OGC STANDARDS AND THE STATISTICAL COMMUNITY

UN-GGIM8 – 31 JULY 2018

Agenda

Background – statistics and geography

UNECE/UN-GGIM: Europe Workshop

Proposed Domain Working Group

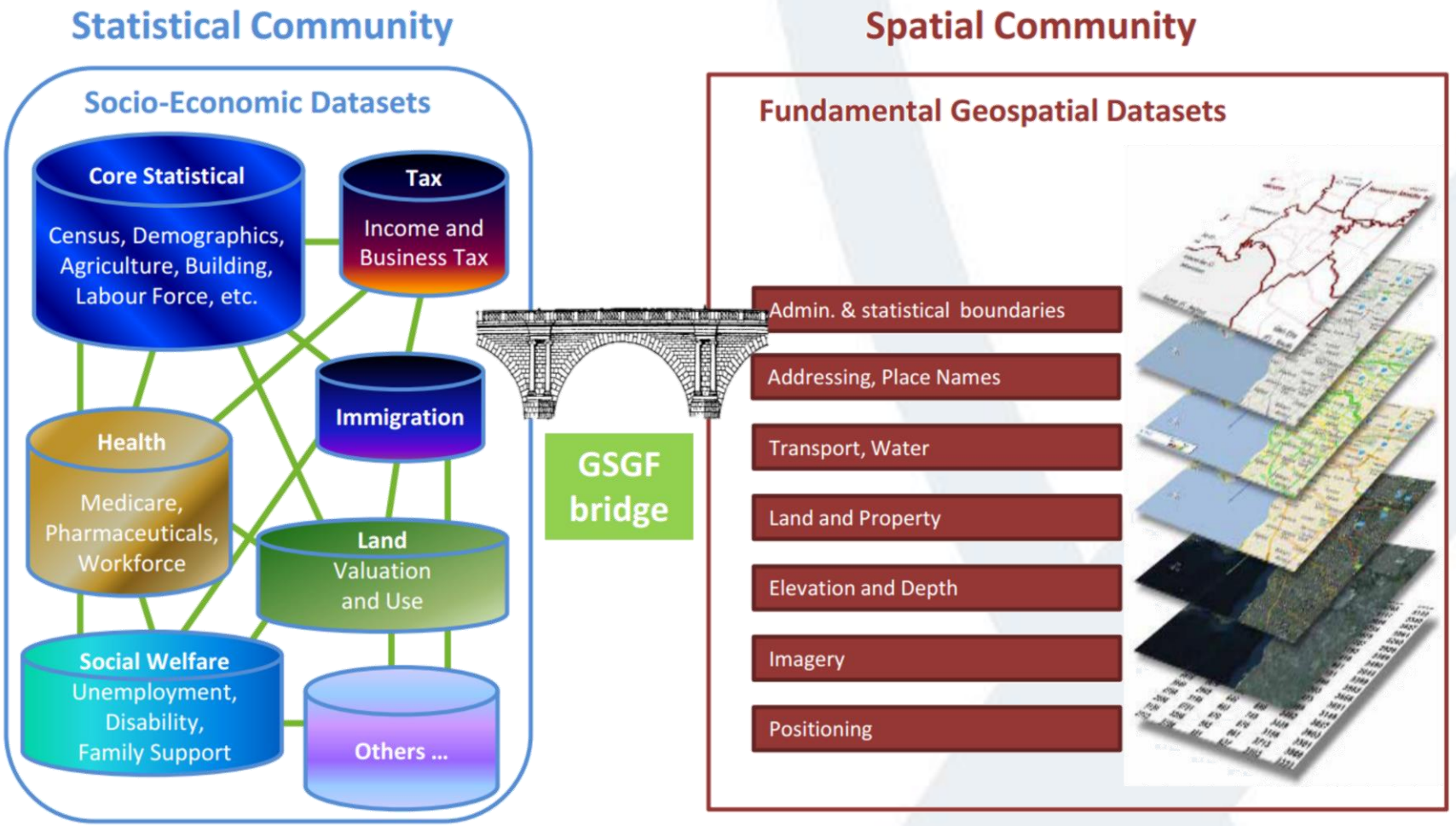
Existing Standards Development

- DGGS
- GeoPackage
- Table Joining Service

Next Steps

Discussion

Geospatial Information and Statistics



2020 round of censuses

Geospatial data underpins census process – collection, processing, outputs

2009 – UN Handbook on Geospatial Infrastructure in Support of Census Activities

- Defining enumeration areas (map production)
- Census Address Register
- Spatially enabled census data
- Consistent output geographies
- Supporting geographic data and products
- Spatial analysis of census data

