Supporting Standards Group

on behalf of our Modernisation Group:
Zoltán Vereczkei (chair)

Workshop on the Modernisation of Official Statistics
22-24 November 2022, Geneva

Supporting Standards Group: our mission

- Find ways how to
  - *develop*,
  - *enhance*,
  - *integrate*,
  - *promote*,
  - *support* and
  - *facilitate the implementation of*

  a range of standards needed for statistical modernisation.

- Operational responsibility for the *maintenance* and *development* of the ModernStats standards.

Where to find us?

- Information on the Supporting Standards Group on the HLG-MOS Modernisation Group page
- Information on the ModernStats models:
  - **G**eneric **S**tatistical **B**usiness **P**rocess **M**odel (GSBPM)
  - **G**eneric **S**tatistical **I**nformation **M**odel (GSIM)
  - **G**eneric **A**ctivity **M**odel for **S**tatistical **O**rganizations (GAMSO)
  - **C**ore **O**ntology for **O**fficial **S**tatistics (COOS)
  - **C**ommon **S**tatistical **P**roduction **A**rchitecture (CSPA)
  - **C**ommon **S**tatistical **D**ata **A**rchitecture (CSDA)
- Information on our ModernStats World Workshops, including interesting country examples. Latest (2022) material here.

Members

Dedicated experts from NSOs and international statistical organisations.

Member	Country/ Organisation
Andrea Petres	Hungary
Anna Długosz	Poland
Carlo Vaccari	Italy
Cory Chobanik	Canada
Daniel Blanc	Uruguay
Daniel Gillman	USA
David Barraclough	OECD
Edgardo Greising	ILO
Essi Kaukonen	Finland

Member	Country/ Organisation
Federico Segui	Uruguay
Flavio Rizzolo	Canada/DDI
Florian Vucko	France
Franck Cotton	France
Helda Mitre	Albania
InKyung Choi	UNECE
José Lujan	Mexico
Janusz Dygaszewicz	Poland
Juan Muñoz	Mexico

Member	Country/ Organisation
Juan Rioja	Mexico
Kevin McCormack	Ireland
Manuel Cuéllar-Río	Mexico
Mauro Bruno	Italy
Martina Hahn	Eurostat
Matjaz Jug	Netherlands
Omurbek Ibraev	Kyrgyzstan
Waleed Mohamed	Egypt
Zoltán Vereczkei	Hungary

Network of experts

Our Task Teams in 2022:

- **GSIM Review** Task Team: *9 organisations 16 people*
- **Core Ontology for Official Statistics** phase 2: *10 organisations 16 people*
- **GSBPM Tasks** Task Team: *11 organisations 18 people*
- **GSBPM / SDMX / DDI** Task Team: *11 organisations 15 people*
- GSBPM overarching processes
- CSPA capacity building

Our workshop in 2022:

- **ModernStats World Workshop 2022**: *54 people*

Overview of 2022 activities/results

Task Teams

GSIM Review	To be completed in 2023. Take a look at what we are doing at our Github.
Core Ontology for Official Statistics phase 2	Important milestone by the end of the year. Material available here (under public review)
GSBPM Tasks	Completed, available here.
GSBPM / SDMX / DDI	To be completed in 2023.

TBD Group

ModernStats World Workshop 2022	Completed, available here.
GSBPM overarching processes	Incorporated into our 2023 programme
CSPA capacity building	Different approach in 2023

