UNECE REPORT OF THE INGEST TASK FORCE ON STANDARDS ISSUES

10th Joint UN-GGIM: Europe - ESS - UNECE Meeting, Luxembourg, 13 March 2024

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UNECE PROJECT OVERVIEW

UNECE has led an EU-funded project to develop capacity in geospatial and statistical data integration

Foster stronger links between statistical and geospatial communities across the region

Facilitate greater collaboration amongst statistical and geospatial organisations
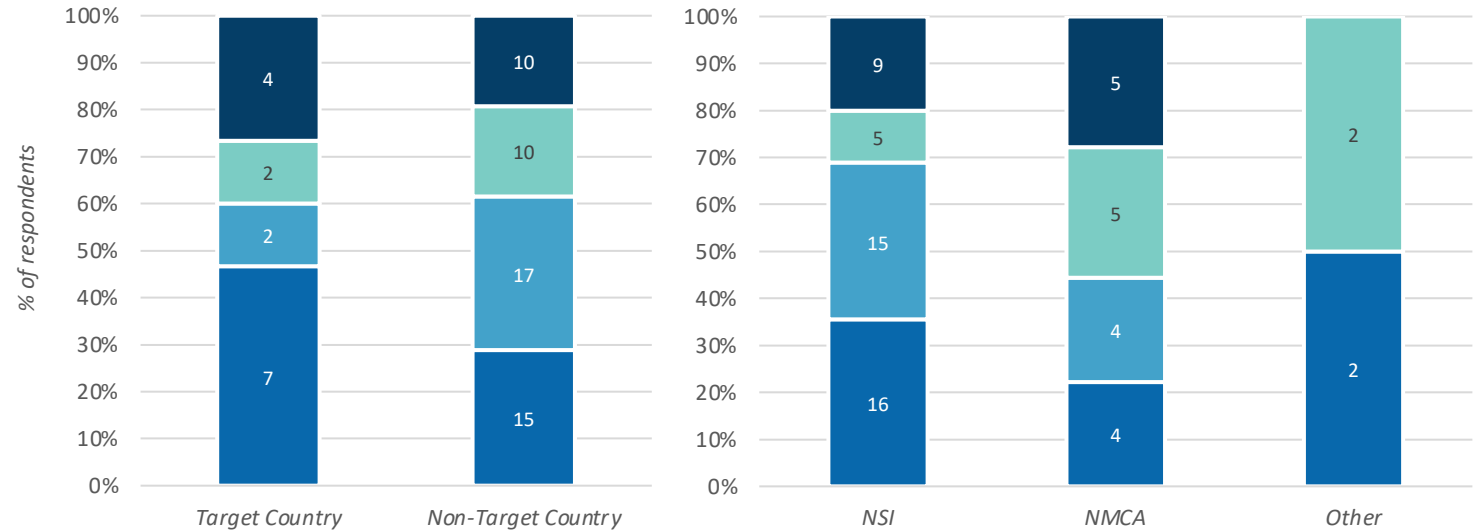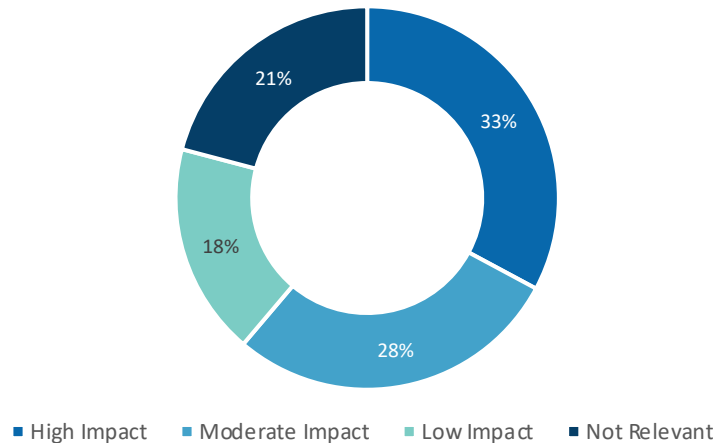
Encourage greater integration of geospatial and statistical information

Promote stronger institutional partnerships and the use of common standards

UNECE SURVEY

Respondents rated the impact of standards on the greater integration of statistical and geospatial data

Key Facts:

- 33% of respondents rated standards issues as high impact, with a higher proportion of respondents from target countries (47%) than non-target countries (29%), and NSIs (36%) than NMCAs (22%).

- Respondents noted issues such as conflicting standards; the lack of compatibility analysis during standards development; the lack of compliance; and poor semantic and technical interoperability.

- Respondents highlighted the need for more unified standards, supported by harmonised operating models, production processes and services.

