WORLD SUMMIT ON THE INFORMATION SOCIETY

WSIS FORUM 2012

IDENTIFYING EMERGING TRENDS AND A VISION BEYOND 2015

C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11

ITU UNESCO UNITED NATIONS UNCTAD UNDP UNDESA FAO UNEP World Meteorological Organization ILO World Health Organization

FACILITATED BY: ITU

World Summit on the Information Society 2015 — Turning targets into action

world summit on the information society — Geneva 2003 - Tunis 2005

WSIS Forum 2012-Identifying Emerging Trends and a Vision beyond 2015!

WSIS Forum 2012 was held from the 14-18th of May in Geneva. WSIS Forum 2012 resulted in an Outcome Document that aims at identifying emerging trends in the Information Society. Since 2006, the WSIS Forum has proven to be a unique global mechanism for coordination of the implementation for WSIS outcomes (ECOSOC 2012/5) and a multistakeholder platform for brainstorming and consensus on emerging trends in the area of Information Society. With information and communications technologies (ICTs) playing an increasingly instrumental role in the delivery of basic services like education, health and food security, improved connectivity, infrastructure, security and access has become a major development imperative.

This booklet captures the emerging trends in the 11 WSIS Action lines, both in terms of policy and technology, discussed by stakeholders during WSIS Forum 2012. The trends identified during the WSIS Forum 2012, provide all the WSIS stakeholders with guidance and a vision for the way beyond 2015, WSIS+10, related activities.

This booklet is a byproduct of the WSIS Forum 2012: Outcome Document available at **www.wsis.org/forum**

Action Line: C1

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

- The need to develop a master plan for parliaments in order to avoid piece meal, uncoordinated
  and non-sustainable activities.
- The increasing importance of a coherent evaluation system both, locally and nationally.
- The urgency to continue developing national e-strategies beyond 2015.

Action Line: C2

Information and Communication Infrastructure

- The demand for broadband services is increasing and spectrum management to utilize underused radio frequencies is vital for economical and societal development. New technological/regulatory approach and convergence between broadcasting and mobile services needs to be considered.
- Transition from analogue to digital terrestrial broadcasting is essential to benefit consumers by more choice and quality in television services, and to also free up radio spectrum for new services.
- New services, business models and regulations will provide new opportunities for business entities to enter the rural/remote areas market, which needs close participation of policy-makers and regulators.
- Development of affordable and easy-to-use devices, education is necessary to expand ICT usage to undeveloped rural areas.
- To meet the uprising demand of broadband services, a secure, inexpensive, and broad backbone is necessary, especially for the developing countries.

Action Line: C3

Access to Information and Knowledge

- The urgency of the innovative use and mainstreaming of ICTs for Inclusive Education .
- The increasing importance of the development of content respecting accessibility and open standards particularly for the web.
- The need for the development of multilingual and accessible Open Education Resources (OER) effort.
- The urgency of ICTs in education for persons with disabilities; providing new and innovative solutions for persons with disabilities to access information and knowledge.
- The increasing importance of training Education Professionals, such as teachers, to use accessible ICTs in education for training of people with disabilities.
- The urgency to promote Universal Design for All.

Action Line: C4

Capacity Building (Mobile Learning)

- The increasing importance of the development of enabling policies for mlearning.
- The need to provide professional development to teachers on using mobile technologies to support teaching and learning.
- The need for more affordable and relevant devices, content and connectivity, including smart phones, notepads, tablets, and integrated digital textbooks.
- The need for creating an ecosystem for the safe use of mobile technologies for education, including by teaching digital citizenship and responsible use to learners.
- The necessity for success stories based on Private-Public Partnerships to popularise and roll out mlearning initiatives.
- The growing importance of research in the area of mlearning, particularly on 1:1 pedagogy under 1:1 computing learning settings.

Action Line: C5

Building Confidence and Security in the use of ICTs

- The need to establish strategies and capabilities at the national level, to ensure protection of National Critical Infrastructures, while enabling prevention and prompt response to cyber threats. Computer Incident Response Team with national responsibilities and National Cybersecurity frameworks are key elements to toward the achievement of Cybersecurity
- The urgent need for building a solid legal framework, to address existing and emerging cybercrimes, at the national regional and international level
- The urgency to build human capacity, to improve the skill and expertise of the security professionals and increase the awareness of the general public
- The increasing need to work with the business sector, such as manufacturers and operators to pave the way toward the achievement of the "security by design" concept, where devices and products contain already those standard security features that would reduce the exploitation of vulnerabilities.
- The need for an international framework that is focused at the elaboration of norms and principles agreed at global level, specifically in areas such:
    - Access to the Internet;
    - Security;
    - Protection of fundamental rights;
    - State involvement; and
    - International cooperation.