GSIM Review Task Team Context

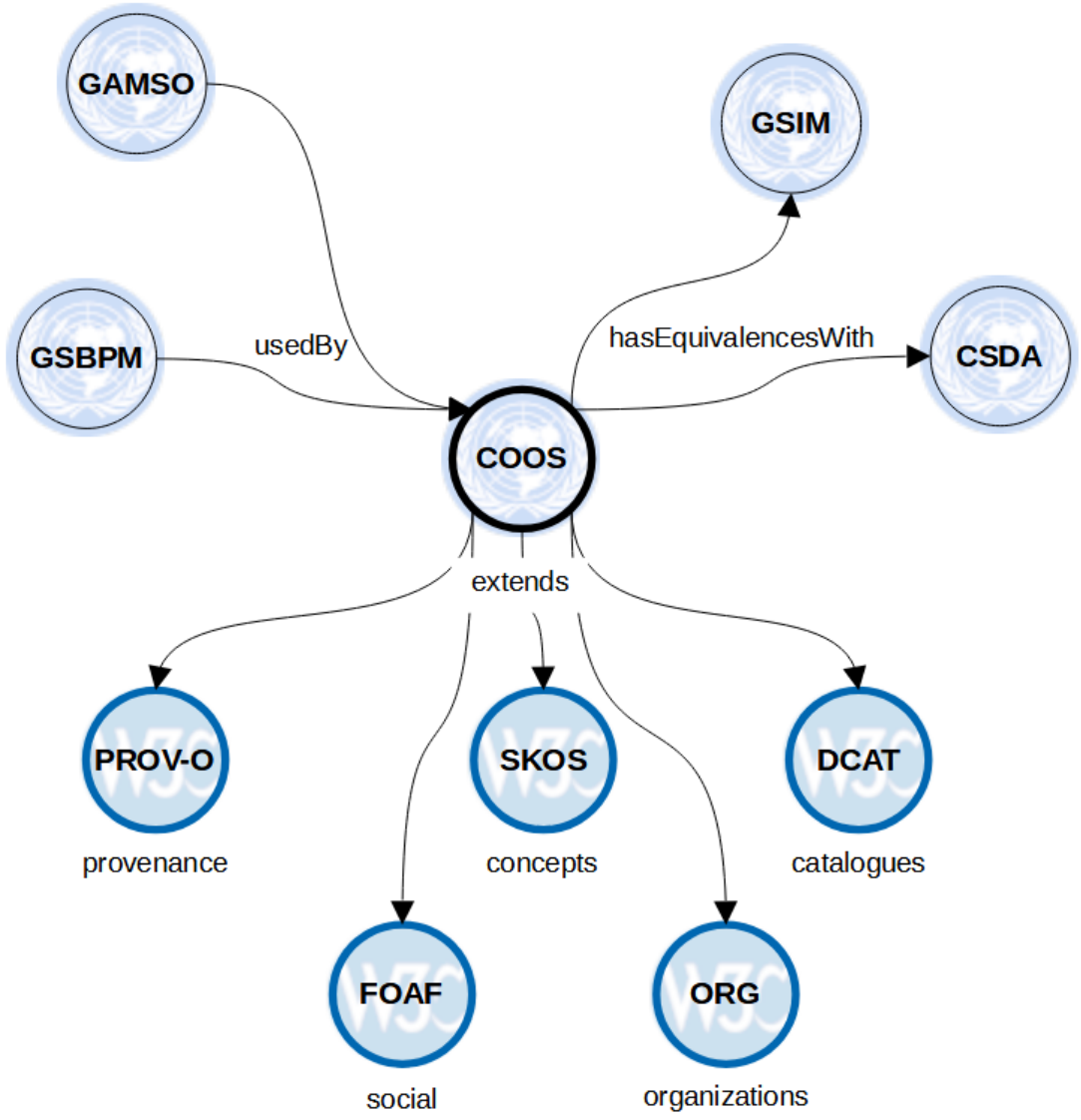
- The **Generic Statistical Information Model** (**GSIM**) provides a catalog of standardised information classes to describe statistical data and metadata.
- GSIM is a *conceptual model* that serves multiple purposes:
  - Facilitate business discussions by providing a “lingua franca” for describing statistical information
  - Provide high-level, abstract information entities that can be realised in practice with implementation standards, e.g. SDMX, DDI, etc.
  - Provide a common vocabulary to describe inputs and outputs of process, activity, service and capability statistical models, i.e. GSBPM, GAMSO, CSPA, CSDA, respectively.
- Over the past three years a large body of issues has been compiled on several fronts:
  - Output of the **Metadata Glossary** activity
  - Synergy with the **Core Ontology for Official Statistics** (**COOS**) and the **Linking GSBPM and GSIM** activities
  - Ongoing **GSIM revision/review** activity and consultation

