United for Smart Sustainable Cities (U4SSC) initiative
Third meeting of the United for Smart Sustainable Cities initiative
26 April 2018
Malaga, Spain

Meeting Report

1. Introduction

The "United for Smart Sustainable Cities" (U4SSC) is a United Nations initiative coordinated by the International Telecommunication Union (ITU) and the United Nations Economic Commission for Europe (UNECE) and supported by supported by the Convention on Biological Diversity (CBD), the Economic Commission for Latin America and the Caribbean (ECLAC), the Food and Agriculture Organization (FAO), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Development Programme (UNDP), the United Nations Economic Commission for Africa (UNECA), the United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women), the United Nations Environment Programme (UN Environment), the United Nations Environment Programme Finance Initiative (UNEP-FI), the United Nations Framework Convention on Climate Change (UNFCCC), the United Nations Human Settlements Programme (UN-Habitat), the United Nations Industrial Development Organization (UNIDO)United Nations University-Operating Unit on Policy-Driven Electronic Governance (UNU-EGOV) and the World Meteorological Organization (WMO) to achieve Sustainable Development Goal 11: "Make cities and human settlements inclusive, safe, resilient and sustainable". U4SSC serves as the global platform to advocate for public policy and to encourage the use of ICTs to facilitate and ease the transition to smart sustainable cities.

As part of the United for Smart Sustainable Cities (U4SSC) Initiative, ITU and UNECE organized the Third Meeting of the U4SSC Initiative that was kindly hosted by the City of Malaga on 26 April 2018 in Malaga, Spain. This meeting was held in conjunction with the 9th Forum on Urban Intelligence and Sustainability that took place from 25-26 April 2018 in Malaga, Spain.

This meeting brought together leading specialists in the field, from city planners to engineers, designers, policy-makers, government officials, regulators, academia and standards experts.

2. Programme

The programme and the presentations of the Third U4SSC Initiative can be found at: https://www.itu.int/en/ITU-T/ssc/201804/Pages/Programme.aspx

Information about the Third Meeting of U4SSC can be found at: https://www.itu.int/en/ITU-T/ssc/201804/Pages/default.aspx

3. Highlights of the discussions
3.1. Opening of the Meeting

At the kind invitation of the City of Malaga, the Third Meeting of the U4SSC Initiative was held on 26 April in Malaga, Spain.

Mr Francisco de la Torre, Mayor of Malaga opened the meeting and welcomed all participants. Mr de la Torre thanked the participants and spoke about the initiatives of the city of Malaga. He stressed the importance of the achievement of the SDGs and the important role of cities to achieve them. He also mentioned that Malaga is a city that has coordinated the international standard for Intelligent Ports and at the same time we are working very actively on the future interoperability standard, where we intend to play a key role. Malaga has been chosen by multinationals, organizations, consortiums and the European Union for the development of multiple pilot projects related to smart cities and environmental sustainability¨.

Ms Reyna Úbeda from ITU and Ms Domenica Carriero from UNECE thanked the host for their kind invitation and delivered opening remarks highlighting the importance of the U4SSC Initiative as a United Nations Initiative which provides an international platform for information exchange, knowledge sharing and partnership building, with the aim of formulating strategic guidance to achieve the Sustainable Development Goals (SDGs), and implement the New Urban Agenda and other international agreements.

An Award Ceremony took place during the meeting. Three of the over 50 cities that are currently implementing the U4SSC KPIs worldwide were awarded with a Certificate for having successfully implemented the U4SSC KPIs. These were: Singapore, Pully (Switzerland) and Bizerte (Tunisia).

3.2. Keynote Speech

Enrique Martinez, Ministry of Energy, Tourism and Digital Agenda, delivered a keynote speech providing an overview of the activities and initiatives carried out in Spain. He focused on the role of IoT for delivering public services, identifying those areas that can most profit from this technology according to their maturity level, such as water, light and waste management. He highlighted the existence of two challenges: a) the need for open standards that allow a collaborative ecosystem; and b) the promotion of policies that prioritize security and respect for privacy. He stressed that the data collected should be limited to the extent necessary to provide the service. Citizens should also be aware of their collection. The Spanish Government is implementing initiatives to foster the services based on IoT. He finally highlighted the importance of standards (including ITU-T Recommendations) and of the collection of data in a harmonized way.

