Future Cities – Reliance on Standards to achieve Interoperability

UNWGIC, 19-21 Nov 2018, Deqing, China

Chris Body
Implementing GIS
Requires More Than Technology

- Vision, Leadership, and Involvement
- A Strong Champion
  - Understanding The Mission
  - ...and Business Value
- Clear Strategy
- Cost, IT, Vision, Risk Management
- Realistic Timelines
- Ongoing Governance
- Good People

...And a Culture of Collaboration

“Collaboration Moves at the Speed of Trust.”
- Chris Thompson
International Standards for Future Cities

IEC
ISO
ITU

IEC::System Committee (SyC)
Smart Cities

ISO::TC268
World Smart City forum::JTC1

ITU::Focus Group
Smart Cities

JTC1::WG11 Smart Cities

European Commission

European Innovation Partnership Smart & Sustainable Cities

OGC

ESPRESSO

SCIRA

Open Standards

Implementations

ISO::TC211

21 November 2018
ISO/TC 211 Geographic information/Geomatics
• Supporting UN SDG
• Published 11 Standards with 14 under development
  – Common Framework
  – Vocabulary
  – Governance
  – Indicators (City services & quality of life)
ISO/TC 268 - Members
International Standards for Future Cities

- IEC
- ISO
- ITU

- IEC::System Committee (SyC) Smart Cities
- ISO::TC268 World Smart City forum::JTC1
- ITU::Focus Group Smart Cities

- Europe Smart & Sustainable Cities
- ESPRESSO
- SCIRI
- Implementations

21 November 2018
ISO/TC 211 Geographic information/Geomatics
• JTC1 approved to form a WG committee in 2015 (JTC1 Smart City Study Group)
• Focus on ICT for Smart Cities
• 25 National Bodies with 148 registered experts
• 4 Standards in development
  – Smart City ICT Reference Framework – Part 2: Smart City Knowledge Management Framework
  – Smart City ICT Reference Framework – Part 3: Smart City Engineering Framework
  – Smart City ICT Indicators
• Submitted a Strategic Smart City ICT White Paper to JTC1 Plenary (Nov 18)
• JTC1 will make a discussion in May 19 on future WG11 program
International Standards for Future Cities

[Diagram showing relationships between various standardization organizations like IEC, ISO, and ITU, and initiatives like World Smart City forum, JTC1, and ESPRESSO.]
ISO, IEC and ITU-T

• The three SDO’s are starting to work closer associated with standards for Smart Cities
• Have established a Joint Technical Coordination Group
International Standards for Future Cities
• Addressing
• Land Administration
• Land Cover/Land Use
• Coordinate Referencing
• GIS and BIM
International Standards for Future Cities
OGC Supporting Smart Cities

“OGC Smart Cities Spatial Information Framework”
https://portal.opengeospatial.org/files/?artifact_id=61188

- OGC contribution to international standards developments
  - JTC 1, ITU, ISO, BSI, DIN, others
- Basis for OGC standards innovation initiatives
  - CityGML
  - Future City Pilot, others
ESPRESSO and European Innovation Partnership for Smart Cities and Communities Urban Platforms

• Urban Platform = standards & ref. architecture
• The Urban Platform as an enabler for Smart City initiatives, based on open standards, to increase competition and avoid vendor lock-in

• ESPRESSO has on board:
• 4 Standard Developing Organisations: DIN, ETSI, OGC, bSI
• 2 Cities: Rotterdam and Tartu
• City Planners, System Integrators, Universities, Innovative companies

• Urban Platform to be used by developers, decision makers, procurement, …
Smart City Interoperability Reference Architecture (SCIRA)

Interoperable framework to integrate IoT sensors for public safety

• Advance Smart Cities in the areas of
  – Public safety, policing, urban resilience
  – Open architecture for interoperable IoT

• Current situation
  – Lack of consensus on architectural approaches results in activities and standards that are divergent, perhaps even contradictory;
  – Insufficient interoperability and scalability of underlying IoT technologies

• Project will produce Architecture and Deployment Guides
• Support future Pilot implementation
Summary

- Standards Development Organisations (SDOs) are developing standards to meet their requirements
- Need to improve collaboration across SDOs
- Supporting SDGs
- Further collaboration and long-term engagement by Geospatial standards community is required