Smart Sustainable Cities Journey

Lessons learned

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Focus Group on Smart Sustainable Cities (FG-SSC)

1. The definition

First internationally agreed definition:

"*A **smart sustainable city** is an innovative city that uses information and communication technologies (ICTs) and other means to improve quality of life, efficiency of urban operation and services, and competitiveness, while ensuring that it meets the needs of present and future generations with respect to economic, social and environmental aspects*"

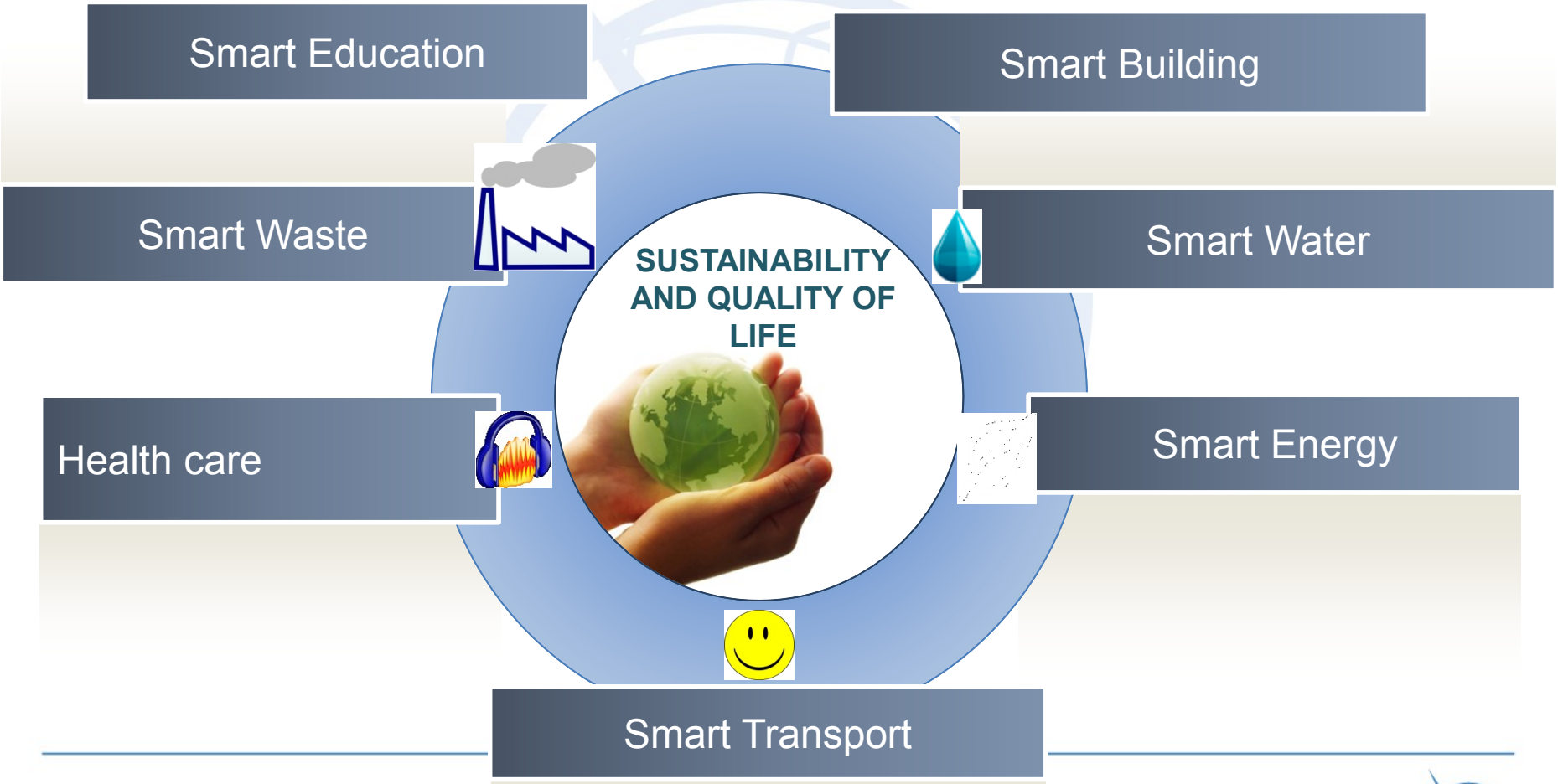
2. City is an Holistic System

"Cities are the greatest creations of humanity" – Daniel Libeskind

3. Engaging stakeholders participation

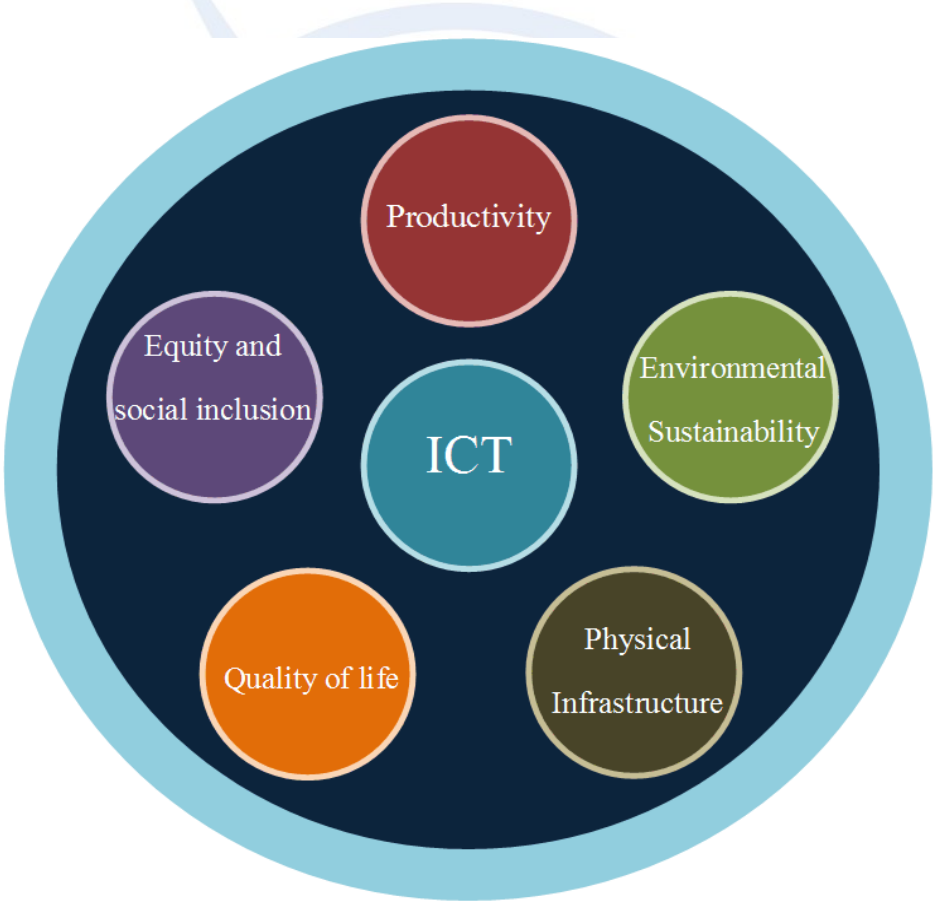
4. SSC Services

Improving sustainability and quality of life



5. Key Performance Indicators (KPIs)

You cannot manage what you cannot measure!