3.3. Session 1: City Panel on "Building Tomorrows' Cities Today"

The session was moderated by Mr Mario Cortés Carballo.

Mr Alexandre Bosshard presented the "Management of the city of Pully with U4SSC KPIs: visualizations, target values and scale aspects". The presentation showed how the city of Pully, in

partnership with Swisscom, has implemented the KPIs developed by the U4SSC Initiative as part of an ITU project. The results showed that the objectives have been achieved. However, some of the KPIs would need to be improved in the next few years such as child care availability, Open data, cycling transportation, public energy consumption and renewable energy consumption. Pully made two proposals on how the KPIs could be further enhanced: the first proposal concerns a visualization of the results in the form of a wheel which allows to have an overview of the indicators in an intuitive and fast way; the second proposal is to define target values based on the Sustainable Development Goals of the United Nations (SDG).

Ms Ana Santos presented the "Comayaguela Digital City: Think Smart, Think Digital, Think in Honduras" providing an overview of the activities carried out in Honduras to create a national smart city agenda. In particular, she focused on the creation of an incubator for companies and start-ups called "techhub" by involving also young people in difficult situation. This is also a project of urban renewal as the hub will be created in a certain part of the city which will become a cultural and recreational center by leveraging on ICT-enabled initiatives.

Mr Kees Rovers presented the "Brabant Urban & Rural; One Smart Community". Peelland is one of the main agriculture regions in Europe. This region is confronted with problems and challenges like: aging population, competition from upcoming new economies, crime, environmental issues, quality of air and water, waste management, environmental issues and keeping the region interesting for recreation and tourism. Mr Rovers discussed these problems and challenges which demand smart solutions, not just for cities and villages, but also for the rural area. The combination of high tech knowledge workers, industries and innovative farming explains the adoption of high speed broadband and why roll-out of fiber has been so very successful. Everybody in the rural areas including the last farm, will have access to fiber this year. The next step will be to transform this community into a smart community. Covering both urban as well as rural areas. Smaller communities in the Peelland region have adopted the Master Plan of the ITU Focus Group on Smart and Sustainable Cities as a model for execution. The province of North Brabant has provided a program for the further Digitalization of Brabant with funding for local initiatives.

Ms Carmen de Campo presented the "Is smart the same as digital?". She described about what a smart city is, which should be focused on efficiency, sustainability and citizens experience. All this will provide a roadmap for the future development of cities which is based on innovation. In order to deliver innovation, we need new service models, operational efficiency, environmental sustainability and health and safety. She finally presented three projects her company is working on.

Mr Ziqin Sang presented the "Mission of smart cities in China in 2018". He provided an overview of the activities and plans which are being carried out in China. In particular, he started by saying that China began to work on smart cities in 2011 with the aim to promote quality of life and people-oriented urbanization. The main measures are: encouraging settlements in cities and towns; strengthening basic pubic services; improve the quality of the city and its development; and improve urban-rural integration. These measures are supported by strong financial mechanisms and incentives.

Ms Esperanza Caro Gomez presented the experience of Sevilla concerning smart cities-related activities. Sevilla considers ICTs as the main enablers for the city competitiveness and efficiency of its operations and at the same time improve the quality of life of people. She finally focused on the integration of different project and the importance of public-private partnerships, and the necessity that the main leader of the city (Mayor) leads this project.

Mr. Javier Llavador presented the activities of Valencia to achieve their smart city strategy. The project to make the city smarter started in 2014 with a 4 million euro budget. At the core of the project strategy is the platform that they created to collect data and use the information for decision making and the mobile application which connects the data collected for people usage.

3.4. Session 2: Overview and Deliverables of the first phase of the U4SSC

The session was moderated by Mr Paolo Gemma.