Action Line: C6

Enabling Environment

- The increasing importance of defining and implementing national broadband strategies in collaboration with all stakeholders.
- The increasing importance of an open, efficient and secure policy and regulatory environment.
- The urgency of adapting the legislative and regulatory framework in order to have a smarter regulation and ensure the use of ICTs for better governance.
- The need for smart regulation based on open consultation involving all stakeholders, inclusive of actions and good coordination. Regulatory challenges facing developing countries are becoming more complex and cross-cutting.
- To improve e-government for business it is important to set up a new legal framework, public campaign and standards for interoperability.
- High investments in optical fiber are needed to provide broadband services and access to Internet services for all.
- A good and proper recycling policy climate policy and processes for cheaper devices is essential for better governance.
- Access to information and ICTs services needs to be considered as a human right.
- Good public governance can leverage ICTs in various ways to increase efficiency and accountability, enhance transparency and facilitate public sector reforms. ICTs can ensure a wider participation and empowerment of citizens, institutions and private sector in the decision making process.

Action Line: C7

ICT Applications

C7 E-Government

- The increasing importance of efficient exchange of best practices through electronic means and the use of new media to inform and connect citizens to the e-government and sustainable development processes are of paramount importance.
- The increasing need to bridge the digital divide by better promotion of e-skills and suitable infrastructure in the developing world and amongst valuable social groups.
- Further development in applying green ITC technology through e governance will contribute to the sustainable economic,financial and social development.

C7 E-business

- The increasing number of changes in the ICT landscape and more accessible technology, notably mobile and international broadband connectivty, will influence the creation of local content and the ability of developing countries to market their ICT products.
- ICT and ICT-enabled services are an increasingly important share of the ICT sector worldwide.
- Lack of data on the ICT sector to support policy decisions, including on the increasingly important services. The IT industry itself may contribute data to support the planning needs of policy makers for the promotion of the local ICT sector.

C7 E-science

- The need to continue to promote e-publishing with different pricing options and open access. (To make scientific findings more affordable and accessible)
- The increasing importance of p2p technology to share scientific knowledge
- The importance of promoting affordable and reliable broadband Internet connection for learning, particularly higher education institutions
- The need to promote long-term collection/dissemination/preservation of scientific data by digitalizing it. (ex, population and weather data)
- The urgency to facilitate cooperation and effective use of scientific information

C7 E-learning (Mobile Learning)

- The increasing importance of the development of enabling policies for mlearning.
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- The need for more affordable and relevant devices, content and connectivity, including smart phones, notepads, tablets, and integrated digital textbooks.
- The need for creating an ecosystem for the safe use of mobile technologies for education, including by teaching digital citizenship and responsible use to learners.
- The necessity for success stories based on Private-Public Partnerships to popularise and roll out mlearning initiatives.
- The growing importance of research in the area of mlearning, particularly on 1:1 pedagogy under 1:1 computing learning settings.

C7 E-health

- The commitment to adopt national eHealth strategies and focus on integrating ICTs to support the priorities of the health sector;
- The increasing use of mobile technologies in health projects are still being done on a trial basis rather than on a large scale;
- The need for sound evidence (and sharing the evidence) as to the impact of eHealth, through credible and reproducible evaluation mechanisms;
- The on-going need for communities of expertise to support health professionals working in remote areas;
- The on-going need to ensure affordable, reliable connectivity to health centres, institutions and remote areas. This is a core aspect of the WSIS commitments that has yet to be realized.