GSIM Review Task Team Progress

- Main progress areas
  - **Process Design**: remodeling of input specification with the addition of input-type classes
  - **Exchange Channel**: better separation between specification, implementation and information being exchanged
  - **Referential Metadata**: use case-driven refactoring and testing of the model (e.g. quality indicators)
  - **Registers**: decoupling from Exchange Channels and removed distinction between statistical and administrative from the model
- Coverage and terminology
  - **Created** Reference Document class to capture unstructured, supporting documentation (e.g. methodology handbooks, guidelines, policies)
  - **Renamed** controversial “Information Object” term to “Information Class”
  - **Updated** definitions and explanatory texts across the board (in progress)
  - **Reviewed** associations and their cardinalities (in progress)
- Check our results on Github: https://github.com/UNECE/GSIMRevision/

Core Ontology for Official Statistics Context

- COOS as an integration model for the core set of ModernStats standards backed by elements of well-known standard vocabularies.
- COOS defines a conceptual integration framework to provide semantic coherence across these models based on a common vocabulary of terms, definitions and a well-defined set of inter- and intra-model relationships formalized in RDF/OWL, using standards vocabularies, e.g. SKOS, PROV, DCAT, DC, ORG, etc.



Core Ontology for Official Statistics
Results

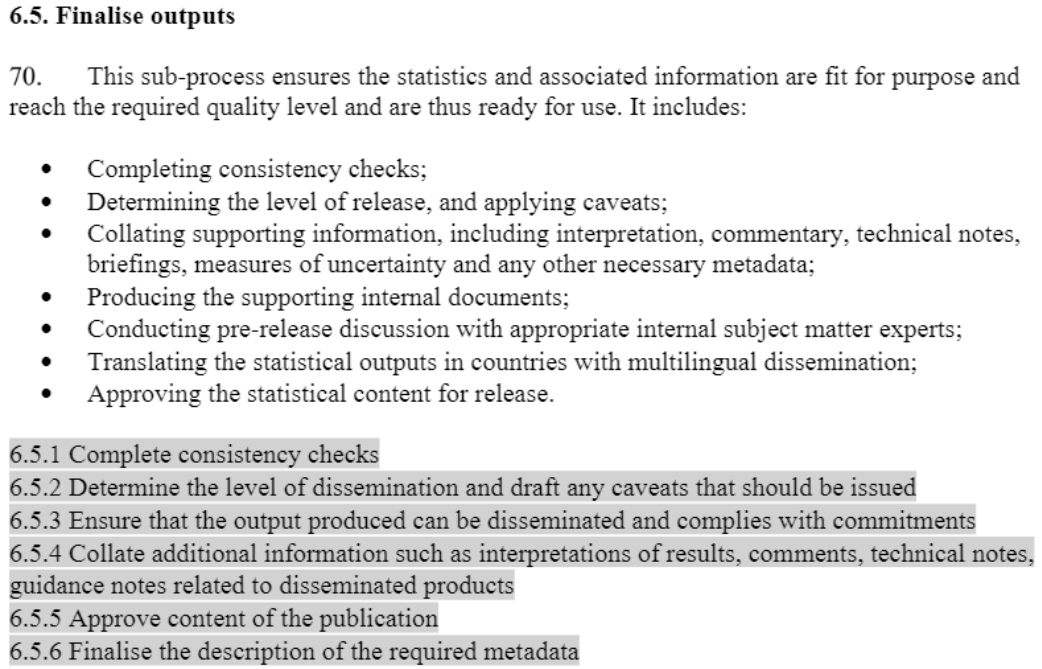
- Integration of feedback from expert review
- Extension of perimeter with links to CSDA and GSIM
- Consolidation of logical structure with ontology expert
- Identification of use cases (e.g. statistical compendium)
- COOS v1 published and is currently under public review
- Check our results on Github: https://linked-statistics.github.io/COOS/coos.html

GSBPM Tasks Task Team Context

- Initiated by the community: prepare a proposal for a finer-level (3rd) coding of the statistical activities described in the GSBPM
- Reviewed examples of lists of «lower level» GSBPM tasks from 8 countries: Australia, Azerbaijan, Costa Rica, Norway, Romania, Saudi Arabia, Serbia, Spain
- Developed a proposal for the task level for all GSBPM phases and sub-processes under a set of principles (e.g., coding, granularity, minimality, description format)

GSBPM Tasks Task Team Results

- GSBPM main document with 3rd level tasks for each sub-process
- Excel sheet presenting the proposals of the 8 nations side by side
- Word document with examples and trace of the discussions that took place in the group
- Input to be taken on board for future work within the Supporting Standards Group: GSBPM revision and also for the clarification of the GSBPM overarching processes
- Activity completed in August 2022