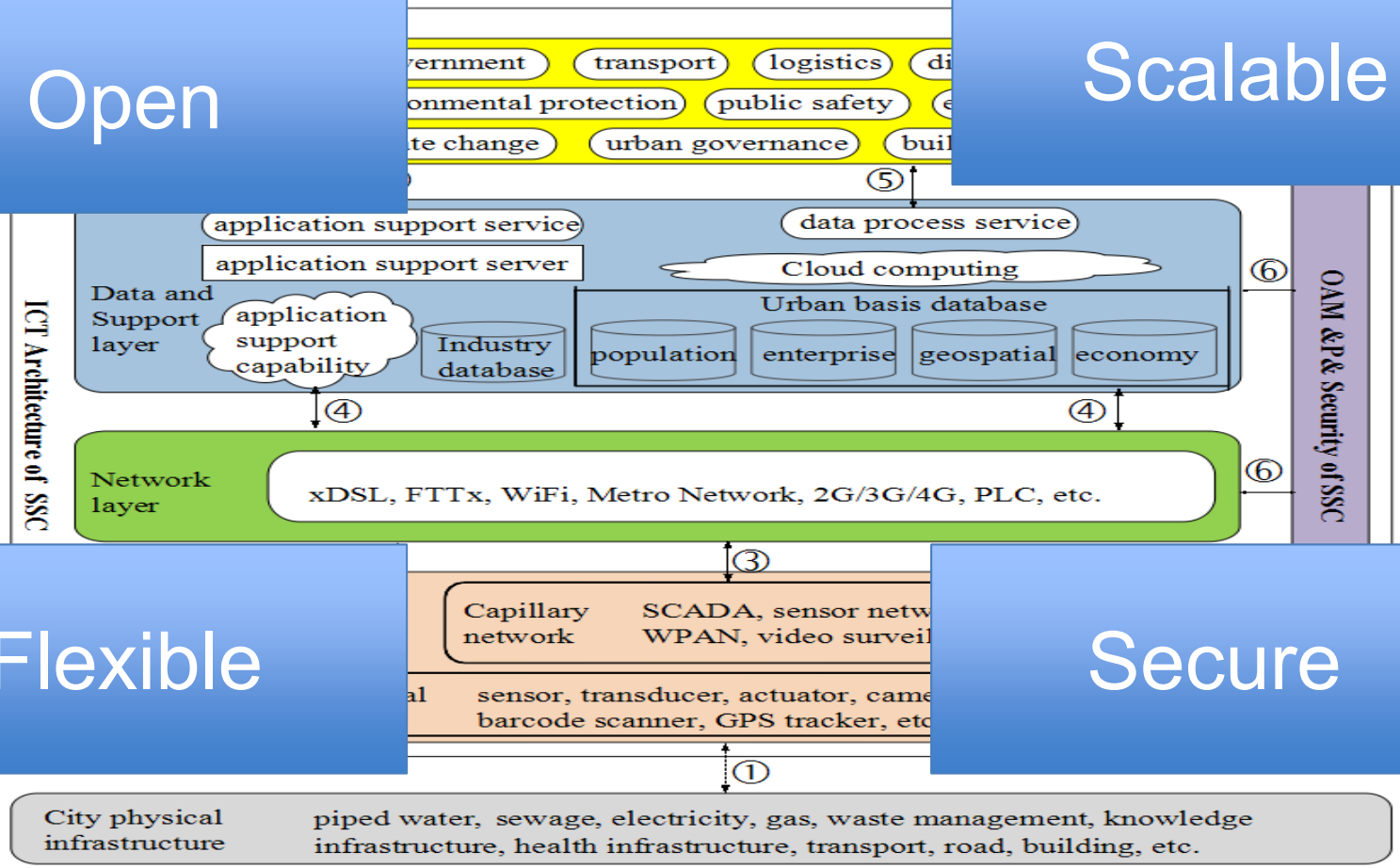
6. International Standards Are a Must!

