Empowering Digital Transformation in cities

Introduction to the U4SSC Key Performance Indicators

John Smiciklas
U4SSC Verifier

Digital Transformation in Cities

The U4SSC Key Performance Indicators for Smart Sustainable Cities have been developed to provide cities with a consistent and standardised method to collect data and measure performance and progress of:

01

achieving the Sustainable Development Goals (SDGs);

02

becoming a smarter city

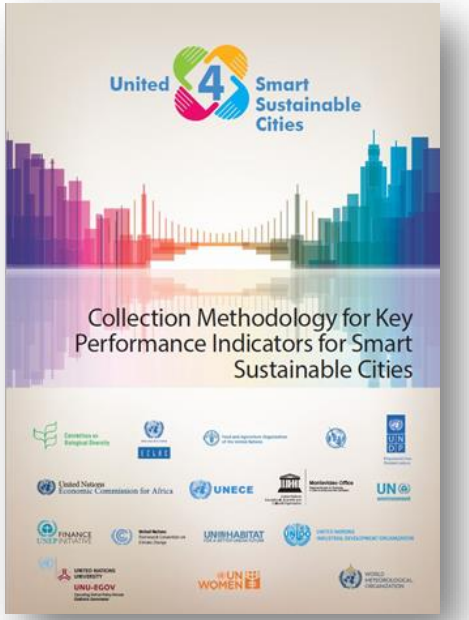
03

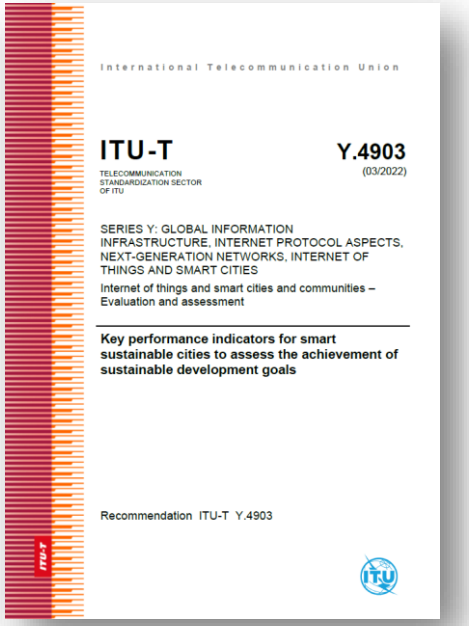
becoming a more sustainable city

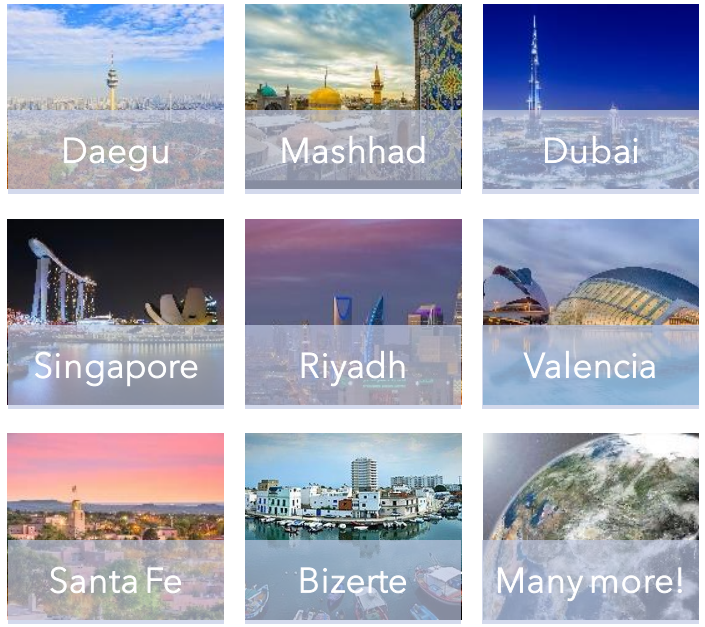
04

Supporting Digital Transformation

U4SSC Key Performance Indicators (KPI)







U4SSC KPI Objectives

These indicators have been developed to provide cities with a consistent and standardized method to collect data and measure performance.

