The objective of this challenge-based learning was to create innovative and out-of-the-box solutions, by engaging interdisciplinary students with the help of various facilitators and experts of the field. There were four target groups, their respective challenges, and facilitators:

Target Group	Challenge	Facilitator
Children and Youth in Refugee Camps	Design a solution so that as many refugee people as possible are informed about upcoming courses on offer in the camp, and how the registration process can be made more efficient.	Paul O'Keeffe (Post-Doctoral Researcher, InZone)
Agriculture Labor in Sub-Saharan Africa	- What are the sustainable and innovative methods to improve incomes and reduce risks in the face of climate change? - How can digital education help to access information about weather, seeds, crops, market, finance, etc.? - How can digital education help to improve knowledge and practices of sustainable farming and adapting to climate change	Khaoula Ettarfi (Research Data Analyst, ILO)

	risks?	
Accessibility of Children with Disabilities	Design a solution aimed at facilitating the shift from an exclusive (cultural traditions, misconceptions, and stigmatization) to an inclusive approach.	Ingeborg Albert (Innovation Manager, GENEUS)
People in Emergency and Humanitarian Context	-How to overcome to technical difficulties related to the electric power, Internet, and available computer/mobile devices? -How to motivate children to participate in such programs? -What kind of curriculum should be provided? -How to deal with the uncertain parent about teaching their children non-local curriculum? -How to structure levels, classes, and exams? -How to deal with local authorities? -How to consider issues related to local culture, language, religion?	Fayez Alrafeea (Researcher, Geneva Tsinghua Initiative)

The format of this workshop was as follows:

- 1) Masters of Ceremonies welcomed facilitators, students, and experts. They gave an overview of the timeframe of the event, and briefly explained the format of the Challenge-Based Learning (10 minutes).
- 2) Facilitators gave general information on the proposed challenges (10 minutes).
- 3) Participants worked on the challenges (1 hour 10 minutes).
- 4) Presentation of each challenge groups and smartphone application feedback (30 minutes)

II. Relevance with the WSIS Action Lines

The World Summit on the Information Society Forum provides a multi-stakeholder platform where the youth voice is invited to contribute to the WSIS Process sharing its ideas, projects and innovative solutions to the current challenges that different communities around the world are facing in ICTs. In this regard, youth engagement has an important role in actual and future development that can be empowered by the WSIS outcomes. Therefore, this space has been planned and designed to facilitate youth participation in the WSIS Process. The main purpose of this activity is to discuss the main issues in the identified topics for youth within the WSIS framework to encourage an active contribution and participation in the WSIS Process. With emerging ICT innovations, the possibilities of providing education by means of digital gears have been enlarged to address the limitations

of traditional learning methods. In this respect, e-learning (C7) has enabled the fulfillment of portable, self-initiative, and tailored contents of education, through which different learners are able to have access to information and knowledge (C3) for individual capacity building (C4). E-learning for underserved communities has been recognized to engender immense potential as education can be personalized to each individual environment, and life situation (C8). With the goal of providing educational opportunities to underserved communities through ICTs (C2), we seek to facilitate local, national, international, and transnational cooperation (C11), while taking into account ethical dimensions and context-specific data (C10).

III. Key achievements, announcements, launches, agreements, and commitments

The students and facilitators agreed that there is a great need to improve access to education in various areas. Worldwide connectivity is increasing but we need to use it for the common good. The students agreed that digital connectivity, mobile technologies, and internet penetration are the new avenues where stakeholders should put more resources but the commitment to increase the human development capital through socio-economic development is the ultimate goal.

IV. Main outcomes highlighting the following:

1) Debated Issues

The students debated on issues regarding the accessibility of quality education for all and tried to provide solutions to various dimensions of digital education technologies. Furthermore, the discussion highlighted the need for human-centered technologies and the involvement of local and regional dimensions of technological advancements.

2) Quotes

“Even with e-learning technologies there is a need for human interaction”

“Although we are bringing new technologies, we need to really involve the population”

“We want to mix innovation with tradition”

“The people should be empowered by the new technologies”

V. Overall outcomes of the session highlighting

- Presentation Outcomes of Each target group:

a. Children and Youth in Refugee Camps

The goal for this group was not only to improve access to education, but to improve the quality as well. The students were faced with a communication challenge regarding the courses. Accessibility issues for people of different backgrounds and different genders and sexual orientation was also discussed. The students decided to establish a local ambassadors program and alumni to

help them promote the programs while taking a grass-roots-approach and being sensitive to the cultural circumstances and differences. The ambassadors will receive training on best practices regarding communication. Moreover, the registration and enrolment process should also implement a digital and a human component. The ambassadors will help evaluate the potential students and support them in the registration process.

b. Agriculture Labor in Sub-Saharan Africa

The students suggested the creation of a “people’s hub” in the vicinity of local markets in which technologies and information could be provided and easily accessed by the local population. Facilitators would work in the hub. Furthermore the climate and weather related warnings will be delivered by SMS, given the high percentage of the agricultural population who is in possession of a phone, but may not have a smartphone device. The delivery of drones for agricultural purposes, was also presented. The devices could assess the on-ground situation, help in assessing the weather conditions and spread awareness on the effects of climate change.

c. Accessibility of Children with Disabilities

Many children around the world are denied access to quality education because of physical or mental disabilities. The students decided in this case to envision a future where they would be able to reach and deliver quality education to these children as well. They underlined the importance of creating partnerships in order to raise awareness about the issue and stimulate peer to peer learning interactions. In order to further bring further attention to the situation, the team has proposed to organize para-olympic and cultural events. It is important however, to always be culturally sensitive and therefore the group decided that any implementation would have to be implemented by a local executive body. The access to technology also needs to be increased in order to provide digital education.

d. People in Emergency and Humanitarian Context

This team decided to divide the focus of their work into three parts: The first part focused on the methodology of the implemented projects. According to the group, a balance between innovative technologies such as e-learning and traditional education methods such as classes and moderators should be found in order to provide courses in emergency situations while still offering a structure and human contact to the students. In second instance, the team focused on the motivation aspects of the students. In humanitarian situations, continuing education might not be a priority, however, certain situations can persist for weeks and months and therefore, getting students to study again is important to get students in a routine again and not letting them fall back on the curriculum. However, the basic primary needs of the students should be satisfied while providing classes. Therefore food and in some cases clothing should be offered. Regarding the material of the courses, the students suggested to implement gamification technologies and interactivity to the classes in order to ensure that the children are having fun. The group further suggested the implementation of a FabLab. The moderators and teachers should come from the local communities in order to offer an understanding of the contexts and surroundings. Lastly, the content of the courses should focus on the primary necessities first such as first aid and sanitation.

- Smartphone Application Feedback
 - The application mentimeter (menti.com) has been used to register feedback from the participants during and after the event.
 - The participants from all the groups gave feedback to the one who was presenting at one particular moment in real time.
 - Feedback Responses matrix:

Group No. and Name	It is a great idea!	I would like to hear more about this idea!	I would like to work on this idea
Refugee camps (Inzone)	57%	43%	0%
Agriculture Labor (ILO)	60%	40%	0%
Humanitarian Assistance (GTI)	67%	33%	0%
Disabled Children (Geneus)	33%	50%	17%

- Feedback regarding the session:
 1. “A plus was the diversity of the challenge! More interaction from the team and moderators would have been better”
 2. “Great exercise to deep dive in specific SDG topic. Great awareness and motivation to join efforts to achieve SDGs. Inspiring!”
 3. “Great organization, congrats to the organizing teams.”

VI. Main linkages with the Sustainable Development Goals

With the commitment of leaving no one behind, the challenge-based learning event aims to bridge the gap of access to quality education and lifelong learning opportunities (SDG 4) by catalyzing partnerships on digital learning technologies (SDG 17). Innovating and scaling up a variety of e-learning technologies for underserved communities will endorse more just and inclusive societies (SDG 16), provide employment opportunities (SDG 8), promote gender equality (SDG 5), and push towards eradicating poverty (SDG 1).

VII. Emerging Trends related to WSIS Action Lines identified during the workshop

Regarding action line C7.17 on ICT applications for E-learning, certain teams proposed the implementation of gamification technologies to engage children in education. Furthermore, the students agreed on the inclusion of human dimensions in digital approaches. Building confidence and security in the use of ICTs among underserved communities (C5) and youth can be a catalyst in exploring and identifying their talents, strengths, and potential. Creating an environment that inspires both project organizers and underserved groups offers an enabling environment (C6) for learning for both sides: service provider and target group. Cultural diversity and identity, linguistic diversity and local content (C8) are aspects which the students focused on while discussing online

courses.

VIII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Children below 18 years old are the prime consumers and users of the internet and digital tools so the solutions and innovations will and should come from this generation, since it is proven that digital technologies can provide solutions to the problems of the most underprivileged and deprived communities of the world. Keeping in mind the above points, the next year's WSIS Forum 2020, especially youth track, should focus on events and interactive sessions with youth. The sessions could provide solutions to various contemporary issues. The youth track can be created as a brand in itself since the voices of the youth and their aspiration should be taken into account and valued. So, for the next year, we would suggest to come up with interactive challenges which are impacting every corner of the world and highlight the ways in which the youth can provide innovative and out of the box, sustainable solutions.

Thematic Workshop



**Holistic transformation of the Agriculture and Trade Sector
through Innovative use of ICTs – Case Studies**

The eWorldwide Group

Friday 12 April 2019

11:00 – 12:45

Popov Room 1 - ITU

This outcome will be made available soon.

Thematic Workshop



Big Data for Social Change

Berney Associes / Foxstonex / Smart Dubai / Foxstone

Friday 12 April 2019

11:00 – 12:45

Room A - ITU

I. **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11**

All the action lines:

Big Data functions like the measurement tool for those relevant action lines; Also, the digitalization is the pillar of the entire process and Foxstone will provide examples related to e-business.

II. **Key achievements, announcements, launches, agreements, and commitments**

Panelists shared their opinions towards the impacts of big data and their personal work experiences of the big data applications. This panel brought up discussions around how to use big data correctly and extract values out of it. Panelists all agree that big data can positively influence people's lives and provide insights as long as they are carefully dealt with.

III. **Main outcomes highlighting the following:**

1) **Debated Issues**

- Digital transformation and big data:
 - Digitalization provides benefits by delivering information to the public and involving the public, especially in financial sector.
 - Big data provides implications of the interconnectedness between different industries. Those implications are the key to generating social goods.
 - Digital transformation has been the enabler for the data-creating in both private and public sectors. Comparing and connecting sets of data from different sectors are the start of innovation for social goods. There are great potential and value in the data and the data-sharing
 - digital transformation and big data shall not be only out of the interest of institutions or organizations. It shall focus more on the benefits of individuals.

- Big data in monitoring: positive influences VS. negative influences
 - There are still a lot waiting to be explored. Individuals and the builders of the interconnectedness have different perspectives towards the data. When the builders are using the big data to produce the implications and apply those implications of the data to social goods, they need to reflect on possible negative influences on individuals.
 - Big data itself has neutral influences on the community. Yet, it is the owners and the controller of the data that decide the usage and possible influences of the data. If the controllers (big-data company for instance) decide to sell data for its personal profits, it will create negative influences. However, when the controller is committed to serving the society with its data (helping the government provide social services), big data can generate social benefits. Meanwhile, trust in the institutions or entities is the key in this process.
 - Nowadays, we provide our personal data in exchange for free services (i.e. google search), social goods in this case. While we are offered with such services by big internet companies, we acquiesce their usage of our data and they are making huge profits from the booming advertisement industry. Such situation requires the governments to take collective actions to regulate the behavior like this. Another argument derived from this is that whether the owner of the data (i.e. the public) shall be compensated for providing the data which has been used by the companies to make profits. Those arguments remind us that we should be careful with the usage of data when it comes to providing social goods.
 - We should be more proactive and more vigilant when it comes to the usage and ownership of the data.
- The individuals' power over the governance of big data:
 - Those internet companies have immense power over the big data and its usage, which is an irreversible fact. It is difficult for individuals to weigh in and make a difference. However, the disruption is always from the bottom.
 - People should pay more attention to the algorithms and how it processes data, instead of just focusing on the result. And we are far from the ideal situation that people are all aware and informed of the building of the algorithms.
 - Nowadays, individuals are targeted by advertisement. Meanwhile, we are enjoying the free service provided and recommended by the advertisement industry. Thus, whether data could have good or bad influences depends on who is using the data and how it is used.
 - Research shows that people are enjoying services provided by those big players of data and those big companies are surprisingly productive. The only problem is that they have a massive concentration of market power. The alternative is the role of the government: should

government intervene and regulate this environment? The second alternative is the disruption from the bottom. We should bear in mind both positive and negative

- Per capita efficiency is not as what is measured, considering the fact that we are all providing free data to them and they are making profits out of it. It's hard for us to challenge things that are nice. Also, it doesn't have to be worse if we take the individuals' benefit and social impact into consideration. If we remain silent about the current situation and do not complain at all, we might be in the hands of those big companies.

2) Quotes

- “It is important to know who is using the data and how it is used. We have to bear in mind that data could generate both positive and negative results depending on these two important factors ‘who’ and ‘how’ .” (Dan AMAR, CEO and Co-Founder, Foxstone)
- “Big data doesn't come to us as something that is just ready to go and you can look at it and understand its meaning. But you have to dive in and get your hands dirty a little bit and wrestle with it to bring out the whole value of the data...We can build platforms that connect our data and have systems with each person bringing their data and questions that we can answer with it. As what we have seen in the example of what Mr. Dan just described (the benefits brought by the decentralization of real-estate investment), together in the network, we can extract value from data” (Imai Jen-La Plante, Big Data Specialist, Berney Associés)
- “How do we make sense out of this data? A lot of these things are purposely collected. So we just collect a lot of useful information and make sense out of it. But there is still a lot that is collected without a certain purpose. So people analyze artifacts of technological system afterwards to make sense out of it. This is actually quite difficult and can be very problematic.” (Karsten Donnay, Professor, University of Konstanz)
- “Proliferation of data poses enormous potential for social innovation. Data itself has no value. But when you take data and contextualise it, then you can start creating value. In this case, we take data, put it into a context and create social value, i.e. social goods for people in general. SDGs and WSIS Action Lines are actually great guidelines for social innovations by using data. We will need to address broad social impacts and implication of data as we move forward. Honorship has mentioned sharing data is the issues that we need to tackle and handle if we want big data to become a social-change driver” (Okan Geray, Strategic planning Advisor, Smart Dubai).

IV. Overall outcomes of the session highlighting

- Crowdfunding platform for real-estate which decentralizes and evolves the funding channels of real-estate and contributes to the benefits of the investors.
- Big data needs to be carefully and seriously dealt with so as to extract real value out of it and to bring services to the public.
- Consent to the use of data should be emphasized: e.g. Cambridge Analytica
- Big data, as the measurement of monitoring the progress of achieving SDGs, can be complicated.
- Individuals and organizations can be empowered by Big data (e.g. crowdfunding platform brings transparency to the real-estate investors; initiative called “CorrelAid” started by the students in the University of Konstanz) Data scientists help them (individuals and NGOs) to make better sense of their data and provide data service to the local community.
- The proliferation of data poses enormous potential for innovation in social goods (e.g. “Happiness Meter” invented by Smart Dubai contributes to the entities by helping them better understand and monitor the performance of the company)
- Contextualized data can be harvested to address social concerns and challenges in urban contexts (e.g. “Wohnbuddy” application of data in solving house problems and contributing to sharing in urban areas in Vienna).
- SDGs and WSIS Action Items can be used as broad innovation goals for data.
- Addressing broad social impacts and implications of data will increase the likelihood of success.

V. Main linkages with the Sustainable Development Goals

All SDGs are strongly linked to data in both implementation and measurement.

Thematic Workshop



Participative Innovation on the Workplace: emerging technologies and the future of work

UNIGE

Friday 12 April 2019

11:00 – 12:45

Room C1 - ITU

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

The link between our session and the selected WSIS action lines might be found in its primary purpose which aims to make people closer and well acquainted with new technologies appearing in workplaces and improve ways of communication between various fields of work.

II. Key achievements, announcements, launches, agreements, and commitments

- The innovation toolkit addition of “Innovation is Intertextual” was launched.
- The independent podcast “It’s all G33K to me” was introduced.
- Five podcast “drafts” of meaningful innovation sharing were recorded.

III. Main outcomes highlighting the following:

1) Debated Issues

- Can an innovative workshop break the formal structures of the panel discussion rooms.
- Can STEM and humanities become more than a sum of their parts in contribution to innovation, using the framework of “innovation is intertextual”.
- Can concepts of translation and transcoding aid in our ability to innovate across silos.