6.5. Finalise outputs

70. This sub-process ensures the statistics and associated information are fit for purpose and reach the required quality level and are thus ready for use. It includes:

- Completing consistency checks;
- Determining the level of release, and applying caveats;
- Collating supporting information, including interpretation, commentary, technical notes, briefings, measures of uncertainty and any other necessary metadata;
- Producing the supporting internal documents;
- Conducting pre-release discussion with appropriate internal subject matter experts;
- Translating the statistical outputs in countries with multilingual dissemination;
- Approving the statistical content for release.

6.5.1 Complete consistency checks
6.5.2 Determine the level of dissemination and draft any caveats that should be issued
6.5.3 Ensure that the output produced can be disseminated and complies with commitments
6.5.4 Collate additional information such as interpretations of results, comments, technical notes, guidance notes related to disseminated products
6.5.5 Approve content of the publication
6.5.6 Finalise the description of the required metadata

Example for GSBPM sub-process 6.5

Check our results on the wiki: https://statswiki.unece.org/display/GSBPM/GSBPM+Tasks

GSBPM / SDMX / DDI Task Team Context

Statistical Data and Metadata eXchange

Data Documentation Initiative

Benefits

- International / global standards
- Free / open
- Helps reuse tools and concepts
- Increases interoperability
- Improves quality

Difficulties

- Which standard to use for which use case?
- Which artefact to use for which stage of production process?
- Technical, people get lost