7. Setting a SSC Infrastructure

Towards Open Smart Sustainable Cities

Open

Scalable



Flexible

Secure

8. Building Trust

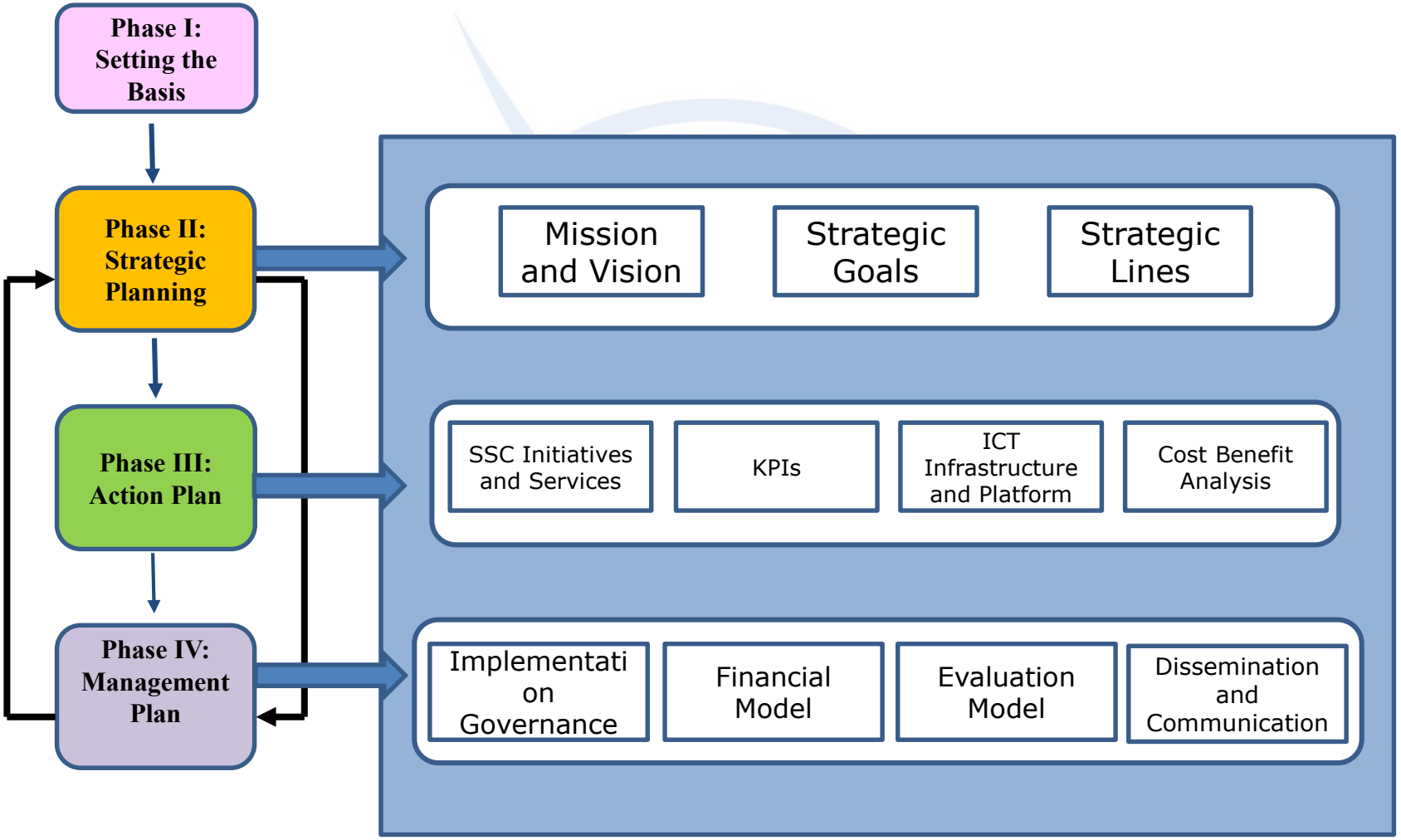
Privacy

Resilience

Data Protection

Security

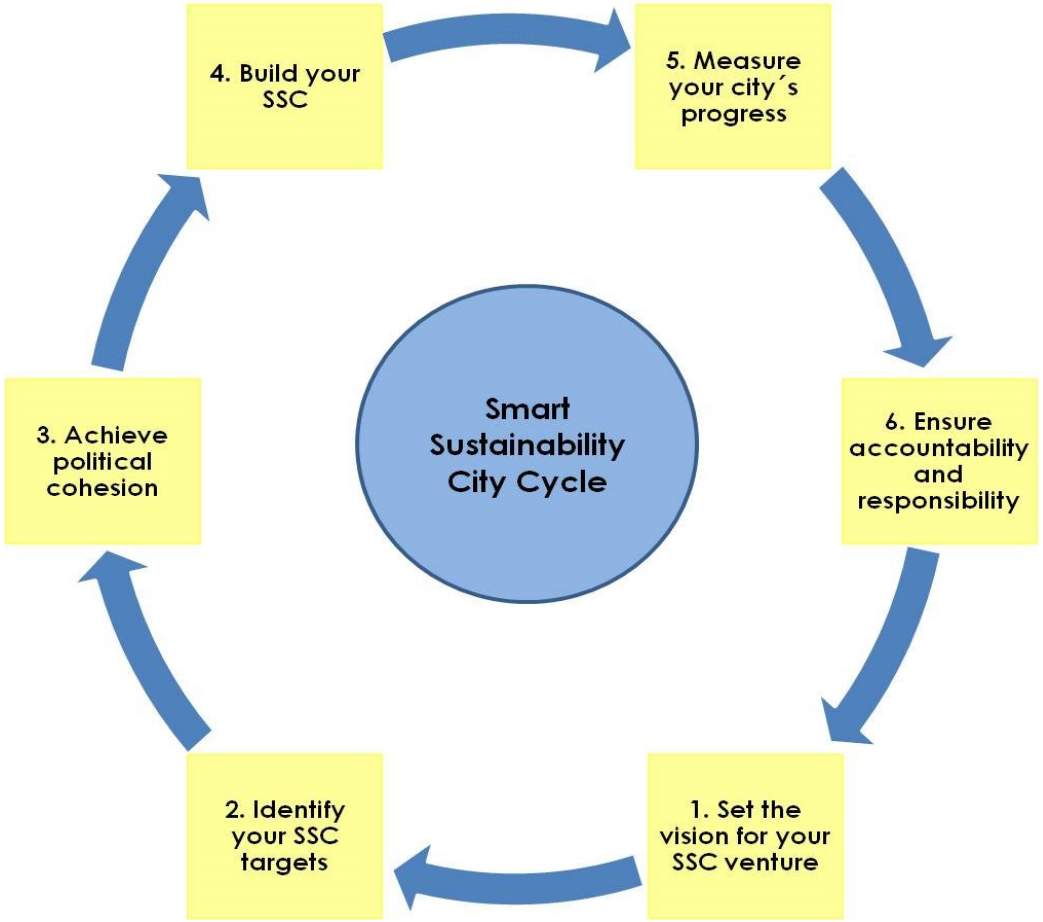
9. Establish Your Master Plan!



10. Way to a Smart
Sustainable City

Steps to Becoming a Smart Sustainable City

Smart Sustainable Cities: A Six Step Transition Cycle



(1) Set the vision for your Smart Sustainable City venture

- This should be done in line with the city's identity, political priorities and long-term development strategy.
- It is important to identify the relevant SSC stakeholders who will assist with the journey.
- It is pertinent to determine the level of current ICT use in the city and identify existing governance mechanisms that would allow an efficient and effective management of SSC solutions.

(2) Identify your SSC

These targets include:

- Developing of an appropriate SSC infrastructure.
- Developing SSC services by integrating ICT into existing urban services.
- Defining the SSC KPIs.
- Educating the stakeholders identified in Step (1) of the advantages of SSC.