Highlight key achievements and challenges shared by the audience and/ or panellists

- Innovation that is trapped in a particular silo cannot reach its full potential, because often innovative solutions are at their most powerful in a different context.
- Innovators are limited to the innovation toolkit in the fields they understand, although they might need the technologies or expertise from outside fields.
- concepts as: signifier and signified, intertextuality, quantum physics.
- Discussing with other fields, even as an expert in your own field, can be embarrassing because you don’t know the jargon, and although ignorance is not stupidity, neither feels good

2) Quotes

- “I worked in string theory, and now I work to show companies how to use innovation in unexpected ways, like the ways described in ‘innovation is intertextual’. MR PAGE.

- "I know I'm not dumb, quantum etc, but still I was I'm embarrassed about intertextual, because I felt I should know about art." Jennah Kriebel.
- "I thought you would continue the session because we have found a wonderful overlap of themes and would be able to produce an entire podcast session!"

IV. Overall outcomes of the session highlighting

- main conclusions reached during the discussion
 - Finding innovations across silos requires a new way of thinking, in order to be able to harvest the true power of innovation.
 - The problems of jargon in different topic areas mean that people may be hearing a word, but with a different mean in context.
 - The embarrassment of not understanding jargon will prevent people from asking for clarification, especially in fields where there is prestige in understanding.
 - The responsibility must be with the expert, to ensure and doubly ensure that the audience understands — otherwise the opportunity for innovation will be lost.
- the vision for implementation of WSIS Action lines beyond 2015
Make an innovation in the workplace more open and multidimensional, especially by encouraging people from differentiated fields of work to cooperate.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

The session is focused on finding intertextualities among economic, social and environmental fields and detecting their points of cohesion to influence the improvement of achieving sustainable development goals. Especially SDG number 17 focused on global participation, in this case, focus on an innovation process. "Innovation is intertextual" has provided a tool for better partnerships across different sectors and themes, to enable the possibility of "sum better than the parts" for all 17 of the SDGs. V. Emerging Trends related to WSIS Action Lines identified during the meeting During the session, it was noticed that the access to knowledge is significantly improving but still it faces some challenges. Among all of those obstacles might be find those focus on widely used jargon which is understandable only by a narrow group of people, thus the knowledge exchange seems to be not the most effective, especially among distant fields of work.

VI. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Innovation tools is a theme worth exploring in greater depth in WSIS 2020. "Innovation is intertextual" can become an overarching theme of WSIS 2020, offering a tool and an insurance that the diverse tracks are not just "preaching to the choir" but that different topic spaces are cross-fertilizing each other: with true understanding.

Thematic Workshop



Connecting the Unconnected: Overview of Technologies to Reach Beyond Communication Barriers

NetFreedom Pioneers

Friday 12 April 2019

11:00 – 12:45

Room C2 - ITU

I. Main outcomes highlighting the following:

1) Debated Issues

- Highlights of the main issues debated and interactions with audience
 - The issue of connectivity in remote and rural was discussed. A number of innovative solutions were presented. The offline project, Kolibri, presented their offline educational platform. Knapsack for Hope presented their deployment in Mexico.

2) Quotes

- Karim Lakhani, CEO of Advintive: “I am originally from Uganda. My dream is to provide distance education to rural population of Africa.”
- Mehdi Yahyanejad, Executive Director of NetFreedom Pioneers: “We want to make sure that because someone is not connected to Internet doesn’t stop them from receiving the information they need.”

II. Main linkages with the Sustainable Development Goals (please specify the SDGs)

- GOAL 4: QUALITY EDUCATION: Obtaining a quality education is the foundation to improving people’s lives and sustainable development.
- GOAL 10: REDUCED INEQUALITIES: To reduce inequalities, policies should be universal in principle, paying attention to the needs of disadvantaged and marginalized populations.
- GOAL 16: PEACE, JUSTICE AND STRONG INSTITUTIONS: Access to justice for all, and building effective, accountable institutions at all levels.

Thematic Workshop



Technology 4 Human Rights

slavefreetrade

Friday 12 April 2019
Room H1 - ITU

11:00 – 12:45

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

2, 3, 5, 6, 10.

II. Key achievements, announcements, launches, agreements, and commitments

- The first public showing of *slavefreetrade*, the world's first "Human Rights Compliance Platform"

III. Main outcomes highlighting the following:

1) Debated Issues

- Questions of privacy and security in a digital age.
- Centralisation versus decentralization – is centralization just in our nature?
- How can human rights be promoted using technology?
- The evolution of digital identity to a self-sovereign model.
- How to engage individuals in determining their own conditions.
- Is technology inclusive or exclusive?

2) Quotes

- Technology is neither good or bad; it only your moral compass determines which it is.

IV. Overall outcomes of the session highlighting

- Technology brings enormous promise to promoting and advancing human rights globally.
- There are billions without access to any technology at all, and that remains a significant obstacle to extending human rights through technology.

- The power of technology when it confers access to human rights can change lives positively
- Any chance of a leapfrog effect for the developing world relies heavily on infrastructure development
- The 4th industrial revolution is happening in the OECD countries, while the 3rd, and in some places, the 2nd, still have not happened.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

1, 3, 4, 5, 8, 10, 16, 17.

VI. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

More time/sessions - including hands-on demonstrations - for technological extensions of human rights would be valuable to participants.

Thematic Workshop



Building the Trustless Computing Certification Body: a trustworthy standards setting and certification body for ultra-secure human computing

Trustless Computing Association

Friday 12 April 2019

11:00 – 12:45

Room H2 - ITU

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

C5. Building confidence and security in the use of ICTs

II. Key achievements, announcements, launches, agreements, and commitments

The event started with a 45 minute keynote by Rufo Guerreschi the Exec. Dir. of the Trustless Computing Association describing the Trustless Computing Certification Body initiative, followed by 10 minute presentations by 5 guest speakers and a 15 minutes QA:

Jorn, Erbguth. Privacy, and blockchain expert
<https://www.linkedin.com/in/jorn-erbguth/>

Lennig Pedron. President & Co-founder ICON, a Swiss NGOs promoting IT and AI security.
<https://www.linkedin.com/in/lennig/>

Paul Wang. Leading expert in blockchain, cybersecurity and IT forensic technologies.
<https://www.linkedin.com/in/paulwang/>

Maira de Roche, IFIP IP3 Chairman | Global Industry Council Director, Fellow IITPSA & PMIITPSA
<https://za.linkedin.com/in/moiraderoche>

Yuko Murayama, Retired professor from Tsuda University. Chair of IFIP Domain Committee on IT in Disaster Risk Reduction
<https://www.linkedin.com/in/yuko-murayama-58532b6/>

III. Main outcomes highlighting the following:

1) Debated Issues

- Please capture highlights of the main issues debated and interactions with audience

Main issue being debated were about the feasibility and strategy of the proposal.

- Please highlight key achievements and challenges shared by the audience and/ or panelists

Main challenges identified where the new body relationship with other EU, ITU and Global standard setting and certification bodies.

2) Quotes

- “As opposed to aviation and nuclear, the lack of sufficiently trustworthy international standards and certifications is not by accident – or lack of technical capabilities – but rather it is by design, by the fact that nations have not found a way to transparently reconcile the need for digital civil freedoms and the need for enabling legitimate cyber investigations. That is the challenge such new body is setting out to solve.” Rufo Guerreschi
- “The Trustless Computing Certification Body addresses an important issue. It proposes a middle ground between legitimate interest of law enforcement and the interest of secure and private communication. However, by proposing this compromise, it risks to encounter resistance from the intelligence community as well as from privacy advocates that prefer the illusion of total privacy in systems broken by design.” Jörn Erbguth

IV. Overall outcomes of the session highlighting

- main conclusions reached during the discussion

The proposal has merits, but it needs to attract a few large companies and/or nations that will more concretely supporting in promotion, networking and/or funding.

- the vision for implementation of WSIS Action lines beyond 2015

NA

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

The realization of such a certification body and the wide availability of complaint techs would radically increase the trustworthiness, actual and perceived, of human computing systems for the most sensitive uses of ordinary citizens and elected officials.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

NA

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

How can we build standards setting and certification schemes for critical societal-domains that are radically more trustworthy, in actuality and in perception?

Thematic Workshop



Women's Empowerment for ICT and ODD

OCAPROCE International

Friday 12 April 2019

11:00 – 12:45

Room K1 - ITU

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

Tableau de liens entre actions WSIS et ODD

	C3	C4	e-business	e-learning	e-health	e-agriculture	C8	C11
SDG1	X	X	X	X		X	X	X
SDG2	X	X	X	X		X	X	X
SDG3	X	X	X	X	X	X	X	X
SDG4	X	X	X	X	X	X	X	X
SDG5	X	X	X	X		X	X	X
SDG6	X	X						
SDG7	X	X						
SDG8	X	X					X	X
SDG9								
SDG10	X	X						
SDG11	X	X						
SDG12	X							
SDG13	X	X						
SDG14								
SDG15								
SDG16	X	X	X	X	X		X	X
SDG17	X	X	X	X				

II. Key achievements, announcements, launches, agreements, and commitments

Le premier pas de l'action concrète d'OCAPROCE international est la construction et l'équipement du Centre pilote multisectorielle de « Communication et du Développement Social (CODESO) » en cours de réalisation à Bafoussam au Cameroun en faveur des jeunes filles et garçons, qui va nous permettre de finaliser toutes les propositions de notre plan d'action. Notre demande expresse à ce jour, est la recherche de partenaires financiers pour assurer ce plan pilote qui a déjà reçu l'accord de principe du Gouvernement camerounais et de nos principaux partenaires.

III. Main outcomes highlighting the following:

1) Debated Issues

Highlights of the main issues debated and interactions with audience

- Egalité et justice pour tous
- Education et formation des femmes et jeunes filles aux TIC et par les TIC comme MOOC, ...
- Eduquer et communiquer les valeurs féminines
- Rôle et place des femmes pour réaliser les ODD
- Autonomisation des femmes par les TIC à travers des applications pratiques telles que la COMCHAIN
- Gouvernance démocratique qui intègre les valeurs féminines

Highlight key achievements and challenges shared by the audience and/ or panellists

- Le projet a pour volonté de mettre en œuvre le parrainage de l'économie et de l'ingénierie sociale numérique, comme lien et acteur solidaire d'applications pratiques de formations diversifiées orientées vers une réinsertion durable, incluant l'autosuffisance économique des plus démunis par l'exercice d'activités lucratives. Cette nouvelle approche participative sous la forme d'une formation traditionnelle, va créer une rupture avec la solitude, la marginalité et permettre à ceux qui ont quitté précocement l'école, d'acquérir des notions pratiques de technologies et des outils constituant un savoir, permettant de leur assurer de meilleures chances de subsistance et de gain honorable.
- Réalisation de l'application COMCHAIN pour l'autonomisation de la communauté locale
- Implantation de matériel technique et informatique pour l'équipement du centre
- Vulgarisation des TIC en Ethiopie
- ICT UN women
- Partenariat pour l'égalité globale
- Création d'un centre multimédias pour les jeunes et femmes au Tchad

2) Quotes

- « Il est important de travailler ensemble de par le monde pour atteindre la réalisation des ODD et principalement l'accès des TIC aux femmes et filles et développer leurs aptitudes et leurs leadership » Mme Patricia LUSWETI UIT.
- « L'autonomie économique et financière des femmes représente la possibilité pour ces dernières d'avoir accès, aux moyens et ressources économiques pour répondre à leurs besoins, ainsi qu'à ceux des personnes dont elles ont la charge. L'autonomie donne la possibilité de faire des choix et d'influencer les structures économiques de nos sociétés. Cela passe absolument par l'éducation des filles/femmes qui constitue un droit fondamental. » Mme Micheline Makou Djouma, OCAPROCE Internationale.

IV. Overall outcomes of the session highlighting

- main conclusions reached during the discussion

L'éducation et la formation doivent être au cœur des stratégies de mises en œuvre pour atteindre l'égalité des sexes à l'ère numérique. C'est pourquoi, les institutions pédagogiques, sociales, officielles et non officielles, doivent être considérées comme étant des acteurs prioritaires pour opérer un changement.

Identification des femmes influenceurs l'accès à une politique de dialogue et d'échanges entre les femmes et le soutien de leurs projets concrets.

Intégration des valeurs féminines de vie et de solidarité au niveau de l'éducation, de la communication et des structures sociales, économiques et culturelles.

- the vision for implementation of WSIS Action lines beyond 2015

Les TIC sont des outils puissants pour l'éducation, la formation, l'information, la communication pour l'autonomisation des femmes et la communauté locale. Ils amplifient l'accès à la santé, à la prospérité et à la paix. Ce sont des leviers incontournables économiques, sociaux et culturels tout en préservant l'environnement.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

L'éducation et la communication sont transversaux de tous les ODD.

Les Objectifs 1, 2, 3, 4 et 5 ont été abordés d'une manière particulièrement spécifique en lien avec l'autonomisation des femmes.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

Education qualitative des valeurs féminines et formation en vue de l'autonomisation économique, sociale et culturelle des femmes et des filles par et avec l'aide du numérique ;

Mise en place d'une stratégie basée sur le Plan Cadre Innovateur (PCI) d'OCAPROCE International ;

Meilleure communication permettant d'intégrer pleinement les femmes et les filles dans le processus de leur autonomisation ;

Développement de partenariats en vue d'initialiser des actions des ODD.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

Changer qualitativement en intégrant pleinement les valeurs féminines, du

contenu des objectifs, des méthodes stratégiques, de la communication et de l'éducation.

Travailler sur le fond en intégrant clairement l'apport des femmes dans tous les processus de mise en œuvre des programmes thématiques du WSIS 2020.

Utiliser les TICs pour une gouvernance partagée et démocratique qui facilite le respect des droits humains dans les secteurs de la vie individuelle et collective.

Thematic Workshop



Rethinking approaches to achieve Sustainable Development Goals in an era of Smart Computing

Western Sydney University

Friday 12 April 2019

11:00 – 12:45

Room K2- ITU

I. Key achievements, announcements, launches, agreements, and commitments

Key achievements: Looking and building a community of people with similar ideas to adapt smart computing into bringing new improved ways to solve problems.

Announcements: “Can we do things differently to make our world a better place for everyone?”

Launches: “Smart Computing Framework for Sustainable Development”

Agreements: There are “Multi Level Coordination Challenges”

II. Main outcomes highlighting the following:

1) Debated Issues

- “Big players are selling the data and value the systems like this create. They would dominate the world. Have you incorporated that into your thinking?” We are looking at various aspects related to this. How much of the ecosystems should be opened to the public and how much to be enclosed? Who will benefit from aggregated data? Etc. At the moment we are looking at models to create social entities to own the ecosystems. We are looking at people with similar interests and interest to make sure there are no monopolies.
- “I am curious to know about the UWTAWI on which language is it available? Only English or also some of the local languages?” Aida Matimitovic, (WSIS2019)

2) Quotes

- “Thanks for very fascinating and brilliant presentation, I believed that IT is an end but now I realized that IT is about people.
- “I imagine this is important for local people. Awesome. I love the presentations.”

III. Main linkages with the Sustainable Development Goals (please specify the SDGs)

1. No Poverty
2. Zero Hunger
3. Good health and wellbeing

IV. Emerging Trends related to WSIS Action Lines identified during the meeting

Humanities are facing challenges in many fronts and issues are becoming more multifaceted to solve. Thus, we need to coordinate our problem-solving process to achieve the maximum impact. We are becoming a digitally connected society. This coupled with advances in Information and Communication Technologies (ICT) open up new possibilities. If we can direct the new possibilities towards solving problems we are facing today and those that need a holistic solution that would be much beneficial towards the longevity of life on earth. An essential mechanism to achieve the SDGs is an efficient coordination and distribution of wealth, products and services, knowledge and behavioral changes in people to achieve the required outcome.

V. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

- Peoples' behavioural changes can happen through empowerment by providing choices.
- Providing choices and enabling them to act, empower and motivate them to continuously use the system and creates the “Stickiness”.
- First stage: Optimizing the tasks and activities, Second stage: Optimizing the processes and Third stage: Optimising the overall outcome of a system
- If you are going to think of a solution to a complex human problem, we need to adapt “Systems Thinking”

Thematic Workshop



Towards an Inclusive Future in AI

Foraus, swissnex Network

Friday 12 April 2019
Room L1- ITU

11:00 – 12:45

Please find in the link below, more information regarding the workshop:

<https://www.itu.int/net4/wsis/forum/2019/Agenda/ViewSession/224#>

I. Relevance with the WSIS Action Lines:

Using the Policy Kitchen method we will leverage the collective intelligence of many to address the problematic around inclusion within the AI development and specifically how we can ensure an ethically ground AI development. In the output of our series of workshops, we will collect a diversity of innovative proposals that can support several of the WSIS action lines, among others C8. Cultural diversity and identity, linguistic diversity and local content, C.10 Ethical dimensions of the Information Society and C11. International and regional cooperation. When it comes to AI development all these action lines will greatly benefit from an inclusive and participative approach. This is why we believe that our workshop will be a great value for the WSIS action lines.

