Future Cities – Reliance on Standards to achieve Interoperability

UNWGIC, 19-21 Nov 2018, Deqing, China

Chris Body

Implementing GIS

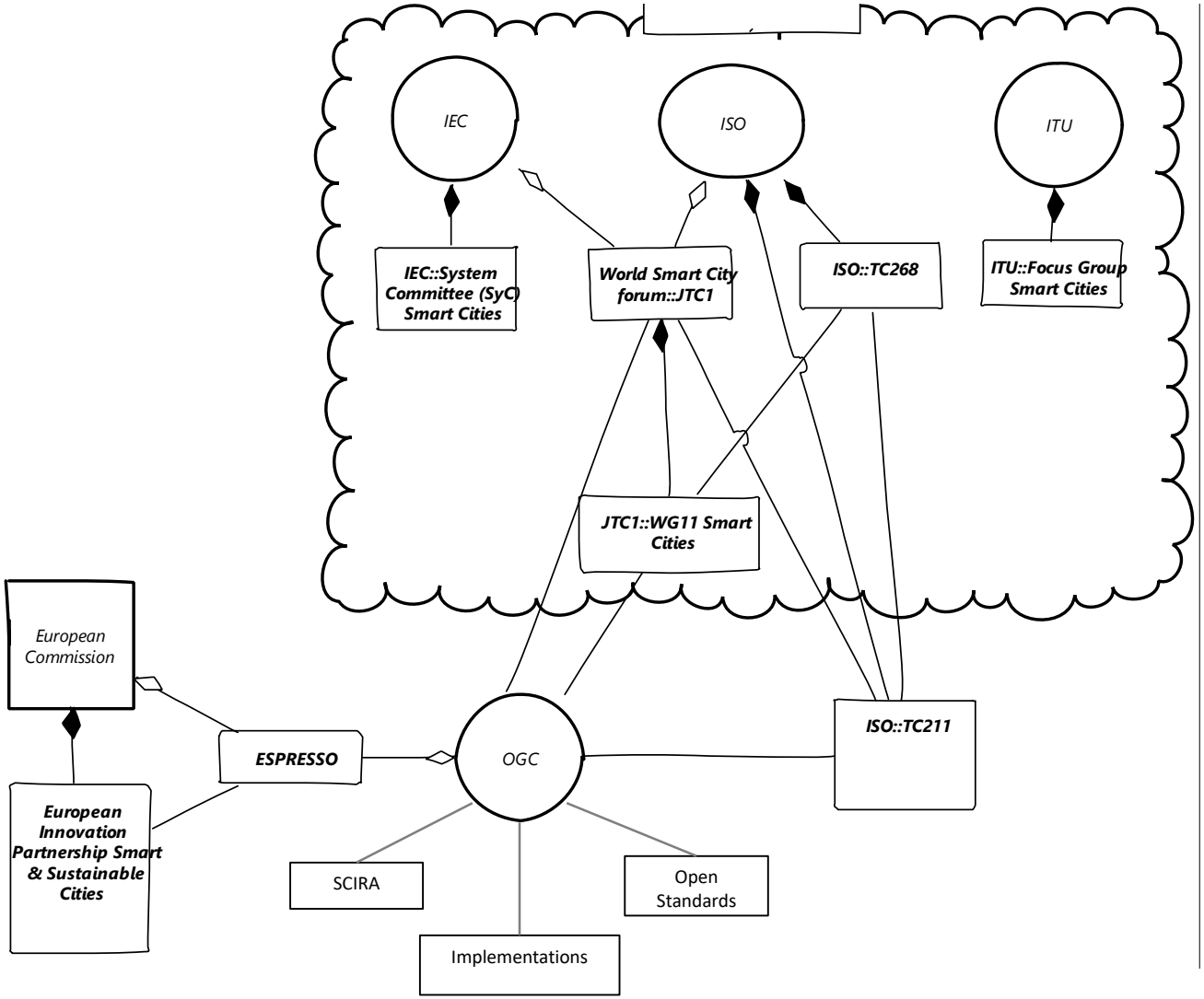
Requires More Than Technology

- 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

