

# An ISO Standards Perspective of BIM-GIS Integration

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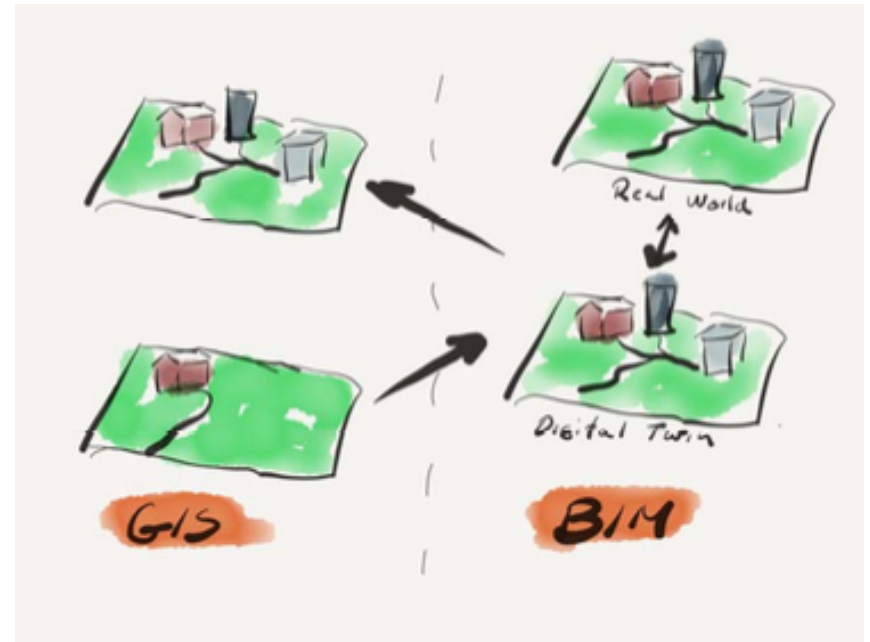
# Standards Collaboration

## BIM-GIS Integration

- Open Geospatial Consortium (OGC) & BuildingSmart International
- ISO/TC 211 Geographic Information/Geomatics Committee & ISO/TC 59/SC 13 Organization of Information about Construction Works
- Smart Cities
- UN Sustainable Development Goals

# Why BIM & GIS is important (from a Government regulator perspective)

- Building Information Modelling is growing in the AEC Industry
- Data and communication flow between BIM & GIS systems is fundamental
- With use of BIM the AEC Industry will produce information relevant for the GIS systems