Cities will be able to:

- Track their progress over time
- Allow for the dissemination of best practices
- Set standards for progress in meeting the SDGs

U4SSC KPI Dimensions

Dimensions

Economy	Environment	Society and Culture
• ICT Infrastructure • Water & Sanitation • Drainage • Electricity Supply • Transport • Public Sector • Innovation • Employment • Waste • Buildings • Urban Planning	• Air Quality • Water and Sanitation • Waste • Environmental Quality • Public Space and Nature • Energy	• Education • Health • Culture • Housing • Social Inclusion • Safety • Food Security

Categories

55 Core Indicators + 36 Advanced Indicators

- 20 Smart + 32 Structural + 39 Sustainable
- 132 Data Collection Points

U4SSC KPI Description

Comprehensiveness:

- The set of indicators should cover all the aspects of SSC.

Availability:

- The KPIs should be quantitative and the historic and current data should be either available or easy to collect.

Simplicity:

- The concept of each indicator should be simple and easy to understand for the urban stakeholders.

Timeliness:

- This refers to the ability to produce KPIs with respect to emerging issues in SSC construction.

U4SSC KPI Description

Each Indicator has a description for:

- the rationale for choosing the indictor;
- how the indicator should be interpreted;
- what benchmarking trends are considered desirable;
- the methodology for calculating the value to be reported; and potential sources of data.

U4SSC KPI Example

Dimension	Society and Culture				
Sub-Dimension	**Safety, Housing and Social Inclusion**				
Category	**Safety**				
KPI Name	**Traffic Fatalities**				
KPI No.	**SC: SH: SA: 9C**	**Type:**	**Core**	**Type:**	**Structural**
Definition / Description	Traffic fatalities per 100,000 inhabitants.				
Rationale / Interpretation / Benchmarking	Road traffic injuries claim more than 1.2 million lives each year and have a huge impact on health development and overall quality of life. They are the leading cause of death among the youth (15 -29 years), and cost governments approximately 3% of overall national GDP. Despite this massive and largely preventable human and economic toll, action to combat this global challenge has been insufficient. The definition of a road traffic fatality for harmonization of surveillance is "any person killed immediately or dying within 30 days as a result of a road traffic injury accident". (WHO, 2015) The choice of 30 days is based on research which shows that most people who die as a result of a crash succumb to their injuries within 30 days of sustaining them. A declining trend should be pursued with lower percentages indicating better road safety.				
Source(s)	WHO Global status report on road safety 2015. Retrieved from <http://www.who.int/violence_injury_prevention/road_safety_status/2015/en/> WHO Global status report on road safety 2009. Retrieved from <http://www.who.int/violence_injury_prevention/road_safety_status/2015/en/>				
Methodology	Calculate as: Numerator: Number of traffic fatalities. Denominator: One 100,000th of the city's population.				
Unit	Number / 100,000 inhabitants				
Data Sources / Relevant Databases	Data can be collected from local transportation and emergency departments and local hospitals. The World Health Organization can also provide adequate data on traffic fatalities.				
SDG Reference(s)	SDG Indicator 3.6.1: Death rate due to road traffic injuries.				