II. Key achievements, announcements, launches, agreements, and commitments

During the workshop, we launched the campaign “Toward an Inclusive Future in AI” that will consist of a global series of workshops conducted at various locations of the swissnex Network and the Open Think Tank Network, culminating in a synthesis session at the AI for Good Global Summit in Geneva. All the ideas coming out of the individual workshops will be published on the [Policy Kitchen](#) platform. These proposals will be reviewed by an advisory board and presented in a final publication as well as to decision makers at various national and

multilateral bodies, including the AI for Good Global Summit and AI Commons.

III. Main outcomes:

During the workshop participants were invited to elaborate their ideas around what are the main challenges in AI and what can be done to solve these. The participant identified these issues that need to be addressed:

1. Failure by many key stakeholders within Government set up to embrace AI
2. Solutions to ensure the inclusion of local input and the development of local capacity
3. Translating the technical language into a political option so people can vote for inclusive AI
4. In order to solve the lack of AI inclusion, there are governance mechanisms that need to be taken into consideration. For instance, international cooperation through intergovernmental platforms.

IV. Main linkages with the Sustainable Development Goals:

Throughout the series of workshops, we will gather relevant input that can help advance the 2030 Agenda and specifically addressing the inclusion question within the context of AI development we believe that will support the Goals 10 and 16. AI is one of the most discussed technologies today and the one that has more potential to produce significant changes in our society. Ensuring inclusivity in the development of AI, especially the most disadvantaged, will provide better changes to address their needs and allow them to take advantage of the great technological potential offered by AI to reduce the inequality within and among countries. Not only that but by providing for inclusivity in AI development will contribute to the development just, peaceful and inclusive societies by addressing the needs of marginalized and disenfranchised groups.

Thematic Workshop



E-commerce and E-employment

Tigarti

Friday 12 April 2019

11:00 – 12:45

Room L2 - ITU

This outcome will be made available soon

High-Level Meeting of UNGIS

Tuesday 9 April 2019

08:00 – 09:00

Closed Session – For UNGIS members



The United Nations Group on the Information Society (UNGIS) meeting was held as part of the WSIS Forum 2019. This meeting comprised the High-Level Segment of the meeting that took place on Tuesday 8 April 2019 and the Working Level meeting that took place on the Friday 12 April 2019. The UNGIS meeting provided an opportunity to advance the Group's objectives of coordination of substantive and policy issues facing the United Nation system in the implementation of the outcome of the World Summit on the Information Society (WSIS). Particular focus was directed towards the development of a Work Plan.

Relevant documentation for the meeting will be made available at ungis.org.

Closed Session – UNGIS Members Only

Session's link to WSIS Action Lines

AL C1. The role of public governance authorities and all stakeholders in the promotion of ICTs for development

AL C2. Information and communication infrastructure

AL C3. Access to information and knowledge

AL C4. Capacity building

AL C5. Building confidence and security in the use of ICTs

AL C6. Enabling environment

AL C7 e-Gov. ICT Applications: E-government

AL C7 e-Bus. ICT Applications: E-business AL

C7 e-Lea. ICT Applications: E-learning

AL C7 e-Hea. ICT Applications: E-health

AL C7 e-Emp. ICT Applications: E-employment

AL C7 e-Env. ICT Applications: E-environment
AL C7 e-Agr. ICT Applications: E-agriculture
AL C7 e-Sci. ICT Applications: E-science
AL C8. Cultural diversity and identity, linguistic diversity and local content
AL C9. Media
AL C10. Ethical dimensions of the Information Society
AL C11. International and regional cooperation

Session's link to Sustainable Development Process

Goal 1: No poverty: End poverty in all its forms everywhere

Goal 2: Zero hunger: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Goal 3: Good health and well-being: Ensure healthy lives and promote well-being for all

Goal 4: Quality education: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Goal 5: Gender equality: Achieve gender equality and empower all women and girls

Goal 6: Clean water and sanitation: Ensure access to water and sanitation for all

Goal 7: Affordable and clean energy: Ensure access to affordable, reliable, sustainable and modern energy for all

Goal 8: Decent work and economic growth: Promote inclusive and sustainable economic growth, employment and decent work for all

Goal 9: Industry, innovation and infrastructure: Build resilient infrastructure, promote sustainable industrialization and foster innovation

Goal 10: Reduced inequalities: Reduce inequality within and among countries

Goal 11: Sustainable cities and communities: Make cities inclusive, safe, resilient and sustainable

Goal 12: Responsible consumption and production: Ensure sustainable consumption and production patterns

Goal 13: Climate action: Take urgent action to combat climate change and its impacts

Goal 14: Life below water: Conserve and sustainably use the oceans, seas and marine resources

Goal 15: Life on land: Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss

Goal 16: Peace, justice and strong institutions: Promote just, peaceful and inclusive societies

Goal 17: Partnerships for the goals

Social Networking Events

WSIS Forum 2019 Donors Dinner sponsored by Poland (On invitation only)

Monday 8 April 2019 19:00

High-Level Lunch (On invitation Only)

Tuesday 9 April 2019 13:00 – 14:30

WSIS Forum 2019 Reception sponsored by Switzerland

Tuesday 9 April 2019 18:30 – 20:30

High-Level Lunch (On invitation Only)

Wednesday 10 April 2019 12:15 – 14:00

High-Level Gala Dinner (On invitation only)

Wednesday 10 April 2019 19:00 – 22:00

WSIS TalkX

(podcasts, part of OpenSpace)

Monday 8 April 2019 – Friday 12 April 2019

Exhibition Area, ITU Tower

The link to the podcasts online can be found here: <https://soundcloud.com/user-913466759>.

I. Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11

- The podcasts fall under different categories including: Alternative Finance, Assistive Technologies, Child Online Protection, Cybersecurity, E-Health, E-learning, Education and Technology, Environment, Environment Start-ups, Gender, ICANN: Domain Name Management, Machine Learning, Media, Regional Cooperation, Rural Connectivity, ICT and Sport, E-Commerce.
- All of these categories have direct relevance to WSIS Action Lines. Each topic revolves around ICTs for SDGs and can fall into at least one, if not multiple, WSIS Action Lines.

II. Key achievements, announcements, launches, agreements, and commitments

- 18 podcasts were produced. They are uploaded on SoundCloud.
- The podcasts animated the WSIS Exhibition Space and elicited an audience.

III. Main outcomes highlighting the following:

1) Debated Issues

- Each podcast's topic incorporated a general question set. Audience interaction was limited to a question and answer session at the conclusion of each podcast, if time permitted.

2) Quotes

- N/A

IV. Overall outcomes of the session highlighting

- Each podcast's primary outcome was to inform the audience (in the OpenSpace area and all general public listeners online) further on the topic discussed through the lens of the interviewee's work. The majority of podcasts had multiple people interviewed to encourage an organic discussion on the topic at hand.

V. Main linkages with the Sustainable Development Goals (please specify the SDGs)

- This is entirely dependent upon the podcast topic.

VI. Emerging Trends related to WSIS Action Lines identified during the meeting

- The podcasts, in general, focused on ICTs for SDGs within their topic's framework.

VII. Suggestions for Thematic Aspects that might be included in the WSIS Forum 2020

- For WSIS 2020, new topics could be introduced into the podcasts. Having a diverse set of participants from different entities should continue to be encouraged.
- For the podcast's organization, since this will not be its inaugural year, the sign-up process for speakers should begin as early as possible. This would allow for more time to promote the podcast and ultimately give it more exposure.



Exhibition

Exhibition Inauguration

Monday 8 April 2019

10:45 – 11:00

Exhibition Area, ITU Tower

WSIS Forum 2019 gathered more than 40 exhibitors from Civil Society, Academia, International Organizations, Private Sector, and Governments. The exhibition set the stage that encouraged all stakeholders to share their initiatives for a more effective Information Society. Exhibitors prepared a number of ground-breaking and innovative projects, including Virtual Reality, Augmented Reality and autonomous robots, as potential solutions to specific issues that will advance the achievement of the SDGs.

Moreover, the photos of winners and champions of the WSIS Photo Contest 2019 were displayed at the exhibition area, showing the results of contributing to the SDGs within the international community, as well as bringing more art and beauty into the space.

At 10:45 AM, April 8th, 2019, the exhibition inauguration was honoured by Mr. Houlin Zhao, the Secretary General of ITU, and H.E Majed Sultan Al Mesmar, Deputy Director General of the Telecommunications Regulatory Authority (TRA) of the United Arab Emirates, as well as the WSIS Forum 2019 Chairman, H.E. Mr. Mustafa Jabbar, Minister, Ministry of Posts, Telecommunications and Information Technology, Bangladesh.

The exhibition of WSIS Forum 2019 was also privileged to host such an interestingly diverse range of other exhibitors from Civil Society, Academia, International Organizations, Private Sector, and Governments, all with a common goal to use ICTs for development. The thematic topics were as multidisciplinary as they were ground-breaking and focused on the following categories:

- WSIS Action Lines and SDGs
- VR and education
- E-Business
- E-agriculture
- ICTs and health
- Development through crowdfunding
- Information Accessibility
- Social network and entrepreneurship
- Internet of Things (IoT) for development
- Mobile remote presence devices (MRPs) for remote participation
- Emerging legal principles in the regulation of cyber security.

WSIS FORUM PARTNERS 2019

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United Arab Emirates - Gold plus

Kingdom of Saudi Arabia – Gold

Partners for specific activities

Oman Information Technology Authority (ITA), Oman

MIC, Japan

The Institute of Electrical and Electronics Engineers (IEEE)

Swiss Federal Office of Communications (OFCOM) / Swiss Confederation

Contributing Partners

The Internet Corporation for Assigned Names and Numbers (ICANN)

Internet Society (ISOC)
Rwanda Utilities Regulatory Authority (RURA)

ELM

Office of Electronic Communications (UKE - Urząd Komunikacji Elektronicznej)
Poland

Supporting Partners

International Federation for Information Processing (IFIP)

University of Geneva (GTI-Tsinghua Initiative) JWL

Research partners

United Nations University

UNGI

IOM

ITU

Other Exhibitors

SatRevolution

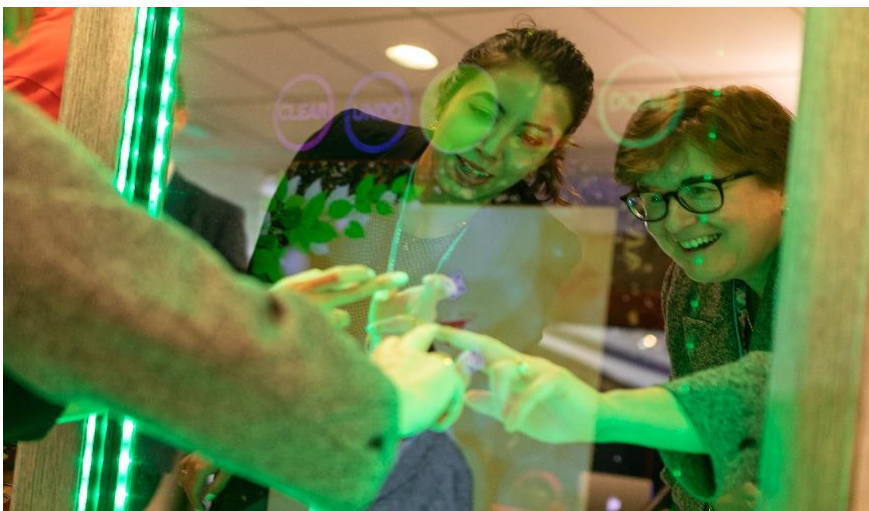
Real-time Earth-observation Constellation
REC

Internet Society of China	AI & Information Accessibility
Horyou Group	Horyou: Using Technology for Innovative Solutions.
The FutureWork Institute, Inc.	Dream it! Do it!: A Hands-On Experience of Four Virtual Learning Environments Virtual Learning Environments (VLEs) Hands-on Exhibit. CNDG's Exhibit Space will provide continuous opportunities for attendees to explore and experience Virtual Learning Environments that take them from the sea floor to the surface of Mars, from prehistoric times to the future, from inside a cell to outer space. With hands-on computers running simulations, our presenters will guide attendees through learning experiences that are live and networked, bringing new and exciting educational opportunities to students and teachers at University and Secondary Education levels, and employees and managers at all levels, around the world.
Chant Newall Development Group LLC (CNDG)	Virtual Learning Environments (VLEs) Hands-on Exhibit. CNDG's Exhibit Space will provide continuous opportunities for attendees to explore and experience Virtual Learning Environments that take them from the sea floor to the surface of Mars, from prehistoric times to the future, from inside a cell to outer space. With hands-on computers running simulations, our presenters will guide attendees through learning experiences that are live and networked, bringing new and exciting educational opportunities to students and teachers at University and Secondary Education levels, and employees and managers at all levels, around the world.
Healthrostrum	How to find people with the same health issue and help other people by sharing your health experience
Mandat International	"Human-centric IoT and Data Protection" The stand will present results from several international research projects in this domain.

Sela Technologies	The exhibition space will help to showcase Sela: a platform that enables transparent execution and measurement of sustainable development projects, eliminating traditional barriers of entry for capital into the emerging world.
World Benchmarking Alliance	Benchmarking corporate contributions to digital inclusion and SDGs
High-Tech Bridge	Free Online Security Test Suites by High-Tech Bridge for SMEs, NGO and Governments: https://www.htbridge.com/free
INTERPREFY AG	Remote Simultaneous Interpretation - Existing technology allows CO2 emission reduction and cost savings.
WeRobotics	Drones & AI for Social Good
Communication University of Zhejiang	50th anniversary of the Internet development
SEMANTIS	Democracy, Languages and ICT Common approaches by SEMANTIS asbl, Eurolinc, and Orange LeVote project
ASTEM Co., Ltd.	IPTV terminal device for accessibility. This device receive caption data and sign language video from internet and synthesizes it with terrestrial and displays it.
VUME	Inclusive Technology in Content Delivery and Consumption.
JOZU for WOMEN INC	We are a start-up. We'd like to know more about this opportunity.
Nayuta Inc.	IoT x Blockchain infrastructures in developing countries
GSMA	Capacity Building for ICTs.
The Womanity Foundation	The Womanity Foundation would like to have a stand to present the Girls Can Code program developed in Kabul, Afghanistan. We will present some information regarding the program, there

	might be the opportunity to interact with the Coding students through skype calls (the details still have to be elaborated).
Geneva Action Platform	ICTs for SDGs: scaling awareness and education
SUDATEL TELECOMMUNICATIONS ACADEMEY (SUDACAD)	SUDATEL Telecommunications Academy (SUDACAD) Training program activities (ICT Applications and Services programme) under the auspices of the ITU Centres of Excellence for Arab States
VR WORLD forum	Bring together high-level personalities, world class VR experience and a very special focus on education. VR can be used to contribute added value to humanity. Using technology to contribute specifically to one or more of the SDGs.
GIP	Inform WSIS Participants about current work and ongoing research on digital policy and internet governance
GLOBAL PLAN	The topic to be displayed is the world's first standardized technology solution expressly designed to affordably and reliably narrow the digital divide.
Cibervoluntarios Foundation	<p>Empodera for the Sustainable Development Goals: The ecosystem to achieve the SDGs</p> <p>Empodera.org is the collective intelligence ecosystem to solve challenges towards the achievement of the SDGs. Supported by the United Nations.</p> <p>All Civil Society, Organizations and Institutions are welcome to create social innovation processes to solve challenges and make citizen initiatives aimed at achieving the Sustainable Development Goals a reality. Join and start to generate impact.</p> <p>https://empodera.org/</p>
Smart Jump Technology	Smart Jump Technology® is a start-up

	<p>company aiming to digitalize the equestrian sport.</p> <p>Our goal is to engage technology in all sport aspects in which we can further enhance it and prevent issues.</p> <p>Our mission is to make the sport more exciting and give the opportunity to riders to maintain their focus during practice and build the bond needed with the horse. We are also committed to provide a safe environment by providing technological products in which the sport becomes more safe and injuries are prevented.</p> <p>We are committed to the equestrian sport as we are also committed to the wellbeing of horse and rider.</p>
<p>Swiss Cyber-Security</p>	<p>CyberSecurity - how to form IT Managers/IT Administrators in the cybersecurity world</p>





Closing Ceremony

Friday 12 April 2019

16:00 – 17:00

Room Popov

The Closing Ceremony of the WSIS Forum 2019 took place on Friday, April 12th at 16:00, in Popov Room. The gathered audience was presented with the closing remarks from the ITU Secretary-General Houlin Zhao, the WSIS Forum Chairman Mustafa Jabbar, as well as the Forum co-organizers from other UN agencies. The Chairman opened the Ceremony giving each of the co-organizers an opportunity to share their experiences and suggestions regarding the five intensive days of the WSIS Forum.