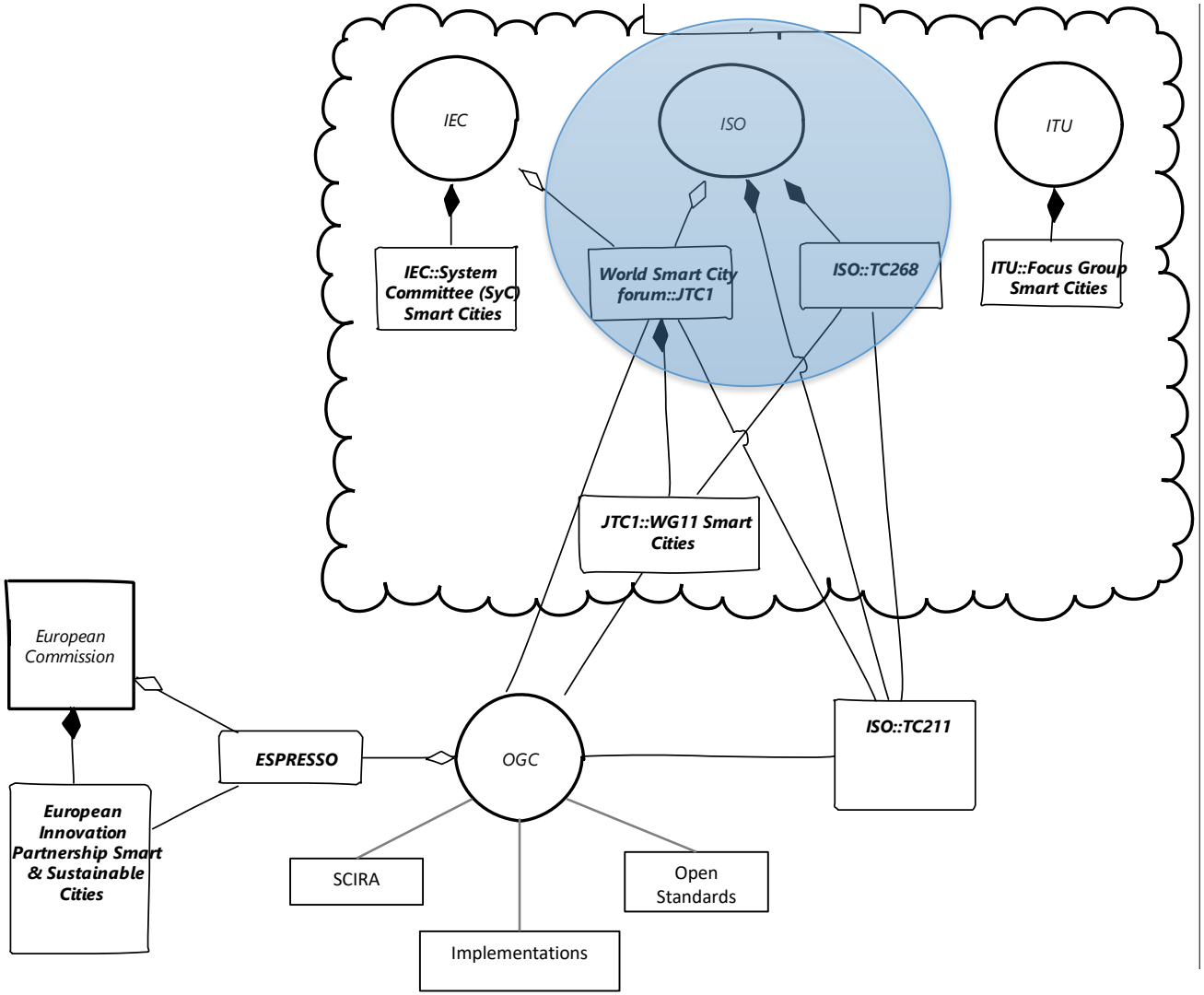
. . . And a Culture of Collaboration

"Collaboration Moves at the Speed of Trust."
- Chris Thompson

International Standards for Future Cities



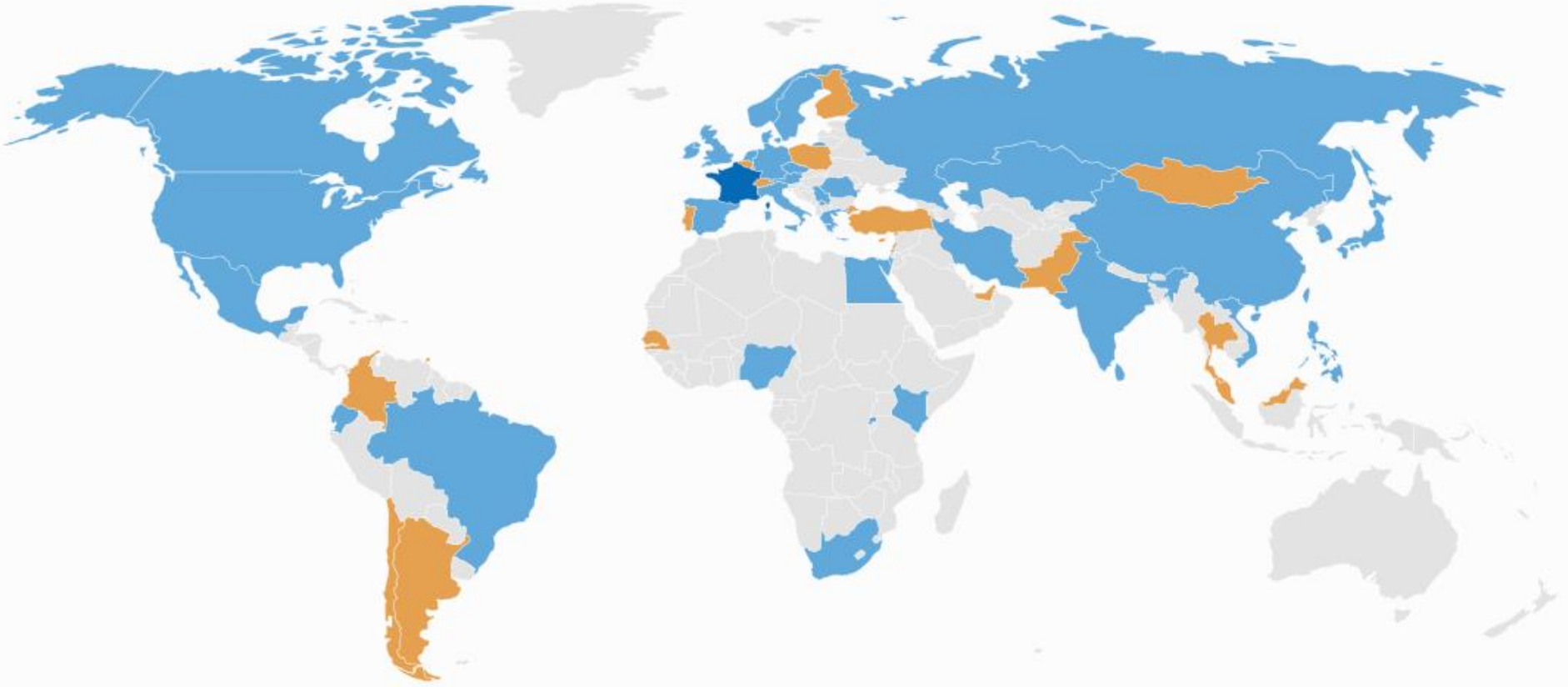
International Standards for Future Cities



ISO/TC 268
Sustainable cities and communities

- Supporting UN SDG
- Published 11 Standards with 14 under development
  - Common Framework
  - Vocabulary
  - Governance
  - Indicators (City services & quality of life)