INGEST TASK FORCE ON STANDARDS ISSUES

Background:

- Established under the UNECE project scope, with 80% of respondents to the UNECE Survey noting their interest in becoming a task force member.

Aim:

- To support the greater harmonization and interoperability of statistical and geospatial information through the use of common standards.

Forum to:

- Discuss the use of standards

- Explore issues and constraints

- Identify priorities and future actions

MEMBERSHIP

Overview:

- 16 organisations
- 12 countries (7 target countries)
- Both NSIs and NMCAs represented

Co-chairs:

- Statistics Finland
- Ordnance Survey of Northern Ireland

Secretariat:

- UNECE

COUNTRY	ORGANISATION
Albania	Institute of Statistics (INSTAT)
Albania	State Authority for Geospatial Information (ASIG)
Armenia	Statistical Committee of the Republic of Armenia
Bosnia and Herzegovina	Agency for Statistics of Bosnia and Herzegovina
Bosnia and Herzegovina	Federal Administration for Geodetic and Real Property Affairs
Finland	Statistics Finland
Finland	National Land Survey of Finland
France	National Institute of Statistics and Economic Studies (INSEE)
Germany	Federal Statistical Office (Destatis)
Kazakhstan	Bureau of National Statistics
Malta	National Statistical Office
Republic of Moldova	Agency for Land Relations and Cadastre of the Republic of Moldova
Montenegro	Statistical Office of Montenegro (MONSTAT)
Türkiye	Turkish Statistical Institute (TURKSTAT)
United Kingdom	Northern Ireland Statistics and Research Agency (NISRA)
United Kingdom	Ordnance Survey of Northern Ireland (OSNI)

TERMS OF REFERENCE

Activities:

A. Understand the current use of standards and share use cases and best practice.

B. Assess the wider operating environment that supports the organisational use of standards and the gaps present within and between organisations.

C. Identify priorities for standards harmonisation work and recommend related actions.

Meetings:

- Regular monthly online meetings, plus additional sub-group meetings as required.
- In-person meeting in Belgrade on 3rd of October 2023 for wider consultation.

Output:

- A report containing recommended actions and guidelines to support their implementation at a national level.

TIMETABLE OF ACTIVITIES

Aug 2023   Establish Task Force

Sep 2023   Agree terms of reference and associated activities; identify co-chairs

Oct 2023   In-person meeting in Belgrade, Serbia

Nov 2023   Completion of Activity A

Dec 2023   Establish sub-groups; completion of Activity B

Jan 2024   Completion of Activity C

Feb-Apr 2024   Drafting of report containing recommended actions and methodological guidelines

