

## Terms of Reference

### ITU-T Focus Group on “Smart and Sustainable Cities” (FG-SSC)

The Focus Group is established in accordance with Recommendation ITU-T A.7.

#### 1. Rationale and Scope

Achieving sustainable urbanization, along with the preservation of our planet, has been recognized as one of the major challenges of our society in the coming decades. Urban areas reflect the complexity of our societies, where social, economic and environmental issues are tightly interconnected. Cities are responsible for more than 70% of global greenhouse gas emissions<sup>i</sup>, and they are accountable for 60-80%<sup>ii</sup> of global energy consumption<sup>iii</sup>, contributing to environmental degradation locally, regionally and globally.

Information and Communication Technologies (ICTs) can provide solutions to many of the problems facing cities as they become magnets for migrating populations as well as contributing to making cities more eco-friendly and economically viable.

In this sense it is important to emphasize the role that ICTs have to solve environmental challenges of cities worldwide; for example: management of water, energy, energy efficiency, solid waste, public transport, traffic, congestion, growth of ICT infrastructure and its environmental impact such as concerns related to EMF, visual aspects and air quality monitoring, etc.

Currently the role that ICTs play to help cities to tackle environmental issues has not been fully identified and recognized.

ITU-T Study Group 5 (ITU-T SG5) is working on environmental and climate change issues including the development of a methodology to assess the environmental impact related to ICT in cities. Taking into consideration that the issue of smart sustainable cities affects various stakeholders this Focus Group would play a key role in providing a platform to share views, develop a series of deliverables and showcasing initiatives, projects, policies and standards activities that are taking place in the area of smart and sustainable cities.

The FG – SSC will analyse ICT solutions and projects that promote environmental sustainability in cities that can be standardized by ITU-T SG5 and will identify best practices which could facilitate the implementation of such solutions in cities.

It will develop a standardization roadmap taking into consideration the activities currently undertaken by the various standards developing organizations (SDOs) and forums.

This “Focus Group on Smart and Sustainable Cities (FG – SSC)” will also invite non ITU-T members and will leverage the role of the ICT sector to foster the growth of smart and sustainable cities worldwide.

#### 2. Objectives

- Define the role of ICTs in cities that aim to be environmentally sustainable. This will include identifying ICT systems necessary to develop an environmental and sustainable city.
- Establishing liaisons and relationships with other organizations which could contribute to the standardization activities of ICTs, environment and climate change in cities.
- Establish a roadmap of the ICT sector contribution to smart and sustainable cities.
- Suggest future ITU-T study items and related actions within the scope of the ITU-T SG5 (see Appendix) for example on:

- Concepts, coverage, vision and use cases of smart and sustainable cities.
- Characteristics and requirements of smart and sustainable cities.
- Efficient services and network infrastructure of smart and sustainable cities, as well as its architectural framework from the environmental impact point of view.
- Identify or develop a set of key performance indicators (KPIs) to assess how the use of ICTs has an impact on the environmental sustainability of cities.
- Foster the development of strategies and best practices related to policies and standards to help cities deliver ICT environmental services including the optimization of the use of scarce resources and build resilience to climate change in cities.
- Identify potential barriers in the use of ICTs to achieve environmental sustainability in cities.
- Help ITU-T Study Group 5 to become a global reference on ICTs and its contribution to smart and sustainable cities.
- Set up a global gateway on ICTs contribution to smart and sustainable cities.

### **3. Structure**

The FG – SSC should establish sub-groups on the following three main areas taking into consideration the objectives listed above:

- 1) ICTs role and roadmap for smart sustainable cities.
- 2) Standardization gaps, KPIs, metrics and efficient ICT for smart sustainable cities.
- 3) Communications, liaisons and members engagement.

### **4. Relationships**

This Focus Group will work in close collaboration with all ITU-T Study Groups, especially SG 11, SG13, SG15 and SG 16. Within ITU-T SG5, it will interact with the following questions: Q7/5, Q13/5, Q14/5, Q15/5, Q16/5, Q17/5, Q18/5, Q19/5 through collocated meetings where and when possible.

This FG – SSC will collaborate with relevant entities, in accordance with Recommendation ITU-T A.7.

