



# OGC and the Met Community

## Fourth Workshop on the Use of GIS/OGC Standards in Meteorology

28 February 2013, Reading UK

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# The OGC Mission



*To serve as a global forum for the collaboration of developers and users of spatial data products and services, and to advance the development of international standards for geospatial interoperability.*



Urban Model of Berlin based on OGC CityGML

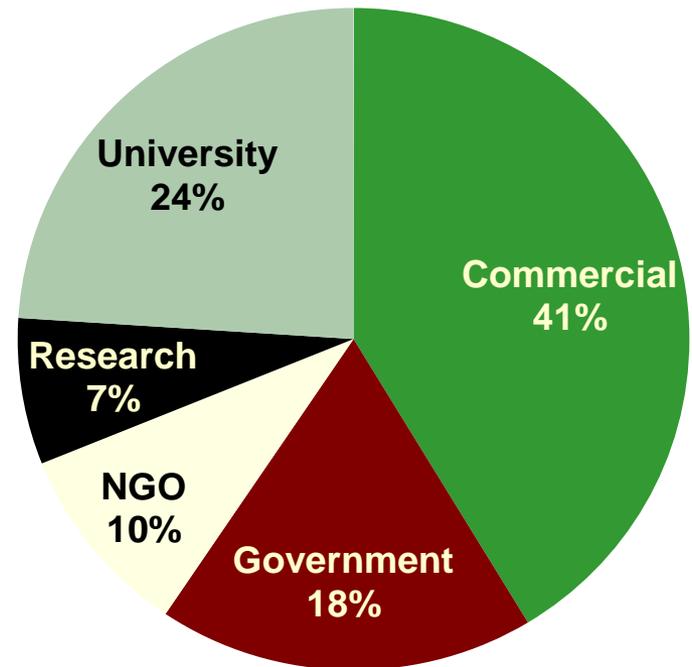
Source: [www.3d-stadtmodell-berlin.de](http://www.3d-stadtmodell-berlin.de)

# Membership - Global



Not-for-profit, international voluntary consensus standards organization; leading development of geospatial standards

- Founded in 1994.
- 480+ members and growing
- 40 standards
- Hundreds of product implementations
- Broad user community implementation worldwide
- Alliances and collaborative activities with ISO and many other SDO's



# Fundamental Goal -- Interoperability



- You know when you don't have it:
  - Custom Integration
  - High lifecycle costs
  - Difficult to rapidly mobilize new capabilities
  - Duplication of effort
  - Missed opportunities for improved decision making



# OGC Alliance Partners

A Critical Resource for Advancing Standards



I E T F®



... and others

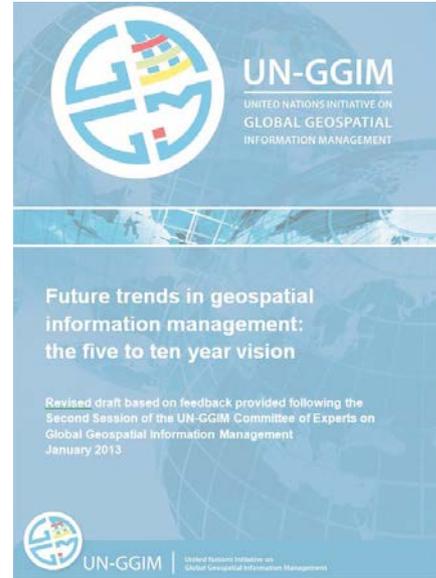
[www.opengeospatial.org/ogc/alliancepartners](http://www.opengeospatial.org/ogc/alliancepartners)



