WSIS Forum 2018 OUTCOME DOCUMENT

Template for Submission of Executive Summaries for

Thematic/Country Workshop/ Action Line Facilitation Meetings/ Interactive Sessions/ High Level Dialogues/Publication Releases/Briefings

Deadline: Thursday 22 March, 2018
Exception: For sessions on Friday 23 March, please send at the latest 2 hours after the session
Please note that the WSIS Forum 2018 Outcome Document will be released on the __23rd of March__
(the last day of the Forum)

1) **Title of your session：**
   Building a Framework for Digital Innovation in Agriculture

2) **Name of Organization/s organizing the session: (FAO/ITU)**
   Food and Agriculture Organization (FAO) and International Telecommunications Union (ITU)

3) **Relevance with the WSIS Action Lines – please specify the Action lines C1 to C11**
   Action Line C7－ICT Applications - eAgriculture

4) **Key achievements, announcements, launches, agreements, and commitments (these will be reflected in the press release and Outcomes Document of the WSIS Forum 2018)**
   ➢ Enhance digital innovation for the poorest of the poor by understanding and acting on both front end and back end.
   ➢ Building a framework for digital innovation in agriculture
   ➢ Develop National E-Agriculture Strategy, currently in 6 countries already.

5) **Main outcomes highlighting the following:**

   I. **Debated Issues**
      • Please capture highlights of the main issues debated and interactions with audience
      • Please highlight key achievements and challenges shared by the audience and/ or panelists

We live today in a digitalized world. In 2017, 47% of the world's populations were using the Internet and 54% of households in the world had Internet access. Mobile-broadband subscriptions have grown more than 20 annually in the last five years and are expected to have reached 4.3 billion globally by end 2017. By 2020, the world is expected to have over 50 billion Internet of Things devices and equipments. At the

same time, the food and agricultural sector, which also includes livestock, fishery, forestry, nutrition and climate topics, is going to face enormous challenges to feed the 9.6 billion people who will inhabit the planet by 2050, and food production must increase by 70% by 2050.

Digital Innovation is key transforming those areas to address global challenges and achieve the SDGs in line with the WSIS Action Lines. Therefore, it is necessary to develop a strategic framework for sustainable digital innovation to support collaboration of UN agencies, partners, and national governments in implementing ICTs, digital innovation ecosystems, and increase e-agriculture initiatives and capacity development. The FAO and ITU developed a National e-Agriculture Strategy Guide (http://www.fao.org/3/a-i5564e.pdf) working with member states in developing their national e-agriculture strategies and masterplans. FAO and ITU co-organized regionals, and a global hackathon called #HackAgainstHunger"(http://www.itu.int/net4/wsis/forum/2018/Pages/SpecialTracks/Hackathon) which took place at WSIS Forum 2018. Around 80 participants from 33 nationalities, 47% were women, worked two days in Geneva designing, developing and applying innovative ways to use ICTS in agriculture.

Technology will surely play a huge role in bringing up new, sustainable solutions, such as precision farming, machine learning and AI, internet of things, and data analytics framework. Precision farming represented the first wave of tech innovation in the agriculture sector. Machine learning & Artificial intelligence are now augmenting the traditional UX patterns. In a connected world, machines will report on their own activity and the potential for data collection is endless. Better data along with the volume and speed with which it is now becoming available, affords new possibilities to understand people and places more deeply.

Human-Centered Design is an innovation process in which end-user needs; aspirations and context are given extensive attention at each stage of the product/service development process. It is better to co-design and test solutions with users, locating users' needs and expectation in the center. Make sure people become part of solutions, through the three phases such as project definition, realization and execution, capturing work flow of ideate, prototype, test, develop, deploy and monitoring. Working with users instead of working for them, we can build a better future together.

ICT application for low literate farmers, which allows us to bridge the gap to low literature people for obtain health and agriculture training to the hardest to reach communities. ICT for farmers training has been implemented in remote areas in Ghana, which proves that ICT devices are very useful for low literature farmers. The agriculture training received through ICT devices help farmers plant crops more effectively. ICT allows us to design project for the every poorest rural families and complete that last mile to help the poorest of the poor. Through analogical innovation, the project creates audio recordings in local language filled with knowledge from local experts on agriculture practices and health behaviors to address the needs of people in hard-to-reach communities. Digital innovation allows us to create user-friendly devices, such as audio recording which allow low literate farmers to use whenever they like.