2030 Sustainable Development Agenda

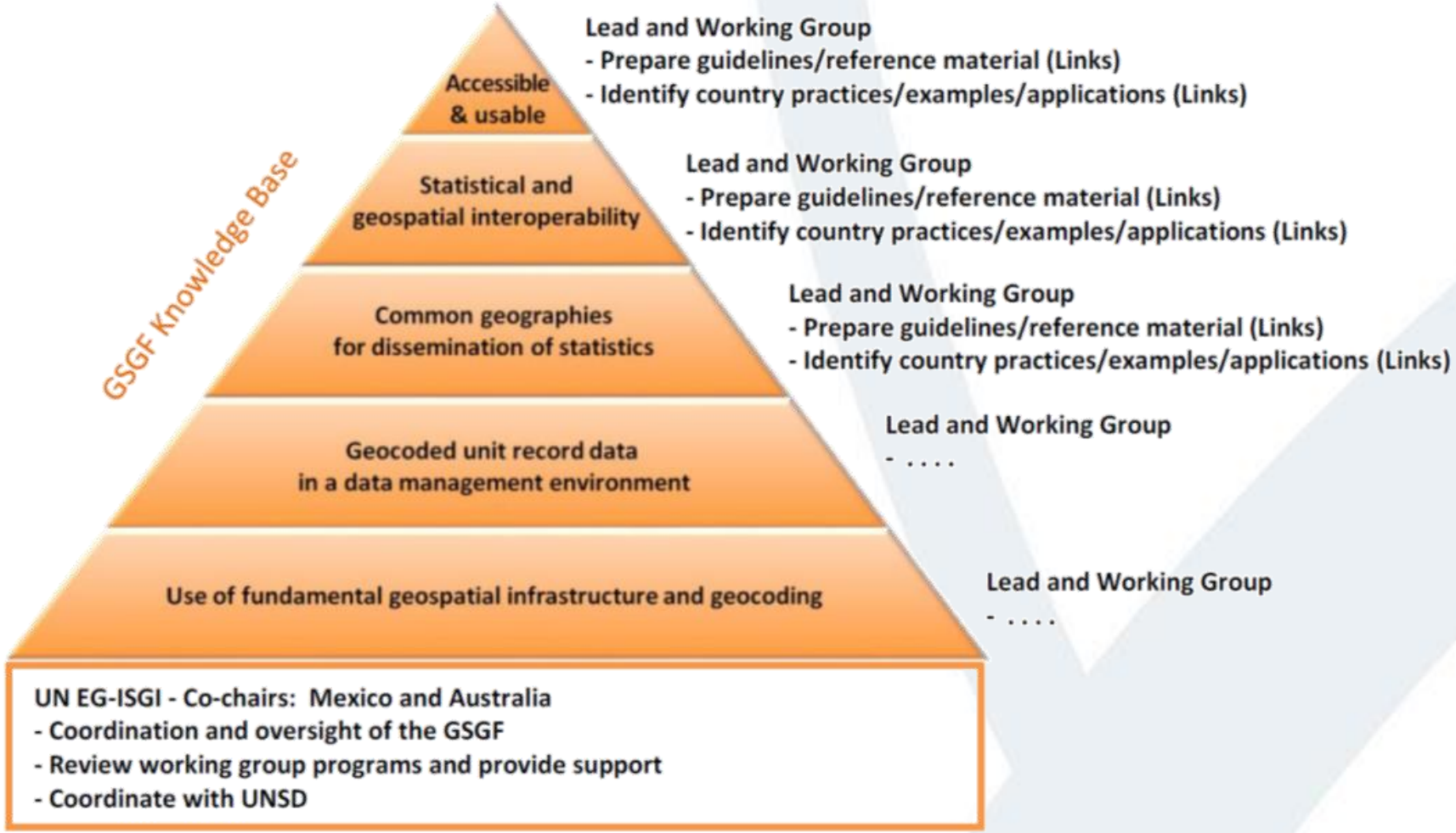
"implementation of 2030 Sustainable Development Agenda requires solid framework of statistical data to monitor progress"

Global framework of 232 statistical indicators adopted by General Assembly in 2017

Framework developed by the Inter-Agency and Expert Group on SDG Indicators (IAEG-SDGs)