A representative from UNDP emphasized the importance of common efforts made to achieve the Sustainable Development Goals (SDGs) in the era of not only quick technological changes but also the digital transformation surrounding us and every aspect of our modern lives.

UNESCO's representative referred to the multi-stakeholder consultations that took place over the five days of the WSIS Forum, pointing out an indispensable potential of ICTs as a means for achieving sustainable development. Also, he highlighted a role of bridging the WSIS Action Lines and the SDGs in a process of inclusive knowledge society realization.

A representative from UNCTAD, after agreeing with what had been said beforehand, added that the WSIS Forum has a significant part in making sense of our rapidly evolving digital landscape.

After the comments from the co-organizing UN entities, the Chairman invited the audience to share some experiences and thoughts collected during the entire WSIS Forum. A common voice of the participants expressed appreciation of the WSIS Process and gratitude for strengthening relations between various WSIS Stakeholders that offered a unique chance for information exchange and sharing different practices.

Then, the ITU Secretary-General thanked to everyone for participating in this year's WSIS Forum. *WSIS Process is an important process*, he said showing that it provides us all with a set of new ideas which help to think about the connection established between ICTs and upcoming future.

The BDT Director, Doreen Bogdan-Martin mentioned that this year's edition, the 10th one, allows us not only to look these 10 years back and see how much we have progressed but also to look forward and work for the next decade to be at least as successful as the past one. In order to achieve 100% of connectivity, she said, we have to discuss new issues (like AI, IoT, blockchain) and rely on principles of trust, inclusion, and equality.

To summarize, the Chairman acknowledged all the lively and interactive discussion that happened during the WSIS Forum, emphasizing the importance of views exchange as a means of cooperation and work for the SDGs. If we want our society to be a knowledge-based one, we need to use the ongoing digitization process and make sure that the available technologies are made for us and for facing all the existing challenges. One of the biggest challenges, he said, is a digital divide that has to be abolished; otherwise the world we expand will not be the world we aim for.

The Chairman also asked to work together for a safer digital world that will ensure prosperity of all the human beings; security is a key here, a key that has to apply to all the individuals, their respective societies, and their nations. The ultimate goal is to make the Internet a safe place and then the entire digital world will be safe as well.

Last but not least, he emphasized the importance of developing the digital skills and being prepared for the challenges occurring as a consequence of the technological development. Only when prepared, adapted, and ready for the instant changes, we can transfer our discussions into actual implementation. The technologies, he said, have to be *suitable for me, for my society, and for my country.*

Press Conference (*Media only*)

Tuesday 9 April 2019
Room 15, CICG

This outcome will be made available soon.

Quick Links

- WSIS Forum 2019 Official Website:
<https://www.itu.int/net4/wsis/Forum/2019/>
- Open Consultation Process:
<https://www.itu.int/net4/wsis/Forum/2019/Pages/OpenConsultations#intro>
- Agenda:
<https://www.itu.int/net4/wsis/Forum/2019/Pages/Agenda#intro>
- Facebook WSIS Process:
<https://www.facebook.com/WSISprocess>
- WSIS Flash:
<http://groups.itu.int/stocktaking/WSISFlash.aspx>
- Twitter WSIS Process
#WSIS:
<https://twitter.com/wsisprocess>
- WSIS on You Tube:
<http://www.youtube.com/wsisprocess>
- WSIS Stocktaking:
www.itu.int/net4/wsis/stocktaking/p/en
- United Nations Group on the Information Society: www.ungis.org
- Partnership for Measuring ICT for Development: <http://www.itu.int/ITU-D/ict/partnership/>

For further information please write to the WSIS Secretariat at wsis-info@itu.int

Documentation

Video Highlights and Interviews:

<https://www.youtube.com/user/WSISProcess>

Photographs:

<https://www.flickr.com/photos/itupictures/collections/72157708046419954/>

Invitation for WSIS Forum 2020

The World Summit on the Information Society Forum 2020 represents the world's largest annual gathering of the 'ICT for development' community. The WSIS Forum, co-organized by ITU, UNESCO, UNDP and UNCTAD, in close collaboration with all WSIS Action Line Facilitators/Co-Facilitators, has proven to be an efficient mechanism for coordination of multi-stakeholder implementation activities, information exchange, creation of knowledge, sharing of best practices and continues to provide assistance in developing multi-stakeholder and public/private partnerships to advance development goals. This Forum will provide structured opportunities to network, learn and participate in multi-stakeholder discussions and consultations on WSIS implementation. The Agenda and Programme of the Forum will be built on the basis of the submissions received during the Open Consultation Process.

Additional information about the WSIS Forum 2020 will be made available soon.

ANNEX

List of Participating Organisations

Organisation	Entity
University of Sheffield	University of Sheffield
Ministry of Health	Government
Asian-Eurasian Human Rights Forum	NGO and/or Civil Society
Permanent Mission of the Republic of Iraq	Iraq
G3ict	Private Sector
African, Caribbean, and Pacific Group of States	Other International Organizations
Permanent Mission of the United Kingdom	United Kingdom
Permanent Mission of the Republic of Croatia	Croatia
CSEND	NGO and/or Civil Society
University of Ilorin, Nigeria/ University of York UK.	Univ/Academia
Ecole la Découverte	Ecole la Découverte
Deutsche Schule Genf	Deutsche Schule Genf
Computer Science	Deutsche Schule Genf
WIPO	United Nations system
DXC	Other
Commission Africaine des promoteurs de la santé et des droits de l'homme (capsdh)	NGO and/or Civil Society
InZone - University of Geneva	Univ/Academia
Ministry Of ICT	Namibia
KAIST	Univ/Academia
Telecommunications Regulatory Commission	Government
Permanent Mission Of The Republic Of Azerbaijan To The United Nations Office And Other International	Azerbaijan
Ministry of Transport, Communications and High Technologies	Azerbaijan
Azerbaijan Internet Society	Azerbaijan
ARIN	ARIN - American Registry for Internet Numbers
Dr. Priebe Consulting	Private Sector
Permanent Mission Of Austria To The United Nations In Geneva	Austria
FSUE NIIR	Russian Federation
Ministère des Postes, des Télécommunications et de l'Economie Numérique	Niger
Geneva Tsinghua Initiative	Univ/Academia
Permanent Mission Of Bangladesh To The UN And Other International Organisations, Geneva.	Bangladesh
Chambre de Commerce et d'Industrie Suisse RD Congo	Private Sector
ACM SIGCHI	Univ/Academia
Information and Communication Technology Division	Government
Ministry of Foreign Affairs and Expatriates Jordan	Jordan
High-Tech Bridge	Private Sector
Ministry of Posts, Telecommunications and ICT	Bangladesh
Bangladesh Telecommunication Regulatory Commission	Bangladesh
Mission Permanente de la Côte D'Ivoire	Côte d'Ivoire
Permanent Misison of Gambia	Gambia

Permanent Mission of the Republic of Zimbabwe	Zimbabwe
Bangladesh Computer Council	NGO and/or Civil Society
Ministry of ICT, Postal and Courier Services	Zimbabwe
Ministry of ICT, Postal & Courier Services	Zimbabwe
Postal and Telecommunication Regulatory Authority of Zimbabwe (POTRAZ)	Zimbabwe
Ministry of ICTs, Postal & Courier Services	Zimbabwe
Federal Office Of Communications OFCOM	Switzerland
UNESCO Liaison Office In Geneva	UNESCO - United Nations Educational, Scientific and Cultural Organization
Ministry Of Foreign Affairs And Internationa Cooperation	Djibouti
Parliament of Ukraine	Ukraine
Permanent Mission Of Ukraine	Ukraine
UNESCO Geneva Office	UNESCO - United Nations Educational, Scientific and Cultural Organization
Permanent Mission of Barbados	Barbados
Embassy of Ukraine to the Swiss Confederation	Ukraine
Permanent Mission of the Slovak Republic	Slovakia
Permanent Mission of Ukraine to UN Office in Geneva	Ukraine
Permanent Mission Of The Slovak Republic To The United Nations Office And Other International Organ	Slovakia
IEEE	Other International Organizations
Permanent Mission Of The Republic Of Armenia To The UN Office And Other International Organizations	Armenia
Geneva Internet Platform	NGO and/or Civil Society
Ministry of Transport, Communication and IT of Armenia	Ministry of Transport, Communication and Information Technologies
Permanent Mission of Latvia	Latvia
Mission Permanente du Gabon	Gabon
Ministry of Environmental Protection and Regional Development	Government
International Organization for Migration	United Nations system
Permanent Mission of Romania	Romania
Permanent Mission of the Republic of Poland	Poland
Ministry of Digital Affairs of the Republic of Poland	Poland
Permanent Mission of Yemen	Yemen
Permanent Mission Of Georgia	Georgia
Ministry of Economy and Sustainable Development of Georgia	Georgia
Georgian National Communications Commission	Georgia
Globethics.net	Globethics
Ministry of Communications and Information Society	Romania
Permanent Mission Of Malaysia To The UN	Malaysia
ANCOM	Romania
Permanent Mission of Serbia	Serbia
CEPT	Other International Organizations
Permanent Mission Of Belgium To The UN In Geneva	Belgium
Permanent Mission of Belgium	Belgium
Mission Of Saudi Arabia To The UN In Geneva	Saudi Arabia
Permanent Mission of Saudi Arabia	Saudi Arabia

Communications And Information Technology Commission	Saudi Arabia
Mechkat Bouldin architectes SA	Private Sector
Mission of Ecuador in Geneva	Ecuador
Permanent Mission of Senegal	Senegal
Mission Of Ecuador	Ecuador
Ministère de la Communication, des Télécommunications, des Postes et de l'Economie numérique	Senegal
Ministry of Public Administration of the Republic of Slovenia	Slovenia
SGS 1 PLACE DES ALPES GENEVA	Private Sector
The Womanity Foundation	Association/Foundation
SGS	Private Sector
Hatch CoLab	Association/Foundation
MFA Montenegro	Montenegro
Indigenous Peoples and Nations Coalition	NGO and/or Civil Society
Permanent Mission Of Montenegro To The UN And Other International Organizations	Montenegro
Horyou Group	Private Sector
Geneva Action Platform	Association/Foundation
Globethics.net Foundation	Globethics
ICANN	ICANN
Global Strategy	ICANN
Ministry of Transport, Information Technology and Communications	Bulgaria
MTITC	Bulgaria
Permanent Mission of Bulgaria	Bulgaria
GICHD	Other International Organizations
Communications Regulation Commission	CRC - Communications Regulation Commission
Mission permanente d'Algérie	Government
Permanent Mission of Algeria	Algeria
Permanent Mission of Bhutan to the UN in Geneva	Bhutan
Ministère de la Communication chargé des Postes et des Télécommunications	Djibouti
Ministry of Information and Communications	Bhutan
Ministry Of Foreign Affairs And International Cooperation	Djibouti
Greek Permanent Mission In Geneva	Greece
Permanent Mission of Greece	Greece
Permanent Mission of Tunisia	Tunisia
Mohan Lal Sah Vidya Mandir School	Univ/Academia
DiploFoundation/Geneva Internet Platform	NGO and/or Civil Society
UN High Level Panel on Digital Cooperation	United Nations system
Permanent Mission of Turkey	Turkey
Information and Communication Technologies Authority (ICTA)	Government
University of Geneva / Centre Universitaire d'Informatique	Univ/Academia
Permanent Mission of Jamaica	Jamaica
Permanent Mission of Thailand	Thailand
Ministry of Digital Economy and Society	Thailand
LtHC Sarl	Other
Permanent Mission of the Dominican Republic	Dominican Republic

Ministry of the Presidency	Dominican Republic
Permanent Mission of the Republic of Kenya	Kenya
National Digital Economy and Society Commission	Thailand
VILLAGES UNIS/UNITED VILLAGES	NGO and/or Civil Society
Entnest	Private Sector
UNCTAD	United Nations system
NIGERIAN MISSION	Nigeria
United Nations Conference on Trade and Development (UNCTAD)	United Nations system
E. Synergies et compétences internationales	Association/Foundation
E-Synergie	Private Sector
International Trade Centre (ITC)	United Nations system
Permanent Mission of Estonia	Estonia
Foreign Economic and Development Cooperation	Estonia
United Nations Conference on Trade and Development	United Nations system
Permanent Mission of Indonesia	Indonesia
MCI	Indonesia
Permanent Mission of the Republic of Indonesia	Indonesia
World Jewish Congress	NGO and/or Civil Society
Indonesian Ministry of Communication and Information Technology (MCIT)	Government
BAKTI, MCIT	Indonesia
Société civile Africaine sur la Société de l'information (SCASI)	NGO and/or Civil Society
Permanent Mission of South Africa	Government
Ministry Of Communication And Information Technology	Indonesia
Africa 21	NGO and/or Civil Society
Ministry of Foreign Affairs of the Republic of Indonesia	Government
Association Africa 21	NGO and/or Civil Society
Misión permanente de Mexico	Mexico
PT. Telekomunikasi Seluler Indonesia	Private Sector
PT. 8villages Indonesia	Private Sector
Mission permanente du Mali	Mali
Ministère de l'Economie Numérique et de la Communication	Mali
Autorité Malienne de Régulation des Télécommunications/TIC et des Postes (AMRTP)	Other
DiploFoundation & Geneva Internet Platform	NGO and/or Civil Society
Autorité malienne de régulation des télécommunications/TIC et Postes	Government
Mission permanente du Cameroun	Cameroon
Ministère des Postes et Télécommunications	Cameroon
Mission Permanente de la Suisse	Switzerland
Permanent Mission of the Kingdom of Lesotho	Government
DiploFoundation	NGO and/or Civil Society
Permanent Mission of the Islamic Republic of Iran	Iran (Islamic Republic of)
Permanent Mission of India	India
UN Economic Commission for Europe	United Nations system
Communications And Information Technology Commission (CITC)	Government
World Meteorological Organization (WMO)	United Nations system
Jesuit Worldwide Learning	Association/Foundation

Mandat International	Association/Foundation
Permanent Mission of Lithuania	Lithuania
Ministry of the Economy and Innovation of the Republic of Lithuania	Lithuania
United Nations University Institute on Computing and Society (UNU-CS)	United Nations system
Permanent Mission of Trinidad and Tobago	Trinidad and Tobago
Planning And Telecom Services	Egypt
Permanent Mission of Egypt	Egypt
International Relations	Egypt
Ministry of Communications and Information Technology (MCIT)	Egypt
Ambassade, Mission Permanente du Burkina Faso à Genève	Burkina Faso
Ministère de l'économie numérique et des postes	Burkina Faso
Ministry of Industry and Information Technology	Government
Post and Telecom Press	Private Sector
Hubei Communications Industry Association	Association/Foundation
Xinjiang Information Communications Industry Association	Association/Foundation
Henan Communications Industry Association	Association/Foundation
Posts&Telecom Press	Private Sector
Office of the Electronic Communications (UKE)	Government
World VR Forum	Private Sector
University of Geneva (UNIGE)	Univ/Academia
University of Geneva	Univ/Academia
Impact Hub Geneva	Private Sector
Permanent Mission of the Russian Federation	Russian Federation
OsloMet	Univ/Academia
Webster Humanitarian Association	NGO and/or Civil Society
Webster University Geneva	Univ/Academia
OSLO Met	Univ/Academia
University of Zimbabwe	Zimbabwe
HIT	Zimbabwe
NUST	Zimbabwe
Communication University of Zhejiang, Consortium of Internet and Society	Univ/Academia
Communication University of ZheJiang	Univ/Academia
Chinalabs	Private Sector
VOOOP	Private Sector
Information Technology Authority	Information Technology Authority
United Nations Institute for Training and Research (UNITAR)	United Nations system
UNITAR	United Nations system
Ministry of Communication	Iraq
SSN Services, LLC	Iraq
Communications and Media Commission (CMC)	Iraq
Oman National CERT	Government
Elm company	Private Sector
Impact Hub	Other
Ministry of Economic Development - DGPGSR	Italy
Postal and Telecommunications Regulatory Authority of Zimbabwe (POTRAZ)	Government

