Joint development of DSDs for National Accounts between ECB, Eurostat and OECD

Project Description and Pilot Planning

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Executive Summary

In 2009 the UN Statistical Commission adopted the new System of National Accounts (SNA 2008) as the updated international statistical standard for national accounts and encouraged countries to implement it. This created a new momentum for the further alignment of international standards for the compilation and dissemination of macro-economic statistics. In the light of scarce resources, there is a growing willingness for closer international cooperation and an increasing emphasis on statistical business process integration. SDMX serves as the standard to facilitate statistical data and metadata exchange initiatives and is thus an enabler for rationalisation of data flows, harmonisation of reporting needs and standardisation of information systems.

The SDMX sponsors (BIS, ECB, Eurostat, IMF, OECD, United Nations and World Bank) mandated ECB, Eurostat and OECD to propose Data Structure Definitions (DSDs) in order to implement SDMX in National Accounts according to SNA 2008 / ESA 2010; this comprises in particular the definition of SDMX Data Structures for exchanging data from reporting countries to international organisations and between the organisations (and possibly beyond) as well as the maintenance of the DSDs over time, in accordance with the procedures agreed upon by the SDMX governance bodies.
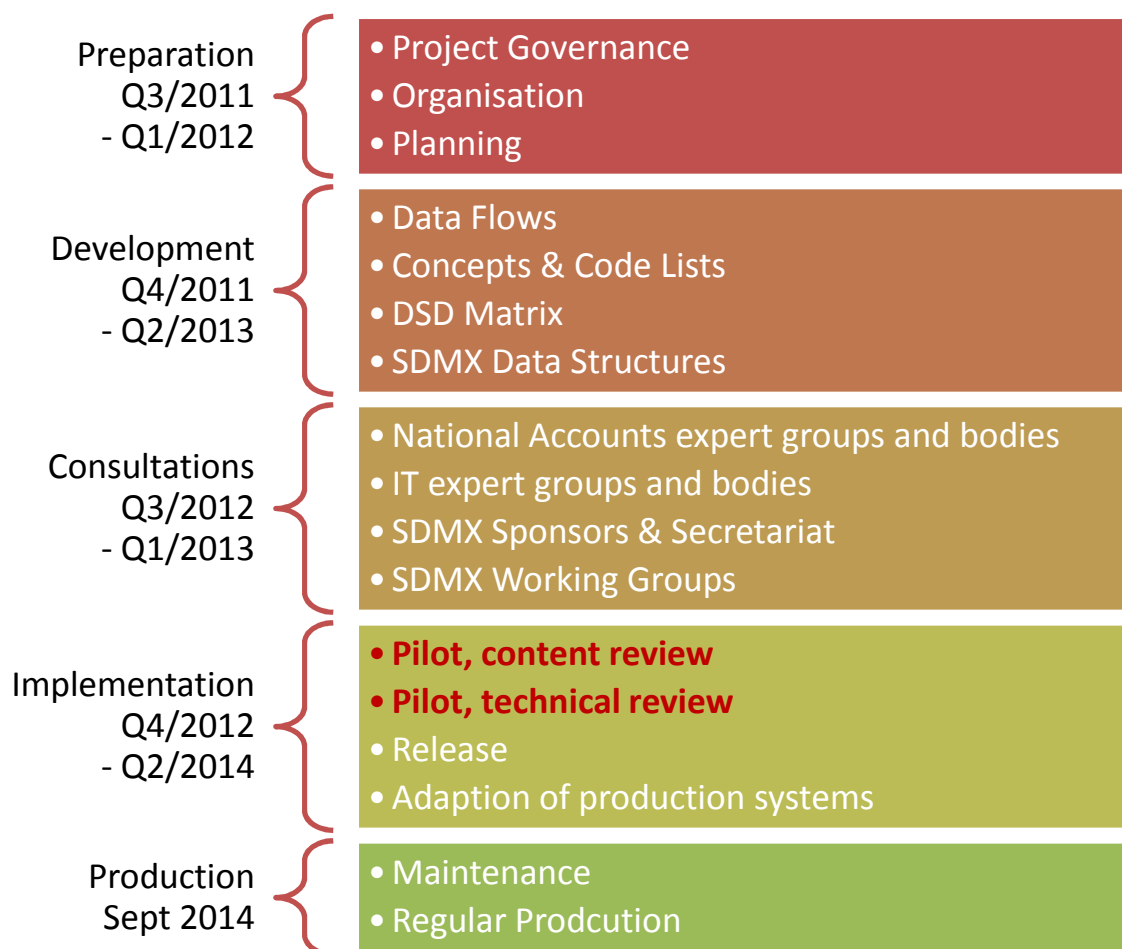
A Steering Group with one National Accounts representative and one SDMX representative from each of the mandated organisations was formed. The Steering Group mandated a Technical Group consisting of National Accounts and SDMX experts.