May 2024   Report finalised
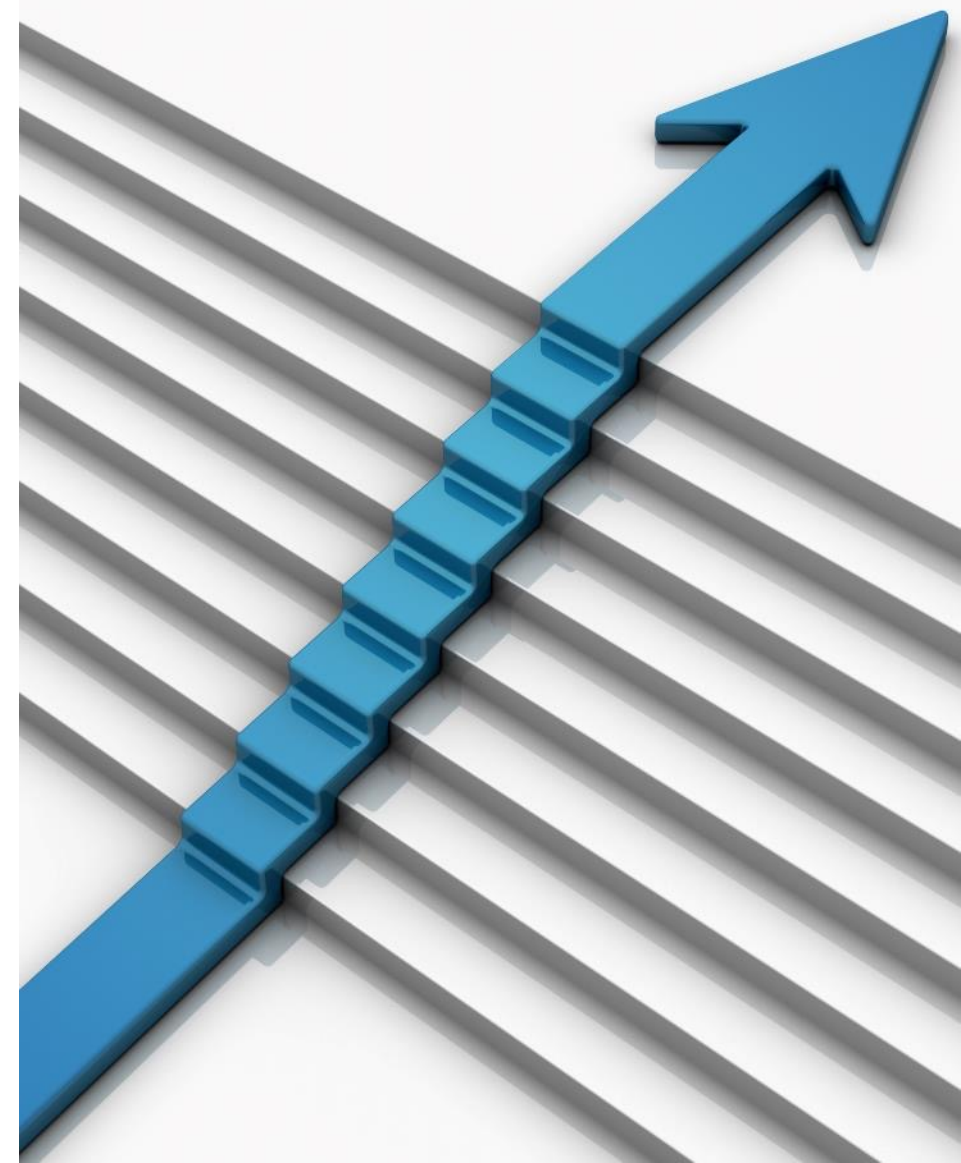
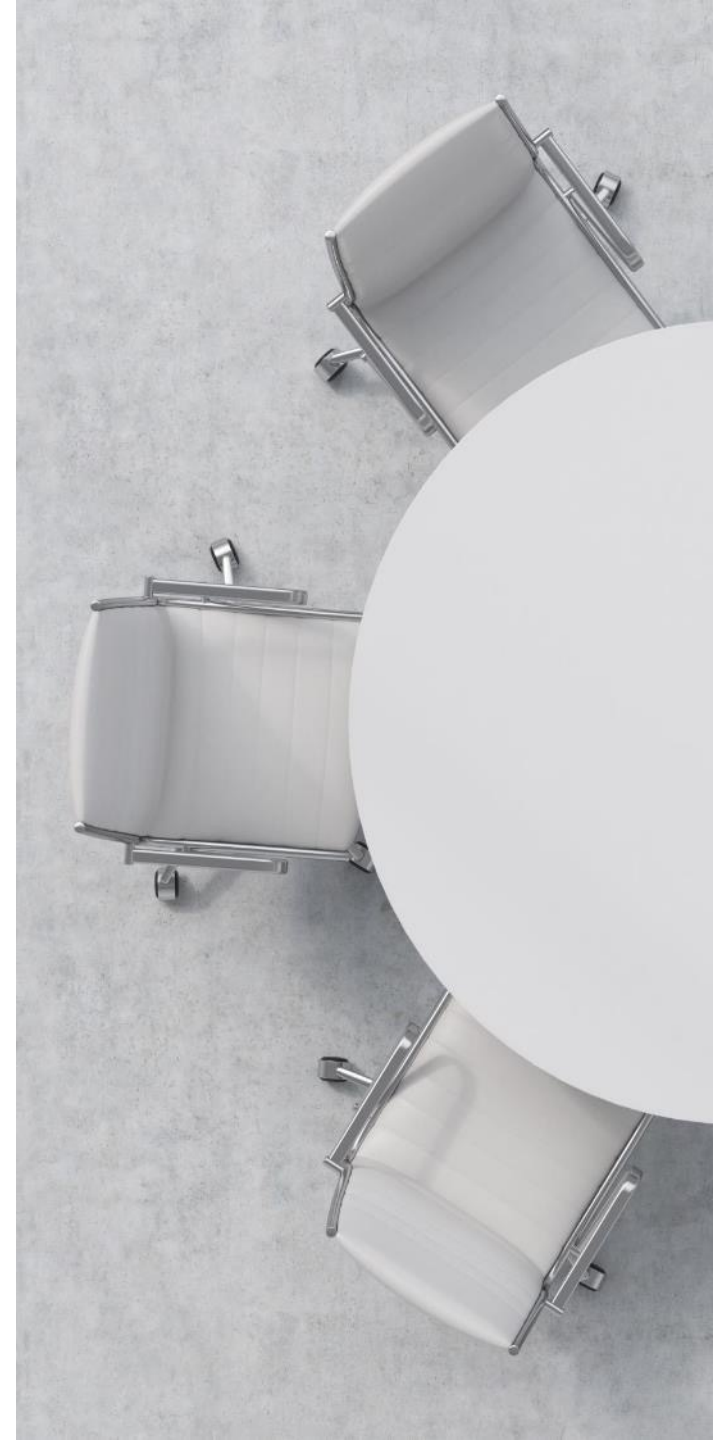# IN-PERSON MEETING, BELGRADE, 3 OCTOBER 2023

