ISO Smart City standards in practice:
Considering current and further cities’ needs and expectations in new standards formulation and implementation

Dr. Bernard GINDROZ
Chair of ISO TC 268
Chair of CEN/CENELEC/ETSI Sector Forum SSCC
Context & Challenges faced by cities

• By 2050, the population is forecast to be just under 10 billion people, with about **80%** of that population expected to be **urbanized**.

• The **challenge** that every city is facing is how to best deliver the **resources and services** needed to ensure a **thriving population** and **good economic performance**.

THE GLOBAL CONTEXT

Cities today occupy approximately **only 2%** of the total land, however:

- **70%** Economy (GDP)
- **over 60%** Global Energy Consumption
- **70%** Greenhouse Gas Emissions
- **70%** Global Waste
Sustainable Development Goals

Common challenges and engagement

Committed by all Member States and EFTA and the European Commission’s strategies
ISO Smart and Sustainable Cities developments

Smart Cities require a holistic approach for sustainable development...

- Challenges faced by Cities are very complex and multidimensional, multisectorial.
- Big challenge is to develop comprehensive policies, consistently applied over different municipal areas.
- A focus on citizens with new governance models
- 5 major areas of priorities with dedicated KPIs:
  1. People
  2. Planet
  3. Prosperity
  4. Governance
  5. Replication/scaling-up-Dissemination

International Workshop: Smart Cities in Practice.

31/10/2017, Vienna

Dr. Bernard GINDROZ
ISO Smart and Sustainable Cities developments

- Identify “maturity level” (readiness)
- Vision (incl. results related)
- Commitment/Decision
- Strategy with objectives
- Roadmap with targets
- Implementation and culture of results
  - Measure progress and monitor
  - Evaluate against planned targets
  - Improve to meet the objectives
  - Communication & reporting
ISO TC 268 Sustainable cities and communities

Standardization in the field of Sustainable Cities and Communities including development of requirements, frameworks, guidance, 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.

TC 268 contributes to the UN Sustainable Development Goals through its standardization work.

The proposed series of International Standards will encourage the development and implementation of holistic and integrated approaches to sustainable development and sustainability.

Secretariat: AFNOR, Mr. Etienne Cailleau
Chairman: Dr. Bernard Gindroz
Creation date: 2012

Participating countries: 33
Observing countries: 23
International Workshop: Smart Cities in Practice.

ISO Smart and Sustainable Cities developments

Organization

ISO/TC 268
Sustainable development in communities

CAG
(Chairman Advisory Group)

ISO-IEC/JTC 1/WG 11

CEN/CENELEC/ETSI
SSCC-SF

ISO/TMB/SSCTF

ISO/TC 268/WG 1
Management System Standards

ISO/TC 268/WG 2
City indicators

ISO/TC 268/WG 3
City anatomy and sustainability terms

ISO/TC 268/WG 4
Strategies for smart cities and communities and Maturity Model

ISO/TC 268/SC 1/WG 1
Smart community infrastructures

ISO/TC 268/SC 1/WG 2
Integration and interaction framework for smart community infrastructures

ISO/TC 268/SC 1/WG 3
Smart transportation

ISO/TC 268/SC 1/WG 4
Data exchange and sharing for smart community infrastructures

ISO/TC 268/SC 1/TG 2
Pilot Testing

ISO/TC 268/SC 1/TG 1
Roadmap
ISO TC 268 Sustainable cities and communities

1. DECISION/COMMIT (Strategy)
2. PLAN (roadmap & targets)
3. DO Implementation
4. CHECK (against targets)
5. ACT (Correct)

→ ISO 37100
→ ISO 37105
→ ISO 37106
→ ISO 37101
→ ISO 37104 série
→ ISO 3712x
→ ISO 3712x
→ ISO 3715x

...to help decision/commitment
...to help setting roadmaps with targets
...to help implementing the roadmaps/actions plans
...to evaluate the results of the actions

Vision
Improvement

ISO 18091
...for setting a long term vision

Diagnostic of city’s "readiness level" (maturity)

Vision ISO 18091
ISO 37101
ISO 37104 série

31/10/2017, Vienna
Dr. Bernard GINDROZ
How to get cities involved and improving standards?