Graduate Institute of International and Development Studies	Univ/Academia
Government And Regulatory Affairs	GSM Association
Smart Dubai Office	Other
CITRA Kuwait	Government
Innovative Trauma Relief Access	NGO and/or Civil Society
Georgetown University	Univ/Academia
The FutureWork Institute, Inc.	Private Sector
Chant Newall Development Group LLC	Private Sector
International Sustainable Development Institute	NGO and/or Civil Society
Department of Education	Government
Global plan Inc.	Private Sector
Health and Environment Program	HEP - Health and Environment Program
Village Suisse ONG	Village Suisse ONG
ISS, Center for Informatics, University of Geneva	Univ/Academia
International Federation for Information Processing (IFIP)	Other International Organizations
Dentechoworld Private Ltd	Private Sector
VUME	Private Sector
CERN	Other International Organizations
Richard Jolly.TV Ltd	Other
Richard Jolly Tv	Other
Ministry of Manpower	Information Technology Authority
Ministry of Information Communication Technology	Government
Telecommunications Authority of Trinidad and Tobago	Trinidad and Tobago
UNIL	Semantis
SEMANTIS	Semantis
Council of Saudi Chambers of Commerce and Industry	Private Sector
Nayuta Inc.	Private Sector
Access Partnership Ltd	Access Partnership Limited
Refugee Voices	NGO and/or Civil Society
Vesna Osana	Other
Internet Society of China	NGO and/or Civil Society
EPFL	Univ/Academia
Luchessa Consulting	Private Sector
National Cybersecurity Authority (NCA)	Government
National Cybersecurity Authority	Government
NCA	Government
Global Solutions Inc	Private Sector
Soluciones Integrales Loyalty	NGO and/or Civil Society
FUNDACION REAL MADRID	Association/Foundation
PR & COMMS	Qatar
World Trade Organization (WTO)	Other International Organizations
World Benchmarking Alliance	NGO and/or Civil Society
Naefos IO AS	Private Sector
Scaphe	Private Sector
Ministry of Post, Telecommunications and ICT	Bangladesh
UNIGE	Univ/Academia

Smart Jump Technology	Private Sector
UNIGE/CISA/MMEF	Univ/Academia
State of Geneva / Directorate General for Economic Development, Research and Innovation	Government
Interprefy AG	Private Sector
Brilliantmont International School	Brilliantmont International School
WeRobotics	NGO and/or Civil Society
ASTEM Co., Ltd	Private Sector
Saudi Telecom Company STC	Private Sector
Aspire Artemis Foundation	NGO and/or Civil Society
Richard Jolly	Private Sector
Botswana Communications Regulatory Authority (BOCRA)	Government
Seitwerk GmbH	Private Sector
Seitwerk	Private Sector
Advanced Interactive Canada Inc.	Other
POTRAZ	Zimbabwe
Ministry Of Digital Economy And Communication	Benin
Universidad Nacional Mayor de San Marcos	Univ/Academia
Ministère Des Postes Télécommunications Et Économie Numérique	Autorité de Régulation des Postes et Télécommunications (ARPT)
Agence Pour Le Developpement Du Numerique	Benin
Ministère du Commerce	Benin
EverComm Singapore	Private Sector
UNDP	United Nations system
Permanent Representative of Benin	Benin
Telecommunication Regulatory Authority	United Arab Emirates
Invited Researcher, UFR Culture et Communication, Université Paris 8	Univ/Academia
Permanent Mission of Indonesia to the United Nations	Other International Organizations
Geeks without Frontiers	NGO and/or Civil Society
Innovation, Science and Economic Development Canada	Government
recapp IT AG	Private Sector
Open Health Network	Private Sector
National Information Center / NIC	Government
SwissCyberSecurity	NGO and/or Civil Society
Politecnico Di Milano - DEIB	EC Medici Framework
Keio University	Univ/Academia
UNESCO Chair In ICT4D	Royal Holloway, University of London
Oxford University	Royal Holloway, University of London
Inter Islamic Network On Information Technology	Royal Holloway, University of London
Royal Holloway, University of London	Royal Holloway, University of London
Seneca Learning	Private Sector
Swiss CyberSecurity	NGO and/or Civil Society
Tongji University	Univ/Academia
Canadian Radio-television and Telecommunications Commission	Government
PR & COMMS (Communications Regulatory Authority)	Qatar
World Food Programme	United Nations system

SatRevolution S.A.	Private Sector
Director of réseau Aloys, Head of French Institute for Dementia	Other
Healthrostrum	Private Sector
SAINTIF	Indonesia
China Mobile Communications Group Co.,Ltd	Private Sector
Jolly TV	Other
Waymap Ltd	Private Sector
UNESCO	United Nations system
Redalyc UAEM	Univ/Academia
DFID	United Kingdom
Sudatel Telecommunication Academy	Private Sector
Ministry of Environment, Water and Agriculture	Government
The Nippon-Foundation	NGO and/or Civil Society
Ministry of Foreign Affairs	Libya
The Nippon Foundation	Association/Foundation
CYBERLAWS.NET	Other
Department of Information and Communications Technology	Government
DY Business Consulting	Private Sector
Institute of Geographic Sciences and Natural Resources, Chinese Academy of Sciences	Univ/Academia
CENTER AGAINST CYBER BULLYING	Other
Intel Corporation (USA)	Intel Corporation
OGERO Telecom	Government
UNOG	United Nations system
Telefonica	International Chamber of Commerce
National Cyber-security Authority	Government
Agence Nationale Des Fréquences	Agence Nationale des Fréquences
Ministry of Communication Technologies and Digital Economy	Tunisia
Ministry	Liberia
MobyGIS Srl	Private Sector
Swiss Cybersecurity Association	NGO and/or Civil Society
AJOL	NGO and/or Civil Society
WMO - World Meteorological Organization	United Nations system
Give1project Gambia	NGO and/or Civil Society
WMO	United Nations system
Brazilian Internet Steering Committee	NGO and/or Civil Society
Federal Ministry for Transport, Innovation and Technology	Austria
Uganda Communications Commission	Uganda
World Meteorological Organization	United Nations system
China Communications Technology Co., Ltd	Private Sector
Horyou SA	Private Sector
Nigerian Communications Commission (NCC)	Nigeria
Núcleo Técnico Científico Telessaúde Mato Grosso	Government
COMSATS Institute of Information Technology Pakistan	Univ/Academia
ESWATINI COMMUNICATIONS COMMISSION (ESCCOM)	Other International Organizations
EHESS/OpenEdition	Univ/Academia

PwC Switzerland AG	Private Sector
EC MEDICI Framework	EC Medici Framework
United Nations Economic and Social Commission for Asia and the Pacific	United Nations system
Iran Telecommunication Research Center (ITRC)	IUST - Iran University of Science and Technology
Lesotho Communications Authority	Lesotho
Communication and Information Technology Commission (CITC)	Government
HandEyes	Private Sector
Agence nationale des Technologies de l'Information et de la Communication (ANTIC)	Cameroon
Welltool Co.,Ltd,	Japan
OCECPR	Office of the Commissioner of Electronic Communications & Postal Regulation
Iran National Research and Education Network (SHOA)	Private Sector
RIPE NCC	RIPE NCC - Réseaux IP Européens Network Coordination Centre
International Organization for Migration (IOM)	United Nations system
eWorldwide Group	Private Sector
ICT Volunteers Bojonegoro	NGO and/or Civil Society
ASDF	ASDF - Association of Scientists, Developers and Faculties
Xiamen University & Internet Society of China	Univ/Academia
Office of Utilities Regulation	Office of Utilities Regulation (OUR)
Japan Science and Technology Agency	Government
International Federation of Red Cross and Red Crescent Societies	Other International Organizations
Ministry of Communication and IT (MCIT)	Government
WAZIUP e.V.	Association/Foundation
Consortium ERUDIT	Univ/Academia
Permanent Mission Of Bangladesh To The UN And Other International Organisations, Geneva.Permanent Mi	Bangladesh
NetFreedom Pioneers	NGO and/or Civil Society
SciELO	Univ/Academia
Communication Regulation Commission	Comisión de Regulación de Comunicaciones
Afghanistan Telecom Regulatory Authority (ATRA)	Government
Université Cheikh Anta Diop de Dakar, UCAD	Government
AB5 Consulting	Private Sector
AccessibilityOz, Inc.	Private Sector
MINISTERE DE L'ECONOMIE NUMERIQUE ET POSTE	Autorité de Régulation des Télécommunications/TIC de Côte d'Ivoire (ARTCI)
Access to Information (a2i), ICT Division	Government
Autorité de régulation de la poste et des télécommunications	Autorité de régulation de la poste et des télécommunications
Croatian Regulatory Authority for Network Industries	Government
Permanent Mission of Colombia	Colombia
Centers for Disease Control and Prevention	Government
Saudi Aramco Oil Company	Private Sector
Mada Center -	NGO and/or Civil Society
Mada Center	NGO and/or Civil Society
JPMorgan	NGO and/or Civil Society

AAgence nationale des Technologies de l'Information et de la Communication (ANTIC)	Cameroon
Wajenzi	Private Sector
ARCEP Tchad	Government
LEMAN & EDAPPAGATH	Private Sector
Hengtong Optic-Electric Co.,Ltd	Private Sector
Rohde & Schwarz	Private Sector
Hengtong Optic-Electric Co., Ltd	Private Sector
China Unicom	Private Sector
Botswana Telecommunications Authority	Botswana
Permanent Mission Of Hungary	Hungary
World Health Organization	United Nations system
European Commission	Other International Organizations
National Center of Cyber Space	Iran (Islamic Republic of)
kWIQly GmbH.	Private Sector
Communications Regulatory Authority (CRA)	Communications Regulatory Authority (CRA)
Cyber Future Foundation & Constituents	EC Medici Framework
BGBG Abogados	Other
World Health Organisation	United Nations system
Facebook	Facebook
United Nations Industrial Development Organization (UNIDO)	United Nations system
Ministry of Transport and Communications	Qatar
Communications Regulatory Authority of Namibia (CRAN)	Namibia
Department For Digital, Culture, Media & Sport	United Kingdom
JOZU FOR WOMEN INC	Private Sector
Comisión Nacional de Telecomunicaciones	Government
Superintendencia General De Electricidad Y Telecomunicaciones	El Salvador
King Saud University - CFY	Univ/Academia
Naif Arab University for Security Science (NAUSS)	Univ/Academia
CITC	Government
BCW & Tribal Development Department	India
World Wide Web Consortium (W3C)	Other
Barreiros	Private Sector
Pix4D SA	Private Sector
Government Of West Bengal	India
Law Faculty, University of Zurich	Univ/Academia
Secretaria de Estado de Saúde de Mato Grosso	Government
Geneva Graduate Institute	Univ/Academia
Advanced Wireless Network Co.,Ltd	Private Sector
Inky	Other
Ministry of Information and Communications Technology	Malawi
CZ.NIC Association	NGO and/or Civil Society
UNDESA	United Nations system
Ministry of Education	Government
United Nations	United Nations system
Richard Kerby LLC	Private Sector

Picterra SA	Private Sector
ACSIS CÔTE D'IVOIRE	NGO and/or Civil Society
INTERMID	Other
Internet Society	Internet Society - ISOC
Federal Telecommunications Institute	Instituto Federal de Telecomunicaciones (IFETEL)
Federal Institute of Telecommunications	Instituto Federal de Telecomunicaciones (IFETEL)
International Cyber Research Centre - UEL	Univ/Academia
Huawei	Private Sector
Airbus Defense & space	Other
IFIP	Other
MuULTISECTORAL REGULATORY AGENCY OF THE ECONOMY	Cabo Verde
CGI.br - Brazilian Internet Steering Committee	CGI.br - Brazilian Internet Steering Committee
Ministry of culture	Government
Internet Society ISOC	NGO and/or Civil Society
Zain Sudan	Private Sector
Birzeit University	Univ/Academia
IA	United Arab Emirates
World Summit Award	NGO and/or Civil Society
Lebanese Cyberspace Association	NGO and/or Civil Society
Université de Nantes	Univ/Academia
Enetric Technology Solutions LLC	Private Sector
Nepal Telecom	Nepal
Xavier Project	NGO and/or Civil Society
US Mission Geneva	Government
OECS Commission	Other
SCE Inc. Korea	Other
Food and Agriculture Organization	United Nations system
UN Women Liaison Office	United Nations system
Antarus SA	Private Sector
Malawi Communications Regulatory Authority	Government
Computer Applications Company (DESOFIT)	NGO and/or Civil Society
OMAEP Organisation Mondiale des Associations pour l'Education Prénatale	NGO and/or Civil Society
OCAPROCE	OCAPROCE International
SCE, Inc	Other
Ministerio de Comunicaciones de Cuba	Cuba
National Communications Authority (Ghana)	National Communications Authority (NCA)
Ministry of Interior	Government
Communications Regulatory Authority Of Namibia	Namibia
Ministry of Posts, Telecommunications and ICT - BIMEE	Bangladesh
Ministerio de Educación de la Republica de Cuba	Government
Majmaah University	Government
National Social Insurance Fund (CNAS)	Government
ARCEP	Niger
Belgian Institute For Postal Services And Telecommunications (BIPT)	Belgium
International Olympic Committee	Other International Organizations
Independent	Univ/Academia

International Olympic Committee (IOC)	Other International Organizations
CONATEL	Haiti
MPTPC	Haiti
The National Computer Network Emergency Response Technical Team/Coordination Center of China	NGO and/or Civil Society
National Internet Emergency Center	NGO and/or Civil Society
Independent Consultant	NGO and/or Civil Society
Ministry of Interior (MOI)	Government
NPO Pangaea	NGO and/or Civil Society
Mitsubishi Chemical Corporation	Private Sector
Third Wave Technologies Limited	Private Sector
Poznan University of Economics, Department of Information Technology	Univ/Academia
Universal Service Provision Fund. NCC	Nigeria
NOVAMEAT TECH SL	Private Sector
Telecommunications Regulatory Authority	Government
Community Grants	Internet Society - ISOC
Google	Private Sector
Autorité de Régulation des Télécommunications et des Postes	Autorité de Régulation des Télécommunications et des Postes (ARTP)
Data Processing Center	Azerbaijan
WTO	Other International Organizations
CITIC Centro Internacional de Investigación Científica en Telecomunicaciones, Tecnologías de la In	Univ/Academia
EUROLINC	Semantis
Open-Root	Semantis
insPoweredBy Sàrl	Private Sector
World Wide Web Foundation	NGO and/or Civil Society
UNU-EGOV / TTU-RND	Other
Cairo University, Academy of Scientific Research and Technology	Academy of Scientific Research & Technology
Nepal Telecommunications Authority (NTA)	Nepal
President	Qatar
Rwanda Utilities Regulatory Authority (RURA)	Rwanda
USAASA	South Africa
Ministry of ICT and Innovation	Rwanda
Ministry of Communication Post and Telecommunication	Djibouti
Ghana Investment Fund for Electronic Communications	Government
African Telecommunications Union	ATU - African Telecommunications Union
Communication and information technology regulatory authority	Government
International Centre for Sport Security Insight	NGO and/or Civil Society
Unión de Informáticos de Cuba	NGO and/or Civil Society
Union of Informatics Professionals of Cuba	NGO and/or Civil Society
Pinar del Río University, Center of Studies of Direction, Local Development, Tourism and Cooperativi	Univ/Academia
National Communication Authority	Somalia
Permanent Mission of the United States	United States
Public Utilities Regulatory Authority (PURA)	Gambia
European Telecommunications Satellite Organization	Other International Organizations

National Information Center	Government
Autorité de Régulation	Government
International Olympic Committee Television and Marketing Services	Other International Organizations
Ministry of Finance	Government
Swiss Telecommunications Association	Private Sector
Ecole Supérieure des Télécommunications - EST	Niger
Universal Service Provision Fund, NCC	Nigeria
Permanent Mission of Bangladesh to the UN and other IOs in Geneva	Bangladesh
VTT Technical Research Centre of Finland	EC Medici Framework
Communications Authority of Kenya	Kenya
Agency for Digital Italy - Presidency of the Council of Ministers	Government
Royal Society for Blind Children	NGO and/or Civil Society
Embassy/Permanent Mission Of The Republic Of Namibia	Namibia
ASIET	ASIET - Asociación Interamericana de Empresas de Telecomunicaciones
ASDF South Asia	ASDF - Association of Scientists, Developers and Faculties
Internet Matters	United Nations system
Mr Aires Marques	Association/Foundation
APNIC - Asia Pacific Network Information Centre	APNIC - Asia Pacific Network Information Centre
Privately SA	Private Sector
NGO: Geneva Internet Platform	NGO and/or Civil Society
Beijing University of Posts and Telecommunications	Univ/Academia
ACCRA DIGITAL CENTRE	Government
Abdel Hadi Abdullah Al-Qahtani & Sons Group	Private Sector
Knowledge Point	Private Sector
Al-kawadir group	Other
Chamber of Commerce and Industry Arar	Other
Group company (Saudi investment/Nabtati/Franchises/Eshraf)	Private Sector
Nabtati Food Agricultural Company	Private Sector
Etisal International Company	Private Sector
Healthy Living Support	Other
Department of Education and Knowledge - Abu Dhabi	United Arab Emirates
Somniacs SA	Private Sector
Communications and Information Technology Regulatory Authority	Government
Ministry Of Communications	India
Ajman Digital Government	United Arab Emirates
Zayed Higher Organization for Humanitarian Care & Special Needs	United Arab Emirates
Ministry of Interior - MOI	Government
Centre For Development Of Telematics, India	India
World Intellectual Property Organization	Other International Organizations
Stiftung Digitale Chancen	NGO and/or Civil Society
World Intellectual Property Organization (WIPO)	United Nations system
Alsanad engineering consultant office	Other
Court of H.H. Sheikh Saif Bin Zayed Al Nahyan	United Arab Emirates
NATIONAL ASSEMBLY	Kenya