Purpose:

- To publicise the Task Force, gain wider perspectives on its planned activities, and input on the current use of standards to feed into the first activity.

Attendance:

- 26 registered participants
- 16 countries
- 15 NSIs, 4 NMCAs and 7 intergovernmental and private sector organisations

Small group discussions:

- What standards do you currently use and what part(s) of the data lifecycle are they used in?
- Do you use national or international standards (or both)? Have you experienced any issues and obstacles in their use?

IN-PERSON MEETING, BELGRADE, 3 OCTOBER 2023

Key takeaways:

- Common standards in use include INSPIRE and the GSBPM, but there is less awareness of the GeoGSBPM.

- Wider organisational, cultural and legal aspects also need to be considered which may differ significantly between different countries.

- NSIs and NMCAs need to communicate and cooperate better to fulfil each other's needs for data integration and standardisation.

- There is a move away from national standards towards international standards.

- Solutions included establishing pilot or proof-of-concept projects at national levels focusing on needs; gap analysis; developing common data infrastructures e.g. data warehouses.
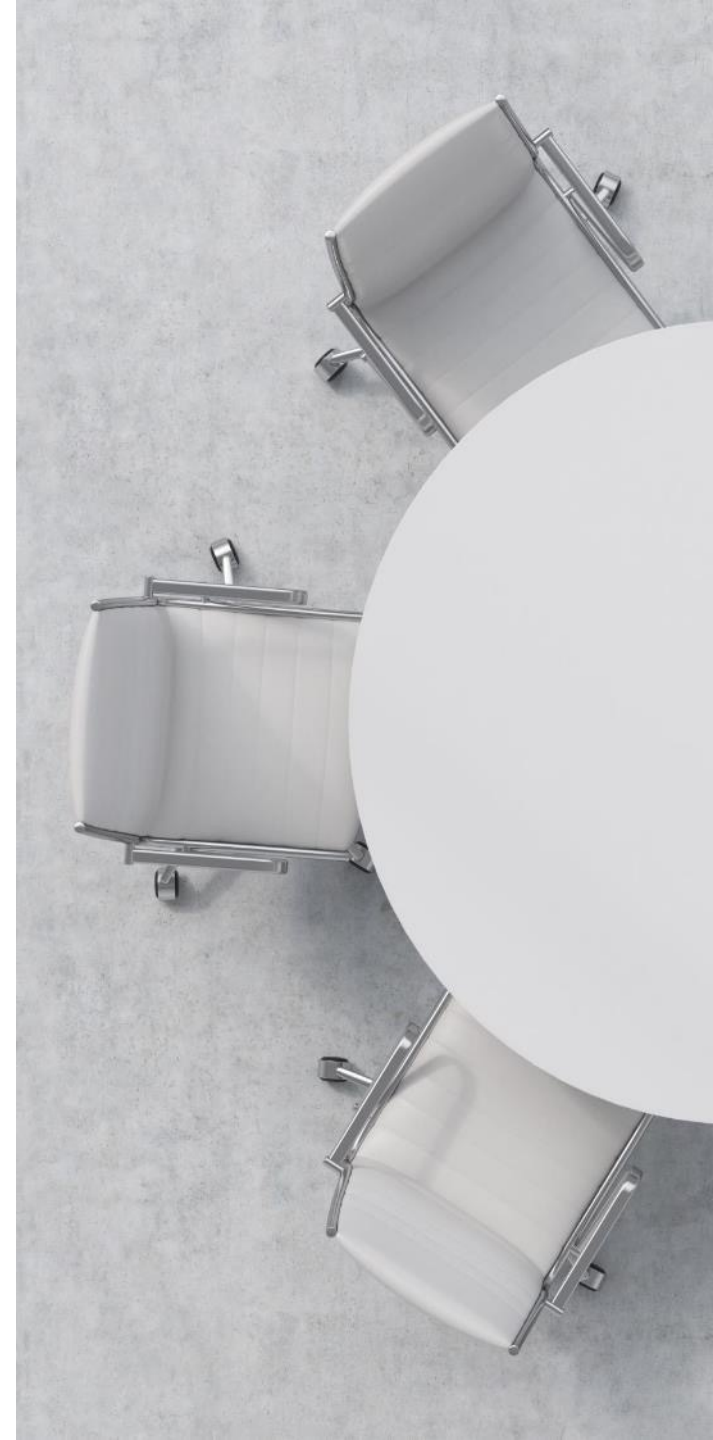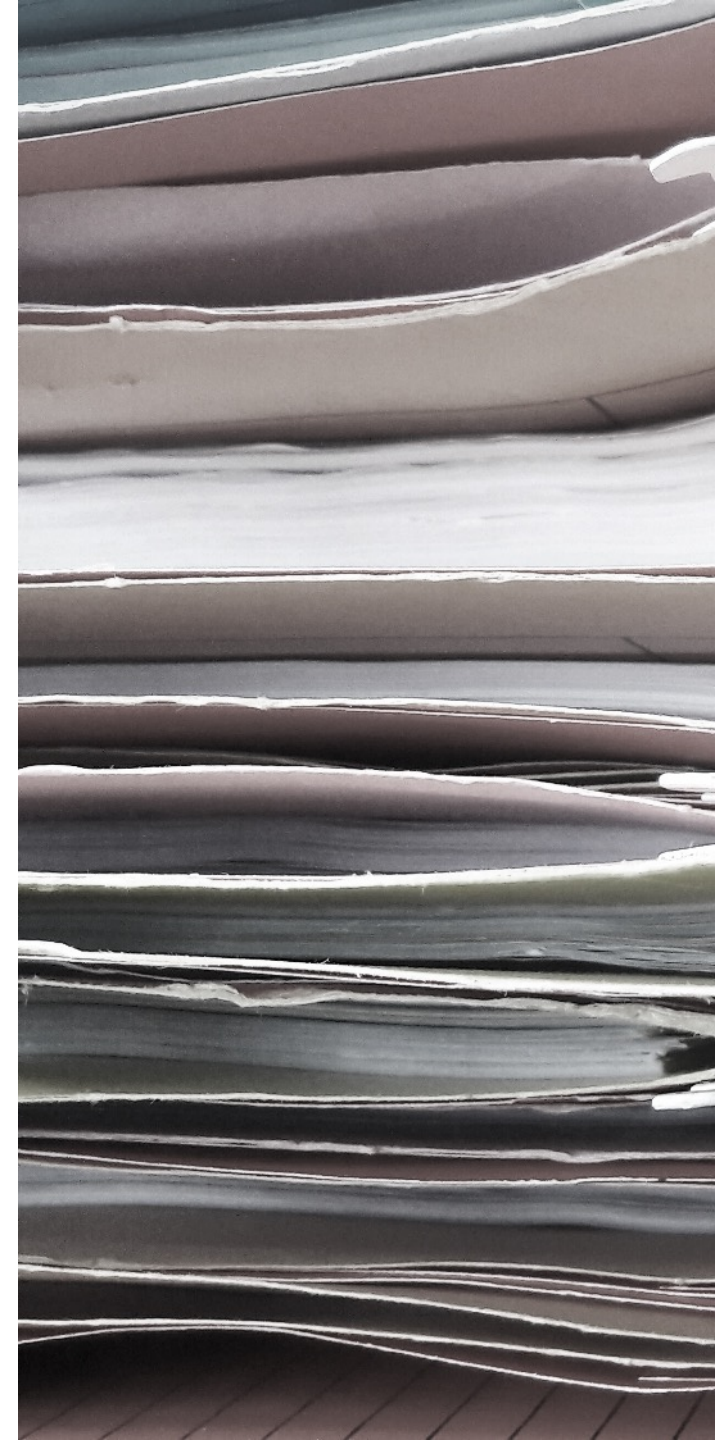
ACTIVITY A

Aim:

- To understand the current use of standards across member organisations and to share use cases and best practice.

Method:

- Document the standards currently used by Task Force member organisations that specifically relate to data integration activities as defined by UN-GGIM's Global Statistical Geospatial Information Framework.

- Data collected included:
    - Type of standard (e.g. national, international)
    - Stage of use in data lifecycle (GeoGSBPM)
    - Other use (e.g. data quality, metadata, archiving, integration)
    - Type of use (e.g. live process, pilot/testing)
    - Additional information (e.g. benefits, problems encountered, use cases)

ACTIVITY A - RESULTS

Key findings:

- 111 records, 70 unique standards.

- Most (89%) are international standards.

- NMCAs on average used over twice as many standards as NSIs.

- Standards are used across all GSBPM phases and other functions.