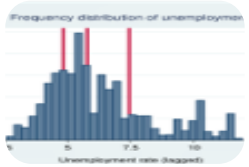
U4SSC KPI Structure

Dimension	Economy	Environment	Society and Culture
Sub-Dimension	▪ ICT ▪ Productivity ▪ Infrastructure	▪ Environment ▪ Energy	▪ Education, Health and Culture ▪ Safety, Housing and Social Inclusion
Category	▪ ICT Infrastructure ▪ Water and Sanitation ▪ Drainage ▪ Electricity Supply ▪ Transport ▪ Public Sector ▪ Innovation ▪ Employment ▪ Waste ▪ Buildings ▪ Urban Planning	▪ Air Quality ▪ Water and Sanitation ▪ Waste ▪ Environmental Quality ▪ Public Space and Nature ▪ Energy	▪ Education ▪ Health ▪ Culture ▪ Housing ▪ Social Inclusion ▪ Safety ▪ Food Security

U4SSC KPI Structure

- Economy
- ICT
- Environment
- Productivity
- Society and Culture
- Infrastructure

Smart Water Meter



Smart Energy Meters

Shared Vehicles

GHG Emissions

E-Government

Adult Literacy

U4SSC KPI Results

Track progress

Perform trend analysis

Benchmark performance

Compare results

How do the U4SSC KPI's Work?

REPORT

Publish key areas of analysis, important lessons learned, establish actionable outcomes and other key city insights

BENCHMARK

Track year over year progress, perform longer term trend analysis and benchmark performance

MAP

Provide a powerful visual representing the areas where city action is required

U4SSC KPI Process

U4SSC Invitation Letter

U4SSC Data Collection Template

Initial Meeting

KPI Data Collection

Initial Submission

Completion of Verification

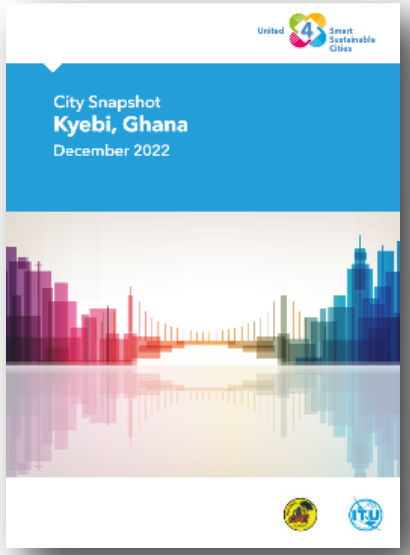
Verifier Feedback And Review

Review of Draft Reports

Finalize Reports

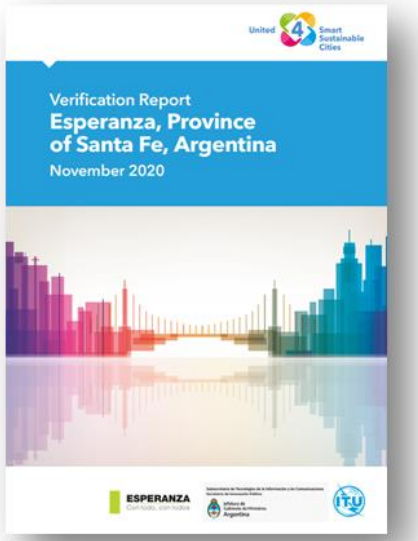
U4SSC Awards Completion

Reporting the U4SSC KPIs



City Snapshots

Provide a visual overview of a city's U4SSC KPIs performance based on global benchmarks



