



The Global Statistical Geospatial Framework

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UN-GGIM

United Nations Committee of Experts on
Global Geospatial Information Management



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Outline

1. Origins of the Global Statistical Geospatial Framework
2. Global consultations and endorsement of the Global Statistical Geospatial Framework
3. Mapping a path forward to elaborate on the detail behind the framework and support implementation



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International Mandate



UN Economic and Social Council (ECOSOC)

UN Statistical Commission (UNSC)

- Global Statistical-Geospatial program review – proposed a global framework

UN Committee of Experts on Global Geospatial Information Management (UN-GGIM)

- List of nine issues included 'linking of spatial to statistics'

UN Expert Group – Integration of Statistical Geospatial Information

Introduction

A recognised need to better integrate statistical and geospatial information:

“there is an urgent need for a mechanism, such as a global statistical-spatial framework, to facilitate consistent production and integration approaches for geo-statistical information.”

Global Forum on the Integration of Statistical and Geospatial Information, 2014 New York

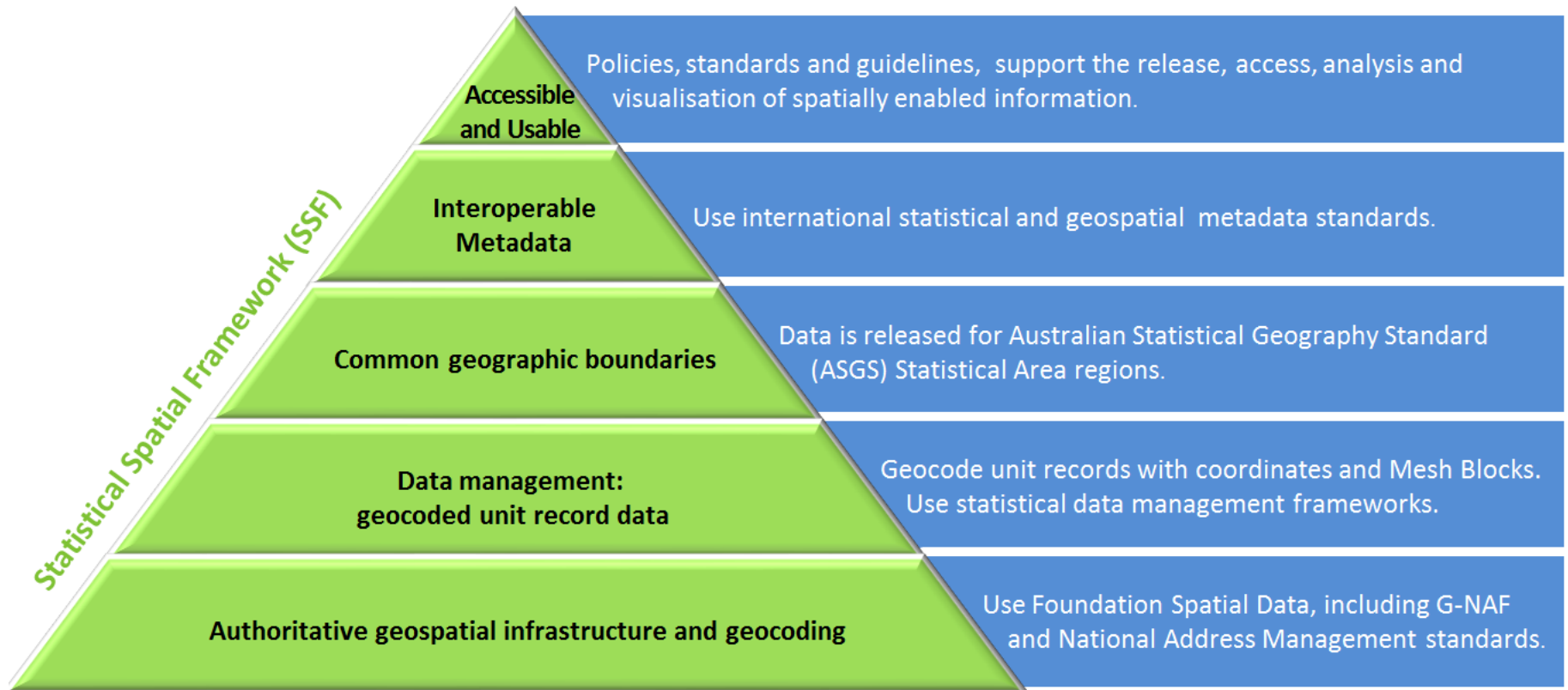
Integration is crucial to getting the most out of data:

- Decision making for smaller geographic areas
- Sustainable Development Goals and 2020 Population Censuses
- Data sharing and new insights