C7: E-environment

- There is an urgent need for a stronger reference to the main challenges related with key environmental issues, such as climate change, electronic waste management and disaster risk reduction to ensure sustainable development. On this regard, it is key to make sure that investments in climate and weather observing as well as ICT\ Telecommunications support the sustainable development agenda.
- The increasing importance to emphasise on the need for cooperation between ICT and environmental sector at the national level, so both levels of policies include cross-references. This cross-sectorial coordination is not sufficiently taking place and it poses a challenge for many initiatives in regards to e-environment.
- It is urgent to address the negative effects of ICTs (Greening the ICT sector), an issue that has become more urgent since the WSIS process started. On this regard, more emphasis should be put on adopting a life-cycle management approach for ICTs, looking at policy, standards, consumer education, and design innovation to promote resource efficiency. Responsibility needs to extend beyond government and corporations and include the end user (the general population), specifically by increasing consumer awareness and better utilizing social media. Attention should be directed to the management which as well includes the disposal of out-of-life ICT equipment.
- With regards to energy consumption, there is an urgent need to pay additional emphasis in measuring performance and establishing reduction goals. Agreeing on a common set of methodologies and engaging the private sector to adopt these standards are two important steps that need to be further promoted.

C7 E-agriculture

- A growing body of experience shows clear benefits of ICT in facilitating information flows and social networks, and the positive impact ICT can have on the livelihoods of people in rural agricultural communities.
- Mobile technology is the dominant tool in agricultural information services, and is expected to remain so. Where mobile is not the predominant communication tool, pricing and policy related to mobile services were identified as the main challenges that need to be addressed.
- Continued growth of mobile technology and information services using mobile technology is expected.
- Critical opportunities will come from improved content, including hyperlocal information.
- Market segmentation is expected.
- A focus on rural women has emerged.

Action Line: C8

Cultural Diversity and identity, linguistic diversity and local content

- Countries (at all income levels) with more Internet infrastructure are also the countries producing more local digital content as measured by Wikipedia entries and by web pages under a given country-code, top-level domain.
- Countries with more international connectivity have lower domestic broadband prices and countries with better domestic infrastructure have lower international bandwidth prices.
- The increasing inter-linkages between the different elements lead to three key lines of policy considerations evolving: (i) Fostering content development, (ii) Expanding connectivity, and (iii) Promoting Internet access competition.

Action Line: C9

Media

- The increasing challenge of addressing freedom of expression and privacy protection on Internet in formulating an inclusive information society.
- The application and implementation of principles, standards and recommendations of freedom of expression to Internet and social media in practice, given the complexity of information environment on Internet with conflicting imperatives including freedom of expression and respect for privacy and challenge on applicable jurisdiction posed by the trans-border nature of cyberspace.
- The increasing challenge in dealing with the liability of intermediaries and governmental surveillance particularly related to freedom of expression on Internet and privacy protection.
- The challenge to optimize the role of traditional media such as Public Service Broadcasters and Community Radios by embracing new media platform and user-generated content in the emerged Internet era.

Action Line: C10

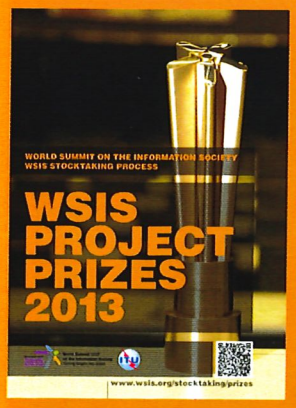
Ethical dimensions of the Information Society