Sustainable Development Goal indicators should be disaggregated, by income, sex, age, race, ethnicity, migratory status, disability and geographic location, in accordance with the Fundamental Principles of Official Statistics

Target Contribute to progress on the Target, not necessarily the Indicator									Goal	Indicator Direct measure or indirect support to the Indicator					
							1.4	1.5	1 No poverty	1.4.2					
						2.3	2.4	2.c	2 Zero hunger	2.4.1					
					3.3	3.4	3.9	3.d	3 Good health and well-being	3.9.1					
									4 Quality education						
								5.a	5 Gender equality	5.a.1					
		6.1	6.3	6.4	6.5	6.6	6.a	6.b	6 Clean water and sanitation	6.3.1	6.3.2	6.4.2	6.5.1	6.6.1	
					7.2	7.3	7.a	7.b	7 Affordable and clean energy	7.1.1					
								8.4	8 Decent work and economic growth						
					9.1	9.4	9.5	9.a	9 Industry, innovation and infrastructure	9.1.1	9.4.1				
						10.6	10.7	10.a	10 Reduced inequalities						
	11.1	11.3	11.4	11.5	11.6	11.7	11.b	11.c	11 Sustainable cities and communities	11.1.1	11.2.1	11.3.1	11.6.2	11.7.1	
				12.2	12.4	12.8	12.a	12.b	12 Responsible consumption and production	12.a.1					
					13.1	13.2	13.3	13.b	13 Climate action	13.1.1					
		14.1	14.2	14.3	14.4	14.6	14.7	14.a	14 Life below water	14.3.1	14.4.1	14.5.1			
	15.1	15.2	15.3	15.4	15.5	15.7	15.8	15.9	15 Life on land	15.1.1	15.2.1	15.3.1	15.4.1	15.4.2	
								16.8	16 Peace, justice and strong institutions						
17.2	17.3	17.6	17.7	17.8	17.9	17.16	17.17	17.18	17 Partnerships for the goals	17.6.1	17.18.1				



Cross cutting issues – terminology, privacy and confidentiality, legal mandates, technical standards

Background to the workshop

Links between statistical and geospatial information have been discussed several times by the CES

New mandates to get more involved in this topic (ECOSOC, CES, UN-GGIM)

Proposals for greater collaboration with UN-GGIM: Europe – “pilot” joint workshop

More joint activities planned for the future

The workshop

77 participants, 30+ countries

Good balance between statistical and geospatial communities – opportunity to start to engage and discuss

2.5 days of presentations and discussions

Introducing the standards

Statistical models and frameworks are more conceptual, geospatial standards are more technical

Important to build understanding between the communities and identify areas for common projects

Demand for information is growing - the two communities will need to collaborate, and can learn from each other


Group Discussion
GSBPM and GSIM
work with NSOs
fundamental data
address registers
data exchange
build tools
comms
metadata
leadership
SDGs and census