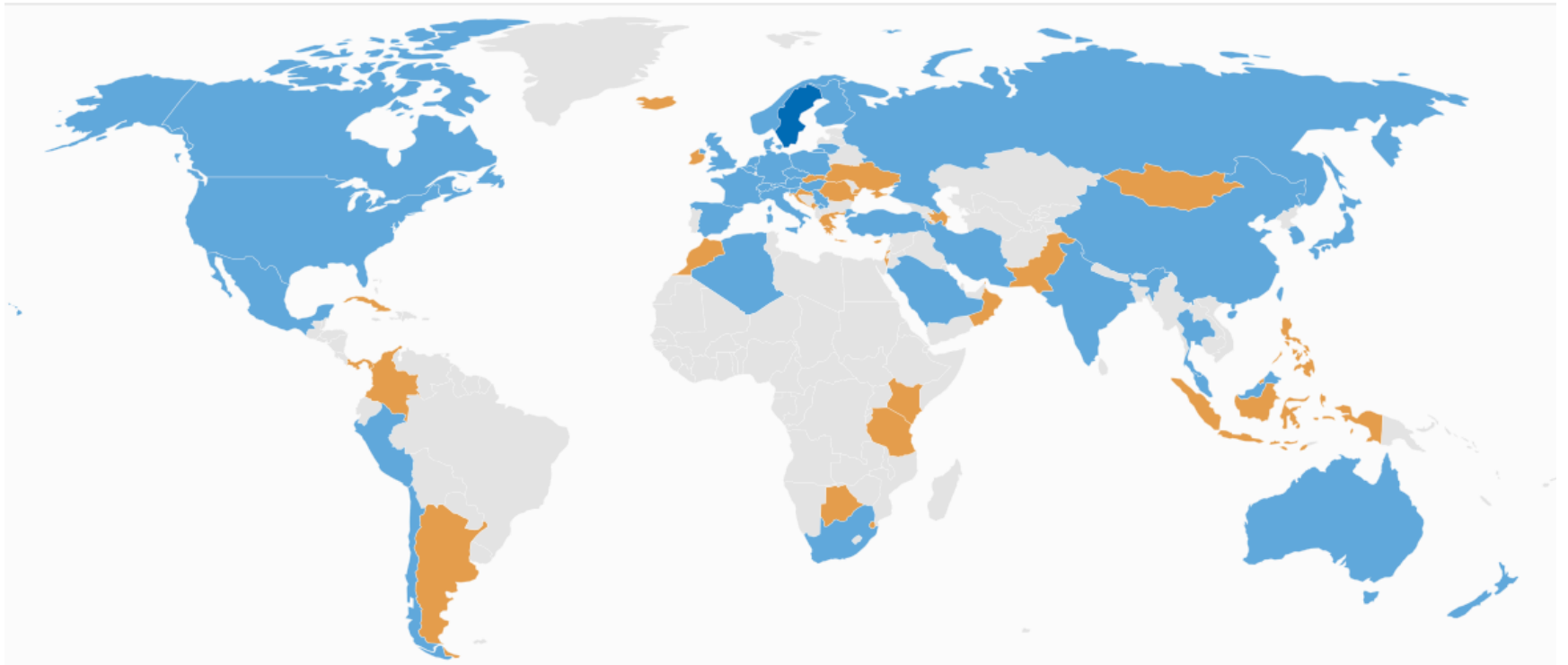


- In 2016 ISO/TC 211 supported the collaboration with ISO/TC 59/SC 13 and to investigate the barriers for interoperability between the two platforms
- In 2017 a joint workshop was organised with ISO/TC 211, ISO/TC 59/SC13, OGC and BuildingSmart International to develop a preliminary work item (PWI) on GIS/BIM Interoperability