Mr Okan Geray presented the [Flipbook on "Enhancing innovation and participation in smart sustainable cities".](#) Mr Geray gave an overview of the deliverable which addressed smart governance, smart economy and smart people domains in Smart Sustainable Cities. It also incorporated several pertinent case studies across the globe for each domain. The presentation ended with an overview of conclusions and lessons learnt based on the discussions held during the actual work of the deliverable.

Ms. Domenica Carriero presented the [Flipbook on "Connecting cities and communities with the SDGs".](#) This deliverable provides an overview on how cities can use information and communication technologies (ICTs) to achieve the Sustainable Development Goals (SDGs). It also maps the case studies to the various international agreements as well as the SDGs.

Ms Reyna Úbeda presented the [Flipbook on "Collection Methodology for Key Performance Indicators for Smart Sustainable Cities".](#) This deliverable provides cities with a methodology on how to collect data or information from key performance indicators (KPIs) for smart sustainable cities (SSC). The set of KPIs for SSC were developed to establish the criteria to evaluate ICT's contribution in making cities smarter and more sustainable, and to provide cities with the means for self-assessments. The KPIs developed within U4SSC are based on ITU-T Recommendation Y.4903: Key performance indicators for smart sustainable cities to assess the achievement of sustainable development goals.

3.5. Session 3: Ongoing Work & Review of U4SSC Terms of Reference

The session was moderated by Ms Domenica Carriero.

Mr Okan Geray presented the "U4SSC brief overview: Guidelines on Strategies for Circular Cities". During Session 3, Mr Geray gave an overview of the deliverables he is leading during the second phase of the U4SSC initiative, namely:
- Guidelines for strategies on circular cities,
- City science application framework, and
- Guiding principles for artificial intelligence in cities.

The scope and the approach adopted for each deliverable was briefly discussed. Each deliverable targets formulation of a high-level framework along with representative cases from across the globe to illustrate real life applications. The first two deliverables are already in progress after their launch in November 2017 and will be completed in 2019. On the other hand, the third deliverable is planned to be kicked-off in the last quarter of 2018 and is expected to be completed in 2019 since it relies partially on the work conducted in the second deliverable. All three deliverables intend to enhance the sustainability of cities by capitalizing on ICT and other schemes where applicable.

Ms Domenica Carriero on behalf of Ms Kari Aina Eik presented the "Overview of the Guidelines on tools and mechanisms to finance smart sustainable cities projects". She briefly described the scope of the work and the chapters of the study. The timeline and the process to develop the output was also presented.

Mr Sang Ziqin and Mr Tomas Llorente presented a new proposal on "The Impact of New Frontier Technologies in Cities" containing three new deliverables expected to be developed in 2018-2019. These three deliverables are, namely: Deliverable 1 "The impact of Artificial Intelligence and Cognitive Computing in Cities"; Deliverable 2 "The impact of Data Processing and Computation in Cities"; and Deliverable 3 "The impact of Sensing technologies and IoT in Cities". Each deliverable will cover different aspects of the related technology as well as their impacts on city management. Tania Marcos was appointed as Co-leader of the three deliverables above mentioned together with Mr Ziqin Sang and Mr Tomás Llorente.

During this session the terms of reference (ToR) were reviewed, discussed and approved. The ToR are available here.

3.6. Session 4: Key performance indicators and city profiles

The session was moderated by Ms Tania Marcos.

Ms Domenica Carriero informed the participants of the UNECE activities on the topic of smart sustainable cities, in particular, on the review and follow up to the implementation of the 2030 Agenda on Sustainable Development for what concerns the urban-related SDGs and of the New Urban Agenda. The presentation included information on the UNECE work in the United for Smart Sustainable Cities (U4SSC) Initiative and UNECE implementation programme United Smart Cities. In particular, she focused on the development of, smart sustainable city profiles using the Key Performance Indicators for Smart Sustainable Cities and UNECE work on capacity building at the national and local level.