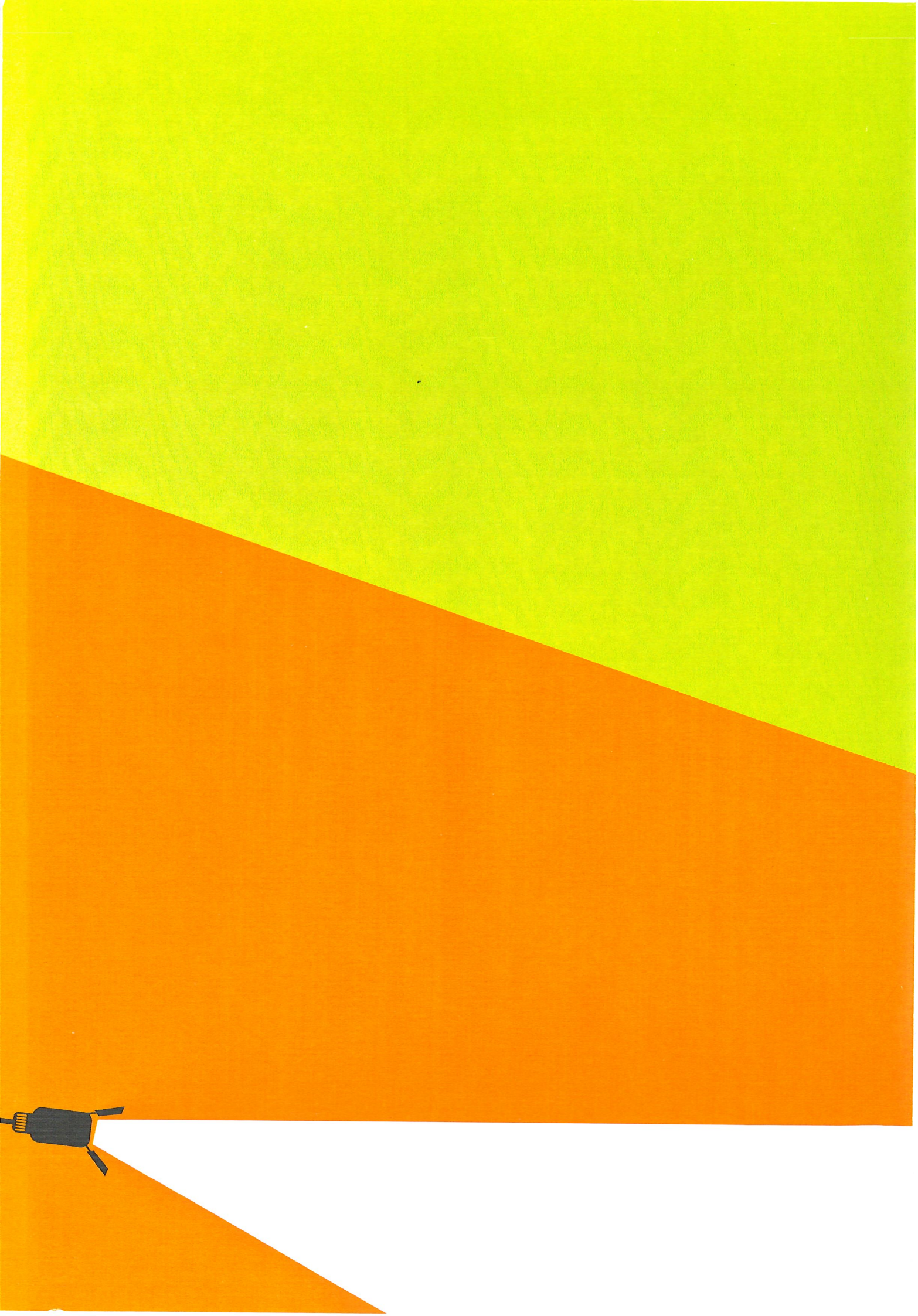
- The increasing role of technology is enabling decentralized approaches to policy and decision-making that enhances participation.
- The increasing role of human rights as a positive contribution to online commerce with more and more businesses voluntarily adopting codes of practice. These efforts are serving to provide consistency and predictable frameworks both off-line and on-line with increasing checks, balances and protections for stakeholders.
- User-driven models may provide better alternatives than consumer-driven and regulatory focused approaches to understanding the drivers of social change and ethical behavior on-line amongst individual and groups.
- Information literacy is essential for empowering users to make informed choices as well as for enabling them to exercise and protect their rights.
- While the focus is currently on ensuring that all persons can access the Internet there is also recognition of a need to discuss the right to disconnect and its implications.
- While beneficial in helping to expand our freedom, technologies can be disruptive. Our organizations and societies need to become sufficiently flexible to cope with the social upheavals that technology brings.
- The fast changing and often unpredictable character of new internet-related developments may exceed our abilities to predict and utilize forecast analysis for taking actions, including at the policy level.

Action Line: C11

International and regional cooperation

- The importance of international cooperation in the area of ICT measurement to avoid duplication of efforts and maximizing usage of resources.
- There is an urgent need to step up the use of internationally agreed ICT indicators, such as those developed by the Partnership for Measuring ICT, for development in national statistical systems.
- The urgency for different national stakeholders to work together in compiling the necessary data for the 49 indicators on measuring the WSIS targets.



For further details please contact the WSIS Team at wsis-info@itu.int

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