Verification Reports

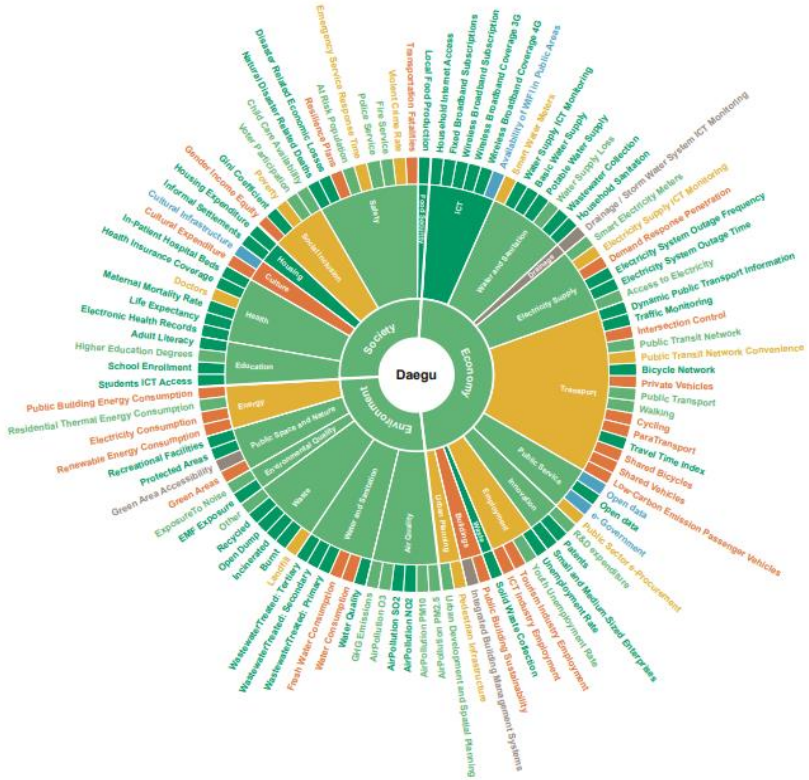
Summarize the conclusions of a city's U4SSC KPIs project

Case Studies

Detail a city's journey towards successfully becoming a smart sustainable city

U4SSC KPIs in Action –

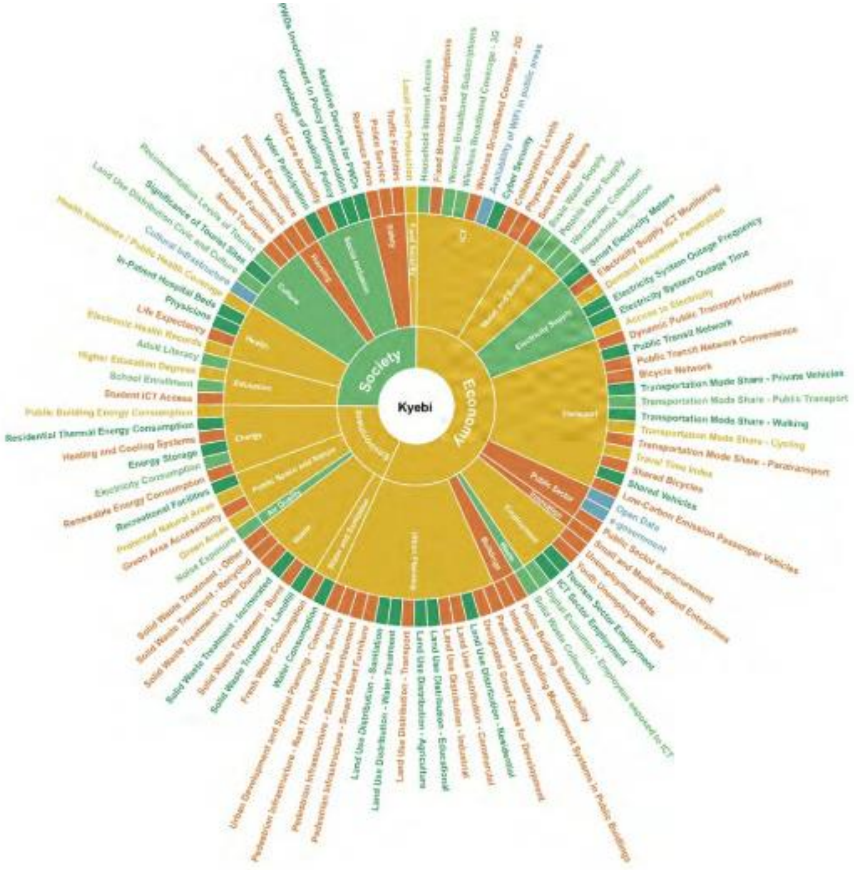
Daegu, South Korea (Republic of)