- Top areas of use:
  1. Dissemination
  2. Metadata management
  3. Integration
  4. Processing

- Most (90%) are used in live processes.

Activity A: Overview of standards use by phase and function
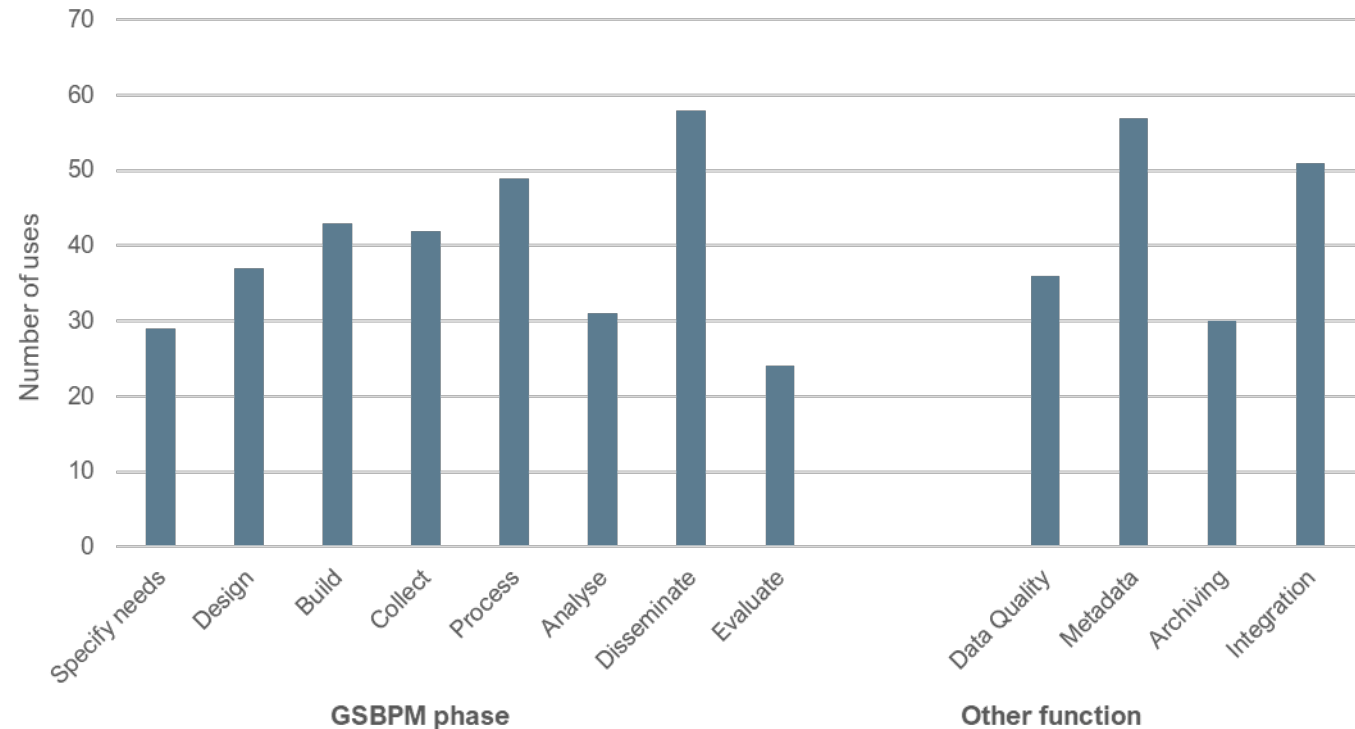
SUB-GROUPS

Governance Sub-Group:

- Scope: Wider governance issues concerning standards use (e.g. organizational structure, financial models, workplace cultures, legislation, policies); use of GSGF Europe and UN IGIF as guiding frameworks.

- Sub-Group Lead: Statistics Finland

Technical Sub-Group:

- Scope: Technical aspects of standards use (e.g. IT systems, hardware, software, security, licensing, technical knowledge/skills, existing workflows) across the data lifecycle; use of GeoGSBPM as a guiding framework.

- Sub-Group Lead: Ordnance Survey of Northern Ireland

ACTIVITY B

Aim:

- To assess the wider operating environment that supports the organisational use of standards and the gaps present within and between organisations.

Method:

- Complete a SWOT analysis by assessing your organisation's operating environment and identifying the strengths, weaknesses, opportunities and threats that support/limit the use of common standards.

- By considering the end goal of achieving harmonised and interoperable data supported by common standards, identify any notable gaps which should be addressed.

