Buenos Aires Action Plan

STUDY GROUP 2

QUESTION 1/2

Creating smart cities and society: Employing information and communication technologies for sustainable social and economic development

1 Statement of the situation or problem

All areas of society – culture, education, health, transport, trade and tourism – will depend for their development on the advances made through information and communication technology (ICT) systems and services in their activities. ICTs can play a key role in the protection of property and persons; smart management of motor vehicle traffic; saving electrical energy; measuring the effects of environmental pollution; improving agricultural yield; increasing efficiency in global travel and tourism; management of healthcare and education; management and control of drinking water supplies; and solving the problems facing cities and rural areas. This is the smart society. Similarly, as highlighted by the World Summit on the Information Society (WSIS), ICT applications can support sustainable development in public administration, business, education and training, health, the environment, agriculture and science within the framework of national cyberstrategies.

The United Nations 2030 Agenda for Sustainable Development recognizes the enormous possibilities offered by ICTs and calls for significant increase in access to such technologies, which have a decisive contribution to make in support of implementation of all the Sustainable Development Goals (SDGs). ITU therefore deems it a priority to supports its membership in achieving the SDGs, in close collaboration with other associates.

Delivering the promise of the smart society relies on three technological pillars – connectivity, smart devices and software – and on sustainable development principles.

Connectivity encompasses and includes existing and traditional networks as well as new technologies. It is a key enabler and component of machine-to-machine (M2M) communication, the Internet of Things (IoT), and resulting applications and services such as e-government, traffic management and road safety.

IoT constitutes a major advance that promises to change the way people live, work, learn, move around, entertain and provide care by having access to more and better information in real time and to better learning opportunities. Moreover, IoT technologies can be used to tackle global development challenges. It is estimated that at present over 50 per cent of IoT activity is focused on manufacturing, transport, smart cities and user applications, but that in the future all industries will be able to benefit from IoT initiatives, highlighting and enabling new business models and workflow processes.

Smart devices are the things that are connected that create smart societies. Cars, traffic lights and cameras, water pumps, electricity grids, home appliances, street lights and health monitors

are all examples of things that need to become smart, connected devices so that they can deliver significant advancements in sustainability and economic and social development. This is especially important in developing countries[1].

Software development connects and enables the first two pillars, such that all three pillars working together support new services that would never have been possible before. These new services are transforming everything from energy efficiency to environmental improvements, road safety, food and water safety, manufacturing and basic government services.

It will be possible for the work carried out under this study Question to be founded on Resolutions 139 (Rev. Busan, 2014), on the use of telecommunications/ICTs to bridge the digital divide and build an inclusive information society, and 197 (Busan, 2014), on facilitating IoT to prepare for a globally connected world, of the Plenipotentiary Conference; Resolutions 44 (Rev. Hammamet, 2016), on bridging the standardization gap between developing and developed countries, and 98 (Hammamet, 2016), on enhancing the standardization of IoT and smart cities and communities (SCCs) for global development of the World Telecommunication Standardization Assembly; and Resolution ITU-R 66 (Geneva, 2015) of the Radiocommunication Assembly, on studies related to wireless systems and applications for the development of IoT.

2   Question or issue for study

1)   Discussion of and assistance in raising awareness on methods of improving connectivity to support the smart society, including connectivity to support smart grids, smart cities and ICT applications in public administration, transport, business, education and training, health, the environment, agriculture and science.

2)   Examination of best practices for fostering and enabling deployment and use of smart devices, including mobile devices, and the importance of the application of such devices.

3)   Survey of methods and examples of how software, both open-source and/or proprietary, enables connectivity of smart devices, thereby supporting smart services, cities and communities.

4)   Definition of a measurement and performance benchmark for quality-of-life indicators in smart cities, and possible regulation and communication mechanisms that can be followed for good urban governance.

5)   Sharing of experiences and best practices in building smart cities.

6)   Promotion of capacity building and the acquisition of knowledge on ICTs for adoption of the skills required for development of a smart society.

7)   Promotion of policy approaches that foster the economy, investment, innovation and development of the smart society, to support integration of ICTs in public administration, transport, business, education and training, health, the environment, agriculture and science.

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[1]   These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

8) Encouraging cooperation between developing and developed countries in order to bridge the digital and knowledge divide through technical and financial assistance, research programmes and voluntary technology transfer on mutually agreeable terms, enabling access to ICT applications in countries and regions where it has not yet been possible.

9) Telecommunication/ICT services for tourism that enhance economic growth in smart societies.

3   Expected output

The output expected from this Question will include:

a) Guidelines on policy approaches to facilitate the development of ICT applications in society, fostering social and economic development and growth.

b) Case studies on the application of IoT, communications and ICT applications in building SCCs, identifying the trends and best practices implemented by Member States as well as the challenges faced, in order to support sustainable development and foster smart societies in developing countries.

c) Increasing awareness among relevant participants regarding the adoption of open-source strategies for enabling access to telecommunications, and studying the drivers for increasing the degree of preparedness to use and develop open-source software to support telecommunications in developing countries, as well as creating opportunities for cooperation between ITU members by reviewing successful partnerships.

d) Analysis of factors affecting the efficient roll-out of connectivity to support ICT applications that enable e-government applications in SCCs.

e) Organization of workshops, courses and seminars for the development of capacities allowing improved uptake of ICT applications and IoT.

f) Annual progress reports, which should include case studies, and a detailed final report containing measurement analysis, information and best practices, as well as any practical experience acquired in the areas of use of telecommunications and other means of enabling ICT applications and connecting devices for development of the smart society.

4   Timing

A preliminary report should be submitted to the study group in 2020. The studies should be concluded in 2021, by which time a final report will be submitted.

5   Proposers/sponsors

The Question was approved for the first time by WTDC-17, on the basis of Questions 1/2 and 2/2.

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6   Sources of input

a)   Progress on study of the Questions relevant to this issue in the ITU Telecommunication Standardization Sector (ITU-T) and ITU Radiocommunication Sector (ITU-R) study groups.

b)   Contributions from Member States, Sector Members, Associates, other United Nations agencies, regional groups and Telecommunication Development Bureau (BDT) coordinators.

c)   Progress of BDT initiatives with other United Nations organizations and the private sector on using ICT applications for development of the smart society.

d)   Progress on any other relevant activity carried out by the ITU General Secretariat or BDT.

7   Target audience

Target audience	Developed countries	Developing countries
Telecom policy-makers	Yes	Yes
Telecom regulators	Yes	Yes
Service providers/operators	Yes	Yes
Manufacturers (telecommunication/ICT equipment manufacturers, automobile industry, etc.)	Yes	Yes
Corresponding ministries	Yes	Yes
BDT programmes	Yes	Yes

a)   **Target audience – Who specifically will use the output**

Relevant policy-makers, regulators and participants in the telecommunication/ICT and multimedia sectors, as well as manufacturers and service providers.

b)   **Proposed methods for the implementation of the results**

In guidelines for implementing BDT regional initiatives.

8   Proposed methods of handling the Question or issue

Within ITU-D Study Group 2.

9   Coordination and collaboration

–   The relevant BDT unit dealing with these issues

–   Relevant work in progress in the other two ITU Sectors.

10   BDT programme link

All BDT programmes are concerned by the Question as regards, in particular, aspects relating to information and communication infrastructure and technology development, ICT applications, enabling environment, digital inclusion and emergency telecommunications.

11   Other relevant information

To be identified later during the life of this new Question.

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