8th ITU Symposium on ICT, Environment and Climate Change
6-7 May 2013

Turin Roadmap: Towards a Planet of Smart Sustainable Cities

In today's world, cities represent opportunities for economic growth and social well-being. From access to education and learning facilities, employment, and prosperity opportunities, cities have become the growth engines of the future. It is predicted that by 2050 there will be 6 billion people living in urban areas. This will result in a huge demand on resources, resources that are finite and can only be sustained if we utilize information and communication technologies (ICTs) to efficiently and effectively manage them.

ICTs have the potential to reduce water consumption, provide more efficient electricity distribution, reduce pollution levels and congestion through better traffic management and bringing services such as health, education, shopping, and work into the home. The integration of ICTs in the development of urban areas could create sustainable economic development and high quality of life. However, if this is to be achieved it will require these applications to work together, to interoperate regardless of the service provider or vendor, and this will require the development of international standards, harmonized frequency spectrum, and the application of enabling policies and best practices.

Taking this into account, and reflecting on the presentations made at the 8th ITU Symposium on ICTs, Environment and Climate Change, meeting in Turin, Italy, 6-7 May 2013, we the participants of the Symposium, recalling the ITU Call to Action on Smart Sustainable Cities[1], recommend that the ITU, in collaboration with policy makers, smart city stakeholders, and relevant international and regional organizations, help build smart sustainable cities worldwide by:

1. **Defining:** Smart sustainable cities, and the role of ICTs in meeting the challenges they face.
2. **Engaging cities:** Establish a Charter for Smart Sustainable Cities with measurable objectives relating to engagement, performance, and collaboration, and invite cities to sign it as a demonstration of their commitment.
3. **Adopting a holistic approach:** Enhance cooperation at international, regional, national, and local levels, between educational and research institutions, governments, industries, civil society, and other smart city stakeholders, to raise awareness on the use of ICTs to address the challenges in cities in the context of climate change mitigation and adaptation Develop and implement best practices and standards, and create business models to encourage partnerships among stakeholders throughwin-win solutions.
4. **Standardizing:** A methodology for assessing the environmental impact of ICTs in cities in collaboration with other relevant organisations and experts taking into account a life cycle perspective.
5. **Developing:** A set of key performance indicators (KPIs) which would allow cities to monitor the sustainability impact of ICTs over time. These KPIs could include basic metrics such as, but not limited to, air quality index, water quality index, waste recycling rates, resource use, sustainable transport systems and access to green areas.
6. **Best practices and lessons learned:** Help disseminate best practices by establishing a platform where smart sustainable cities around the world can provide information on the implementation of successful practices.

[1] The Call to Action was issued on 17 September 2012 during the second ITU Green Standards Week.

7. **Behavioural change:** Promote education, lifelong learning, and behavioural change for sustainable development.
8. **Advocacy**: Integrate ICT policies in the on-going dialogue on cities in organizations such as the United Nations Human Settlements Programme (UN-Habitat), United Nations Framework Convention on Climate Change (UNFCCC), United Nations Environment Programme (UNEP), United Nations Educational, Scientific and Cultural Organization (UNESCO), World Meteorological Organization (WMO) and others; facilitate collaboration between ICT stakeholders, city planners, policy makers and other smart city stakeholders to encourage the integration of ICTs in smart sustainable city policies.
9. **Measuring success:** Carry out pilot and flagship demonstration projects to demonstrate "smart sustainable" ICT solutions to build smart sustainable cities by utilizing new technologies and international standards. Identify strengths and weaknesses of implementation strategies, report success stories, best practices, lessons learned, cost implications in dealing with the challenges met and innovative solutions used.
10. **Mobilizing expertise**: In relevant ITU Study Groups, and other groups as appropriate to pursue work in this important area.