Australian application of SSF



Australian application of SSF



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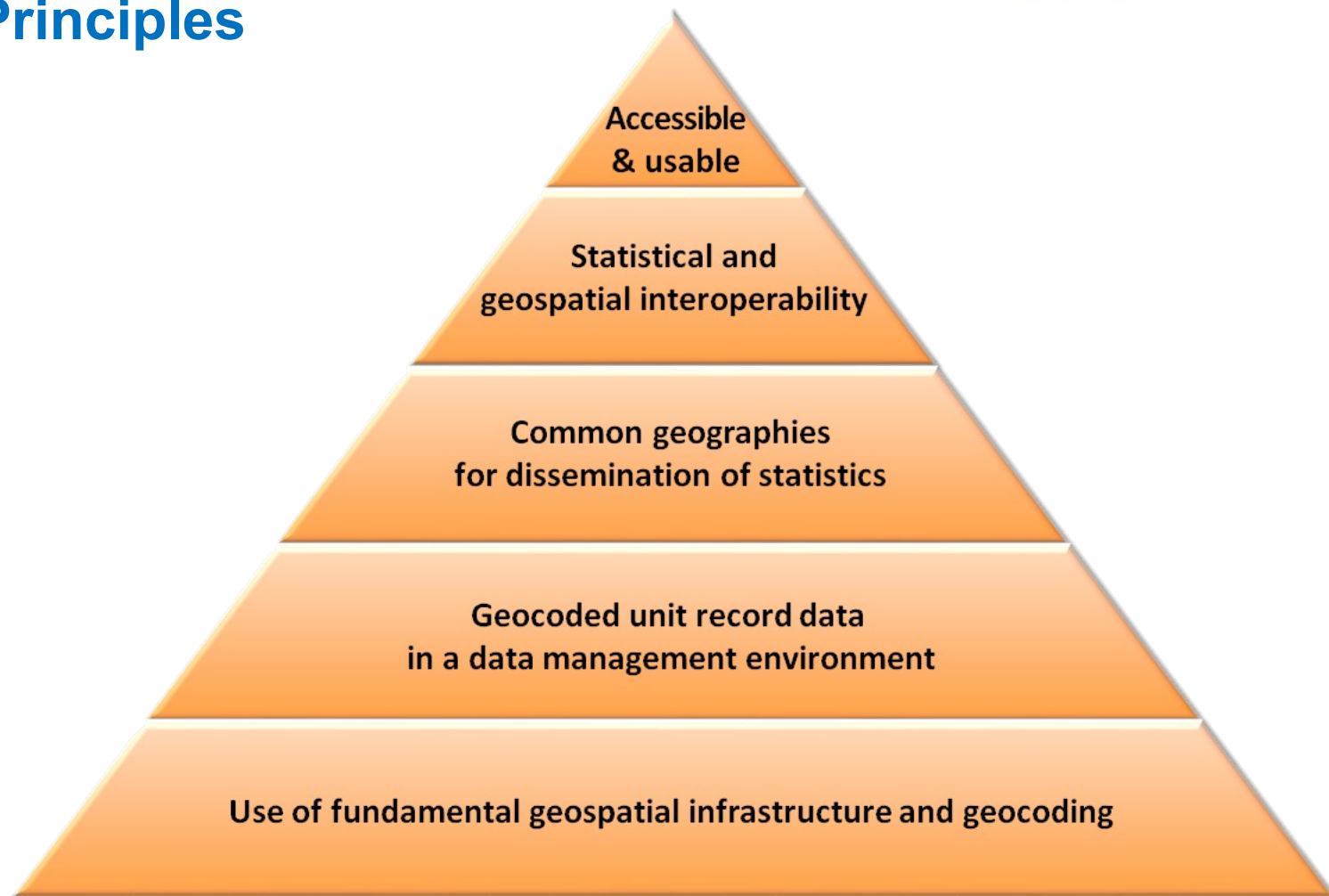
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Statistical Geospatial Framework:

5 Principles



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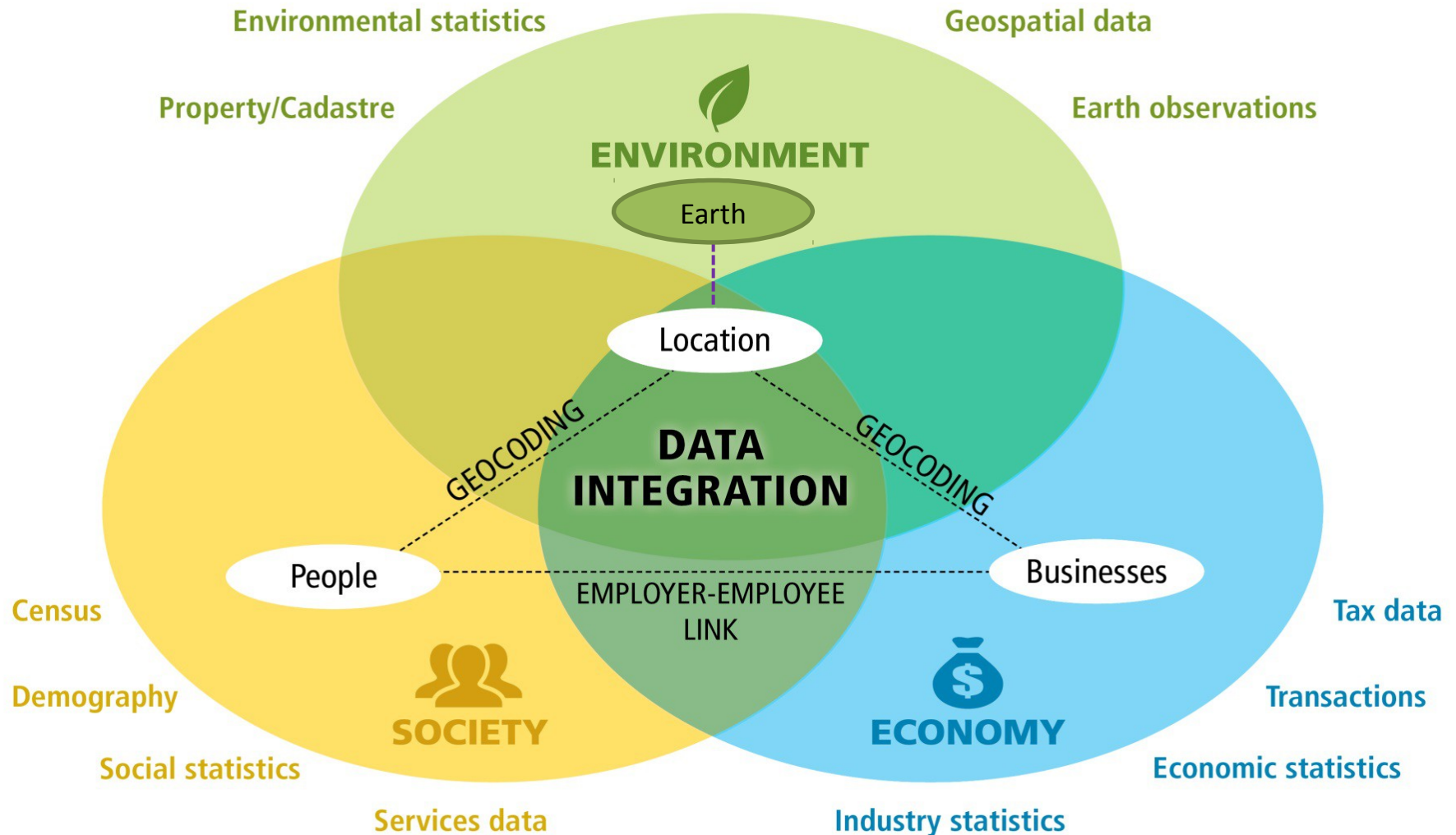


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Location – bridging the 3 domains





2. Global consultations and endorsement of the Global Statistical Geospatial Framework



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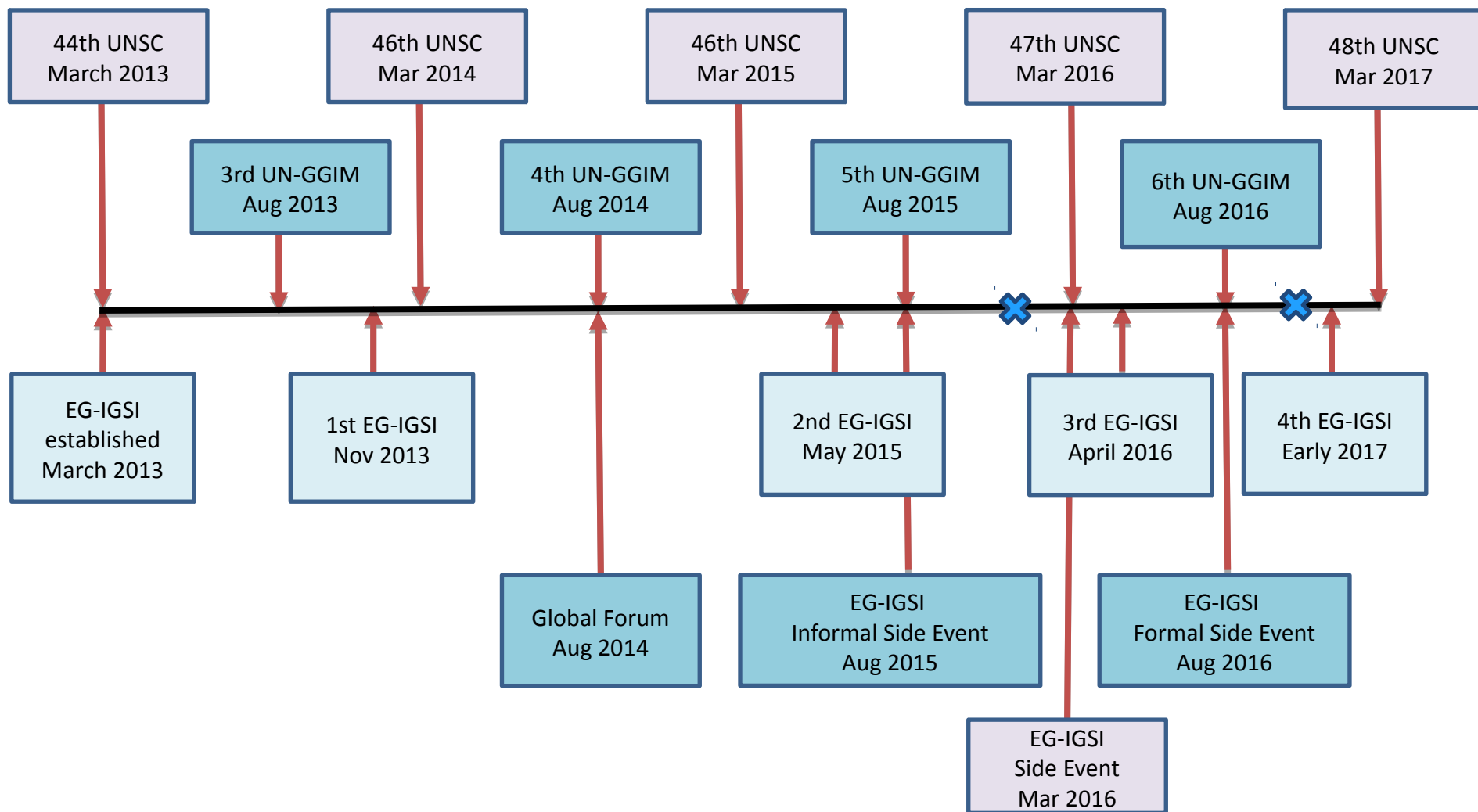
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Statistical Geospatial Framework:

Timeline



3rd EG-ISGI meeting: Outcomes



Focused on the Global Statistical Geospatial Framework

- Discussed feedback from global consultation amongst EG members
- Agreed on a way forward on the issues raised by EG members
- Undertook to meet an ambitious timeframe of
 - May - finalise the draft Framework
 - June – Global consultation
 - July – UN-GGIM Member State consideration
 - August – 6th meeting of UN-GGIM



EG members: Six key issues



Is it a standard or a framework?

The EG agreed the GSGF is a principles-based framework, not a statistical or technical standard.

The GSGF should be as inclusive as possible with regard to georeferencing.

Address and property-level georeferencing are preferable but are not the only method of locating statistical units

What is the scope?

The scope of the GSGF covers all statistical information including demographic, social, economic and environmental data.

Consistent Terminology

The first principle of the GSGF changed to 'Fundamental' geospatial data instead of 'Authoritative'

What about "new data sources?"

"New data" sources identified as an area that could benefit from application of GSGF principles e.g. mobile phone datasets.

Inclusion of open data policies and principles.

The Expert Group agreed to include references to international principles and/or agreed national policies on open data.

3rd EG-ISGI meeting: Outcomes



Plans for progressing the global framework

Collect national level examples of practices, policies, guidelines, standards and use cases to be published through the Expert group's webpage;

Establish a small editorial board (led by Eurostat) to advance work on common terminology, and thanked Eurostat, Finland and Australia for work already undertaken;

Progress national and international collaboration on data and metadata standards; and

Retain it's existing co-chairs, each to serve for another period of three years.



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Overview of Global Consultation

Following the 3rd UN EG-ISGI meeting,
global consultation was undertaken

June – Member States
193 Members States times two!
(NMAs and NSOs)

58 Responses

Very pleasing to have such a strong positive response



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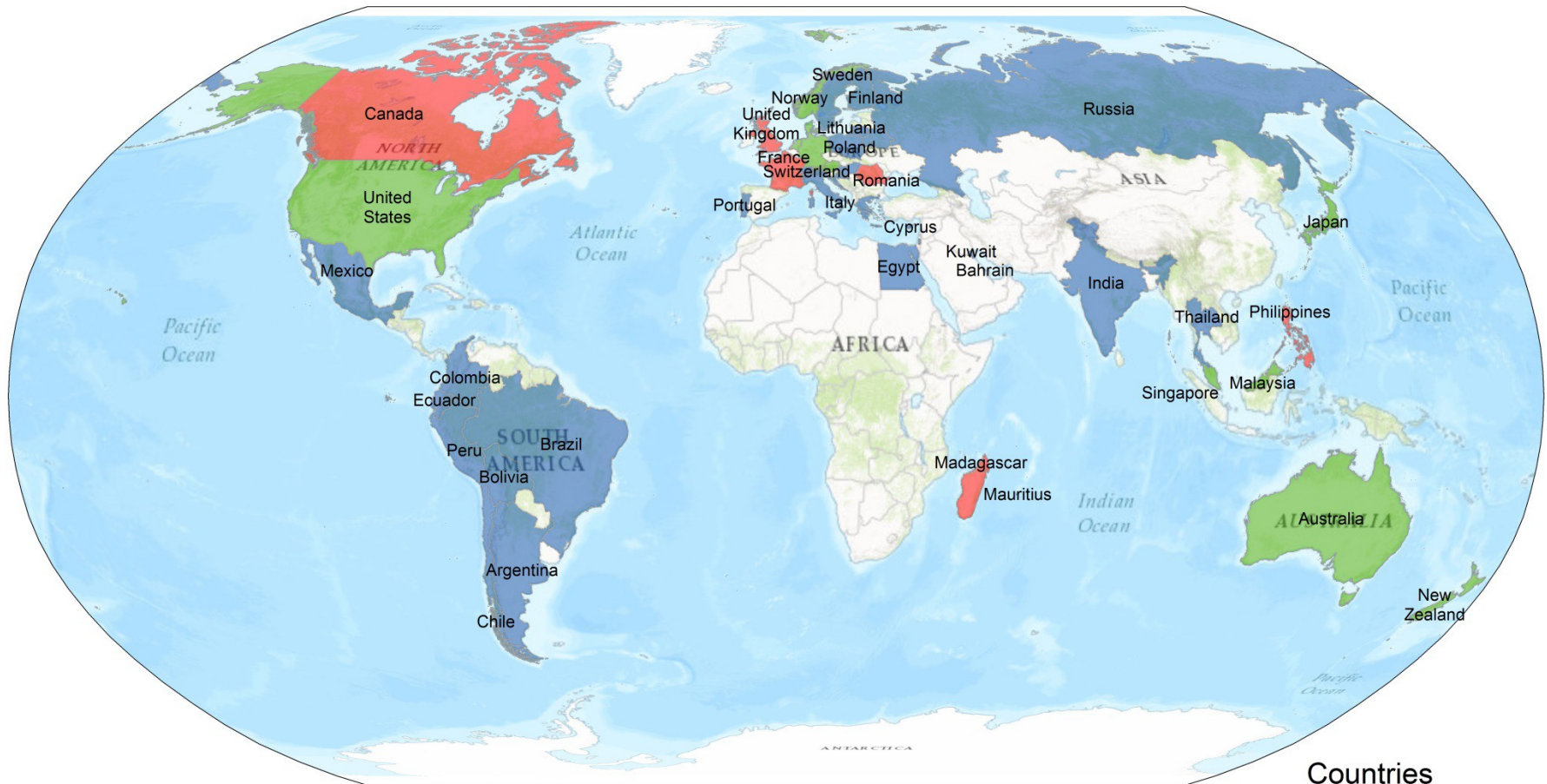
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Overview of Global Consultation:

Global responses

Global Consultation on a Global Statistical Geospatial Framework: Responding member states.



Countries



Sources: ESRI, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community
Projection: Robinson

Overview of Global Consultation:



- Overwhelming support for the five principles of the Global Statistical Geospatial Framework
- The majority of feedback focused on details of the application of the Framework
- In some instances, feedback was given on the level of completeness for these detailed aspects.



Overview of Global Consultation



Based on results of the Global Consultation, the Expert Group sought **adoption** of the five principles of the Global Statistical Geospatial Framework.

UN-GGIM endorsement

- UN-GGIM 6th session in New York – 1-5 Aug
- Paper seeking adoption of principles submitted
- GSGF information session side event – 2 Aug
- Co-chairs proposed adoption
 - Very large number of interventions from across the globe – possibly a record
 - Universal agreement
- Consolidation and implementation of the GSGF
- Capability-building, knowledge management and sharing of good practices

UN-GGIM endorsement



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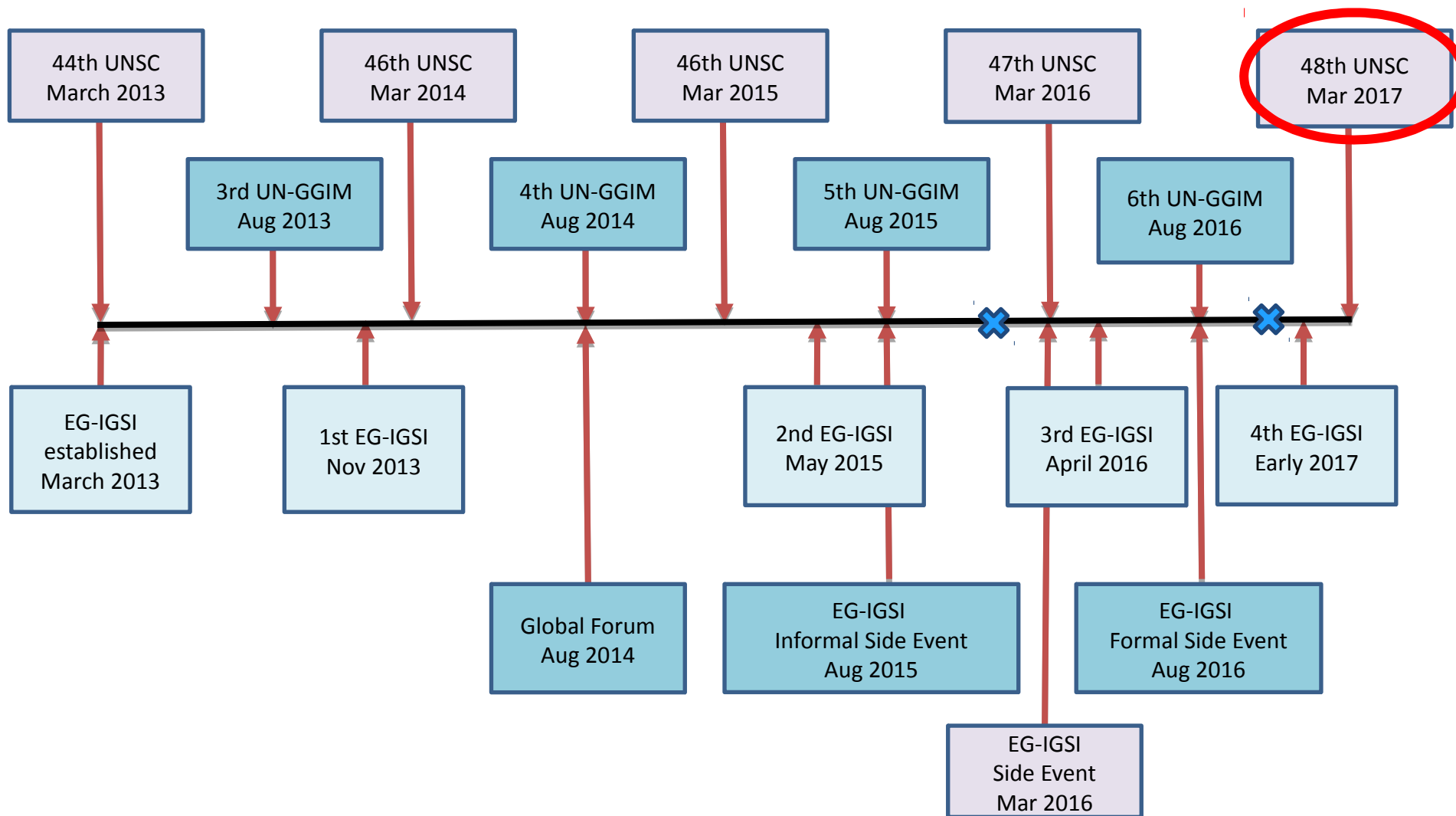
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Statistical Geospatial Framework:

Timeline





3. Mapping a path forward to elaborate on the detail behind the framework and support implementation



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Now is an important time for Member States to have guidance on how to integrate statistical and geospatial information

2030 Agenda for Sustainable Development



2020 Round of Population Censuses



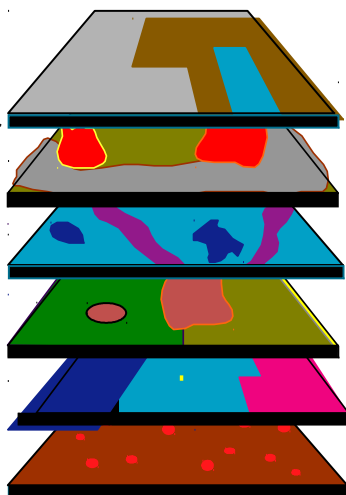
2020 World Population and Housing Census Programme

NSDI



**High quality, timely
and reliable data**

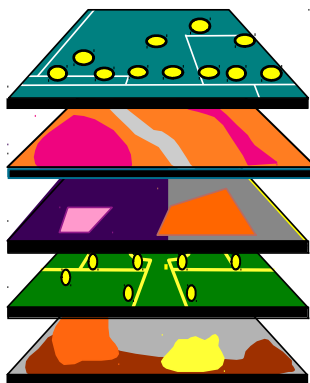
Geodetic
Elevation
Water/Ocean
Land use/cover
Transport
Cadastre
Population
Infrastructure
Settlements
Admin. Bdys.
Imagery
Geology/soils
Observations
etc.



**Fundamental Geospatial
Data Themes**

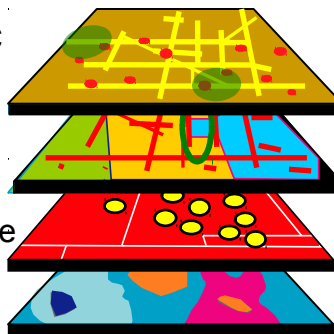
SOCIAL

Society
Poverty
Education
Health
Population
Employment
Water
Sanitation
Equality
Gender



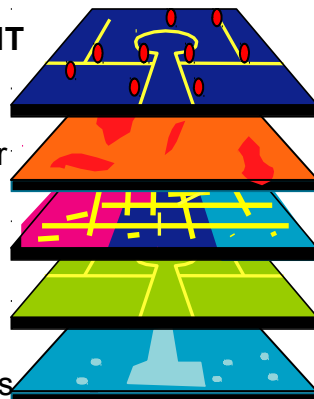
Economic

Well-being
Cities
Water
Energy
Infrastructure
Industry
Sanitation
Economy



ENVIRONMENT

Water
Seas/oceans
Land use/cover
Ecosystems
Forests
Agriculture
Climate
Biodiversity
Natural hazards
Pollution



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United Nations Secretariat
Global Geospatial Information Management

Positioning geospatial information to address global challenges

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Principle 1:

Use of fundamental geospatial infrastructure and geocoding

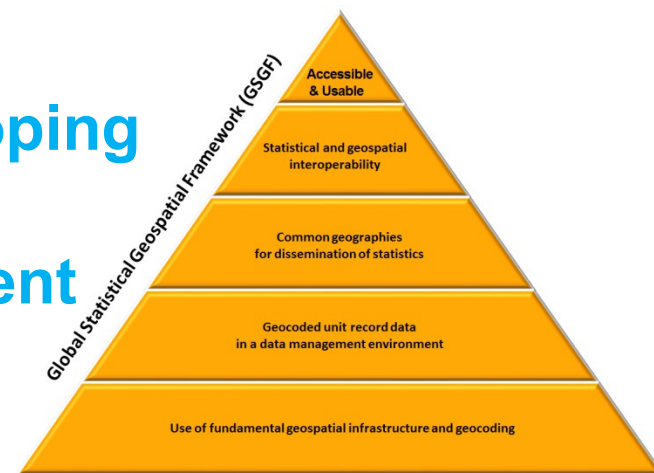
A common and consistent approach to establishing a location and temporal description of each unit in a dataset, using national fundamental datasets.

Objectives:

- Accurate and consistent address, property, building and location information
- Accurate and consistent geocoding results, and consistent management of geocoding issues.