E-agriculture has been a WSIS action line led by the FAO with support from ITU since the Geneva 2003 and Tunis 2005 Summits. Many e-Agriculture applications today are the product of numerous years of this fruitful bilateral cooperation.

ITU/FAO jointly has developed e-agriculture strategy to give this advice to government. It is necessary to bear in mind that we have great opportunity to use digital tools/solutions to make bigger changes. However, it's not just one or two applications, as we saw from previous two concrete projects, it only happens when lots of applications work together as comprehensive, cohesive and overall system to achieve the goal. That's why it is important to develop an ecosystem.

It is also important to make sure each area is able to speak to each other. Build on each other, each sector knows what are the roles they play, such as government (Ministries of Agriculture, Communications and others), what is real role from government to maximize the impact. Different applications are isolated, it is necessary to break silos to shift from (siloed) applications to system approach by creating a common digital platform that some assets are common, some solutions are concrete.

National E-agriculture strategy includes a full circle of strategic planning, analysis, design and implementation. Information collected from project implementation would help us further project analysis for a better outcomes.

According to demand driven platform design process: what to do from strategy to platform, the national e-agriculture strategy includes requirements gathering (business architecture), tech inventory, information architecture design, interoperability framework, request for proposal for system integrators (including technical architecture).

II. Quotes
- Please provide two important quotes from the session and the names & organization of the person you are quoting

"Innovative use of digital technologies contribute to improving livelihoods of farmers, increase nutrition and food security, reduce poverty, and provide solutions to better adapt and mitigate the effects of climate change on agriculture. In addition, innovation and ICTs help us to improve society productivity and to reach the most vulnerable. It is important to harness digital innovation for social good"— James Azevedo Görgen, Head of Digital Innovation and Development at FAO.

"A common ICT framework brings together partners and solutions from across value chain/across sectors to synergize and meet needs to further SDGs. A common ICT component business models include information providers, sector specific buyers/suppliers, technology providers, NGOs, telecom operators, banking, finance and payments, donors and government. People from these different sectors

shall speak to each other for a comprehensive, cohesive and overall system to make big changes and achieve SDGs"- Hani Skandar, ICT Applications Coordinator at ITU.

III. Overall outcomes of the session highlighting
- main conclusions reached during the discussion
- the vision for implementation of WSIS Action lines beyond 2015

People care about their problems not digital solutions. Innovation design decisions must be rooted in solving real problems suffered by actual users, or they're not useful. Therefore, it is critical to learning with the community, designing with the community and testing with the community.

When doing innovation, it is important to consider both frontend and backend, if you don't understand what to do at the backend, you actually don't understand the frontend well either. The existing examples from Bangladesh and India teaches us that when thinking about the framework, naturally flushing with lots of solutions at the beginning stage, however it is important to think about systems. Do not leave it for later, otherwise problems could become serious.

When doing e-Agriculture, it actually takes many differences to meet farmers' need. If only offering knowledge, and there are no way farmers to get seeds or other services, then there will be no concrete results at all. That's why it is important to develop partnerships with other stakeholders to complete the comprehensive programme from frontend to backend. It is important to know backend. It is important to know the users. The number of people to use the device will generate data to help you make better decisions. To avoid using technology to easily get project deployed for incentives to see success, instead using technology to bride the gap and let people further behind benefit from the development of technology.

Digital innovation framework is a platform for multi-stakeholders to work together with innovative technology and practices, as well as innovative business models and processes. FAO and ITU, as well as the entire UN community, need to be able to work with all sectors. It's important to engage multi-stakeholders to promote digital innovation and achieve successful business model.

IV. Main linkages with the Sustainable Development Goals

Digital innovation has the potential to transform the approach to all 17 SDGs. Specifically, the development of a strategic framework for digital innovation in the food and agriculture sector will provide a systematic process and sustainable business model for creating, testing, funding, and scaling new digital solutions to achieving the SDGs, particularly 1, 2, 8, and 13. Through this process, youth entrepreneurship, capacity development, and multi-stakeholder partnerships will be formed that will enable a permanent and systematic approach to integrate digital technologies and innovation into local communities and national action plans. These activities contribute to SDGs 1, 2, 6, 8, 9, 13, 14 and 15 as well as establishing business models to produce new ideas and products aimed at contributing and achieving all the SDGs.

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

Digital innovation ecosystem
The framework of digital innovation in agriculture
National e-Agriculture Strategy
Common digital platform
Precision and smart agriculture
Human-centered design
Machine Learning and data analytics

VI. **Suggestions for Thematic Aspects that might be included in the WSIS Forum 2019**

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