U4SSC KPIs in Action –

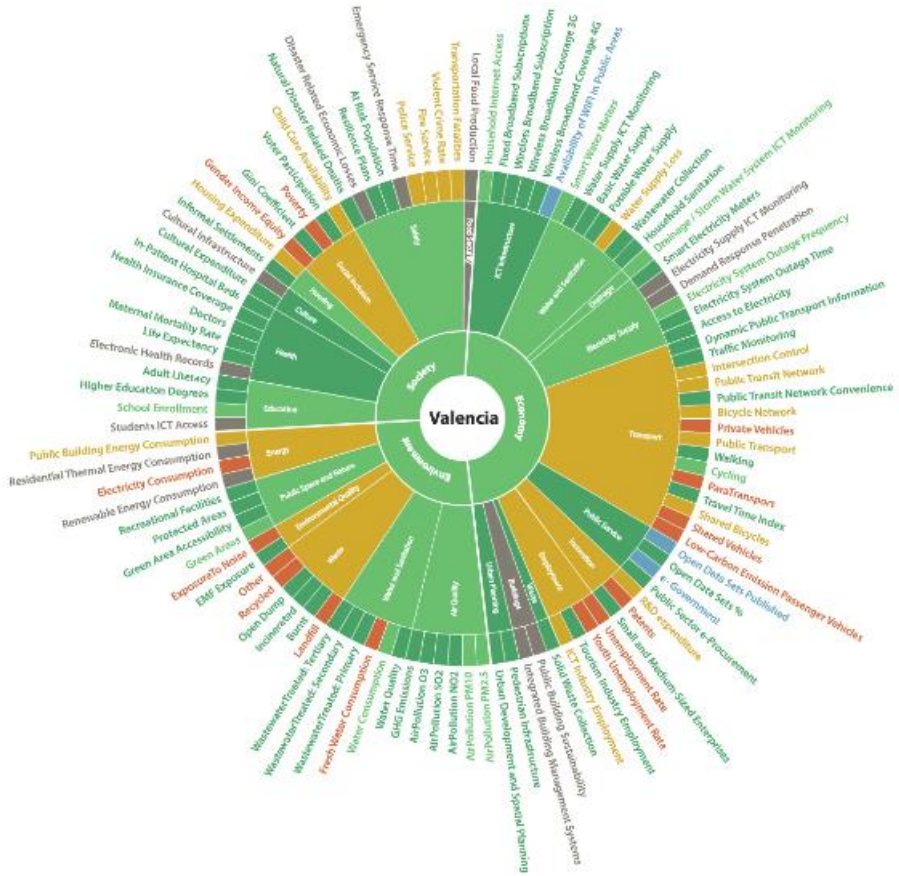
Daegu, South Korea (Republic of)

U4SSC KPIs in Action –
Kyebi, Ghana



U4SSC KPIs in Action –

Valencia, Spain



Economy

ICT
(ICT Infrastructure, Water and Sanitation, Drainage, Electricity Supply, Transport, Public Sector)

Productivity
(Innovation, Employment)

Infrastructure
(Water and Sanitation, Electricity Supply, Transport, Waste, Buildings, Urban Planning)

Environment

Environment
(Air Quality, Water and Sanitation, Waste, Environmental Quality, Public Space and Nature, Energy)

Energy
(Energy)

Society and Culture

Education, Health and Culture
(Education, Health, Culture)

Safety, Housing and Social Inclusion
(Housing, Social Inclusion, Safety, Food Security)

U4SSC KPI Advantages

- The first and only International Standard supported by 16 UN Agencies
- Support cities in the development of informed policy making
- Identify areas of improvement and assess its own progress
- Allows cities to develop stronger strategies
- Help cities to accelerate digital transformation and achieve the SDGs

How To Get Involved

Will your city be next?

1. To support cities in the implementation and use of the SSC KPIs

2. To test and verify the applicability of SSC KPIs in several cities of the world

Thank you!

Email

u4ssc@itu.int

Website

U4SSC.itu.int