STRENGTHS

WEAKNESSES

OPPORTUNITIES

THREATS
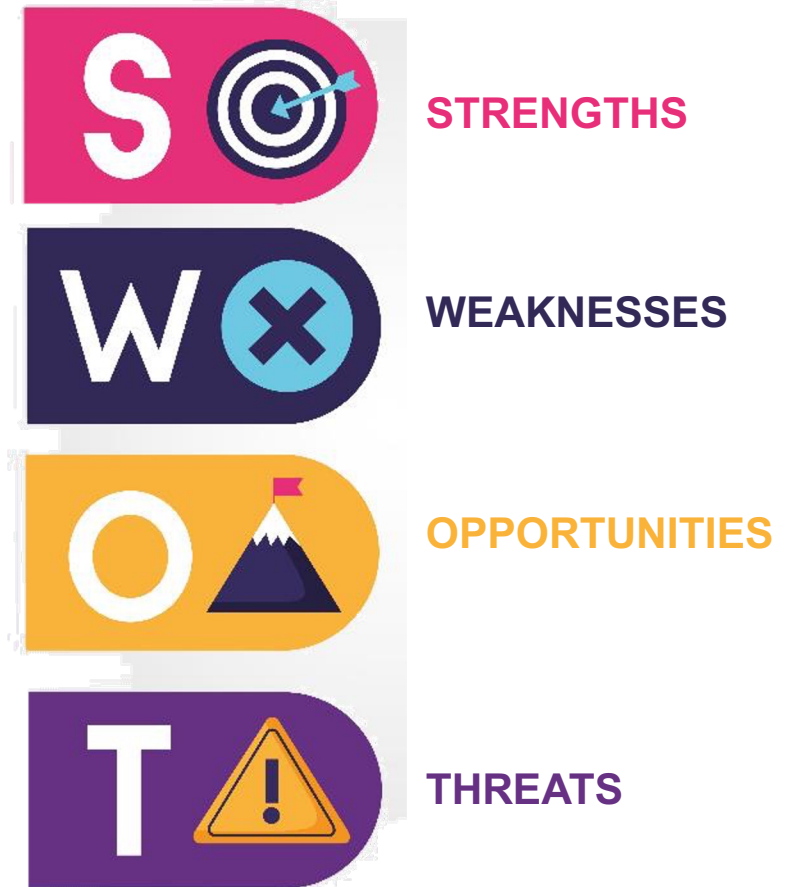
ACTIVITY B - RESULTS

STRENGTHS

- Many standards are already being utilised.
- Standardised geographies are used.
- NSIs/NMCAs existing remit over authoritative data and are best placed to lead standards adoption.
- Good cooperation with other institutions, both at national and international levels.

WEAKNESSES

- Weak collaboration between NSIs & NMCAs – little understanding of shared requirements.
- Skills gaps – lack of standards knowledge.
- Bureaucratic internal systems/processes that are difficult to change.
- Data quality issues.
- Weak IT infrastructures for standards-based data exchange.

OPPORTUNITIES

- New projects could be a catalyst for integrating standards from inception.
- Open data initiatives.
- Growing need for interoperability to realise efficiencies and cost savings.
- National mandates for use of authoritative data e.g. address data in standardised form.

THREATS

- Fast pace of technology changes – requires constant upskilling and investment.
- Lack of budget and insufficient resourcing to support changes.
- High staff turnover and loss of expertise.
- Different organisational drivers – no cohesive approach to standards implementation.

ACTIVITY C

Aim:

- To identify priorities for standards harmonisation work and recommend related actions.

Method:

- Complete a MoSCoW analysis to identify and prioritise the requirements needed to successfully implement common standards based on four prioritisation categories:

  - Must Have: Non-negotiable needs that are mandatory for standards implementation.

  - Should Have: Important requirements that are not vital but add significant value.

  - Could Have: "Nice-to-have" requirements that would have a small impact if left out.

  - Will Not Have: Not a priority and will not be implemented at this time.

MUST HAVE

SHOULD HAVE

COULD HAVE

WILL NOT HAVE

ACTIVITY C - RESULTS

Some "Must-Haves" (and recommendations in the making)

- Cooperation, collaboration and communication should be institutionalised through official structures (e.g. networks, national steering groups), developing shared objectives that are supported by standardized operating models and technical standards relevant to organisational activities.

- A national roadmap for data integration with standards as a key element. Agreed leadership/champions to drive the implementation of the roadmap with sufficient resources guaranteed by national level policy.

- Organisational commitment to standards adoption and active participation in standards development. Organisational structures that support the effective use of standards, strategically driven by senior management and technically supported by skilled staff.

- Data infrastructures and platforms that are "fit for purpose" and facilitate the implementation of standards. Established geospatial information management for statistical production using standardised methods and services.