- Standardization development is made by experts who collect expression of needs relevant to their national context, through a national standardization mirror committee to ISO TC 268 and EU sector forum;

- Cities and association of cities are very generally members of these national mirror committees; example, in Germany cities and the Association of German cities is a member of the German mirror committee to ISO TC 268 and report about needs, feedbacks from existing standards, alignment with policy framework and international commitments;

- Standards are implemented by cities, in real life, especially ISO 37120 (Indicators published in 2014), widely implemented in USA and Europe (i.e. Amsterdam, Helsinki, Barcelona, London, Rotterdam, Porto, Eindhoven, Heerlen, Aalter (BE), Sintra (PT), Zwolle, Den Hagen, Gdynia (PL), Valencia, Koprivnica, Zagreb, ...), and more recently ISO 37101 (management system, published 2016) in China, Kazakhstan, France, ...);
How to get cities involved and improving standards?

- The national mirror committees get feedbacks from implementation by cities, in a way to provide inputs to ISO TC 268 and EU sector forum for improving the existing standards and developing new ones if requested;

- A Club of cities has been launched last July, with support of ISO, UN, World Bank. This Club is led by cities in collaboration with standardization bodies (leader: Hangzhou China, support AFNOR France); The aim is to collect obstacles and benefits from implementation of standards in real life and feed ISO TC 268 with inputs, as well as motivate other cities to join and to share best practices and success stories - as well as what doesn’t work and should be improved -.
How to get cities involved and improving standards?

➢ Today, these recent standards are implemented in a wide range of cities’ sizes, however, Sweden has proposed the creation of a dedicated Working Group for Small and Medium sized cities (Small giants), both at ISO TC 268 level and at European level;

➢ ISO TC 268 developments are made in a complementary manner and support with regulation, policies and global commitment (i.e. COP, UN Habitat III, UN SDGs, …).

➢ In Europe, standardization development is made in collaboration with policy makers (EU level), in order to ensure alignment between legislative framework and standardization work and support to cities and local authorities;
At European Level

CEN/CENELEC/ETSI Sector Forum on Smart and Sustainable Cities and Communities (SF-SSCC)

Dr. Bernard GINDROZ - Chairman

SERVING THE CITIES’ NEEDS
CEN/CENELEC/ETSI Sector Forum SSCC

- Sector Forum created in 2017
- As a horizontal strategic and advisory body on smart & sustainable cities and communities
- 2 plenary sessions per year
- 1 annual seminar
- Permanent representation in the European Innovative Partnership initiative from the European Commission (Smart Cities and Communities – EIP SCC - )
- Permanent participation of the European Commission (legislation)
International Workshop: Smart Cities in Practice.

CEN/CENELEC/ETSI Sector Forum SSCC

- provide a **platform for exchange** of information between cities and all concerned stakeholders, including citizens;
- provide **support and guidance** to the relevant technical bodies, essentially on horizontal or cross-sectorial matters;
- **coordinate and advise** on standardization activities relevant to the cities and the sector;
- consider where **further standardization work** is needed within the sector.
CEN/CENELEC/ETSI Sector Forum SSCC

- consider requirements resulting from any **EU legislation relevant to standardization** within the sector and monitor developments
- Motivate **replication** and **scaling-up**
- **Share national views and position** about international standardization development (ISO, IEC, ITU)
- **Discuss and make recommendation about adoption of international standards** (ISO, IEC, ITU) at European level
CEN/CENELEC/ETSI Sector Forum SSCC

Annual event

• First one last October 19th in Brussels, co-organized by European Commission and CEN/CENELEC/ETSI

• Collect expression of needs from cities and communities

• Identify topics where standardization development is relevant

• Create dedicated Working Groups for mapping needs and gaps

• Reference standardization Board for Smart & Sustainable Cities and Communities in Europe
Conclusions and perspectives

- **Smart & Sustainable development a real challenge for cities**
- **A need for holistic approach & New governance models**
- **A culture of results with permanent improvement approach**
- **A culture of communication and reporting to keep collective engagement**
- **A need to engage with cities and get feedbacks from “real life”**
- **A need for exchange platforms and benchmarking**
  - Active participation of cities in national mirror committees
  - Club of Cities implementing ISO TC 268 standards with a management system approach (ISO 37101)
  - CEN/CENELEC/ETSI Sector Forum Smart and Sustainable Cities and Communities

**Standards as key enablers**
Questions & Answers