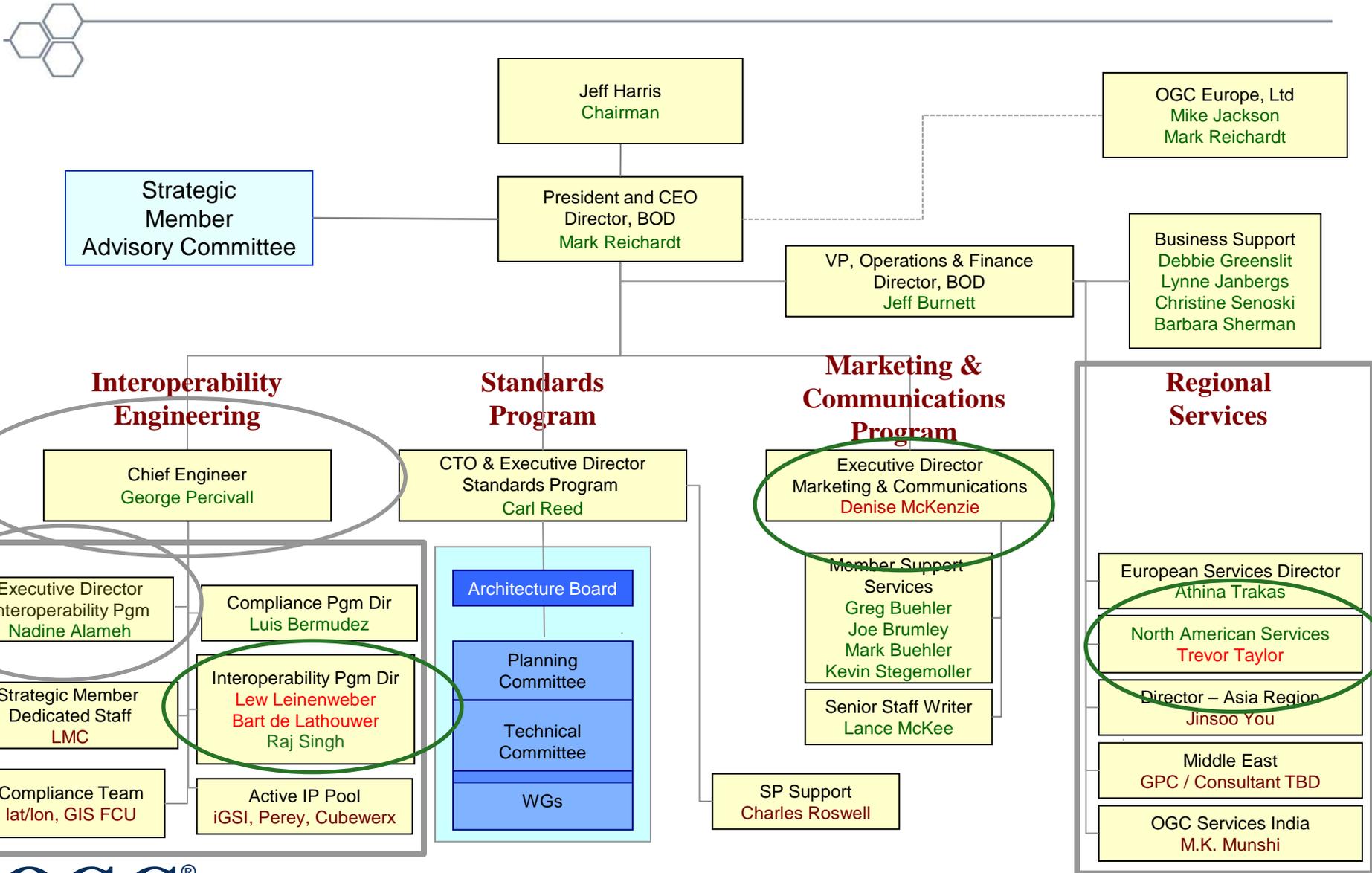
# UNGGIM



- Mark Reichardt & Denise McKenzie attended meeting in Doha, Qatar February 2013
- OGC in partnership with ISO will present a paper at the July meeting explaining the standards work between the two standards bodies and will include a gap analysis
- 5 – 10 Year trends document was put out for comments
- OGC will host a Planning Committee (Principal Members) discussion at Abu Dhabi meeting March – coordinated submission