WMO - OMM	United Nations system
Tsinghua University	Univ/Academia
Western Sydney University	Univ/Academia
Asia-Pacific Telecommunity	Other International Organizations
Freie Universitaet Berlin	Univ/Academia
United States International University - AFRICA	Univ/Academia
Rhode&Schwarz	Private Sector
MOUNT KENYA UNIVERSITY	Government
Association for Progressive Communications (APC)	NGO and/or Civil Society
Ministry of Environment, Science, Technology and Innovation (MESTI)	Government
Access Partnership	Other
Commonwealth Telecommunications Organization	CTO - Commonwealth Telecommunications Organisation
UAE Space Agency	United Arab Emirates
Technical Services And Consultancy	CTO - Commonwealth Telecommunications Organisation
ViaSat Inc.	Private Sector
PSS-GDTA	Government
Fortinet	Private Sector
Government Of India	India
CECUA	Semantis
AUTORITE DE REGULATION DES TELECOMMUNICATIONS ET DES POSTES	Autorité de Régulation des Télécommunications et des Postes (ARTP)
Government of West Bengal, India	India
DIAMINDS	Private Sector
Nuara Group Sdn Bhd	Private Sector
KALINGA INSTITUTE OF SOCIAL SCIENCES	Univ/Academia
Stirling University	Univ/Academia
Saudi eGovernment Program - Yesser	Government
Ministry of Information Society and Administration	Ministry of Information Society and Administration
WIPO - World Intellectual Property Organization	United Nations system
Permanent Mission of North Macedonia to UN, WTO and other International Organizations in Geneva	Government
Ministry of Information Society and Administration	Government
UN Women	United Nations system
Federal Department of Foreign Affairs Switzerland	Government
Geneva-Tsinghua Initiative & SDG Solution Space	Association/Foundation
Ministry of Economy and Planning	Government
Permanent Mission of the Sultanate of Oman	Oman
Ministry of Human Resources and Emiratization	United Arab Emirates
University of Oxford / NASK / IGF UN MAG Member	United Nations system
Organisation for Economic Co-operation and Development	Other International Organizations
Permanent Mission Of The Republic Of Armenia To Geneva	Ministry of Transport, Communication and Information Technologies
European Broadcasting Union	Association/Foundation
Ministry of Human Resources	Government
World Health Organization (WHO)	United Nations system

GridCure, Inc.	Private Sector
ThinkSport	Association/Foundation
Marc Lee	Other
Information Technology Organization	Iran (Islamic Republic of)
Telecom Disputes Settlement & Appellate Tribunal, Ministry Of Communication	India
Ministry of Transport of the Republic of Latvia	Government
Ethiopian Mission	Government
The Brazilian Network Information Center (NIC.br)	Other
Permanent Mission of Japan	Japan
Eleven Campaign	Other International Organizations
AR Master	United Arab Emirates
PARLIAMENT OF UGANDA	Uganda
EU Delegation to the UN and other international organizations	Other International Organizations
The Permanent Mission Of The State Of Qatar	Qatar
JAMAICA INTELLECTUAL PROPERTY OFFICE	Government
Naif Arab University for Security Science	Univ/Academia
Global Knowledge Research Foundation	Other International Organizations
Microsoft	International Chamber of Commerce
ArboLife	Private Sector
Nina Telles	Other
SPORTS RIGHTS MANAGEMENT LTD	Private Sector
PRIMATURE	Government
Vector Synergy Sp. z o.o.	Private Sector
King's Online; King's College London	Univ/Academia
US Mission	Government
Internet Governance Forum Secretariat	United Nations system
Ministry of Foreign Affairs of Bosnia and Herzegovina	Government
Ministry of Commerce and Investment	Government
UNFPA Benin	United Nations system
UK Mission	United Kingdom
Division of Conference Management	United Nations system
UN-OHRLLS	United Nations system
International Telecommunication Academy	ITA - International Telecommunication Academy
Mission Permanente de l'Etat de Palestine	Government
AI Pioneers , UNOPS and US Council on Competitiveness	Other
The Graduate Institute	Univ/Academia
Empowerment Lab	NGO and/or Civil Society
EBU - European Broadcasting Union	EBU - European Broadcasting Union
American Tower Corporation	Private Sector
AgID	Government
Dept Of International Relations And Cooperarion	South Africa
Telecommunications Authority Suriname (TAS)	Suriname
London Northwest healthcare Trust NHS	Univ/Academia
Agence Nationale du Service Universel de Telecommunications-TIC	Government
ASAMCO COMPANYY	Private Sector

State Security Presidency	Government
Ministère du Développement de l'Economie Numérique et des Postes	Government
ESCAP/APDIM	United Nations system
IPS S.p.A.	EC Medici Framework
Gyana Limited	Private Sector
Ministry of media	Government
Marketing IPS Intelligence	EC Medici Framework
Permanent Mission of China	China
Universidad de La Punta / Ministerio de Ciencia y Tecnología	Government
Government of San Luis	Government
Right To Play	NGO and/or Civil Society
Be You Network	Association/Foundation
Rwanda Information Society Authority (RISA)	Rwanda
Internet Governance Forum MAG / Nigeria Internet Governance Forum	United Nations system
Permanent Misson of Benin	Benin
EPF Ecole d'Ingénieurs	Univ/Academia
IGF Secretariat (UN DESA)	United Nations system
Misión Permanente del Paraguay	Paraguay
iuventum e.V.	NGO and/or Civil Society
Permanent Mission of Italy	Italy
Media Department	EBU - European Broadcasting Union
Brookings Institute	NGO and/or Civil Society
Long Life Joy	Private Sector
International Government Affairs and Asset Management	Intelsat
Ministry of Transportation and Telecommunications	Bahrain
MTN GROUP	Private Sector
Yale University	Univ/Academia
Agence de Régulation des Télécommunications	Cameroon
Infocomm Media Development Authority	Singapore
Knowledge Solutions	International Chamber of Commerce
ORACLE	Private Sector
International Chamber of Commerce (ICC)	Private Sector
Universal Doctor	Univ/Academia
Ministry of Digital Policy, Telecommunications and Media	Greece
MFA Finland	Finland
AGENCE DE REGULATION DES TELECOMMUNICATIONS	Cameroon
Utilities Regulation and Competition Authority (URCA)	Government
Federación Nacional de Sordos de Colombia - FENASCOL	NGO and/or Civil Society
Rudi international	NGO and/or Civil Society
Aga Khan Development Network	NGO and/or Civil Society
University of Geneva and independent consultant	Univ/Academia
UEFA	Association/Foundation
Permanent Mission of Nepal	Nepal
INWES - International Network of Women Engineers & Scientists	NGO and/or Civil Society
The Galway Strategy Group	Private Sector
Aalto University	Univ/Academia

Ministère de L'Economie Numerique et de la Communication	Mali
CAPDA	NGO and/or Civil Society
INDUSTRIA.tech	Private Sector
de al cruz beranek Attorneys at Law Ltd.	Private Sector
Kanzlei Kirchert	Private Sector
German Research Institute for Public Administration	Univ/Academia
Privacy by Blockchain Design	Private Sector
PrivacybyBlockchainDesign.com	Other
LUISS Guido Carli University	Univ/Academia
Ministry Of Post And ICT	Chad
CORE Association	Association/Foundation
Oxford Internet Institute, University of Oxford	Univ/Academia
Council for Scientific and Industrial Research (CSIR)	EC Medici Framework
Olympic Refugee Foundation	Other International Organizations
Norwegian Ministry of Transport and Communications	Government
Israel Tech Policy Institute	Other International Organizations
Permanent Mission of Oman	Oman
Subah Infosolutions Ghana Limited	Private Sector
Permanent Mission of Sri Lanka	Government
Permanent Mission of Sri Lanka to the UN in Geneva	Sri Lanka
GSMA	Association/Foundation
AARP	Association/Foundation
International Center of diplomatic cooperations	Other International Organizations
Kiron Open Higher Education	NGO and/or Civil Society
Permanent Mission Of Tanzania	Tanzania
Muhlenberg College; School for International Training	Univ/Academia
EU Business School	Univ/Academia
Muhlenberg College	Univ/Academia
China Association of Communications Enterprises	Association/Foundation
Fujian Information Communications Industry Association	Association/Foundation
Guangdong Communication Industry Association	Association/Foundation
ICTA	Government
Gapeli	Other
TRANSPORT, POST & TELECOMUNICATIONS	Equatorial Guinea
Ministry of Transport, Posts & Telecommunications	Equatorial Guinea
Costa Rican Chamber of Information and Communication Technologies	Private Sector
Secretariat of the Internet Governance Forum (IGF)	United Nations system
Permanent Mission of Uruguay	Government
Iconem	Private Sector
World Taekwondo	Other International Organizations
ILO	United Nations system
University of Applied Sciences, Western Switzerland (HEPIA)	EC Medici Framework
Château de Versailles	NGO and/or Civil Society
Right Here / Right Now Productions	Other
Swiss Engineering	Other
Croatian Mission to thr UN	Government

The American University in Cairo	Univ/Academia
GAISF	NGO and/or Civil Society
Verisign Inc.	Private Sector
GTI	Univ/Academia
Nepal Telecommunications Authority	Government
Centre for Sport and Human Rights	NGO and/or Civil Society
Presidency of the Republic of Turkey Directorate of Communications	Government
LEDsafari SA	Private Sector
Communication And Information Sector UNESCO	UNESCO - United Nations Educational, Scientific and Cultural Organization
UNITED VILLAGES	NGO and/or Civil Society
Hôpitaux Universitaires de Genève (HUG)	Univ/Academia
Department of Commercial Law, Faculty of Law, University of Geneva	Univ/Academia
Graduate Institute	Univ/Academia
Ministry of Economy, Finance and Planning	Government
WHO - ONUSIDA	United Nations system
Communications Regulatory Authority Qatar President Office	Qatar
Permanent Mission the US	Government
Spell languages	Private Sector
Permanent Mission of US	Government
NGO Committee On Ageing	International Longevity Centre Global Alliance and UN NGO Committee on Ageing
International Maritime Organization (IOM)	IMO - International Maritime Organization
Cambridge university	NGO and/or Civil Society
PM of the US	Government
United Nations Technology Bank for LDCs	United Nations system
Instituto Nupef	NGO and/or Civil Society
ZENData - Cyber-sécurité	Private Sector
Permanent Mission of Bahrain	Bahrain
Inmarsat	Private Sector
Intervale	Private Sector
Tanzania Communications Regulatory Authority	Government
Bangladesh NGOs Network for Radio & Communication (BNNRC)	NGO and/or Civil Society
Atlantic Arts Association	NGO and/or Civil Society
quantum integrity S.A.	Private Sector
UNOPS Asia Region	United Nations system
The Defeat-NCD Partnership	United Nations system
The Defeat-NCD Partnership, UNOPS	United Nations system
International Electrotechnical Commission (IEC)	NGO and/or Civil Society
orange business services	Private Sector
Mission of Estonia	Government
International Law and Technology Interoperability Association	NGO and/or Civil Society
Independant consultant (former WMO)	Other
Kindom Of Bahrain	Bahrain
AfICTA	Association/Foundation
Hellenic Telecommunications and Post Commission (EETT)	Government

Ministry of Post ,Telecommunications ,Technologies and digitization	Government
Regulatory Agency for Electronic Communications and Postal Services	Other
World Archery Federation	NGO and/or Civil Society
RATEL	Other
Faculty of Law	Université de Genève
Université de Genève	Univ/Academia
Ministry of Foreign Affairs and Trade	Hungary
Permanent Mission of Bolivia	Government
GAUSO "MFC"	NGO and/or Civil Society
COLEGIO DE INGENIEROS MECANICOS Y ELECTRICISTAS A.C.	NGO and/or Civil Society
Ecole Polytechnique Federal de Lausanne	Univ/Academia
Permanent Mission of Mongolia	Mongolia
European Union Delegation to the UN in Geneva	Other International Organizations
GeoTechVision	Private Sector
Federal Authority For Nuclear Regulation	United Arab Emirates
Department Of Enterprises And Institutions	ITC - International Trade Centre
Univeristy of Geneva	Univ/Academia
Permanent Mission of the Republic of the Union of Myanmar	Other International Organizations
Permanent Mission of the Republic of Kazakhstan	Kazakhstan
Mission permanente du Burundi	Burundi
Permament Mission of Uzbekistan	Uzbekistan
Permanent Mission of Kuwait	Kuwait
Permanent Mission of Swaziland	Eswatini
Permanent Mission of Swaziland/Eswatini	Eswatini
UNICEF	United Nations system
Center for SocoEcoNomic Development	NGO and/or Civil Society
The Future Society	Univ/Academia
Permanent Mission of South Sudan	South Sudan
MLi Group	Private Sector
IBE-UNESCO	United Nations system
IPS Institute of Planetary Synthesis	NGO and/or Civil Society
Permanent Mission of Costa Rica	Costa Rica
SCMD	NGO and/or Civil Society
Universitat Politècnica de Catalunya	Other
Université de Genève InZone	Univ/Academia
Federal Ministry for Economic Affairs and Energy	Government
Redes por la Diversidad, Equidad y Sustentabilidad A.C.	NGO and/or Civil Society
Cnas	Government
International Labour Organization (ILO)	ILO - International Labour Organization
Food and Agriculture Organization (FAO)	United Nations system
Internet Society France	NGO and/or Civil Society
UNHabitat	United Nations system
ICON NGO	NGO and/or Civil Society
Symantec Corporation	Private Sector
IGF Secretariat	United Nations system
Ministry of Internal Affairs and Communications	Japan

Women power international foundation	NGO and/or Civil Society
Apruda App Private limited	Other
Federal Office of Communications (OFCOM)	Switzerland
Graduate Institute, Geneva	Univ/Academia
Information Age Consulting	Private Sector
Amplio Network	NGO and/or Civil Society
International Labour Organization	United Nations system
National Regulatory Agency for Electronic Communications and IT (ANRCETI)	National Regulatory Agency for Electronic Communications and Information Technology (ANRCETI)
Ministry of Economic Development - ISCTI	Italy
Hospital Universitário Julio Muller	Univ/Academia
Committee on IT and Communications of St. Petersburg	Government
Fundação Universidade Federal de Mato Grosso	Univ/Academia
Fundación Cibervoluntarios	NGO and/or Civil Society
Paniamor Foundation	NGO and/or Civil Society
Wife of Mr Muntean	Other
Ministry of Economic Development of the Russian Federation	Russian Federation
The Central Bank of the Russian Federation	Government
St. Petersburg State Unitary Enterprise "St. Petersburg Information and Analytical Centre"	Government
Halaqah Media	Private Sector
Gedaref Digity City Org. GDCO Sudan	Univ/Academia
United Nations Internet Governance Forum	United Nations system
Connected Women	Private Sector
Université de Genève-InZone	Univ/Academia
Research ICT Africa University of Cape Town	Univ/Academia
Ministry of Labor, Employment and Social Security	Government
National Media And Infocommunications Authority	Hungary
UNIDO	United Nations system
Permanent Mission of Israel	Israel
NCA National cyber security authority	Government
Horyou	NGO and/or Civil Society
FerMUN	NGO and/or Civil Society
Mission Permanente du Gabon à Genève	Government
Autorité De Régulation Des Communications Electroniques Et De La Poste Postes Et	Benin
Huawei Technologies Ltd	Private Sector
Ministry of Environment, Science, Technology & Innovation	Government
Permanent Mission of the Republic of Namibia	Namibia
Permanent Mission of Brunei Darussalam	Brunei Darussalam
IGF Secretariat/UNDESA	United Nations system
Permanent Mission of the Kingdom of Morocco	Government
ANACOM	Portugal
Permanent Mission of the Republic of Korea	Korea (Republic of)
International Policy Department/Ministry of Digital Affairs	Poland
International Emissions Trading Association	NGO and/or Civil Society