(3) Achieve political commitment:

- This includes adoption of SSC targets/ programmes through consensus.
- This consensus would provide the basis for an agreed document that has widespread support and which can serve as a reference for strategic planning

(4) Build your Smart Sustainable City

- Make a feasible Master Plan for your Smart Sustainable City transition
- Conform to appropriate construction models including Public Private Partnerships in various SSC programmes
- Ensuring long term services via good operation and maintenance after infrastructure is in place.

(5) Measure your city progress

- This step involves monitoring and evaluating a work programme required to achieve the targets set in Step (2).
- The FG-SSC KPIs form an excellent baseline for city decision makers, as they map the city's progress in terms of their overall SSC journey.

(6) Ensure accountability and responsibility

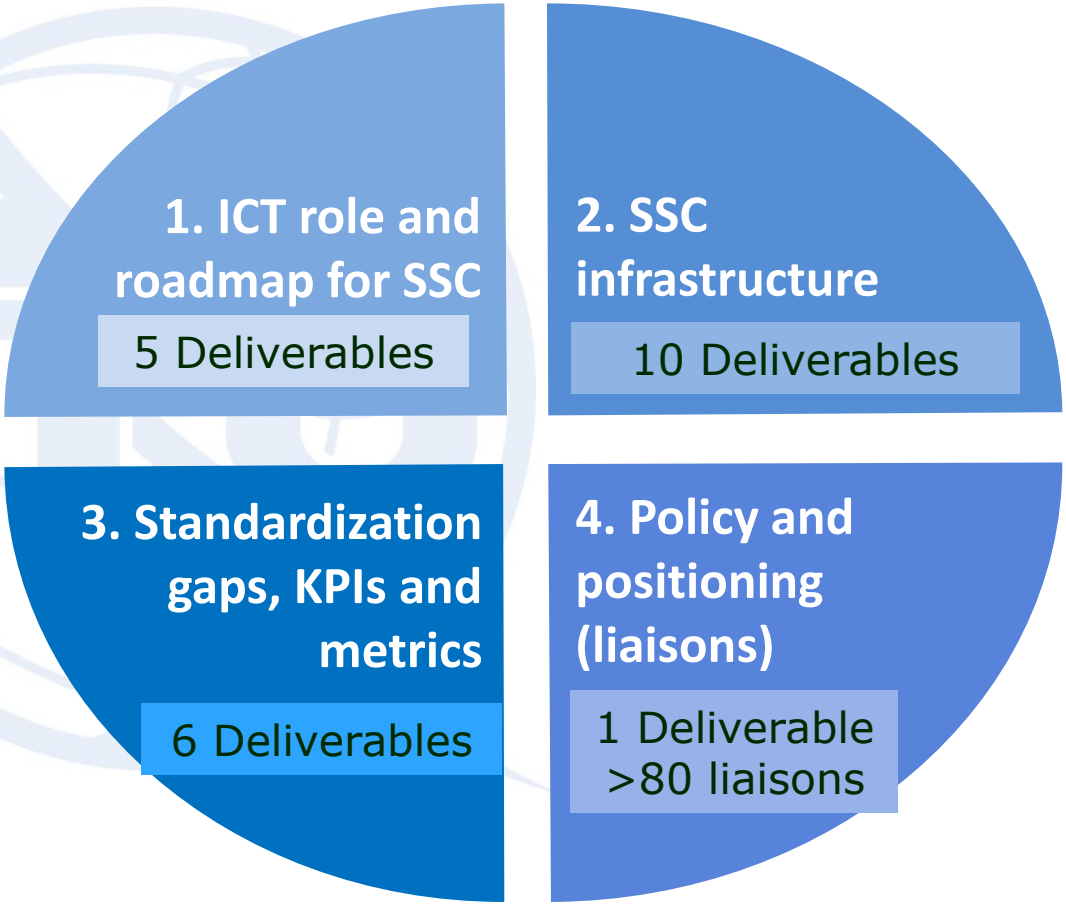
- This focuses on evaluating, reporting and learning from the SSC process and related experiences.
- This includes an assessment of the implementation of the work programme, and an analysis of reflections about strengths and shortcomings.
- This step helps with the preparation of future baseline reviews to deepen SSC master plans, among others.