ISO/TC 268 - Members



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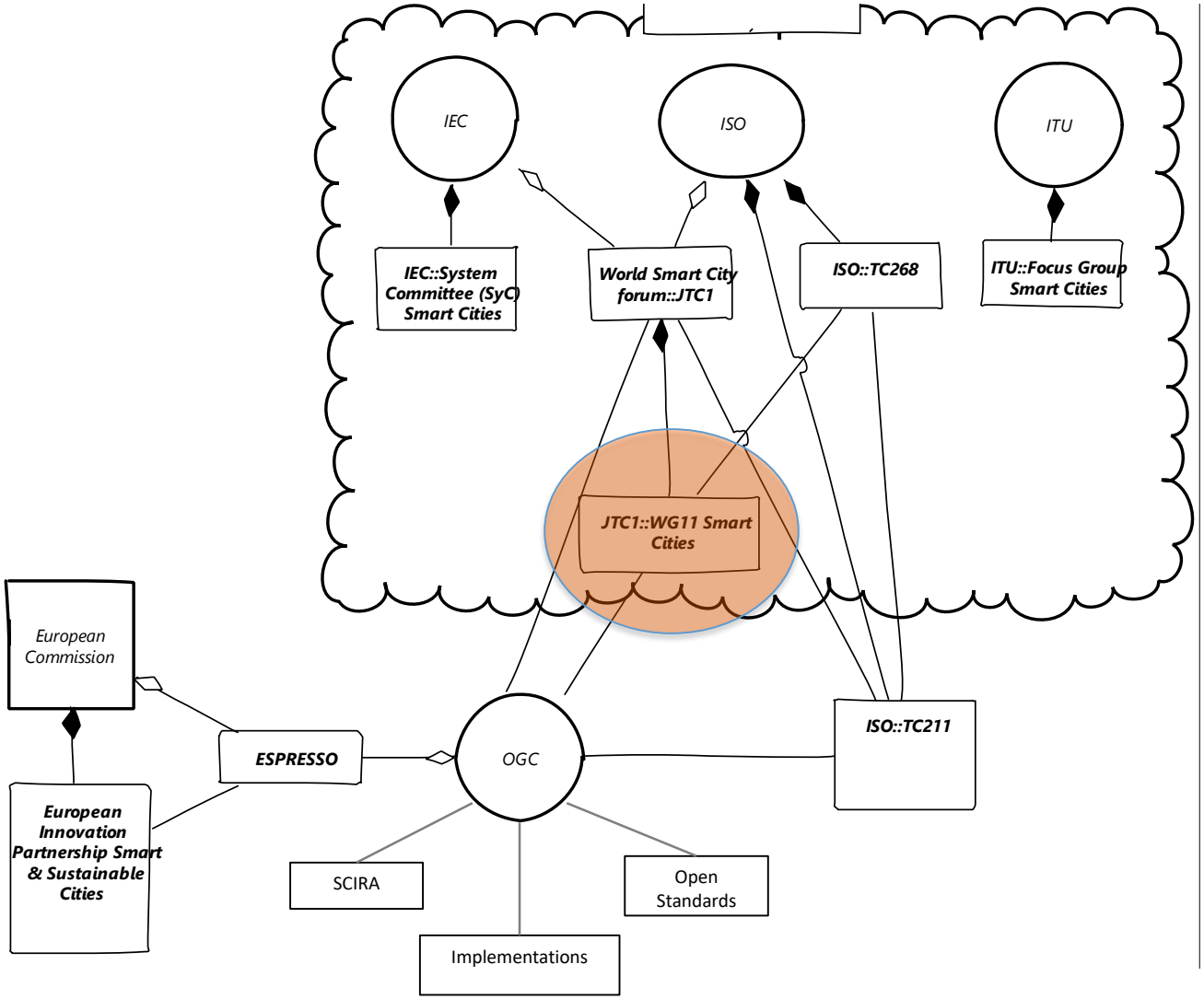


