UNITED NATIONS COMMISSION ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (CSTD)

Contribution to the CSTD ten-year review of the implementation of WSIS outcomes

Submitted by

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1. **To what extent, in your experience, has the "people centred, inclusive and development-oriented Information Society," envisioned in the opening paragraph of the WSIS Geneva Declaration of Principles, developed in the 10 years since WSIS?**

Perhaps the most significant change since the WSIS first launched in 2003 is the explosion of mobile phones—rather than computers—as the primary tool in expanding universal access to information. This changes everything from technical specifications to the types of services best suited to these types of mobile devices. In recent years, tablet computers have also become an increasingly viable option for everyday users in developing countries, but to date there has been no "tablet revolution."

In particular, the explosion of mobile phones has changed the type of services that ICT effectively provides. While the use of ICT in many of the sectors identified in Geneva and Tunis has not yet produced transformative, systemic change in low-income countries, others sectors not envisioned at that time have been dramatically transformed—in particular financial services for the very poor.

While often the Information Society is envisioned as providing equitable access to information, the past decade has shown that it is also about giving voice. Initiatives such as MyWorld 2015 or UNICEF's uReport have leveraged ICT infrastructure to allow citizens to comment directly on policy debates. Moving forward, we can build on this momentum to define participation and voice as key elements of a "people centred, inclusive and development oriented Information Society."

2. **What are the challenges to the implementation of WSIS outcomes? What are the challenges that have inhibited the emergence of a "people centred, inclusive and development-oriented Information Society"?**

Globally, we have progressed a great deal along many of the outcomes articulated in the Action Plan. In many areas there remains much work to be done. Some challenges include:

Access to information vs. Availability of technology
Perhaps the biggest advancement over the past 10 years has been building the infrastructure such that even many of the remotest regions in the world could access mobile technologies. Ten years ago we probably would not have envisioned the astonishing reach of mobile phones. However, *availability* has not always translated into meaningful *access*. Challenges in *access* might include a low capacity to use technology to seek information, lack of information literacy, or a lack of relevant information available. In many respects, barriers to accessing and making use of information follow existing patterns of exclusion in society—it is often the marginalized who most face these challenges. This new digital divide thus relates less to a *technology gap* and more to a *knowledge gap*. Yet in many developing countries, with a few notable exceptions, investment in institutions that can help bridge this gap (such as providing specific ICT support to public or community libraries and schools), remains low.

Language, and locally appropriate applications
Language challenges remain as salient now as they were 10 years ago for marginalized populations. Again, often the challenges are reflective of "off-line" patterns of exclusion.

Governance
The Geneva plan articulated an international trust framework for internet governance as a key outcome. While the Internet Governance Forum has been active, we have witnessed over the past several years a weakening of trust in Internet Governance.

3. **How are these challenges being addressed? What approaches have proved to be effective in your experience?**

Design principles
UNICEF has advanced a "human- centred design" process that informs how we develop technology that can serve the most vulnerable populations. These design principles put people at the centre of technology and program development. This ensures that technology is not only about availability but also about access. UNICEF Innovation has developed a rich set of resources for those seeking to learn from this approach, including from our successes, and our failures.

Locally appropriate applications
Investing more in the development of locally relevant applications might mean investing more in local application *developers*, a strategy which has been highly successful in a very small number of countries, such as Kenya or India. One successful model of encouraging local application development has been *labs* or one-off events such as *hackathons* or *competitions.* These may be more or less successful in resulting in specific applications. However, they do help build a community around application development, with the added benefit of supporting entrepreneurship in a new sector of the economy. UNICEF has established labs, for example in Kosovo and Uganda. In Nepal, UNICEF has also encouraged young app developers through an *Ideas Studio*, a national competition for children to design solutions to specified challenges.

Governance
Regional bodies, such has APEC, OECD and the EC all try to fill in the global governance gap to support regulatory and technical standards. The Internet Governance Forum should be strengthened to leverage the frameworks these institutions have advanced to become a stronger global thought leader in this space.