Where we started….

ITU-T Focus Group on SSC

- Established at SG5 meeting in Geneva (February 2013)
- Mandate extended until May 2015
- As an open platform for smart-city stakeholders
- Over 150 participants / collaborators from different stakeholders
- Liaison with Other SDOs (ISO, IEC etc)

Working Groups & Deliverables



FG-SSC technical reports and specifications

High Level Reports & WG1 Reports (5)

1. Smart sustainable cities: an analysis of definitions **(Finalized)**
2. An overview of smart sustainable cities and the role of information and communication technologies **(Finalized)**
3. Smart Sustainable Cities: **a guide for city leaders**
4. **A master plan** for smart sustainable cities

Working Group 3 – KPIs & Standardization Gaps (5)

1. Overview of key performance indicators in smart sustainable cities **(Finalized)**
2. KPIs definitions for smart sustainable cities **(Finalized)**
3. KPIs related to the **use of ICT** in smart sustainable cities **(Finalized)**
4. KPIs related to the **sustainability impacts of ICT** in smart sustainable cities **(Finalized)**
5. **Standardization roadmap** for smart sustainable cities **(Finalized)**
6. **Standardization activities** for smart sustainable cities

Key performance indicators (KPIs) series documents

1. Technical specifications on overview of key performance indicators in smart sustainable cities
2. Technical report on KPIs definitions for smart sustainable cities
3. Technical specifications on KPIs related to the **use of ICTs** in smart sustainable cities
4. Technical specifications on KPIs related to the **sustainability impacts of ICTs** y in smart sustainable cities

- KPI dimensions aligned with UN-HABITAT
- KPIs include **ICT use** and **ICT impact**
- KPIs include the **ICT & sustainability** impacts together
- Complementary & broader than other set of KPIs
- Basis for **a SSC Index**

FG-SSC technical reports and specifications

Working Group 2 Reports – Infrastructure (10)

1. Overview of smart sustainable cities **infrastructure**
2. Setting the **framework for an ICT architecture** of a smart sustainable city
3. **Multi-service infrastructure** for smart sustainable cities in new-development areas
4. **Anonymization infrastructure and open data** in smart sustainable cities
5. **Intelligent buildings** for smart sustainable cities
6. ICTs for **climate change adaptation** in cities **(Finalized)**
7. **Smart water management** in smart sustainable cities **(Finalized)**
8. **Cybersecurity**, data protection & cyber resilience in smart sustainable cities **(Finalized)**
9. **EMF** considerations in smart sustainable cities **(Finalized)**
10. **Integrated management** for smart sustainable cities **(Finalized)**

Working Group 4 – Policy & Positioning (1)

1. Setting the stage for stakeholder engagement for SSC **(Finalized)**

New Question 20 in ITU-T Study Group 5

Motivation:

The integration of ICT into all aspects of city planning and operations allows for better informed decision-making thereby facilitating the integration of city services and cooperation across different sectors.

Question 20
Smart sustainable cities and communities (SSC&C)

Tasks - developing Recommendations *(inter alia)*:

- for terms and definitions, characteristics and requirements, architecture framework of SSC&C;
- on key performance indicators, metrics, measurement methodologies;
- for guidelines and best practices related to SSC&C strategic planning and implementation.

It is a journey, a mindset, not an arrival point

- ICTs provide an integrated strategic approach to sustainability in SSC, making them key enablers of urban development.
- Given the urbanization problems, cities do not have the option to continue functioning as they have done in the past.

Conclusion

IoT enabled

ITU-T is the ideal global platform

Thank you

More information on Smart Sustainable Cities

Visit: http://www.itu.int/en/ITU-T/climatechange/Pages/default.aspx

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