To meet the go-live deadline in September 2014, the technical group was charged to develop a content-oriented package for a pilot implementation with data providers by end 2012. It was decided to conduct the pilot in two phases leading to a first release of SDMX Data Structure Definitions by mid-2013. This gives data providers and international organisations around one year for testing and fine-tuning of the process and implementation.
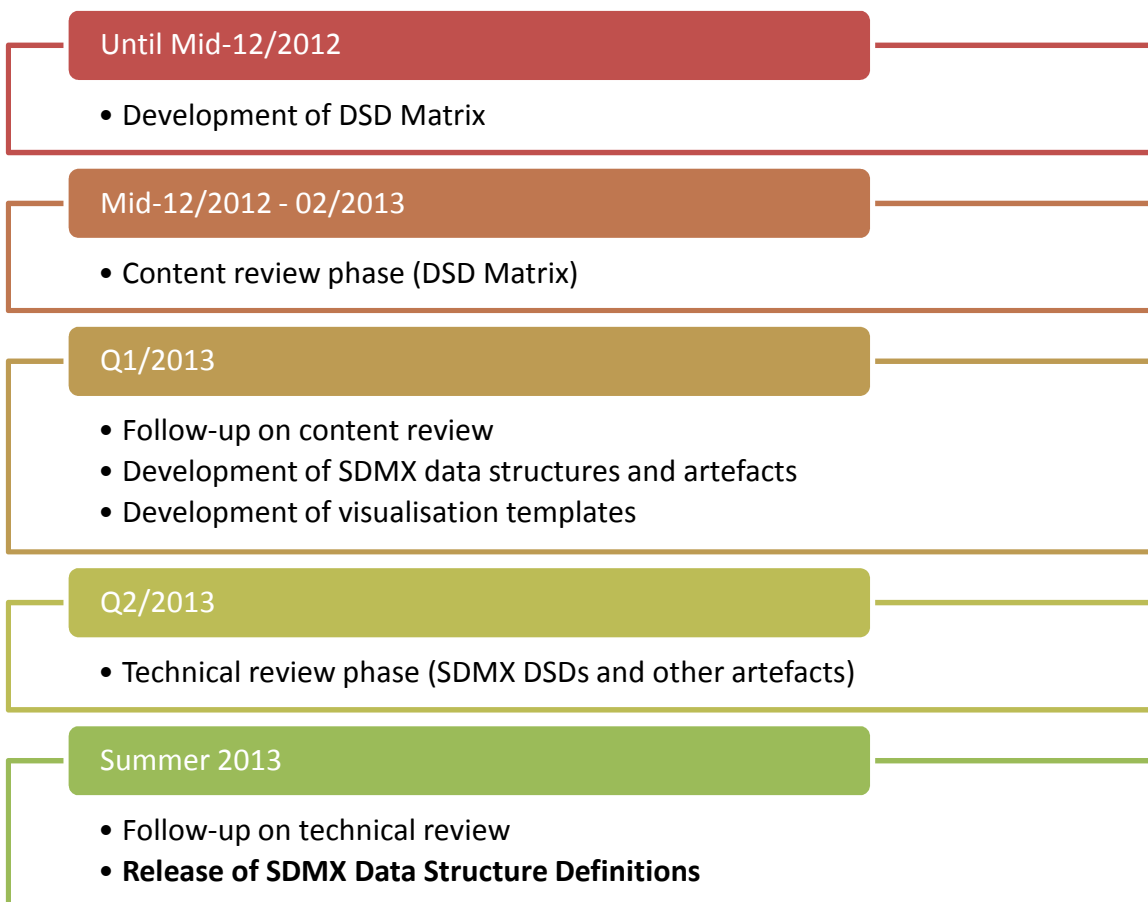
Pilot Planning

Roadmap

The major milestones of the overall roadmap are visualised below.