Ms Reyna Ubeda presented ITU-T activities on Internet of things (IoT) and smart cities and communities (SC&C). ITU-T work on IoT and SC&C is focused on the development and implementation of standards, research and pre-standardization work and knowledge sharing. ITU-T Study Group 20 develops international standards to enable the coordinated development of IoT technologies in smart cities, including machine-to-machine communications and ubiquitous sensor networks. This Study Group is also involved in studies relating to big data aspects of IoT and smart

cities and communities. Ms Ubeda also highlighted the work of the Focus Group on Data Processing and Management to support IoT and Smart Cities & Communities, which is to propose mechanisms, frameworks and guidelines for supporting the security, privacy and interoperability of datasets and data-management systems within the IoT and smart city domain. Additionally, Ms Ubeda presented the ITU project on the Implementation of the U4SSC Key Performance Indicator project. This set of KPIs is currently being implemented in over 50 cities worldwide and other cities were invited to take part of this project.

Mr Borhene Dhaouadi presented the activities of Bizerte. The main focus of his presentation was to provide information on the creation of the digital port and the bridge which connects two parts of the city. In particular the digital port is at the core of their smart city strategy and will enable the perfect integration of the city digital agenda with the urban cultural heritage.

Mr Chee Wee Tan presented the "Developing a Digital Economy Sub-Index for Cities for Smart and Sustainable Growth." A vibrant digital economy that harnesses the power of technology will create good jobs, enable businesses to seize market opportunities, empower its people to forge stronger communities to lead meaningful and fulfilled lives towards a sustainable future. Many countries are embarking on this journey to digitalize their economy to attain these goals. With greater digitalization comes the benefit of cost savings, improved processes, resource allocation and productivity. Measures on the digitalization of business sectors will serve to provide data for tracking the impact of digitalization, such as unlocking productivity gains through the usage of technology, protecting businesses from external disruptions both locally and internationally, and providing the tailwinds for growth. Having embarked on this journey to digitalize the economy, the speaker shared the experience of Singapore to be able to contribute to the development of the ITU Global Smart Sustainable Cities Index by proposing the inclusion of a Digital Economy (DE) Sub-Index, providing a means to measure and track over time the performance of a digital economy at the city level.

3.7. Session 5: Building a Global Smart Sustainable Cities Index

The session was moderated by Mr Okan Geray.

Ms Barbara Kolm provided a brief overview on "Building a Global Smart Sustainable Cities Index". The Global SSC INDEX is a project which is being carried out by ITU together with Smart Dubai within the U4SSC framework. The Global SSC Index is being developed by a team of consultants led by Dr Barbara Kolm and John Smiciklas under the supervision of ITU. This Index is expected to meet the need to measure progress, to make different levels of economic integration, geographic location sizes of cities transparent, to evaluate and integrate different levels of quantitative and qualitative data, to make these data comparable and visible with state of the art scientific methods, to transform/translate scientific outcomes into easy understandable graphics and numbers and to make outcomes/results public for users (citizens, governments etc.). After all it will help cities to learn from each other and improve their services. This Index is expected to be the result of worldwide cooperation, academic exchange and sharing of best practices, expertise and experiences by researchers and scientists from universities, institutes and think tanks from different fields of research e.g. political and social science, economics, institutional economics, sociology, mathematics, statistics, computer science, philosophy, city planners, architects,

environmentalists etc. In addition, the cities that are implementing the U4SSC KPIs or have implemented the KPIs will be given an opportunity to contribute to the development of the Index.

3.8. Session 6: Future Workplan & Wrap up

The session was moderated by Mr Paolo Gemma. Mr Gemma provided an overview of the U4SSC Action Plan which was discussed, reviewed and approved during the meeting. This Action plan contains the list of deliverables, the names of the Leaders responsible for the coordination of each deliverable and it lists the United Nations agency tasked to provide secretariat support.

Participants highlighted the need to create regional hubs which would help to promote the U4SSC work in the different Regions. ITU and UNECE were asked to follow up on this proposal.

4. Closure of the meeting

The U4SSC Vice Chairman, Mr Paolo Gemma thanked the speakers and the participants for their contributions and support during the meeting. The Vice-chairman also expressed his gratitude to the host, City of Malaga, for their excellent organization and warm hospitality. The Vice-chairman also extended his appreciation to ITU and UNECE staff for their assistance in this meeting.

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