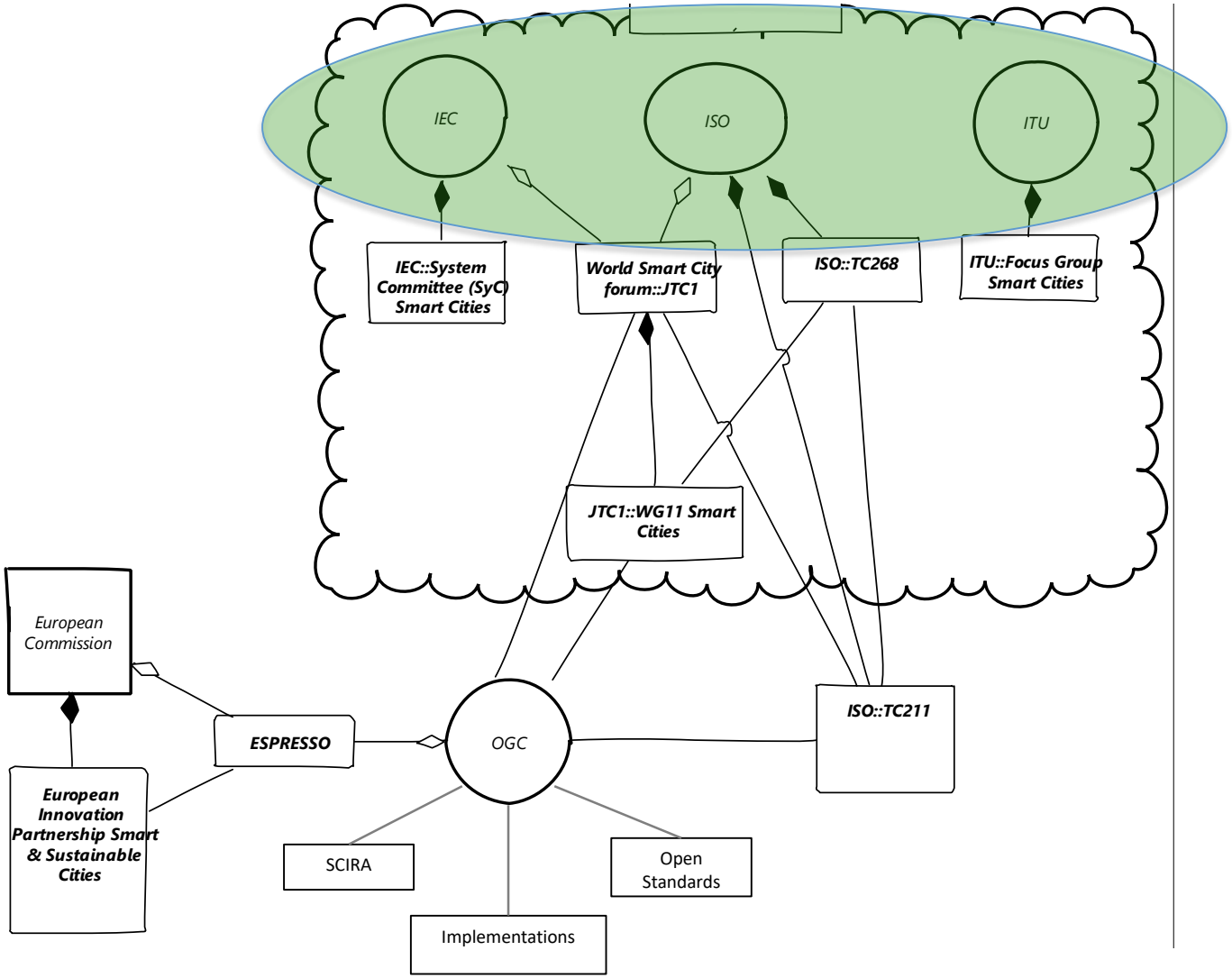
ISO/IEC JTC1 WG11
Smart Cities - ICT

- 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 1: Smart City Business Process Framework
  - 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