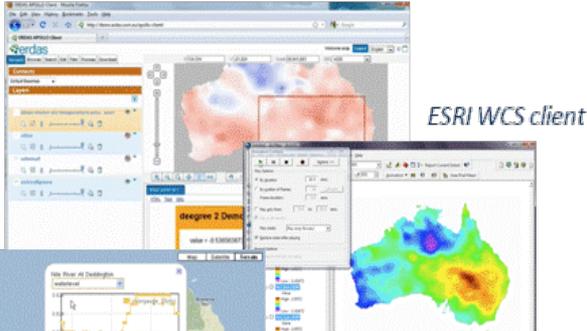
# OGC Staffing



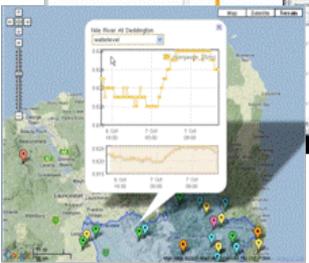
# OGC Interoperability Program Testing, Validation, Demonstration



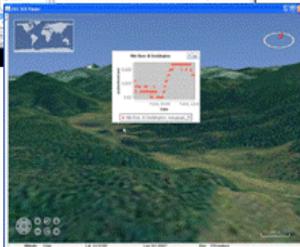
ERDAS WCS client



ESRI WCS client



CSIRO Google Maps SOS client



CSIRO WorldWind SOS client

- Testbeds, Pilots, Experiments & Plugfests
  - Technology providers and users in rapid, hands-on collaborative engineering efforts
  - Produce:
    - Tested and validated draft standards
    - Industry technology implementations
    - Architectural recommendations
    - Live demonstrations to validate utility of standards in user context
  - Advance
    - Research on the use of IT to help solve geospatial interoperability problems
    - Maturity of interoperable implementations sufficient for organizations to base procurement decisions



# Interoperability Program 2012

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- **Funded Initiatives**

- OGC Web Service Phase 9 (**OWS-9**) Testbed
- Global Earth Observing System of Systems (**GEOSS**) **Architecture Implementation Pilot**, Phase 5 (**AIP-5**)
- **Climate-Hydrologic Information Sharing Pilot**, Phase 1 (**CHISP-1**)
- European Commission **COBWEB**
- European Commission **EO2Heaven**
- **NCOIC Geospatial Cloud**

- **Funded Studies**

- **NSF EarthCube** Governance
- **IJIS Institute Springboard** Process
- **GeoMobile** and **Internet of Things** (IoT)
- **OpenPOI** Registry

- **Interoperability Experiments**

- **3D Portrayal** – recently completed
- **Hydro Forecasting** – underway
- **C2Core** – in planning

# Interoperability Program



Global, innovative, hands-on rapid prototyping and testing program designed to unite users and industry in accelerating interface development and validation, and the delivery of interoperability to the market

## Proven Process

- Accelerate development, testing, acceptance and refinement of standards & best practices

## Effective Process

- Align industry in advancing standards in state-of-practice IT systems

## Repeatable Process

- Over 40 initiatives successfully conducted using proven policies and procedures