# Joint Workshop

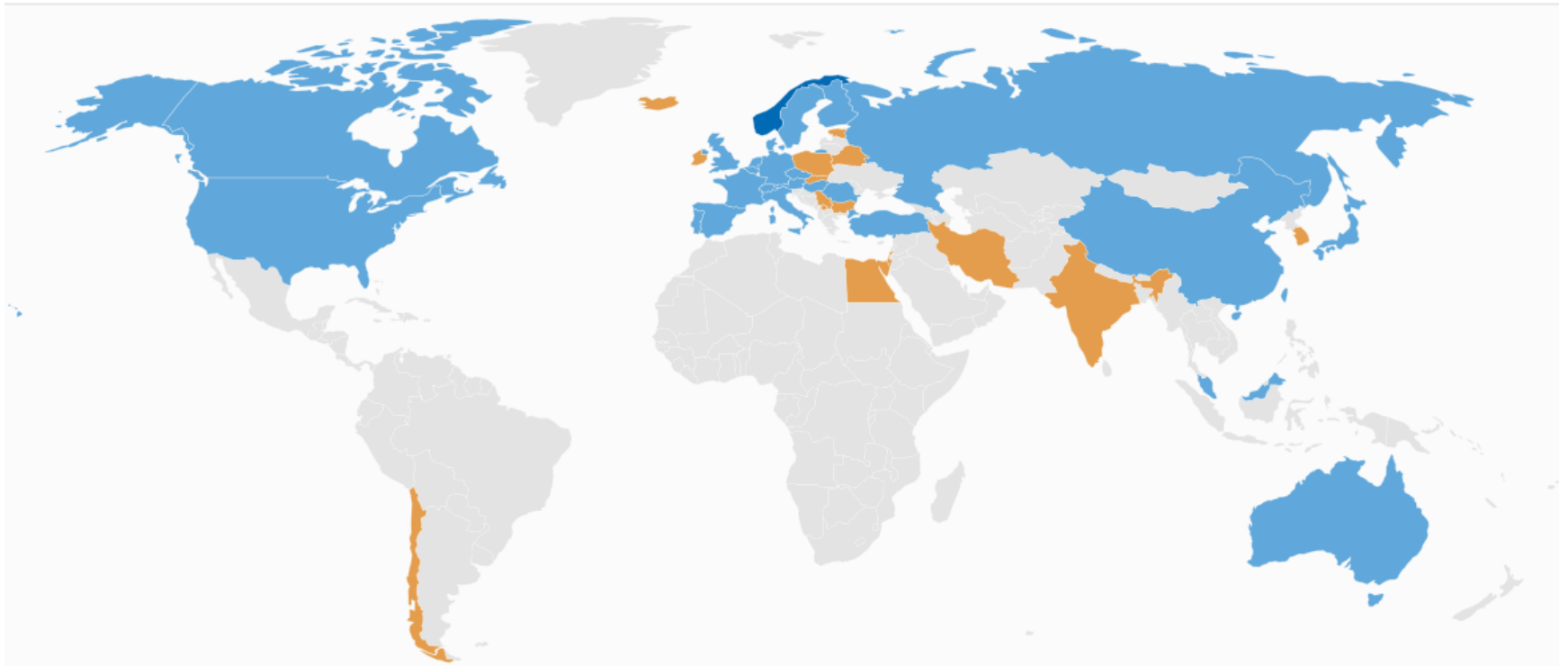
- The two ISO committees acknowledge the close collaboration & MOU between OGC & BuildingSmart International
- There was the need for the two ISO committees to do something similar

# ISO/TC 211 Membership



■ Secretariat ■ Members ■ Observers

# ISO/TC 59/SC13 Membership



■ Secretariat ■ Members ■ Observers

# Aim of the Workshop

- Better understand of the two platforms
- Similarities and discrepancies between the two platforms
- Mapping between concepts in GIS & BIM – Where are the main challenges?
- Joint work between ISO/TC 211 & ISO/TC 59/SC13 ensure interoperability by removing interoperability barriers between the standards, in close cooperation with Building Smart & OGC



# Workshop Topics

- Integrated Digital Built Environment
- LandInfra – experiences from the alignment project between BSI and OGC
- Mapping between GIS (General Feature Model) and IFC metamodel – both directions
- Spatial Schema (ISO 19107)
- Geometric and Topological representation (ISO 10303-42)
- Linking between GIS & BIM (Logical elements, Instance, Coordinates)
- Vocabulary, Terminology & Data Dictionary

# Outcomes from the Workshop

- ISO 19166 BIM to GIS Conceptual Mapping (B2GM) maybe stopped
- Develop a preliminary work item (PWI) that is a joint work between the two ISO committees with ISO/TC 59/SC 13 having the responsibility for its development

# Resolution 838 from ISO/TC 211

## June 2017

- ISO/TC 211 welcomes a preliminary work item (PWI) for drafting one or more new work item proposal(s) on GIS/BIM interoperability as a joint work with ISO/TC 59/SC 13, and in close cooperation with liaison organizations (in particular OGC and buildingSMART). ISO/TC 211 accepts that ISO/TC 59/SC 13 will have the responsibility of the joint work.
- ISO/TC 211 also welcomes a nomination from national member body of Norway of Mr. Morten Borrebaek as co-convenor for this work item to ensure a strong cooperation between the two committees.

# What's Next

- Meeting in Wellington (next month) to review progress
- Progress PWI between the two committees in 2018
- Seek input from GIS & BIM communities and academia
- Think horizontal not vertical