ISO/IEC JTC1 WG11
Smart Cities - ICT

- 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

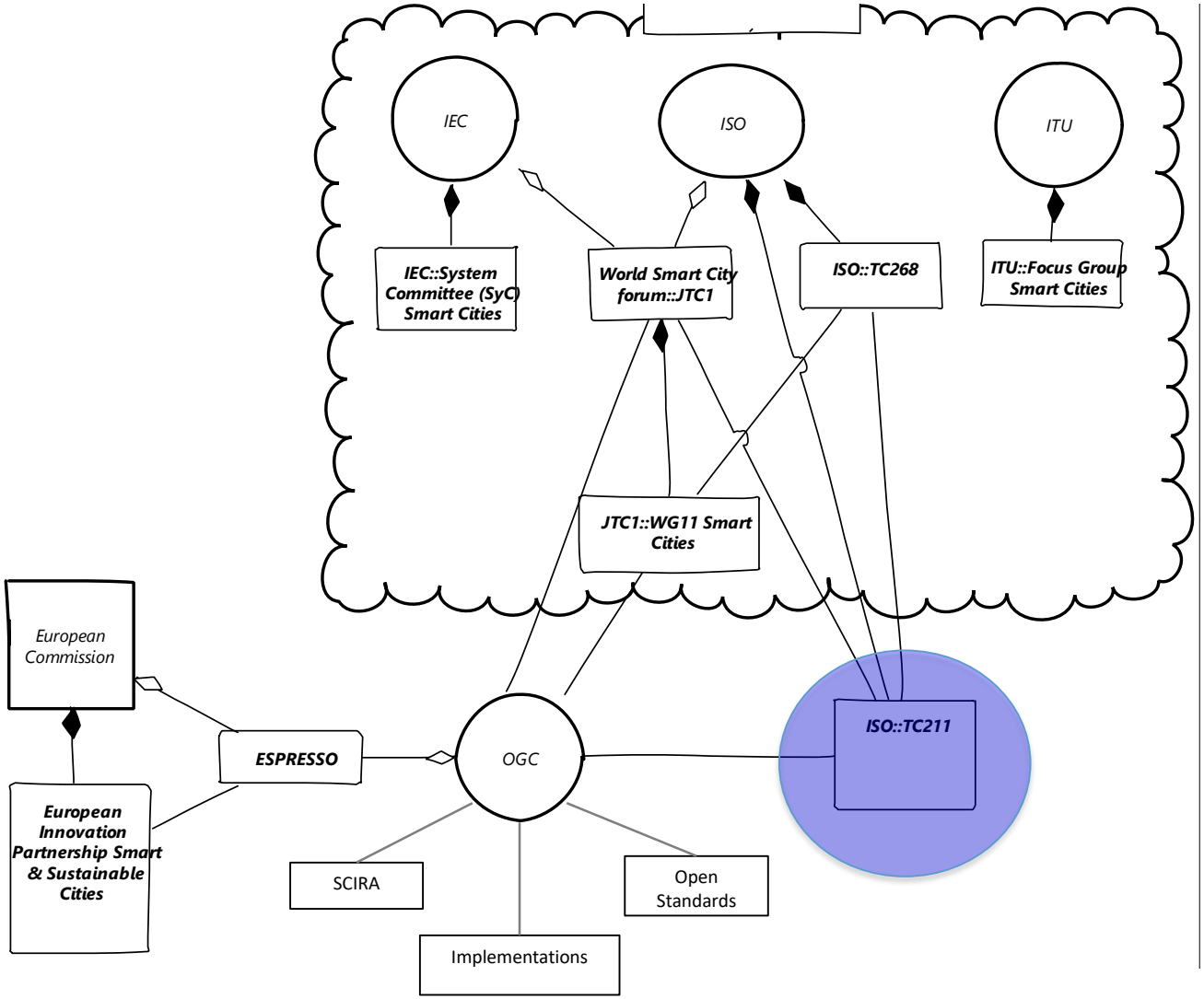
International Standards for Future Cities