Embassy and Permanent Mission of the Republic of Mauritius	Government
Women in Tech Africa	NGO and/or Civil Society
Women in Tech Africa German Chapter	NGO and/or Civil Society
International Trade Centre	United Nations system
Organisation of Eastern Caribbean States	Other International Organizations
Department of technical education and skill development	Government
Organisation of Eastern Caribbean States	Other International Organizations
University of Library Studies and Information Technologies (ULSIT)	Univ/Academia
Permanent Mission of Malta	Malta
Missions Publiques	NGO and/or Civil Society
MISSIONS PUBLIQUES SARL	NGO and/or Civil Society
Permanent Mission of Guatemala	Guatemala
The FutureWork Institute	Private Sector
Two Monkeys Technology	NGO and/or Civil Society
Estonian Internet Foundation	Government
National Telecommunications and Information Administration	Government
Research ICT Africa	NGO and/or Civil Society
Permanent Mission of the Philippines	Government
General Investment Authority	Government
Saudi Swiss Business Council	Private Sector
SEA Ventures	Private Sector
MACRA	Malawi
MINISTRY OF FOREIGN AFFAIRS OF PARAGUAY	Government
Nomads Foundation	Association/Foundation
Internet Service Providers Association of India (ISPAI)	Private Sector
Zambia Police Service	Government
IGF-MAG	Private Sector
Womenpowered Digital	Private Sector
The Rockefeller Foundation	Association/Foundation
DotAsia Organisation	Private Sector
Global Voices	NGO and/or Civil Society
Mercari, Inc.	Private Sector
Wavenet Limited	Private Sector
Permanent Mission of Zambia	Zambia
Sigfox Foundation	Association/Foundation
Permanent Mission of Portugal	Portugal
EastWest Institute	NGO and/or Civil Society
CiV	Private Sector
Permanent Mission of the Democratic People's Republic of Korea	Korea (Democratic People's Republic of)
Universidad politecnica de Madrid	Univ/Academia
Telecommunications and Post Regulatory Authority (TPRA)	Government
Digital Poland Project Centre	Poland
Department for Implementing Broadband Projects/Digital Poland Project Centre	Poland
Permanent Mission of the Syrian Arab Republic	Syrian Arab Republic
Ministère de la culture, du tourisme et des loisirs	Government

Permanent Mission of the United Arab Emirates	United Arab Emirates
Delegation of the EU	Other International Organizations
International Telecommunication Union (ITU)	2. General Secretariat
Advintive	Private Sector
Permanent Mission of Lybia	Libya
Permanent Mission of Cuba	Cuba
Misión Permanente De Cuba En Ginebra	Cuba
Ministry of Economic Affairs and Climate Policy	Government
Philippine Mission to the United Nations and Other International Organizations in Geneva	Government
360Medlink Inc. Canada	Private Sector
Permanent Mission of Sweden	Sweden
Swiss Federal Department of Foreign Affairs	Government
Permanent Mission of Mexico	Mexico
Permanent Mission of Iran	Iran (Islamic Republic of)
c/o World VR Forum	Private Sector
GreenGoWeb	Private Sector
Son of Mr Lee - ID 1138219	Univ/Academia
ARTCI	Autorité de Régulation des Télécommunications/TIC de Côte d'Ivoire (ARTCI)
Regulatory Authority for Electronic Communication and Post	Government
University of Genva	Univ/Academia
Pierre Mirlesse Consulting	Private Sector
The Estonian Patent Office	Government
NeuroPSY	Other
EmpirEqual and Women of Color in Blockchain	Private Sector
Head	CECIDE - Centre du Commerce International pour le Développement
COFCO INTERNATIONAL	Private Sector
HAPSc	NGO and/or Civil Society
Fondation généreuse développement (FGD)	Association/Foundation
AEHRF-London Chapter	Asian-Eurasian Human Rights Forum
Symantec	Private Sector
Happy Booth	Other
University of Pau	Univ/Academia
The Greystone Group, Inc.	Private Sector
CUBARTE	Government
Sophia Reyes Mury	Other
IOM International Organization for Migration	Other International Organizations
Norwegian Communication Authority	Norway
mPower Social Enterprises Ltd	Private Sector
Permanent Mission of the Czech Republic	Czech Republic
Autorité de régulation des communications électroniques et des postes	Government
Sorbonne University	Univ/Academia
Digital Impact Alliance (DIAL)	Private Sector
Mission permanente du Canada	Canada

Ministry of Public Administration (MoPA)	Government
Sudacad	Sudatel Telecom Group
AEHRF-Geneva Chapter	Asian-Eurasian Human Rights Forum
Technology Policy	GSM Association
SAMENA Telecommunications Council	Private Sector
East Charity Foundation for Development	NGO and/or Civil Society
Council of Ministers	Government
Communications Regulatory Commission of Mongolia	Government
Permanent Mission of Qatar	Qatar
EPFL Extension School	Univ/Academia
Slavefreetrade	NGO and/or Civil Society
Permanent Mission of Cameroon	Cameroon
Université Populaire du Canton de Genève	Univ/Academia
Dept. of of Communication and Media Research	Univ/Academia
Berney Associés	Private Sector
National Telecommunication Regulatory Authority	Government
AGSB	Univ/Academia
ITU	United Nations system
Oxford Information Labs	Private Sector
Oxford Information Labs Limited	Private Sector
Sea Foam Media & Technology	Private Sector
1981 - ETHix	Private Sector
Jugodata	Private Sector
Ministry of Presidency and Administrative Modernization	Government
planet network international	Private Sector
Malawi Communications regulatory Authority (MACRA)	Government
AT&T, Inc	AT&T
IOM	United Nations system
ACSIS-SCASI	NGO and/or Civil Society
Norwegian Communications Authority	Norway
European Commisison	Other International Organizations
Ceapat, Imsero	Government
Ghana Permanent Mission	Ghana
The VETRI Foundation	NGO and/or Civil Society
University of Twente	United Nations system
CEABAD (Centro de Estudios Avanzados en Banda Ancha para el Desarrollo)	Other International Organizations
Virtual Activism	NGO and/or Civil Society
IUST - Iran University Of Science And Technology	IUST - Iran University of Science and Technology
Knowhow Consulting	IUST - Iran University of Science and Technology
Internet Governance Forum Support Association (IGFSA)	Association/Foundation
Saudi e-Government program (Yesser)	Government
Etimad	Government
AIESEC in Switzerland	Association/Foundation
Permanent Mission of Ethiopia	Government
Women@TheTable	NGO and/or Civil Society

Consultere.io	Private Sector
Microsoft Deutschland GmbH	Private Sector
Soroptimist international	NGO and/or Civil Society
Office of the Deputy Prime Minister of the Slovak Republic for Investments and Informatization	Slovakia
Steering Committee	Just Net Coalition
Orange	Private Sector
PBG Consulting	Private Sector
LIMSI-CNRS	Univ/Academia
Techlabs Switzerland	Private Sector
The English Media Network GmbH / TechLabs	Private Sector
Six Degrees Labs Ltd	Private Sector
Sciences PO	Univ/Academia
Presidency of State Security	Government
UNU EGOV	United Nations system
TechLabs	Private Sector
ICT MINISTRY	Senegal
Ministry of Communication, Telecommunications, Posts and Digital Economy	Senegal
Terre Des Hommes	NGO and/or Civil Society
Permenant Mission of Rwanda	Rwanda
AIESEC	Association/Foundation
WBCSD	Private Sector
Stockholm University	Univ/Academia
SPIDER / Stockholm University	Univ/Academia
Zayed Higher Organization For People Of Determination	United Arab Emirates
City Waste Recycling Ltd	Private Sector
Nokia	Private Sector
Pacific Community	Other International Organizations
UNIDIR	United Nations system
FIFEL - International Foundaiton for films on energy - CEN EPFL	Univ/Academia
OECD	Other International Organizations
World Economic Forum	NGO and/or Civil Society
Qualcomm International Inc	Private Sector
TaC-Together against Cybercrime International	NGO and/or Civil Society
Saami Parliament	Other
UNU-EGOV	United Nations system
Calmar Corps	Private Sector
Equals Global Partnership - ITU	United Nations system
ECPAT International	NGO and/or Civil Society
Secretariat oif the Basel, Rotterdam and Stockholm Conventions, UNEP	United Nations system
UNEP/BRS Secretariat	Other International Organizations
Be Customer Smart Sarl	Private Sector
Kolff.net	Other
International Trade Center	United Nations system
Secretariat of the Basel, Rotterdam and Stockholm Conventions (UNEP)	United Nations system
iSpace Foundation	NGO and/or Civil Society

United Nations Office in Geneva	United Nations system
ML Consult	Other
Geneva Centre for Security Policy	Association/Foundation
Massai Experience	NGO and/or Civil Society
UPEACE	Other International Organizations
Ruspromo Foundation	NGO and/or Civil Society
ETH Zürich	Univ/Academia
ETH Zürich EcoVision Lab	Univ/Academia
Permanent Mission of Lebanon	Lebanon
Banque Mondiale des Bonheurs	Association/Foundation
United Nations Institute for Disarmament Research	United Nations system
United Nations Headquarters	United Nations system
WEF	NGO and/or Civil Society
Campus Biotech	Univ/Academia
Vodafone Group	Private Sector
Bundesnetzagentur	Government
SAS	Private Sector
Saudi Telecom Company	Private Sector
Cisco Systems	Private Sector
Immersion4	Immersion4
Bounties Network	Private Sector
AQAL AG, AQAL Foundation And International Club Of Rome	Globethics
Celo	Private Sector
TechLabs (The English Media Network GmbH)	Private Sector
UNHCR	United Nations system
PWC	Other
Nokia Bell NV	Private Sector
Contact Motion	Other
Geneva Health Forum	Univ/Academia
Breathing Games	Other International Organizations
e-Governance Academy	NGO and/or Civil Society
United Nations Development Programme (UNDP)	United Nations system
Geneva English School	Geneva English School
Groupement romand de l'Informatique (GRI)	NGO and/or Civil Society
CEPIS	NGO and/or Civil Society
Latvian Internet Association	NGO and/or Civil Society
ICT4D.at - The Austrian Network for Information and Communication Technologies for Development	NGO and/or Civil Society
www.seedsgroupe.com	NGO and/or Civil Society
École De Pregny-Fontaine	École de Pregny-Fontaine
EMLSRI (Evolution of Mind Life Society Research Institute)	NGO and/or Civil Society
University of Nottingham, Horizon digital economy research institute	Univ/Academia
Maarij foundation for peace and dev.	NGO and/or Civil Society
University of Lausanne	Univ/Academia
Permanent Mission of the Solomon Islands	Solomon Islands
Middle School Ecolint	International School Geneva

Ecolint	International School Geneva
Middle School	International School Geneva
Dybaw Advisory	Other
International School Of Lausanne	International School Lausanne
Primary: International School of Lausanne	International School Lausanne
British School Geneva	British School Geneva
British School	British School Geneva
Lemania-Verbier International School	Lemania Verbier International School
Ipsos MORI	Private Sector
Lemania Verbier International School	Lemania Verbier International School
HPE	Other
Global Forum for Media Development	NGO and/or Civil Society
Habitat Association	NGO and/or Civil Society
History	Institute Florimont
Reporters Without Borders	NGO and/or Civil Society
Science	Institute Florimont
Kumon Leysin Academy of Switzerland	Kumon Leysin Academy of Switzerland
LLH. communication - Le Magazine Monde Économique	Other
Mobile For Development	GSM Association
Swiss cybersecurity Community	Association/Foundation
Derechos Digitales	NGO and/or Civil Society
Ecole Topalian	Armenian Sunday School "Ecole Topalian"
Microsoft Switzerland	Private Sector
Terre des hommes foundation	NGO and/or Civil Society
Mobile SWIFT Company	Private Sector
Vice Presidency for Science and Technology	Iran (Islamic Republic of)
Geneva Business School	Univ/Academia
kft consult	Private Sector
Ambrosus	Private Sector
UNRISD	United Nations system
Geneva Chamber of Commerce	Private Sector
International Secure Electronic Transactions Organisation - OISTE	NGO and/or Civil Society
EVG-Zentrum GmbH	Other
EVG-Zentrum	Private Sector
Crime Stoppers International	Association/Foundation
School of Economic Warfare	Other
Ministry of Science and ICT	Korea (Republic of)
Geneva School Of Economics And Management	Université de Genève
United Nations Office in Geneva UNOG	United Nations system
University of Bern	Univ/Academia
BroadLights	NGO and/or Civil Society
Itk AVtobvS SÀRL	Private Sector
ITC	United Nations system
Permanent Mission of Liberia	Liberia
University of Oxford	Univ/Academia
BT Group	Private Sector

Organisation Internationale pour la Sécurité des Transactions Electroniques	NGO and/or Civil Society
UNIDO Liaison Office in Geneva	United Nations system
Novartis Foundation	Association/Foundation
EPFL Tech4Impact	Univ/Academia
Ezassi, Inc	Private Sector
Ezassi	Private Sector
Hewlett Packard Enterprise	Private Sector
CZ.NIC, z.s.p.o.	Association/Foundation
Geneva Science-Policy Interface (GSPI)	Univ/Academia
WanderSafe	NGO and/or Civil Society
UNITAR/UNOSAT	United Nations system
Jozu For Women	Private Sector
Swiss Cyber Security	NGO and/or Civil Society
German Rectors' Conference (HRK)	IUST - Iran University of Science and Technology
S-Gate Sarl	Private Sector
Medair	NGO and/or Civil Society
acsis	NGO and/or Civil Society
DCAF	NGO and/or Civil Society
IFRC	Other International Organizations
Espace Afrique International	NGO and/or Civil Society
CCC company , part of STC Group in Saudi Arabia	Private Sector
Blokchchain for Humanity (b4H)	Association/Foundation
Xiaomi Inc.	Private Sector
Permanent Mission Of The Czech Republic Geneva	Czech Republic
Department For International Trade	United Kingdom
EBU	Other International Organizations
OMPI	United Nations system
EASY GLOBAL MARKET	Private Sector
1992	United Nations system
Portuguese Embassy	Government
CSPOC	NGO and/or Civil Society
UNICC	UNICC - International Computing Centre
Xiaomi	Private Sector
King & Spalding LLP	Private Sector
Geneva Science Policy Interface	Univ/Academia
NetHood	Association/Foundation
Airbus DS	Private Sector
Taekwondo team	Taekwondo team
TAEKWONDO	Taekwondo team
Global Cyber Security Capacity Centre	Univ/Academia
ICC	United Nations system
CITIES FOUNDATION	NGO and/or Civil Society
CAT / Caterpillar	Private Sector
Terre des hommes Lausanne	NGO and/or Civil Society
United Nations Institute for Training and Research	United Nations system
Trustless Computing Association	Association/Foundation

High-Tech Bridge SA	Private Sector
International Labor Organization	Iran (Islamic Republic of)
International Road Federation	NGO and/or Civil Society
International Plant Protection Convention	United Nations system
KITRO	Other
OCAPROCE INTERNATIONAL	NGO and/or Civil Society
Cité des Métiers/Office d'orientation pour la formation professionnelle et continue (DIP)	Government
National Post Company	Iran (Islamic Republic of)
Manaber Ann Co.	Other
University of Bocconi	Univ/Academia
AIESEC Switzerland	NGO and/or Civil Society
Arpuda App private Limited	Private Sector
GENEUS	Other
Porini Foundation	Association/Foundation
AIESEC in Fribourg	Association/Foundation
Institut International de l'Ecologie Industrielle et de l'Industrie verte	NGO and/or Civil Society
Oxford Brookes University	Univ/Academia
foraus -Forum Aussenpolitik	NGO and/or Civil Society
foraus- Forum Aussenpolitik	Association/Foundation
Fem.Friendly	Univ/Academia
AIESEC in Geneva	Association/Foundation
University of Konstanz	Univ/Academia
foraus - Forum Aussenpolitik	NGO and/or Civil Society
EMOTA	Association/Foundation
AIESEC in Lausanne	Other International Organizations
Tim Hetherington Trust	Other International Organizations
Tigarti	Private Sector
State Secretariat for Education, Research and Innovation SERI	Government
Foxstone	Private Sector
IHEID	Univ/Academia
International Organisation for Migration	Other
Fide group	Private Sector
Techcode	Private Sector
JP Morgan	Private Sector
Slave free trade	Other International Organizations
Presidence of State Security - GDTA	Government
PartiPirate International	NGO and/or Civil Society
Geneva Interdisciplinary Centre for Economics and Law	Univ/Academia
Agropur	Private Sector
Graduate Institute of Geneva	Univ/Academia
Lycee International de Saint Genis-Pouilly	Other
Ministry of Digital Development, Communications and Mass Media of the Russian Federation (NIIR)	Russian Federation
Permanent Mission of Cyprus	Cyprus
LIRNEasia	LIRNEasia