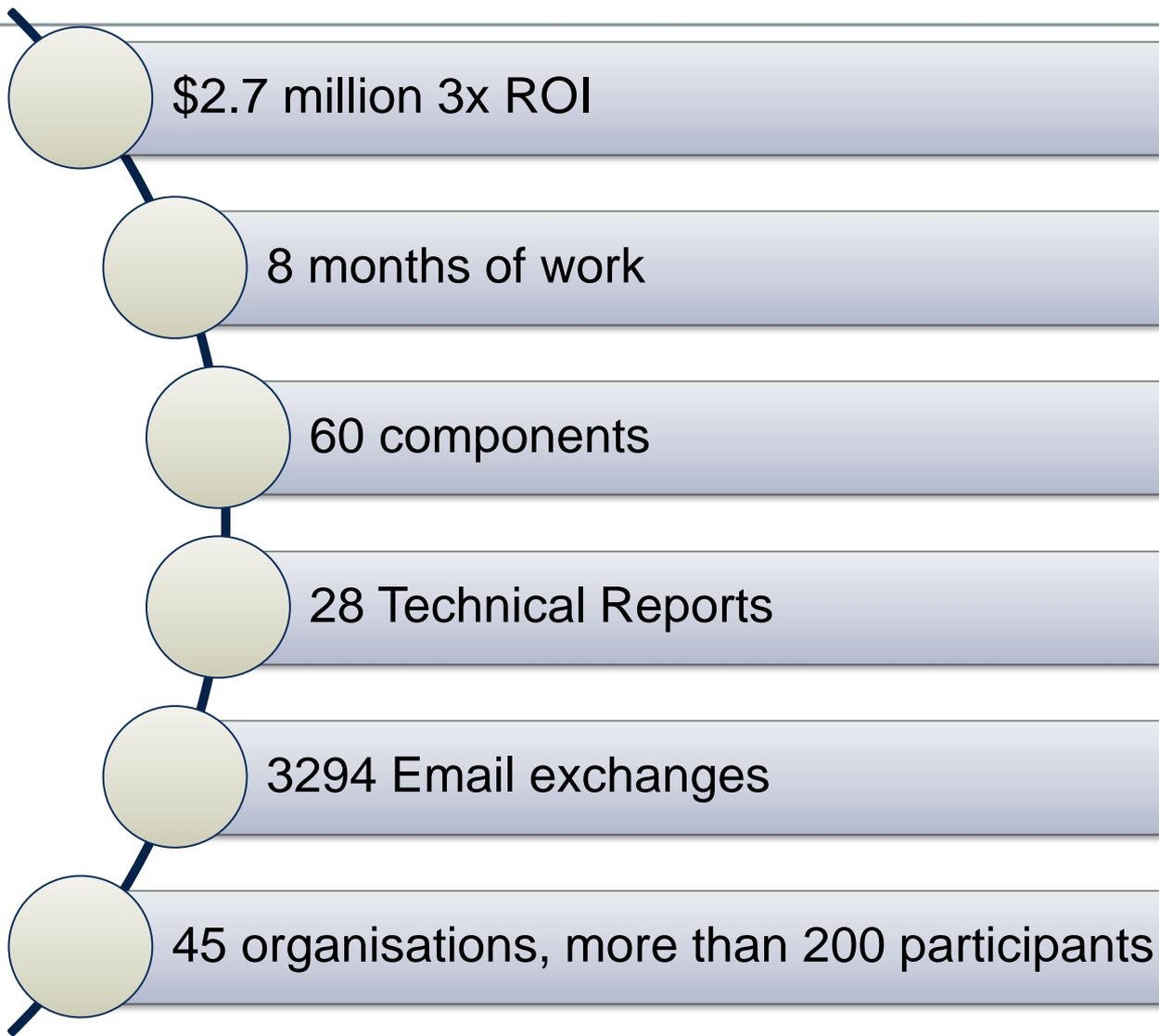
## Competitive Process

- Regularly yielding a high-level of industry participation and cooperation

## Cost effective Process

- For sharing expertise and cost while gaining early marketplace insight and advantage

# OWS-9



# OWS-9 Sponsors

~ \$ 2.7 Million



# OWS-9



## 5 Threads to OWS-9

- Aviation
- Cross Community Interoperability
- **Security and Services Interoperability**
- **Innovations**
- Compliance and Testing
- Mobile (Geopackage)
- Coverages - serve NITF, LiDAR, NetCDF via WCS
- GPS
- WMTS refinements

# What Next? OWS-10 2013

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- 40 organisation reps at Redlands meeting January
- 2 hour requirements discussion
- Gathering requirements now!
- Are you interested? Teleconference 5<sup>th</sup> March.
- Contact our IP Team
  - Nadine Alameh, Exec Dir, Interoperability Program
  - [nalameh@opengeospatial.org](mailto:nalameh@opengeospatial.org)

# Into the future for geospatial

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- Mobile – apps, security, intelligence, etc
- Civil and Land Development
- Big data analytics
- Indoor Location
- Augmented Reality
- Social-Local-Mobile (Human Intelligence)
- Sensors
- Performance
- Cloud
- Open Data/Open Licencing
- and more.....