Consultation highlighted:

- Infrastructure capacity in developing countries – trial GPS capture
- GSGF a road map for development of national/regional capability



Principle 2:

Geocoded unit record data in a data management environment

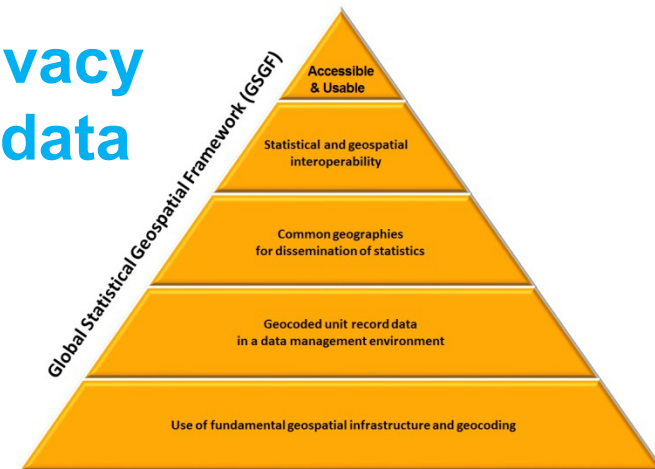
Storage of the unit record statistical data linked to a geocode within a data management environment will ensure flexibility over time and protect privacy and confidentiality.

Objectives:

- Effective data management and custodianship
- Consistent and interpretable geocode information
- Simplified data aggregation

Consultation highlighted:

- **Managing confidentiality and privacy**
- **Persistent geocodes and linked data**



Principle 3:

Common geographies for dissemination of statistics

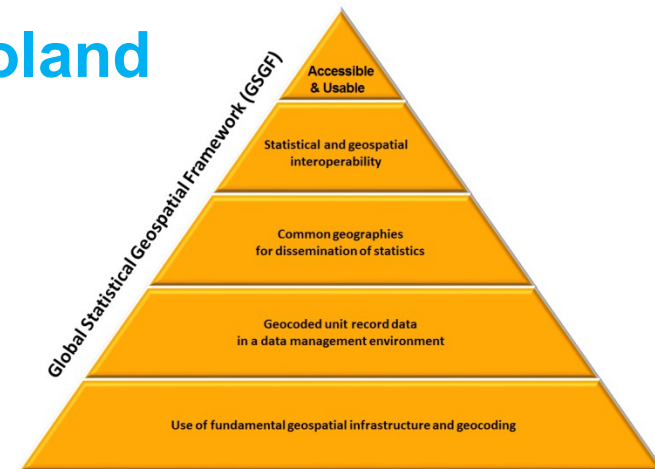
A common set of geographies for the display, reporting and analysis of statistics to enable comparisons across datasets – statistical and geospatial.

Objective:

- Data from disparate sources can be integrated
- Aggregation, visualisation and analysis is simplified
- Conversion of data between geographies is supported







Consultation highlighted:

- **Consistent geography model, Poland**
- **Potential from Discrete Global Grid System**



The 10 Levels Model

unique identifiers system

Geodetic System	Layers (suitable for geocoding)	Statistical System
+	NUTS1 - Administrative level 1	+
+	NUTS2 - Administrative level 2	+
+	NUTS3 - Administrative level 3	+
+	LAU1 - Administrative level 4	+
+	LAU2 - Administrative level 5	+
 Cadastral units Cadastral parcels	INDIVIDUAL UNITS level 6 (not necessary for harmonize)	 Statistical regions Enumeration areas
+	 POLYGON level 7	?
?	 GRID level 8	+
+	 LINE level 9	?
+	 POINT level 10	+

Principle 4:

Statistical and geospatial interoperability

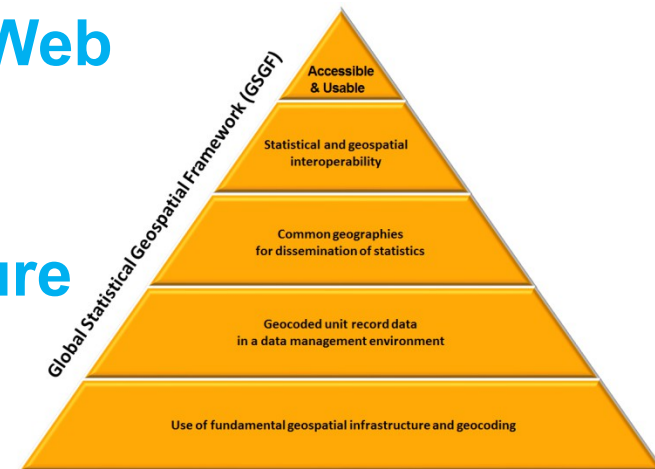
Greater interoperability to enhance the efficiency of creation, discovery, access and use of data.

Objectives;

- Greater efficiency and simplification in the creation and use of data.
- A wider range of data available for analysis and broader application of data and technologies.

