# Smart sustainable cities: An analysis of definitions

## Executive summary

This Technical Report was written with the aim of establishing a concrete definition for smart sustainable cities (SSC) which can be used worldwide. Although there is abundant literature available on smart cities, there is no standardized, commonly accepted set of terminologies which would help to aptly describe a "smart sustainable city". Such a standardized definition will help create a more defined structure in relation to information and communication technology (ICT) infrastructure, key performance indicators (KPIs), metrics and policies for smart sustainable cities as viewed by ITU.

The following common criteria was used as a guideline, based on key attributes: (1) sustainability, (2) quality of life, (3) urban aspects, and (4) intelligence or smartness.

Core themes for SSC include: (1) society, (2) economy, (3) environment, and (4) governance.

Approximately 116 existing definitions of smart sustainable cities were studied and analysed by using as a guideline the attributes and themes of SSC developed in a parallel ITU-T Technical Report on the Overview of smart sustainable cities. These definitions were obtained from a variety of sources including: academia and research communities, government initiatives, international organizations (United Nations, ITU, etc.), corporate/company profiles, user centric definitions, trade associations and standards development organizations (SDOs).

Key categories and indicators were established and a list of 30 key terms which should be included in a standardized definition were also identified. The following eight (8) categories were identified to be key for SSC: (1) quality of life and lifestyle, (2) infrastructure and services, (3) ICT, communications, intelligence and information, (4) people, citizen and society, (5) environment and sustainability, (6) governance, management and administration, (7) economy and Finance, and (8) mobility. Six (6) primary indicators were identified to be smart living, smart people, smart environment and sustainability, smart governance, smart mobility and smart economy. The following 30 key words were identified to be representative of SSC.

- ICT
- Adaptable
- Reliable
- Scalable
- Accessible
- Security
- Safe
- Resilient
- Economic
- Growth
- Standard of living

- Employment
- Citizens
- Well-being
- Medical Welfare
- Physical safety
- Education
- Environmental
- Physical and service infrastructure
- Transportation and mobility

- Water
- Utilities and energy
- Telecommunications
- Manufacturing
- Natural and man-made disasters
- Regulatory and compliance
- Governance
- Policies and processes
- Standardization