- Skills and training programmes that develop and maintain sufficient internal expertise to implement standards appropriately across the data lifecycle.

NEXT STEPS

1. Preparation of a report that contains recommended actions and guidelines to support the use of common standards within data integration activities at national levels.

2. All Task Force outputs will be publicly available on the UNECE wiki space, final report published on the main UNECE website.

3. An INGEST blog post that presents the work of the Task Force will be published.

4. Paper and presentation at the upcoming Q2024 Conference.

Future Work?

- Assess the relevance of individual standards to data integration activities.

- Recommend the use of particular standards across the data lifecycle.

A path towards the use of common standards to support the integration of statistical and geospatial information

Funded by the European Union

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AUDIENCE DISCUSSION

- Do you agree with the main outcomes shared today? Is there anything we have missed?

- What are your own experiences of standards use within your organisation? Are they similar or different?

- How should standards issues be tackled in the future? What should the future priorities be?
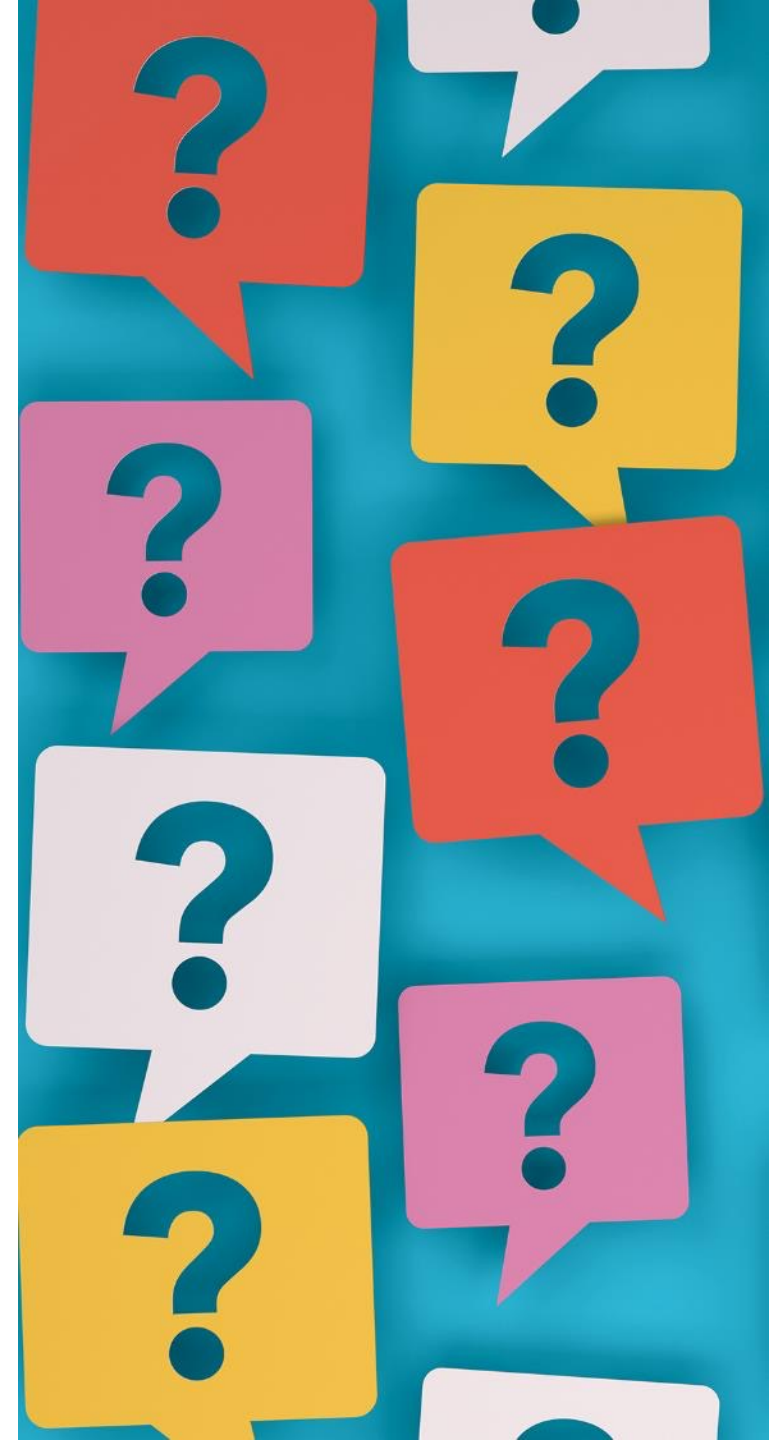
THANKS FOR LISTENING

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