Preparation Q3/2011 - Q1/2012	• Project Governance • Organisation • Planning
Development Q4/2011 - Q2/2013	• Data Flows • Concepts & Code Lists • DSD Matrix • SDMX Data Structures
Consultations Q3/2012 - Q1/2013	• National Accounts expert groups and bodies • IT expert groups and bodies • SDMX Sponsors & Secretariat • SDMX Working Groups
Implementation Q4/2012 - Q2/2014	• **Pilot, content review** • **Pilot, technical review** • Release • Adaption of production systems
Production Sept 2014	• Maintenance • Regular Prodcution

It was decided to organise the pilot implementation in two phases. The first phase will consist of a content review by National Accounts experts. After one feedback loop of the content review, a technical review phase will be organised with National Accounts and SDMX / IT experts. The goal is to finalise a first release of the DSDs by mid-2013, giving data providers and international organisations around one year for testing and fine-tuning of the process and implementation.

For the planning of the pilot the roadmap can be broken down from September 2012 until mid-2013 as follows:

Until Mid-12/2012

• Development of DSD Matrix

Mid-12/2012 - 02/2013

• Content review phase (DSD Matrix)

Q1/2013

• Follow-up on content review
• Development of SDMX data structures and artefacts
• Development of visualisation templates

Q2/2013

• Technical review phase (SDMX DSDs and other artefacts)

Summer 2013

• Follow-up on technical review
• **Release of SDMX Data Structure Definitions**

For each project phase the experts will be able to participate in a passive or active way. In the first case the package will be given to the participant for information. In the second case the participant will be able to provide feedback following a pilot questionnaire prepared by the Steering Group. The feedback will be taken on board for the further implementation work.
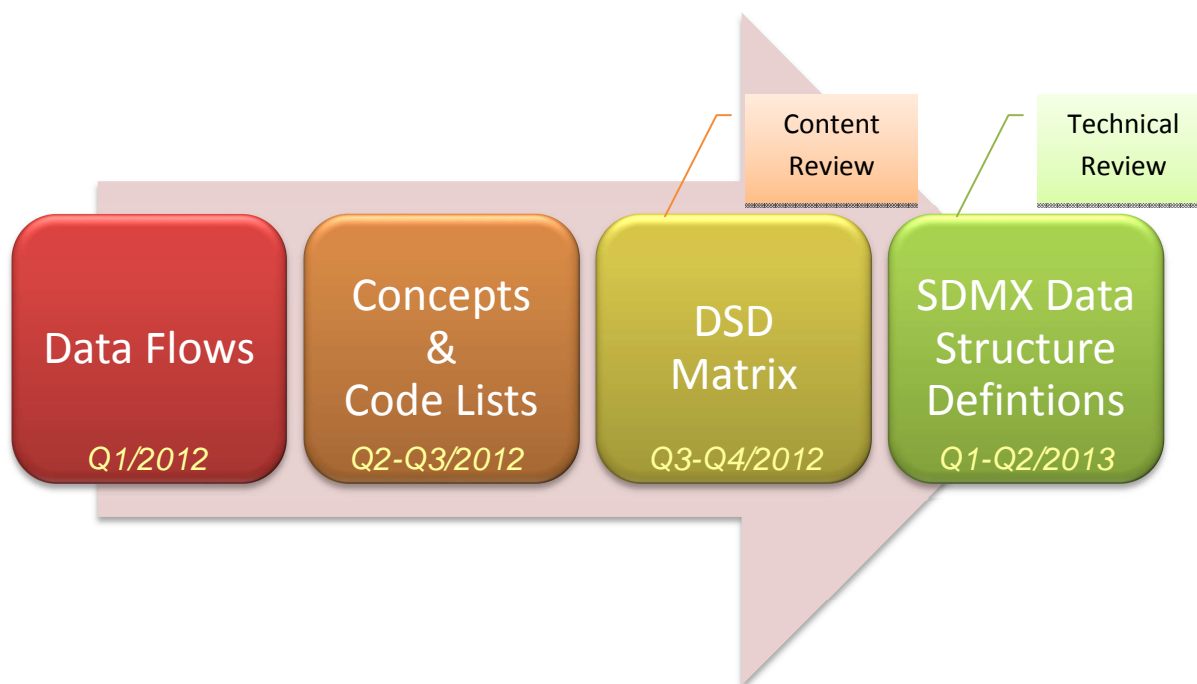
Content Review (12/2012 – 02/2013)

For the content review National Accounts experts in national organisations, international organisations (SDMX Sponsors) and the SDMX Statistical Working Group will be invited to participate. As described in the implementation steps below, the so-called "DSD Matrix" (see below) will be transmitted to participants, together with some further guidelines. In case of active participation a few short questions with the opportunity for feedback on the work done will be attached.