# Mobile



- Key standards – Webservices, GeoPackage, Open GeoSMS, 3D Portrayal, IndoorGML
- Mobile World Congress – workshop connecting OGC member experts directly with developers approx 100 attendees
- Working with W3C on OpenPOI

# Standards for Met

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- Web Mapping Service (WMS)
- Web Map Tile Service (WMTS)
- Web Coverage Service (WCS)
- Web Feature Service (WFS)
- Sensor Web Enablement (SWE)
- Catalog Service for Web (CSW)
- Water ML2.0



### News & Events

- OGC Blog
- OGC Update
- Events
- Upcoming TC
- Press Releases
- Press Coverage

### Social Media



### Areas of Interest

- [Learn About OGC](#)
- [Membership Benefits](#)
- [Endorsements](#)
- [Join OGC](#)
- [OGC Standards](#)
- [OGC Network™](#)
- [OGC Public Forum](#)
- [Registered Products](#)
- [Domains](#)
- [Get Certified](#)
- [Learn How To](#)

## The OGC adopts WaterML 2.0 Hydrologic Time Series Encoding Standard

OGC Press Releases

### Contact:

[info@opengeospatial.org](mailto:info@opengeospatial.org)

### Content:

20 September 2012 - The Open Geospatial Consortium (OGC®) has adopted the OGC WaterML 2.0 Part 1: Time Series Encoding Standard as an official OGC standard.

OGC WaterML 2.0 is an important new XML-based international standard for encoding and exchanging data describing the state and location of water resources, both above and below the ground surface. WaterML 2.0 Time Series supports encoding of hydrological and hydrogeological observation data in exchange scenarios such as:

- Exchange of data for operational monitoring and forecasting programs
- Supporting infrastructure operation (e.g. dams, supply systems)
- Exchange of observational and forecast data for surface water and groundwater
- Release of data for public dissemination
- Enhancing disaster management through data exchange
- Exchange in support of national reporting

The WaterML 2.0 Time Series work was supported through a water information research and development alliance between the Australian Commonwealth Scientific and Industrial Research Organisation (CSIRO) Water for a Healthy Country Flagship program and the Australian Bureau of Meteorology. The work was also supported by the Consortium of Universities for the Advancement of Hydrologic Science Hydrologic Information System (CUAHSI) and many other organizations around the world. The following organizations submitted the candidate standard to the OGC membership for adoption:

- Australian Bureau of Meteorology
- CSIRO (Australia)
- Deltares (Netherlands)
- disy Informationssysteme GmbH (Germany)
- Federal Waterways Engineering and Research Institute (Germany)
- Geological Survey of Canada, Natural Resources Canada
- German Federal Institute of Hydrology
- International Office For Water – Sandre (France)
- KISTERS AG (Germany)



# Getting Involved

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- Standards Working Groups
- Domain Working Groups – Met Ocean DWG (2008)
- Technical Committee Meetings

# TC/PC Meetings 2013

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- How to participate? Attend TC/PC meetings
- March - Abu Dhabi,  
<http://www.opengeospatial.org/event/1303tc>
- September – Frascati, Italy
- December – Mumbai, India



# Keep in touch!

[www.opengeospatial.org](http://www.opengeospatial.org)  
[www.ogcnetwork.net](http://www.ogcnetwork.net)



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Open Geospatial Consortium (OGC)



<http://www.youtube.com/user/ogcvideo>

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