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

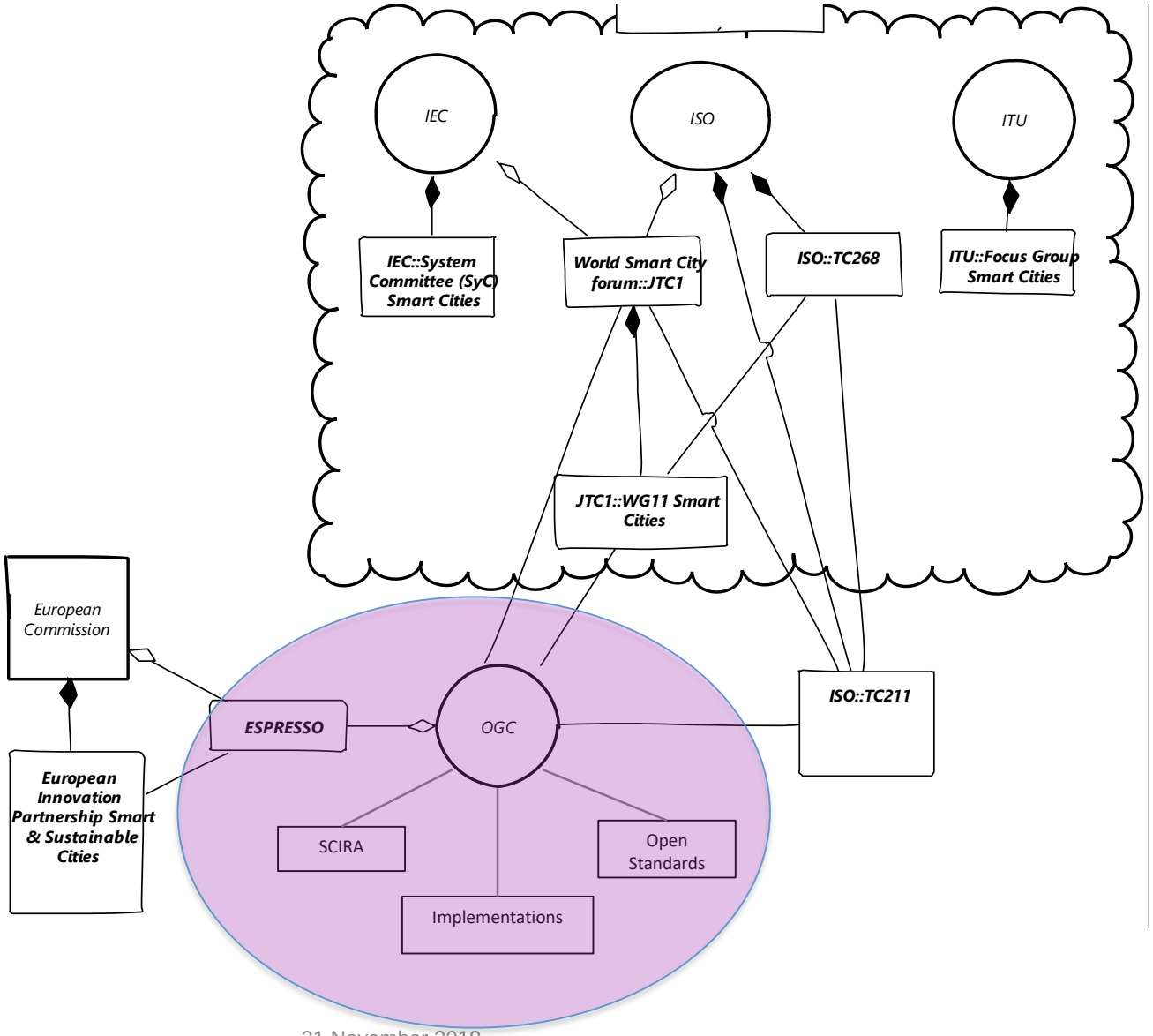
International Standards for Future Cities



ISO/TC 211
Geographic Information/Geomatics

- Addressing
- Land Administration
- Land Cover/Land Use
- Coordinate Referencing
- GIS and BIM