Collaboration across communities

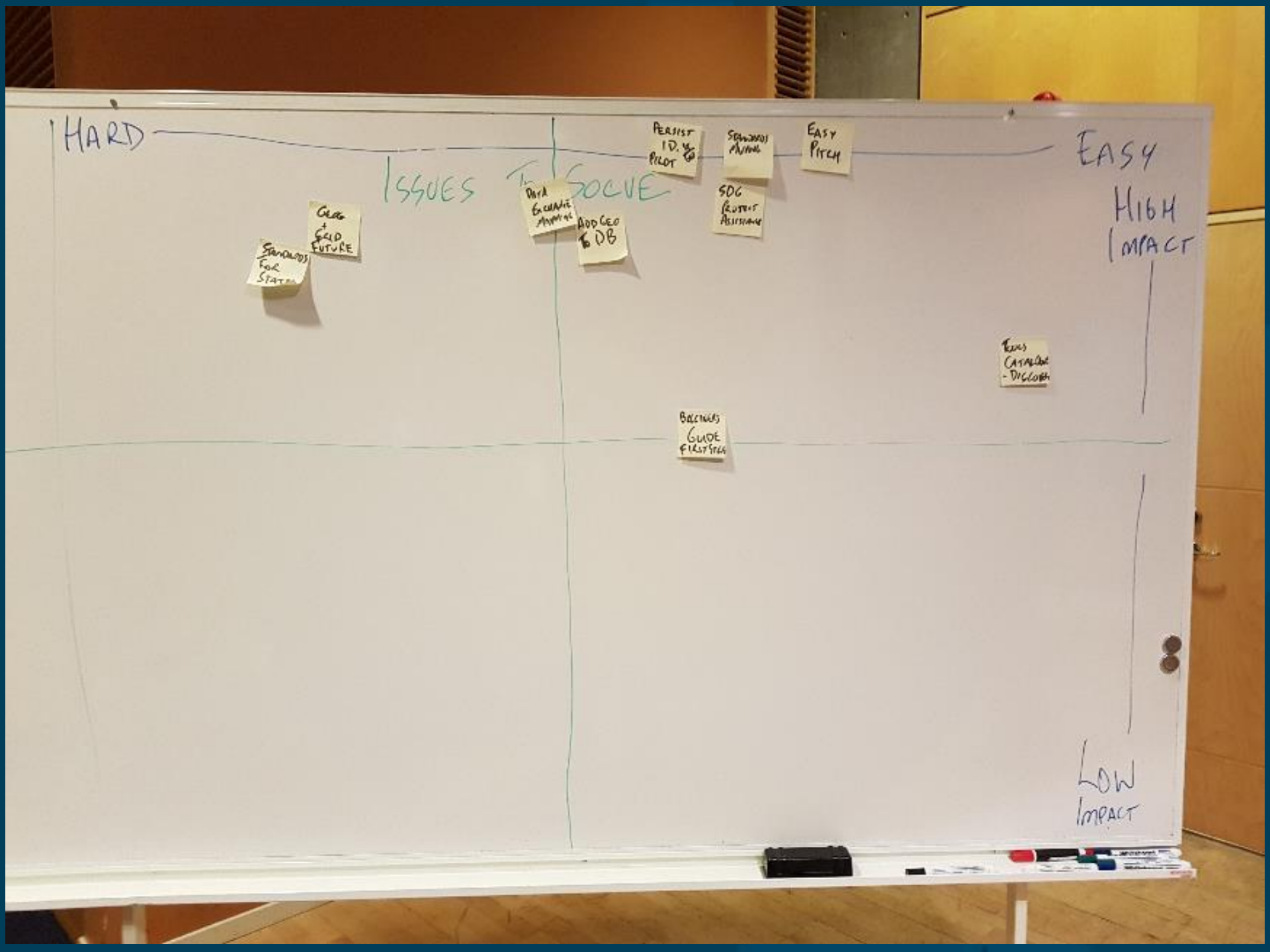
Both provide information for better decision making

Understand interdependencies, gaps and overlaps

International collaboration supported by senior managers, through national institutional arrangements (long term, sustainable, clear)

Broaden the communities - industry, ministries, mapping agencies, INSPIRE, earth observations, ISO, UN Expert Group on Classifications.

How can the communities work together to provide answers to user questions?


HARD
ISSUES
EASY
HIGH
IMPACT
LOW
IMPACT
EASY
PITCH
SDG
ADD GEO
TO DB
GUIDE

Proposed future standards work

- A pitch statement to present to senior managers and leaders to gain buy-in and funding
- A beginner's guide to using standards from both communities.
- Both communities to develop communication materials that simply describe the interrelationships between their frameworks, models and standards.
- Pilot to determine options for persistent ids to link aggregate statistical outputs to standard geographies.
- Look for opportunities to work on semantic interoperability issues (for example, ontology for addresses and buildings).
- Improve the discoverability of geospatial tools that are based on standards.
- Guidance on how to store geospatial objects references/links in existing statistical databases
- Map the data exchange process between statistical and geospatial organizations.
- Examine comparative use cases for application of traditional geography and emerging grid technologies, particularly for dissemination of statistics.
- Examine pathways and interest within Statistical Community to move to formal ISO Standards for models and frameworks in addition to existing ones (e.g. ISO/TC 154).

Important outcomes

Standards and interoperability are important, but the biggest issues are institutional, e.g.

- Partnership mechanisms
- Communication
- People

Two communities working together in cooperation and friendship to solve issues: Building a geo-statistical community

Standards Challenges

Integration

Capture

Processing

Exchange

Analysis

Knowledge

Proposed Statistical Domain Working Group

"Identify requirements and use cases of how geospatial and statistical standards can support the integration of geospatial information into the statistical system and for the purposes of broad discovery, analysis and use"

Proposed activities

Identify statistical use cases – benefit from OGC standards.

Identify statistical domain requirements

Identify other areas of OGC influenced by statistics.

