SMART CITY STRATEGIC GROWTH MAP

Organisations that develop standards

Organisations that develop standards

Navigating the sea of international standardisation organisations that provide a framework for smart cities can be challenging.

Among the largest international standardisation institutions are:

ISO	International Organisation for Standardization	ISO develops International Standards in technical and economic fields.
IEC	International Electrotechnical Commission	IEC is an international standards organization that publishes International Standards for all electrical, electronic and related technologies.
ITU	International Telecommunication Union	ITU consists of three sectors, one of which is the ITU Telecommunication Standardization Sector (ITU-T). This sector coordinates standards for telecommunications.
CEN	European Committee for Standardisation	CEN is a standards organization that provides a platform for the development of European Standards and other technical documents in a number of industrial and service sectors, helping to foster the European economy in global trading.
CENELEC	European Committee for Electrotechnical Standardization	CENELEC is responsible for European standardization in the area of electrical engineering.
ETSI	European Telecommunications Standards Institute	ETSI is a standardization organization in the telecommunications industry. ETSI develops globally-applicable standards for the ICT sector.

Among the largest industry standards organisations are:

OGC	Open Geospatial Consortium	OGC is an international organization creating quality open standards for the global geospatial community. OGC standards are used in a wide variety of domains including Environment, Defence, Health, Agriculture, Meteorology, Sustainable Development and many more.
W3C	World Wide Web Consortium	W3C is an international community that develops open standards to ensure the long-term growth of the Web.
TM Forum	-	TM Forum is the global membership association for digital business. Focus is on leveraging computing and communications standards to produce a common way for digital business.
IEEE	Institute of Electrical and Electronics Engineers	IEEE is an international professional organisation that, among other things, leads on international standards that underpin telecommunications, information technology, and power-generation products and services.
OneM2M	-	A technical specifications developing body for M2M-related business domains such as: telematics and intelligent transportation, healthcare, utilities, industrial automation, smart homes, etc.
OASIS	Organization for the Advancement of Structured Information Standards	OASIS is a consortium that produces open standards for security, Internet of Things, cloud computing, energy, content technologies, emergency management, and other areas.

Organisations that develop standards

Due to the large number of standardisation organisations there is a variety of standardization initiatives. Historically, standards organisations have worked on separate areas with little if any overlap. Though with cities touching on a number of different sectors, such as energy, transport or sensors, this approach is being rethought for the benefit of a networked structure. Activities in the smart cities standardisation domain include:

ISO/IEC's Joint Technical Committee 1 (JTC 1) WG 11 on Smart Cities

The Smart Cities Working Group (WG 11) created by ISO and IEC's Joint Technical Committee examines the needs and potentials for standardization in cities.

Projects include:

- ICT reference framework
- the core concept model (CCM) of the Smart City
- the Smart City reference model and KPIs

The Study Group focuses on ICT aspects of smart cities.

ISO/TC 268 Sustainable cities and communities

This work group includes the development of requirements, frameworks, guidance and supporting techniques and tools related to the achievement of sustainable development considering smartness and resilience, to help all Cities and Communities and their interested parties in both rural and urban areas become more sustainable.

ISO/TC 268 has developed two standards and one technical report since it was first established.

- ISO 37101 Sustainable development of communities – Management systems – Requirements with guidance for resilience and smartness
- ISO 37120 Sustainable development of communities – Indicators for city services and quality of life
- ISO 37150 Smart community infrastructures – Review of existing activities relevant to metrics

With one more technical report currently under development:

- ISO 37121 Inventory and review of existing indicators on sustainable development and resilience in cities (Technical Report)

Possible new work items include:

- Guide to establishing strategies for smart cities and communities
- Indicators for Resilient Cities
- Indicators for Smart Cities

CEN-CENELEC-ETSI Smart and Sustainable Cities and Communities Coordination Group (SSCC-CG)

These European standardisation bodies have come together to coordinate and promote European standardization activities relating to Smart Cities.

The SSCC-CG is also compiling an overview of other relevant international standardization activities, but does not develop standards itself. It has an advisory function, reporting directly to the standards organizations' steering bodies, to which it also proposes recommendations.

SSCC-CG identified four primary objectives for the implementation of a European strategy for smart/sustainable city/community standards:

1. Development of a suitable framework for SSCC
2. Inclusion of all stakeholders in standards activities
3. Implementation of standardization
4. Communication and active promotion of SSCC standards

IEC Smart Cities Systems Committee

The Working Group on developing a reference architecture

- review the end-to-end electrotechnical aspects of city management and city service delivery
- ensure integration, interoperability and effectiveness across the different city systems