Action pour l'Education et la Promotion de la Femme	NGO and/or Civil Society
Make Mothers Matter (MMM)	Make Mothers Matter (MMM)
Child Helpline	Sematanzania
Hertie School of Governance	Univ/Academia
Evolving Consulting	Private Sector
Ministère de la Jeunesse, des Postes et des Technologies de l'Information	Burundi
Global Repository of Internet Studies GRIS	NGO and/or Civil Society
Permanent Mission of Austria	Austria
mCADE Ilc	Private Sector
Action Aides Aux Familles Demunies	NGO and/or Civil Society
International Cooperation Division	Korea (Republic of)
International Trademark Association (INTA)	Association/Foundation
Presidential Administration of the Republic of Azerbaijan	Azerbaijan
GICHHD, Maison de la paix	NGO and/or Civil Society
World Diplomacy	Other
Pan African Institute for Entrepreneurship and Community Development	Univ/Academia
Institute Electronics and Telecommunication	Univ/Academia
Russian State University for the Humanities	Univ/Academia
TRUST-IT SERVICES	Private Sector
APS PFC - Person Family Community	Private Sector
Technovation	NGO and/or Civil Society
Femme et Environnement "BG"	NGO and/or Civil Society
CEFEPD	NGO and/or Civil Society
National Fisheries Solidarity Movement	NGO and/or Civil Society
Women Economic and Leadership Transformation Initiative(WELTI)	NGO and/or Civil Society
Aastha Engineering Solution Pvt.ltd.	Private Sector
ISOC Cameroon	NGO and/or Civil Society
BWDA	NGO and/or Civil Society
Ministry of Communications of South Africa	South Africa
AL AWAEL, Education and Learning	Univ/Academia
Medclirik	Private Sector
BRIDGE Foundation	Association/Foundation
International Network for the Prevention of Elder Abuse, INPEA	NGO and/or Civil Society
Dataforest	Other
Child Online Africa	NGO and/or Civil Society
Muzit berhane	Association/Foundation
Tech_Elite Kenya	Other International Organizations
Action Secours Ambulance (ASA)	NGO and/or Civil Society
Bot Bán Hàng	Private Sector
Permanent Mission of Mauritius	Mauritius
MindAfrica Leadership Initiative	NGO and/or Civil Society
Ministry of Information and Communication Technology	Government
Planning and Development Department, Government of Punjab	Government
Permanent Mission of Finland in Geneva	Finland
Girls Speak Out (The Usawa Institute)	NGO and/or Civil Society
Ministry of ICT and National Guidance	Uganda

Central City Public Library V. Mayakovsky	Government
World Vision International	NGO and/or Civil Society
Musabe Foundation	NGO and/or Civil Society
CHILD DEVELOPMENT FOUNDATION	NGO and/or Civil Society
Permanent Mission of the Lao PDR	Lao
Viet Nam Internet Network Information Center (VNNIC)	Government
ICRC	Other International Organizations
Consortium of Internet and Society	Univ/Academia
Vector Synergy Ltd	Private Sector
Directorate of school education India	Government
Drone Creativo	Private Sector
HP Inc.	Private Sector
Ministry of communications and information technology	Government
Government of St. Petersburg	Government
Autorité Malienne de Régulation des telecommunications / TICet des postes	Government
Office of the United Nations High Commissioner for Human Rights (OHCHR)	United Nations system
Telecommunication Regulatory Commission	Sri Lanka
Script.Media	Private Sector
Communications	ICANN
Agence Nationale de Réglementation des Télécommunications	Government
NATIONAL COMMUNICATIONS SECRETARIAT	Kenya
FDFA / United Nations and international organizations Division	Government
ECOLE NATIONALE SUPERIEURE DES POSTES, TELECOMMUNICATIONS ET TIC	Cameroon
Defacto.4	Association/Foundation
MINISTRY OF INFORMATION, COMMUNICATIONS AND TECHNOLOGY	Kenya
Ministry for Innovation and Technology	Hungary
Permanent Mission of Albania	Albania
UNITED NATIONS OFFICE AT GENEVA	United Nations system
Ministerio de Ciencia, Tecnología y Medio Ambiente	Government
Authority Of Electronic Communication And Postal Regulatory	Chad
Agency Of ICT Development	Chad
Autorité de Régulation des Postes et Télécommunications	Government
Aga Khan Agency for Microfinance (AKAM)	Other International Organizations
Zendata	Other
Permanent Mission of Angola	Angola
United Nations Development Programme	United Nations system
Unions Chambre du commerce	Private Sector
Permanent Representation Of Turkey To UNOG	Turkey
United Village	NGO and/or Civil Society
Miss	NGO and/or Civil Society
State of Kuwait	Government
World Intellectual Property Organisation	United Nations system
United Nations International Computing Centre	United Nations system
University of Lucerne	Univ/Academia
Geneva International Center for Humanitarian Demining	Other International Organizations

Elfi	Other
London School of Economics	Univ/Academia
Jagiellonian University	Univ/Academia
UNI Global Union	Iran (Islamic Republic of)
Brown University	Other
Government of Catalonia	Other
Permanent Mission of Commonwealth Small States	Government
AIESEC Lausanne	Association/Foundation
Delegation of the government of Catalonia in Switzerland	Government
IDB GROUP - IDB LAB	Other International Organizations
Permanent Mission of Uganda	Uganda
UNECE	United Nations system
Access Now	NGO and/or Civil Society
AIESEC in Switzerland	NGO and/or Civil Society
Geneva-Tsinghua Initiative	NGO and/or Civil Society
ilem group	NGO and/or Civil Society
Africa Open Data and Internet Research Foundation	NGO and/or Civil Society
Ministry of Electronics & Information Technology	MEITY - Ministry of Electronics and Information Technology
National Society of Black Engineers Ghana Secretariat	NGO and/or Civil Society
Electricité d'Haiti	Government
ANRTIC	Comoros
ARCTEL-CPLP	ARCTEL - CPLP
Outreach Social Care Project	NGO and/or Civil Society
State Agency for e-Governance of Ukraine	Government
UN-ESCWA	United Nations system
Ministry of Information, Communications and Information Technology	Government
Shanghai Jiao Tong University	Univ/Academia
International Center for Promotion of Enterprises (ICPE)	ICPE - International Center for Promotion of Enterprises
Sematanzania	Sematanzania
COMMISSION NATIONALE POUR L'UNESCO	Government
Earth Focus Foundation	NGO and/or Civil Society
ODILO SL	Private Sector
Liberia Information Technology Student Union	NGO and/or Civil Society
Action Lab for Development	NGO and/or Civil Society
National Disaster Management Agency	Government
Leadership Watch	NGO and/or Civil Society
HOUSE OF AFRICA	NGO and/or Civil Society
Action Citoyenne pour l'Information et l'Education au Developpement Durable	NGO and/or Civil Society
Association des Jeunes des Nations Unies du Cameroun (AJNUC)	NGO and/or Civil Society
SAP	Private Sector
benocars technology ltd	Private Sector
United Nations Economic Commission for Africa (UNECA)	United Nations system
Aligarh Muslim University	Univ/Academia
Protect the Children, Inc	NGO and/or Civil Society

SIDN	SIDN
IAAF	Association/Foundation
The Brocas Group	Private Sector
Afireregister.eu	Private Sector
innovecteur	Private Sector
Innovation of communicating and cooperative mobile Research Lab	Univ/Academia
Standing Commissioner	Korea (Republic of)
Radio And Television Policy Division	Korea (Republic of)
General Affairs Division	Korea (Republic of)
Regional Media Policy Division	Korea (Republic of)
ANSI	Niger
Ministry of Telecom & IT	State of Palestine
Association Gabonaise des utilisateurs de linux et des logiciels libres	NGO and/or Civil Society
International Bridges to Justice	NGO and/or Civil Society
ACSIS Cameroon	NGO and/or Civil Society
SWGfL	NGO and/or Civil Society
Innovation and Entrepreneurship Center of Minya university	Private Sector
Pakistan Telecommunication Authority	Government
European Central Bank	Other International Organizations
ANSUT	Government
Agence de l'informatique de l'Etat	Government
U.S. Department Of State	United States
Fundació guifi.net	NGO and/or Civil Society
Africa Centre for Citizens Orientation	NGO and/or Civil Society
My Drop in the Oceans	NGO and/or Civil Society
California State University, Long Beach	Univ/Academia
ICES Foundation	NGO and/or Civil Society
EFF	Association/Foundation
Springer	Univ/Academia
African Journalists forum	Association/Foundation
Ministry of Foreign Affairs - Brazil	Government
science4data	Private Sector
Al-Azhar University	Government
University of Lyon	Univ/Academia
IHRC	Association/Foundation
Mico University College	Other
Pakistan Community Peace Foundation	NGO and/or Civil Society
Jonction	NGO and/or Civil Society
CineSoft	Government
Australian National University	Univ/Academia
BGD e-GOV CIRT	Government
Bangladesh Institute of ICT in Development (BIID)	Private Sector
Conference of NGOs in Consultative relationship with the United Nations (CoNGO)	NGO and/or Civil Society
Open Fiber - European Affairs	Private Sector
University of Leon	Univ/Academia

Permanent Delegation of the African, Caribbean and Pacific Group of States	Other
Waterpreneurs	Private Sector
Organismos Técnicos	Spain
HP Inc	HP Inc.
Dade gostar e Asr e Novin (HIWEB)	Government
GODAN - Global Open Data for Agriculture & Nutrition	Private Sector
International Trade Council - Pakistan Region	Other International Organizations
groupe actumedia	Private Sector
E-Government Center	Lao
Lao National Internet Center	Lao
Multimedia University (MMU)	Univ/Academia
Ministry of Commerce, Industry and Tourism	Government
United Kingdom Research and Innovation	Other
CentralNic Group PLC	Private Sector
Permanent Mission of Brazil to the World Trade Organization	Brazil
SoftYoung Info-Tech Co., Ltd	Private Sector
Paltel Group Company	Private Sector
Hebei Information and Communication Industry Association	Association/Foundation
Enterkey Solutions Ltd	Private Sector
Ministry of IT & Telecom	Pakistan
Liaoning Information Communication Industry Association	Association/Foundation
African Commission of Health Promoters and Human Rights (CAPSDH)	NGO and/or Civil Society
Heilongjiang Association of Communication Enterprises	Association/Foundation
Rural Area Development Programme, RADP	NGO and/or Civil Society
Ministry of Communications & Information Technology	Samoa
Information and Communication Technology Association of Zimbabwe	NGO and/or Civil Society
Ministry of Digital Infrastructure and Information Technology Sri Lanka	Sri Lanka
ADETIC Agence de developpement des TIC	Government
Permanent Mission Of Belarus To The UN In Geneva	Belarus
ICT Volunteers Bojonegoro	NGO and/or Civil Society
iConnect101	Private Sector
AL AWAEL. Education and Learning	Univ/Academia
Permanent Mission of Belarus	Belarus
Islamic Sciences and Culture Academy	Univ/Academia
Union des Comores/Comores Telecom	Government
nationale Directorate of meteorology	Government
Give	Private Sector
Bin Mansoor Plastic Factory	Private Sector
Denominator Group	Association/Foundation
United For The Protection Of Human Rights Advocacy Network-Sierra Leone	NGO and/or Civil Society
Autistic Minority International	NGO and/or Civil Society
Association nigérienne pour l'émergence des TIC	NGO and/or Civil Society
Green Invest Africa	Private Sector
Fondazione Bruno Kessler (FBK)	Other International Organizations
FAO Somalia, SWALIM Project	Other International Organizations
Iran Youth NGO/ Swansea University	Univ/Academia

Government of West Bengal, Backward Classes Welfare Department	Government
Internet Society Gambia Chapter	Other International Organizations
Iran Youth NGO	NGO and/or Civil Society
St. Petersburg Information and Analytical Centre" (SPb IAC)	Government
Microsoft Corporation	Private Sector
Media Initiatives for Social Change Organization	NGO and/or Civil Society
AMADER GRAM - BFES-Bangladesh Friendship Education Society	Bangladesh
Musabe Foundation	NGO and/or Civil Society
IEARN ALBANIA	NGO and/or Civil Society
Mission permanente de la France	Government
General Authority for Communications & Informatics	Libya
Relawan TIK	NGO and/or Civil Society
Centre for Youth and Literacy Development	NGO and/or Civil Society
Executive Education	Amber Management Sarl
Giving Life Nature Volunteer	NGO and/or Civil Society
Beijing Xiaomi Mobile Software Co.,Ltd	Private Sector
Ministry of Communications and Multimedia Malaysia	Government
Arianous ICTD	Arianous ICTD
GEOSYS	Private Sector
TEMA CMAI	Association/Foundation
National authority for digital certification	Government
Gateway Innovations - Ghana Cyber City	Private Sector
Central China Normal University	Univ/Academia
International Telecommunications Satellite Organization (ITSO)	Other International Organizations
National Advanced School of Posts, Telecommunications and ICT	Government
World Bank Group	United Nations system
Sela Technologies	Private Sector
Dalit Welfare Association (DWA)	NGO and/or Civil Society
Baze University	Univ/Academia
National authority for remote sensing and space science	Government
Sleekchip Technologies Ltd.	Private Sector
Youths UNESCO Club	NGO and/or Civil Society
Literary Academy for Dalit of Nepal (LAD-Nepal)	NGO and/or Civil Society
Ministry of Technology, Communication and Innovation	Mauritius
Ministry of IT & Telecom - IGNITE - National Technology Fund	Government
Prefeitura Municipal de Sorriso	Government
Optic Technology	NGO and/or Civil Society
Computadores para Educar	Government
Department of International Relations and Cooperation	Government
Swedish Post and Telecom Authority	Government
Police nationale congolaise	Government
Zambia Information and Communications Technology Authority (ZICTA)	Government
Ministère des postes et des NTIC	Government
Africa City Of Technology	National Telecommunications Corporation (NTC)
FASCET CO.	Government
Autorité de Régulation des Communications Electroniques et des Postes	Government

University of Nicosia	Other
American University in Dubai (AUD)	Univ/Academia
Ministry of Economy, Finance and Planning / DTAI	Senegal
TRA	Government
Ministry Of Posts, Telecommunications & Technology	Somalia
ZERO PAUVRE AFRIQUE	NGO and/or Civil Society
PR & COMMS (Communications Regulatory Authority)	Qatar
HES-SO	Univ/Academia
Kottackal Business Solutions Pvt Ltd	Private Sector
Permanent Mission Of The State Of Qatar	Qatar
UNEP	United Nations system
OneWeb	Rwanda
One Web	Rwanda
Agence Nationale de la Statistique et de la Démographie (ANSD)	Government
Swiss Federal Departement of Foreign Affairs	Government
ADEK	Government
Ministère de l'Economie numérique et de la Poste	Côte d'Ivoire
Ministry of Digital Economy and Post	Côte d'Ivoire
United Nations Environment Programme	United Nations system
ASDF Arab Region	ASDF - Association of Scientists, Developers and Faculties
SDGPA	Private Sector
Ywai Aqua Life Integrated systems	Private Sector
CNEJ-TOGO (National Coalition for Youth Employment)	Government
Université de Genève - CISA	Univ/Academia
HIT Foundation	Association/Foundation
TELCOR	Nicaragua
St. Petersburg Committee for Culture	Government
AIC	Private Sector
MAONI NETWORK	NGO and/or Civil Society
Saudi Arabian General Investment Authority (SAGIA)	Government
Geneva Academy	Univ/Academia
National Informatics Centre, Ministry of Electronics & Information Technology, Government of India	Government
JMA	NGO and/or Civil Society
Privacy Company d.o.o.	Private Sector
Naizak Global Engineering Systems	Private Sector
Ministry Of Electronics And Information Technology	India
Gabon	Gabon
Rural First Broadband Group Inc. (dba First Broadband)	Private Sector
Permanent Mission of Bolivia to UN and other International Organization in Geneva	Government
Universitat Rovira i Virgili	Univ/Academia
représentation permanente de l'Organisation internationale de la Francophonie	Other International Organizations
Organisation internationale de la Francophonie (OIF)	Other International Organizations

Représentation permanente de l'Organisation internationale de la Francophonie auprès des Nations uni	Other International Organizations
NAJRAN UNIVERSITY	Univ/Academia
Organisation Internationale de la Francophonie	Other International Organizations
Communications Regulatory Agency Bosnia and Herzegovina	Government
MAHA : Mapping and Analytics for Health Activities	Private Sector
Subah Infosolutions Ltd	Private Sector
JokkoSanté	Private Sector
Emergent Technology	Private Sector
Permanent Mission of Sierra Leone	Sierra Leone
Permanent Mission of Gambia	Gambia
Permanent Mission	Government
Frontier Economics	Private Sector
TIS - Trade Invest Syndication	Private Sector
Innovative Solutions Consortium	Association/Foundation
The Graduate Institute in Geneva	Univ/Academia
Alsenet SA	Private Sector
Canadian Administrator of VRS	NGO and/or Civil Society
Socian Ltd.	Private Sector
ParkingKoi	Private Sector
Monsieur	Private Sector
4IP Group LLC	Private Sector
Nigerian Communications Commission	Government
Permanent Mission Of Peru	Peru
City of Maribor	Government
Permanent Delegation of Ecuador to UNESCO	Government
Univrsty of Southern California	Univ/Academia
Swisscom Blockchain AG	Government
Permanent Mission Of Bangladesh	Bangladesh