Support Interoperability Experiments or Testbeds.

Statistical DWG – Planned activities

1. Outreach to and organisation of OGC members as well as external organisations to contribute to the DWG.
2. Describe the landscape of statistical production and identify the opportunities for the integration of geospatial information.
3. Communicate the geospatial requirements from the statistical community to the OGC.
4. Communicate the geospatial expertise in the OGC, such as existing applicable standards, to the statistical community.
5. Insert statistical requirements into other OGC standards and interoperability activities.

OGC – Existing standards work

OGC are already developing standards that would benefit the statistical community

Need better requirements from the statistical community

The Domain Working Group would provide an umbrella under which existing work could be steered to the benefit of the statistical community

GeoPackage

open, non-proprietary and standards-based data format

implemented as a SQLite database container. Standard governs the rules and requirements of content stored in a GeoPackage container

Managed through the Geopackage Standards Working Group

Important to statistical community – greater integration with non-geospatial data

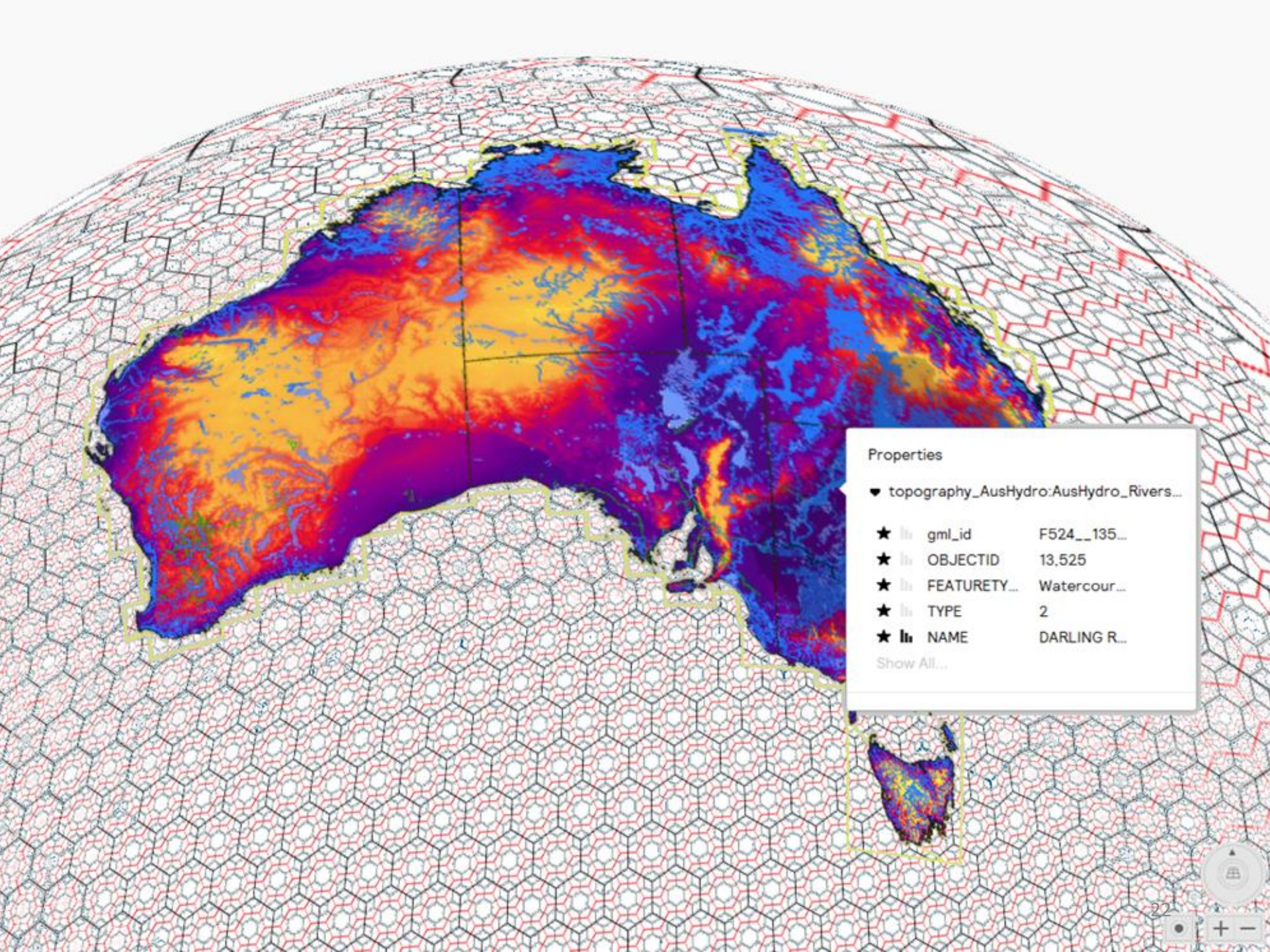

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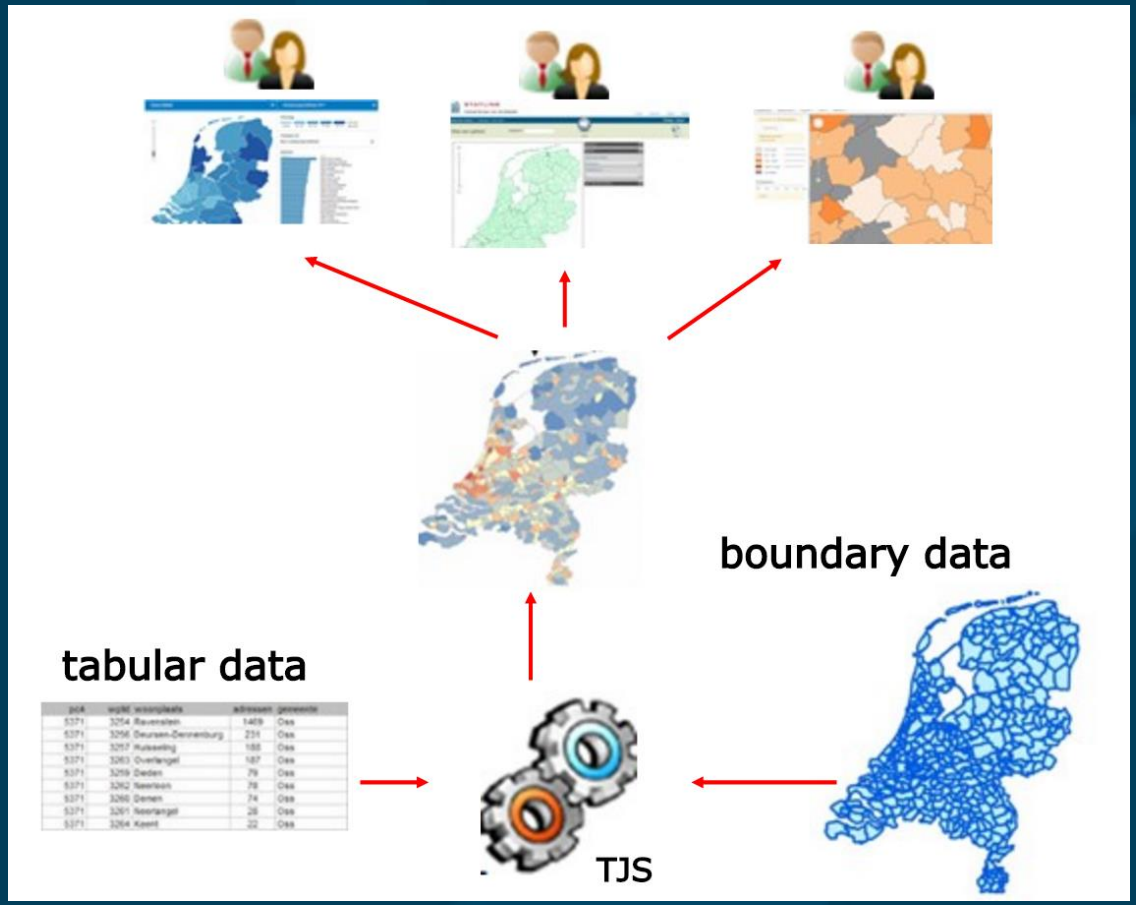
Table Joining Service

defines a simple way to describe and exchange tabular data that contains information about geographic objects

Useful way of bringing together statistics and geographic information

But so is WFS.....



Next steps

Informal *ad-hoc* meeting on statistics held back in March

Proposed Domain Working Group charter out to public comment – closed on Saturday

OGC members vote on the adoption of the charter – can be done electronically

First meeting of the DWG (hopefully) be at the Stuttgart meeting (10-14 September)

DISCUSSION: THE NEED FOR A STATISTICAL DWG