A good first step would be to better understand and articulate the risks. A child-focused strategy would seek to protect children from online exploitation, including sexual exploitation, bullying, and discriminatory use of data. UNICEF's Voices of Youth Citizens program has mapped digital risks and opportunities faced by children in a subset of countries all over the world.

4. **What do you consider the most important emerging trends in technology and other aspects of ICT, which have affected implementation of WSIS outcomes since the Summit? What has been their impact?**

1. The past decade of increasing severe weather events, from Haiyan to New York City, has underlined the role of the Information Society in resilience. This includes the provision for information during emergencies: *Radio* has proved to be critical for communication during the

emergencies on the ground. In some places, *Twitter* and *crowdsourcing platforms* such as Ushahidi have provided real-time information in the critical space between the advent of an emergency and trusted news reports.

Critically, this also includes technology infrastructure itself. In "technological frontier" areas where internet is primarily accessed via mobile phone networks, there may be an opportunity to build high-speed services with resilience principles at the core. This may mean a shift away from "big" infrastructure projects like fiber optic cables in favor of decentralized approaches, for example wireless mesh technologies.

2. Another key trend is the dominance of one business model for service provision in the digital age, a business model that is based on monetizing personal data. This shift has created governance challenges that are not addressed in the original document, including in particular the protection of privacy. The lack of privacy standards has particular implications for children. Children born today will have data collected about them from a very young age, which they may not realize is creating a profile that could affect them later in life. This is particularly the case for children who frequently access internet services; it is increasingly the case with those who access mobile phones as well.

3. The development of new technologies also continues. One example is development of computational capacity in everyday objects, such as clothing. Another example is unmanned aerial vehicles, or drones. As these devices become more advanced, they will pose enhanced capacity to accurately target services to individuals and communities—from clean water to education to medicines. They will also pose continued privacy challenges, as information used to target services can also be used to discriminate.

For more on emerging trends in technology and other aspects of ICT, please refer to UNICEF's recent publication on global trends and their implications for children here.

5. What should be the priorities for stakeholders seeking to achieve WSIS outcomes and progress towards the information society, taking into account emerging trends?

The pace of change in the past 10 years is itself a key feature in relation to the type of international cooperation and governance that can support a "people-centred, inclusive and development-oriented Information Society." The ability of national, regional or international governing bodies to be primary drivers in the way technology develops may be low; but the ability of these actors to manage that change to meet the vision of the WSIS will be entirely dependent on their ability to adapt alongside the pace of change. Stakeholders should therefore not only seek to create actionable goals to create a more inclusive Information Society; they should seek to create governance structures that can adapt and keep up with the pace of change, starting with the recognition that we can't fully anticipate either the risks or the opportunities that will arise in the next 10 years.

The WSIS should also embody the principles of the Information Society into the way it does business. Stakeholders are not only those with a seat at the table—advances in ICT allow us to bring in a plurality of voices. WSIS should seek to be at the cutting edge of advancing our

ability to incorporate citizen voice. This also means strengthening WSIS's own communications, providing easily consumable and compelling information on activities, plans, and outcomes.

6. **What role should information and communication play in the implementation of the post-2015 development agenda?**

While the post-2015 development goals, like the MDGs, represent a broad range of needs and challenges, there is one thing they have in common: combatting them requires better information, both for policy makers to strengthen their interventions, and for individuals to make informed choices. Information is thus will be a critical enabler *across* the post-2015 goals.

UNICEF has advanced the notion of Communication for Development, which goes beyond providing information. C4D engages communities and children in the promotion of child rights, amplifying the voices of individuals and communities and providing tools to combat challenges ranging from polio immunization, maternal mortality, child marriage for girls and use of ITCs for development.

7. **Please add any other comments that you wish to make on the subject of the review that you believe would be helpful.**