

SDMX: An Overview

Session 6: Data sharing and dissemination

What is SDMX?

Statistical Data and Metadata eXchange

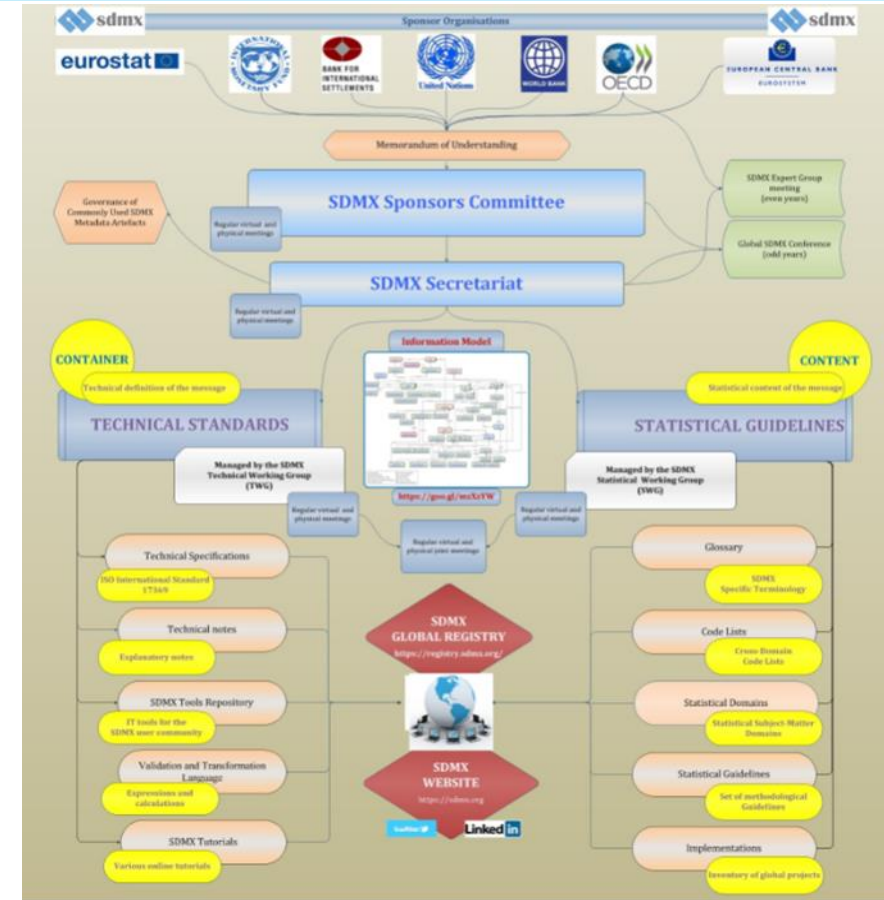
- A registered ISO standard
- Approved by the United Nations Statistical Commission as the preferred standard for statistical data and metadata exchange.
- An initiative sponsored by Eight international organizations
 - Bank for International Settlements
 - European Central Bank
 - Eurostat
 - International Labour Organization (ILO)
 - International Monetary Fund
 - Organization for Economic Cooperation and Development
 - United Nations
 - World Bank

Objectives of SDMX

- SDMX was originally designed to standardize data and metadata exchange between and among international organizations and member countries
- However, the power and utility of its underlying information model has increasingly broadened the scope of use of SDMX in addition to data/metadata exchange
 - Processing
 - Validation
 - Dissemination

SDMX Governing Bodies

- **SDMX Sponsors Committee**
Highest decision-making body which provides overall guidance as well as decides on issues that the SDMX Secretariat cannot resolve.
- **SDMX Secretariat**
Oversees implementation and functioning of the governance framework and submits proposals for improvement to the SDMX Sponsors Committee
- **Statistical and Technical Working Groups**
Maintain, improve or further develop the SDMX technical and statistical standards