International Standards for Future Cities

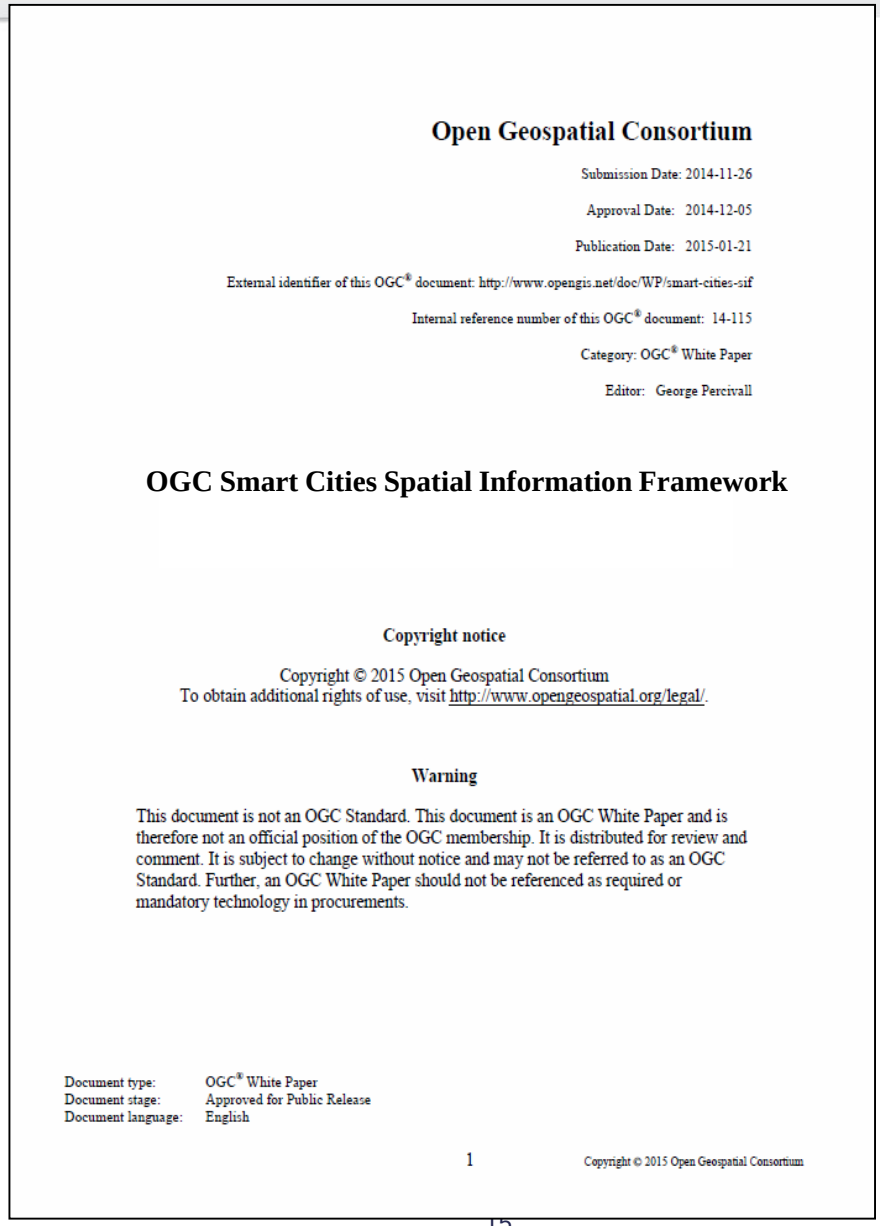


OGC Supporting Smart Cities

"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



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OGC Smart Cities Spatial Information Framework

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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 competiion 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, …

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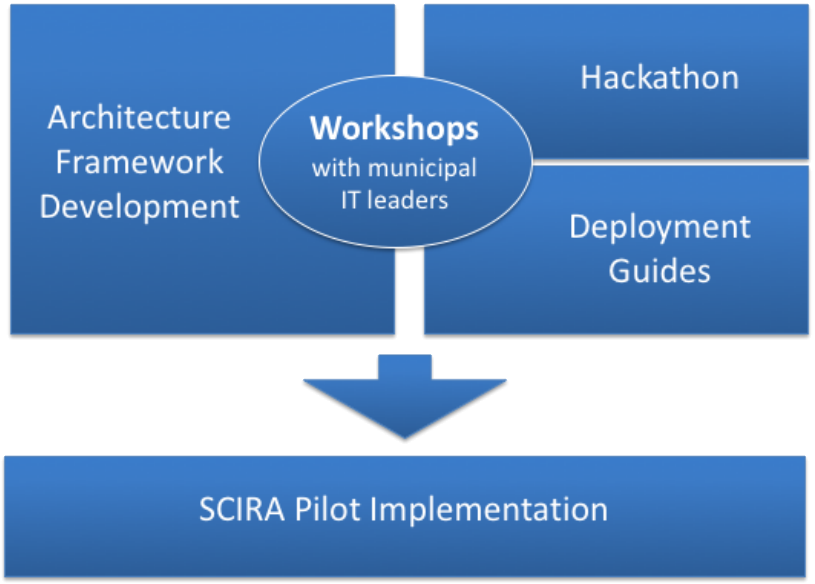
Smart City Interoperability Reference Architecture (SCIRA)

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