Technical Review (Q2/2013)

For the technical review the National Accounts experts are invited to work in close cooperation with the IT / SDMX experts in their organisations. The SDMX Technical Working Group will also be asked for feedback. For this phase the package that will be given to participants will contain an updated version of the DSD matrix and guidelines. Additionally, this will be accompanied by SDMX Data Structures (and other SDMX artefacts) as well as a visualisation template for a more detailed review of the suggested coding of the respective tables.

During the technical review phase the actual data exchange will also be tested end-to-end with interested participants. This includes support from the SDMX experts in the international organisations to produce SDMX-ML messages according to the data structures, testing of the actual data exchange process (national → international, international → international) and data loading / validation in international organisations.

Development Steps

Data Flows (Q1/2012)

Before looking into the concrete structure of the data to be exchanged, the data flows from countries to international organisations and between international organisations were analysed. The general idea was not only to reflect today's reporting needs, but also to use the advantages provided by the SDMX-standard to simplify and rationalise the data exchange on international level from national data providers to international organisations and among international organisations.

Concepts & Code Lists (Q2-Q3/2012)

It was agreed to start with the definition of the "Domain Concepts" as a fully comprehensive set of SDMX artefacts to describe the National Accounts domain ("National Accounts Domain Concepts"). It was underlined that many of the concepts and associated code lists already exist; however, they need to be partly revised and improved in line with SNA 2008 / ESA 2010.

The concepts are populated with SDMX standard code lists, existing classifications or well-known code lists used in the past and adopted to the needs of SNA 2008 / ESA 2010. The main aspects of the work on concepts and code lists are the harmonisation between organisations participating in National Accounts data exchange and alignment with other statistical domains implementing SDMX. A number of SDMX code lists from the Content Oriented Guidelines are used. For National Accounts the highest

overlap was identified with Balance of Payments Statistics. A close cooperation between the groups working on SDMX for Balance of Payments Statistics and the ones working on National Accounts has resulted in a high level of harmonisation between the two proposed implementation projects.

The collection of the concepts and code lists are compiled as an inventory ("Global DSD inventory") from which a limited number of National Accounts DSDs linked to specific data flows will be derived.

DSD Matrix (Q3-Q4/2012)

Based on the "Global DSD inventory" designed in the previous phase, the overall aim is (a) to create as few DSDs as possible and (b) to share them among the organisations as broadly as possible. The DSDs should however describe the actual data flows accurately. This approach combines maximum harmonisation of the "National Accounts Domain Concepts" with the flexibility to address all sponsors needs and the needs of other (non-Sponsor) organisations.

Concepts ► ▼ NA Table	Stocks, Transactions, Other Flows	Accounting Entry	Activity	Counterpart institutional sector	…
1	O	X	O		X
2	O	X		X	
3	O	X	X		O
…	X	O			C

X…concept fully used   O…concept partially used   C … single code from concept used   (blank)…concept not used

Following the approach displayed above this is put into practice by building a matrix of - on the one hand - concepts identified from SNA 2008 / ESA 2010, and on the other hand National Accounts tables defined in the transmission programs, guidelines and PGI / G20 indicators.

This matrix is also the deliverable used for the content review phase of the pilot implementation.

SDMX Data Structures (Q1-Q2/2013)

Based on the feedback received during the content review, the matrix is updated and an analysis is made to generate the optimal set of SDMX artefacts (Data Structure Definitions, Code Lists, Constraints, etc.) describing the data exchange for machine to machine communication. For the purpose of visualisation of the detailed coding these artefacts will also be used as a basis for building tabular templates of the respective tables.

The SDMX artefacts and the visual templates will subsequently be tested in the technical review phase of the pilot implementation.