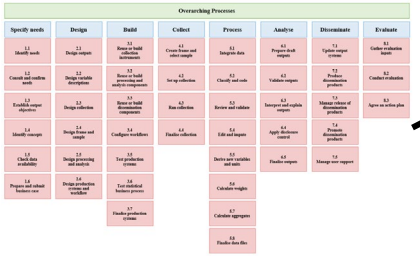
GSBPM / SDMX / DDI Task Team Context

Statistical Data and Metadata eXchange

+

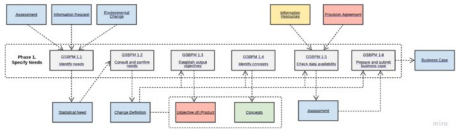
Data Documentation Initiative

GSBPM



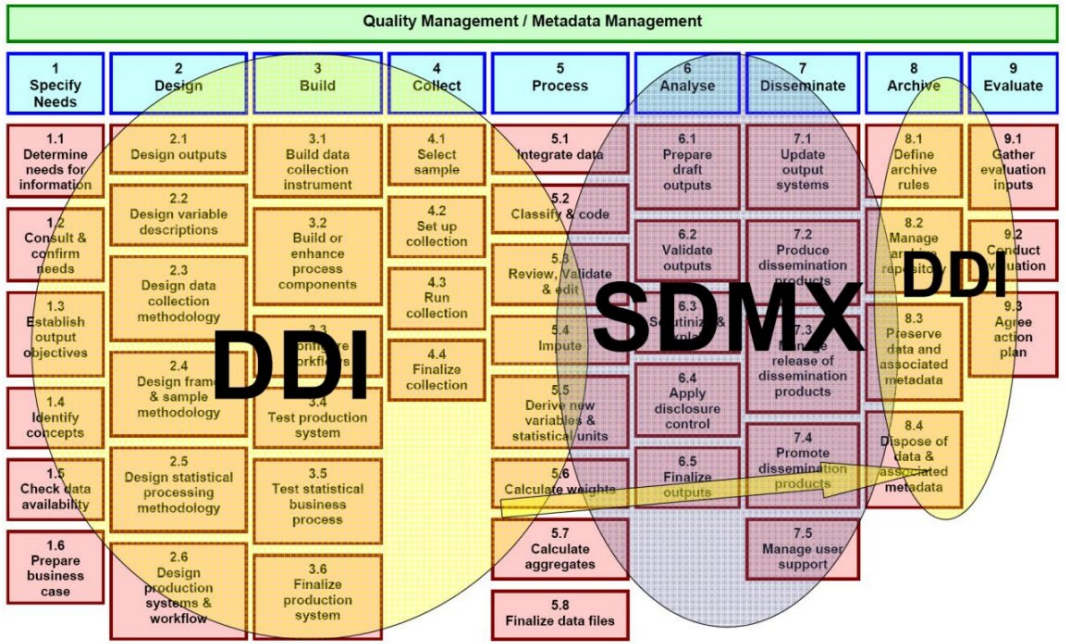
Provides statistical context

Linking GSBPM - GSIM



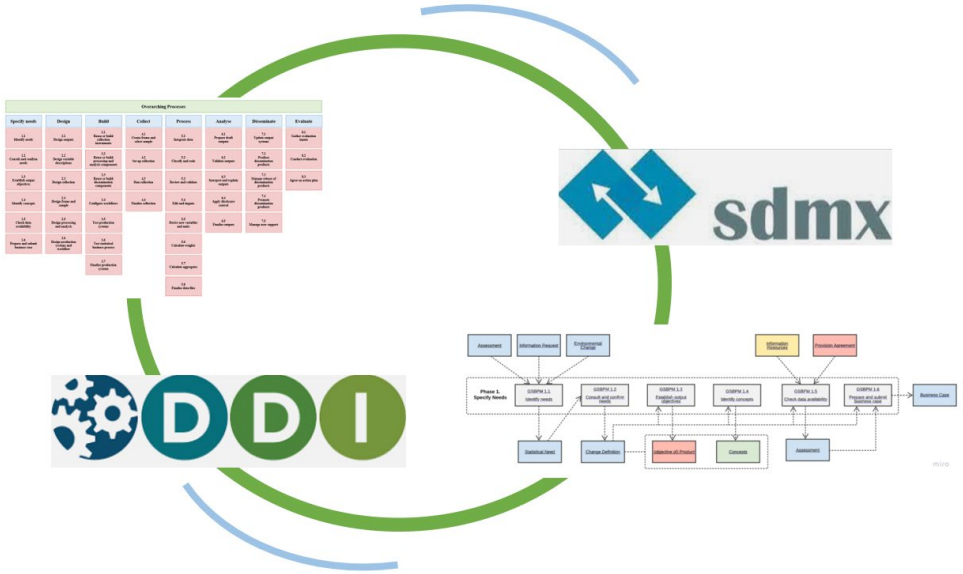
Provides inputs / outputs that can be mapped to SDMX / DDI artefacts

GSBPM / SDMX / DDI Task Team Evolution

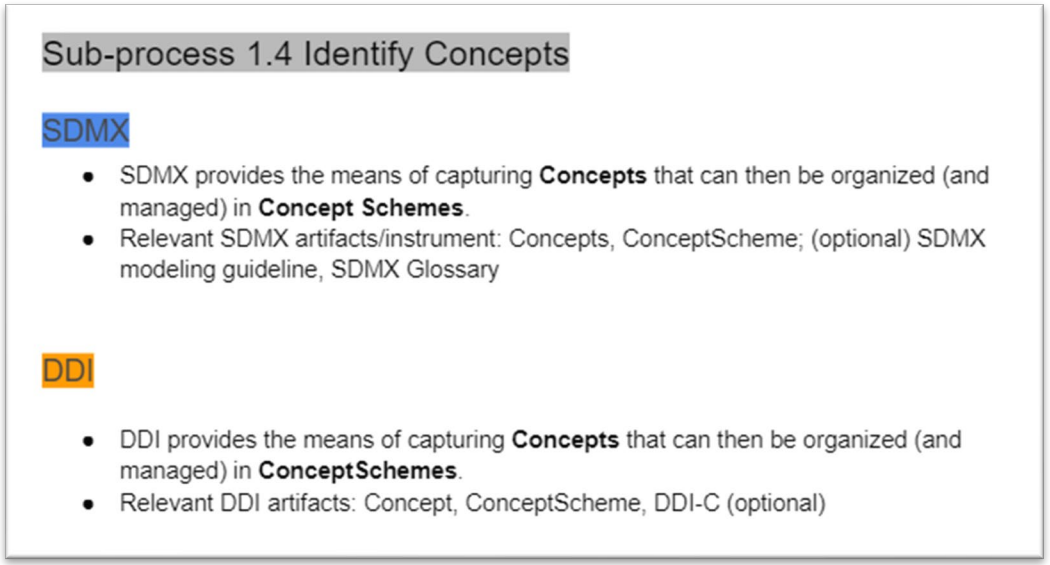


Source: Steven Vale: Exploring the relationship between DDI, SDMX and the Generic Statistical Business Process Model