SDMX as the Infrastructure

- Standards for:
 - Structuring of statistical data
 - Packaging of statistical data as XML, JSON, CSV, and other formats
 - Registry of data and metadata
 - Application Programming Interface (API)
- Specifications, guidelines, tools, and manuals are freely provided to support implementation

SDMX Specifications and Guidelines

Technical specifications

- Speak the **same IT language**
- Describe the **container (i.e. the message)**

SDMX Guidelines

- Speak the **same statistical language**
- Describe the **content (i.e. data and metadata)**

Statistical Data Structures

- SDMX specifies how statistical data can be structured.
 - Technical specification does not detail specific structures or codes, it only provides a framework for developing those.
 - Guidelines, best practices, and recommended building blocks including structures and codes are provided at the sdmx.org web site.
- **Data Structure Definitions** (DSDs) describe characteristics of the data to be exchanged.
- A DSD **must** be developed before any SDMX exchange, dissemination, or processing can take place.

Where do those DSDs come from?

- Generally, when SDMX is used for reporting, a global DSD will have been developed by an international working group, such as those for Macro-Economic Statistics, Labor, SDGs
 - Take the global DSD, use tools to map your data to the DSD, convert to SDMX, and provide to the recipient.
 - Global DSDs are published at the [SDMX Global Registry](#).
- When SDMX is used for dissemination, you create your own DSD and publish the data at your web site
 - Dissemination DSDs may use internal concepts and codes but it is preferable to use global concepts and codes, when available, for better interoperability.
 - Global DSDs may also be used for dissemination, and customized dissemination platforms are increasingly developed for those.

Guidelines: SDMX Glossary

- Common terminology to be used in order to facilitate communication and understanding
- Concepts and related definitions used in structural and reference metadata of international organisations and national data-producing agencies
- Overall message: if a term is used, then its precise meaning should correspond to the Glossary definition, and any reference to a particular phenomenon described in the Glossary should use the appropriate term
- 250 concepts stored in a Concept Scheme in the Global Registry

Guidelines: Cross-Domain Code Lists

- Used to support cross-domain concepts
- Higher efficiency (through re-use), easier maintenance, less mappings
- Some 20 cross-domain CLs currently available, others under development
- Stored as Codelists in the Global Registry

Content-Oriented Guidelines

- Set of documents providing methodological guidance to SDMX implementers in various domains
- Examples of SDMX Content-Oriented Guidelines:
 - Governance of commonly used SDMX metadata artefacts
 - Modelling Statistical Domains in SDMX
 - Guidelines for SDMX Data Structure Definitions
 - Guidelines for the Creation and Management of SDMX Code Lists
 - Guidelines on the Versioning of SDMX Artefacts
 - Guidelines on Non-Calendar Year Reporting of Data
 - Possible Ways of Implementing the CL_OBS_STATUS Code List
 - Guidelines for Confidentiality and Embargo in SDMX
- Made available as MS-Word and HTML documents

SDMX Tools

- A large number of SDMX-related tools that implement the technical specifications have been developed by different organizations.
- Some but far from all include:
 - Structure maintenance
 - [DSD Constructor](#) (ILO), [Matrix Generator](#) (OECD), [Fusion Metadata Registry](#) (Metadata Technology)
 - Data mapping and preparation
 - [SDMX Converter](#) (Eurostat), [SMART](#) (ILO), [SDMX Reference Infrastructure](#) (Eurostat) , [Fusion Registry](#) (Metadata Technology, subscription based)
 - Data, metadata, and structure dissemination
 - [.Stat](#) (OECD), [SDMX Reference Infrastructure](#) (Eurostat), [Fusion Registry](#) (Metadata Technology, subscription based)

More information

- SDMX Web site: <http://sdmx.org>
- SDMX tools: https://sdmx.org/?page_id=4500
- SDMX Global Registry: <http://registry.sdmx.org>
- Eurostat's SDMX InfoSpace: <https://ec.europa.eu/eurostat/web/sdmx-infospace>

Thank you



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