These entities include the following: municipalities, federation of municipalities, non-governmental organizations (NGOs), policy makers, SDOs, industry forums and consortia, companies, academic institutions, research institutions and other relevant organizations.

### **5. Specific Tasks and deliverables**

- Collect and document information on initiatives from the global smart and sustainable cities community on current activities and technical specifications.
- Develop a document which reflects the role of ICTs in environmentally sustainable cities.
- Identify or develop terminology and taxonomy for smart and sustainable cities.
- Develop a stakeholder map which is a document that will map all stakeholders involved in the area of ICTs and smart sustainable cities.
- Develop a document of KPIs to assess the impact of the use of ICT projects in cities.
- Develop a gap analysis of potential barriers for the implementation of ICTs for smart sustainable cities.

- Draft technical reports describing and addressing the gaps and identifying future standardization work for ITU-T SG5 in the field of ICT for smart sustainable cities.
- Send the final deliverables to the parent Study Group, other relevant Study Groups and other SDOs or organizations/consortia/forum as appropriate.

## **6. Parent group**

The parent group is ITU-T Study Group 5.

## **7. Leadership**

See clause 2.3 of Recommendation ITU-T A.7.

Chairman: Silvia Guzman, Telefonica

Vice-Chairman: Flavio Cucchiatti, Telecom Italia

Vice-Chairman: Pablo Bilbao, Federation Argentina de Municipios, Argentina

Vice-Chairman: Franz Zichy, USA

Vice-Chairman: Nasser Saleh Al Marzouqi, UAE

Vice-Chairman: Ziqin Sang, Fiberhome Technologies Group

Vice-Chairman: Sekhar Kondepudi, National University of Singapore.

## **8. Participation**

See clause 3 of Recommendation ITU-T A.7. A list of participants will be maintained for reference purposes and reported to the parent group.

It is important to mention that the participation in this Focus Group has to be based on contributions and active participations.

## **9. Administrative support**

See clause 5 of Recommendation ITU-T A.7.

## **10. General financing**

See clauses 4 and 10.2 of Recommendation ITU-T A.7.

## **11. Meetings**

The frequency and location of meetings will be determined by the Focus Group and the overall meetings plan will be announced as soon as possible. The Focus Group will use remote collaboration tools to the maximum extent, and collocation with existing meetings to the maximum extent. The meetings will be announced by electronic means (e.g., e-mail and website, etc.) at least four weeks in advance.

This group will take advantage of other ITU-T events on ICT, Environment and Climate Change. Some possible dates for future meetings could be:

- Symposium on ICTs, Environment & Climate Change in Turin, May 2013
- FG SSC Meeting in Latin America hosted by Telefonica, June/July 2013
- III Green Standards Week; Madrid September 2013
- SG5 meeting in Geneva, September/October 2013 (TBD).

## **12. Technical contributions**

Contributions are to be submitted at least twelve calendar days before the meeting takes place.

**13. Working language**

The working language is English.

**14. Approval of deliverables**

Approval of deliverables shall be taken by consensus.

**15. Working guidelines**

Working procedures shall follow the procedures of Rapporteur meetings. No additional working guidelines are defined.

**16. Progress reports**

See clause 11 of Recommendation ITU-T A.7.

**17. Announcement of Focus Group formation**

The formation of the Focus Group will be announced via TSB Circular to all ITU membership, via the ITU-T Newslog and other means, including communication with the other involved organizations.

**18. Milestones and duration of the Focus Group**

The Focus Group lifetime is one year from the first meeting (see ITU-T A7, clause 2.2).

A preliminary set of milestones includes:

- First FG – SSC Meeting: Turin, Italy, May 2013.
- Intermediate presentation of Focus Group SSC and its activities: Green Standards Week, Madrid, September 2013.

**19. Patent policy**

See clause 9 of Recommendation ITU-T A.7.

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<sup>i</sup> See; [http://www.unhabitat.org/downloads/docs/E\\_Hot\\_Cities.pdf](http://www.unhabitat.org/downloads/docs/E_Hot_Cities.pdf)

<sup>ii</sup> See: <http://www.un.org/en/sustainablefuture/cities.shtml>

<sup>iii</sup> See: <http://www.unhabitat.org/content.asp?cid=9599&catid=7&typeid=46&subMenuId=0&AllContent=1>