Consultation highlighted:

- **W3C/OGC - Spatial Data on the Web Working Group (SDWWG)**
- **GEOSTAT/UNECE - Common Statistical Production Architecture**



Principle 5:

Accessible and useable geospatially enabled statistics

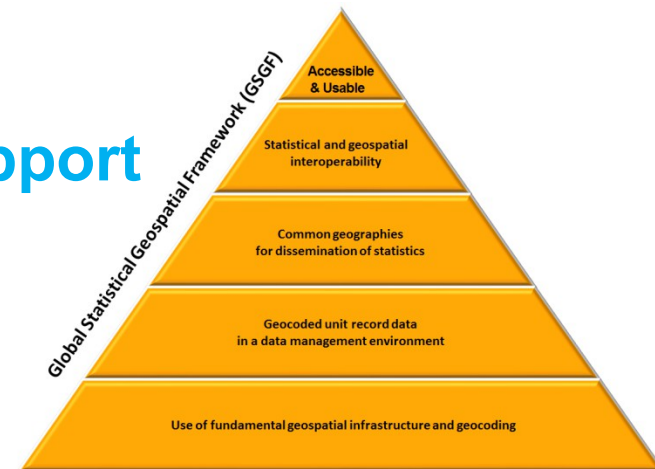
Identification and development of policies, standards and guidelines to support the release and use of geospatially enabled information.

Objectives:

- Data released and accessible, with privacy and confidentiality protected.
- Web services enabling machine-to-machine access and dynamic linking.
- Promote best practices.

Consultation highlighted:

- **Need for more guidance and support material for this section.**

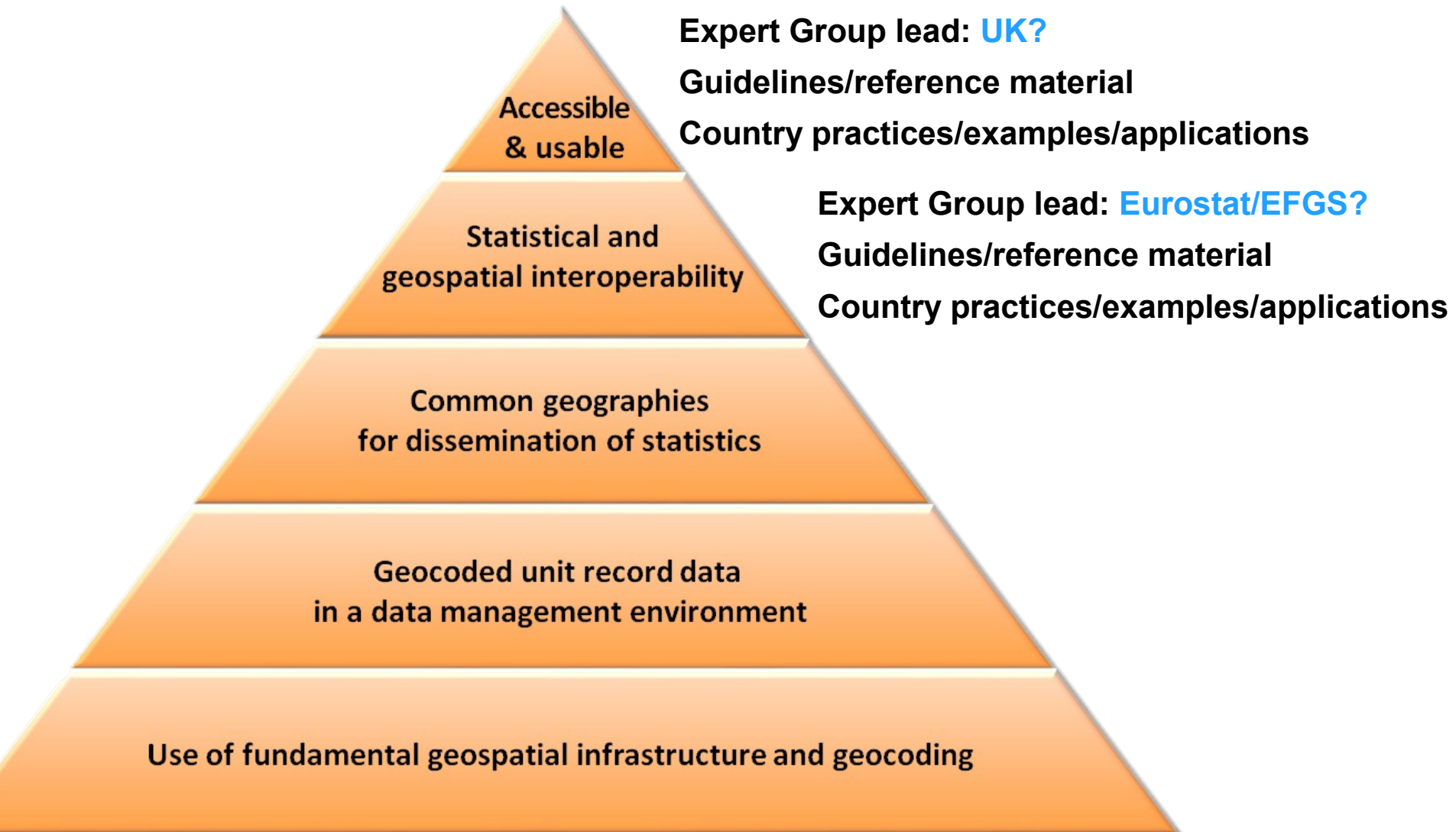


GSGF Content development



- UN EG-ISGI to provide overall coordination and oversight of the Framework and guidance materials.
- Each of the 5 Principles to be lead by a country, and supported by a working group, to coordinate the collection of key papers, guidelines, presentations, country examples, etc.
- Establish a Knowledge Base structured around the GSGF pyramid, as a repository for organising relevant guidance materials and documents.

Content development





Questions?



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