GSBPM / SDMX / DDI Task Team Context



GSBPM / SDMX / DDI Task Team Progress


Sub-process 1.4 Identify Concepts

SDMX

- SDMX provides the means of capturing **Concepts** that can then be organized (and managed) in **Concept Schemes**.
- Relevant SDMX artifacts/instrument: Concepts, ConceptScheme; (optional) SDMX modeling guideline, SDMX Glossary

DDI

- DDI provides the means of capturing **Concepts** that can then be organized (and managed) in **ConceptSchemes**.
- Relevant DDI artifacts: Concept, ConceptScheme, DDI-C (optional)

Example for GSBPM sub-process 1.4

Objectives

- Provide short description why/how SDMX/DDI helps as an entry point
- List relevant SDMX/DDI artefacts under each sub-process
- Map relevant SDMX/DDI artefacts under each sub-process to GSIM class

Results and (some preliminary) findings

- By using GSBPM as common linkage points, identifies where SDMX and DDI work together, their strengths
- With mapping between SDMX and DDI made easier, more chances for interoperability between the two standards

ModernStats World Workshop 2022
workshop objectives

- To bring together users and the community, focus on the use of the standards, common challenges and the needs of the community.
- To provide a platform for the users to exchange experience and lessons learned.
- To progress work on development and maintenance of the ModernStats models.
- Three focus areas:
  - ModernStats implementation
  - ModernStats evolution
  - ModernStats integration

ModernStats World Workshop 2022
Results

Hosted by Statistical Office of the Republic of Serbia in Belgrade from 27 to 29 June 2022.

Meeting material here!

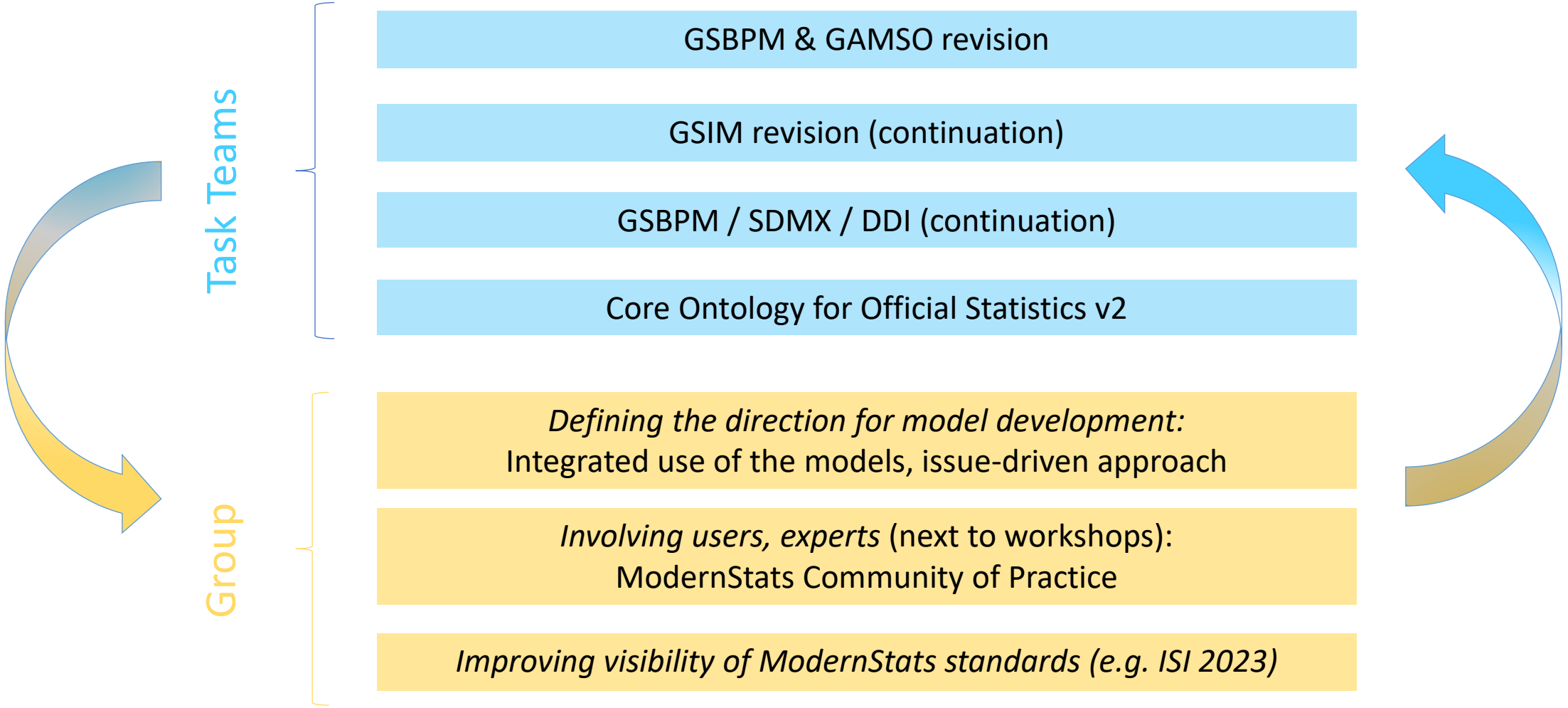
Some key lessons learned:

- Countries doing similar developments, facing similar issues. ModernStats models can help a lot!
- Need to come together to sit down and discuss.
- Specific messages to take back to the group and align our 2023 programme accordingly.

Future directions

- Integration of ModernStats standards on a higher level:
  - Between our models
  - But also the way we work
  - Between official statistics and the outside world
- Evolution of ModernStats standards: be relevant and stay relevant
- ModernStats Community of Practice
- Discuss key issues inside our community first & define what is needed!
  - Shared services in general and CSPA; but also CSDA
  - Common challenges: process modelling, similar developments in countries

Overview of our planned 2023 activities



GSBPM & GAMSO revision

- GSBPM and GAMSO will be revised together within the same team.
- Excellent opportunity to better integrate the models!
- Many key challenges already identified.
- User consultation: Q1 2023
- Integrate planned GSBPM overarching processes work.
- Planned last milestone: CES consultation and adoption: Q2 2024

GSIM revision

- Ongoing prioritisation of issues to be addressed in GSIM version “2023” (GSIM v2.0?).
- Creation of backlog for future releases/updates (determined in conjunction with COOS work).
- Development work to finish end of Q1 2023.
- Public review and release Q2-Q3 2023.

GSBPM / SDMX / DDI

- Cover all phases of the GSBPM, building on the work already started.
- If you know colleagues who are interested in making SDMX/DDI easier via GSBPM (or learning more about SDMX or DDI through lenses of GSBPM!), please pass the information about the Task Team!
- Task team: Hungary, Mexico, USA, Canada, France, Netherland, ILO, OECD and UNECE
- Activity to finish in 2023.

Core Ontology for Official Statistics v2

- COOS as landing and triaging point for more integrated feedback-based evolution process.
- Topics not included in first version, for example:
  - consistency of product/dataset relationship
  - inclusion of support program
  - modelling of links between GSIM and GSBPM
- More use cases and concrete examples.
- Application profile for practical use with other standards.
- Timing of the activity (start-finish) still to be decided.

ModernStats Community of Practice

- Bring together experts and users.
- Discuss topics that the SSG should explore and further develop.
- Discuss topics of interest parallel to the revision of the models.
- Increase the understanding and the use of ModernStats models within different user groups.
- Stay tuned! More information about this later: idea currently being discussed within the Supporting Standards Group.

We need you!

- Please consider joining our Task Teams and help us to realise our ambitious work programme!
- We need good experts, especially for the GSBPM & GAMSO revision and the GSBPM / SDMX / DDI Task Teams!
- Excellent opportunity to add your expertise and take part in the modernisation programme!
- Contact us!
  - InKyung Choi: choii@un.org
  - Zoltán Vereczkei: zoltan.vereczkei@ksh.hu

Acknowledgements

- Experts committed to the work of the Supporting Standards Group and the Task Teams.
- Chairs of the task teams.
- UNECE with very special thanks to InKyung Choi for her invaluable support!
- You

Thank you!

https://statswiki.unece.org/display/hlgbas/Modernisation+Groups