

# From Challenges to Solutions

## SDMX: The Early Years (2001–2015)

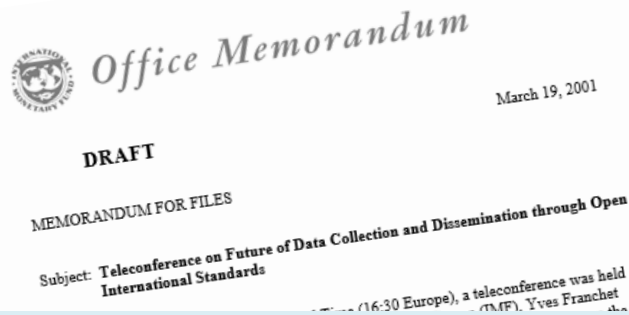
**Marco Pellegrino**

European Commission, Eurostat (official from 1995 to 2024)

1. How it started
2. First steps  
Common statement
3. Challenges, Governance
4. Achievements
5. Lessons learnt



# The Spark: 12 March 2001



“Emerging standards necessitate the broad coordination among agencies to develop standards and syntaxes for interoperability among different countries. Moreover, given the global reach of this initiative, together with the interest that many organizations have in being involved in international data dissemination activities, that we move ahead collaboratively and expeditiously, initially convening a strategic planning meeting with the organizations represented on this teleconference call”.

Everyone has to gain: there are no conflicts of interests  
Need for a global perspective, including the UN and commercial stakeholders  
Prepare for a broad meeting on this subject

- **First teleconference**  
The Heads of BIS, ECB, Eurostat, IMF and OECD met virtually.
- **Agreement**  
Task-force on new common e-standards and efficiency goals (also including UN and World Bank)
- **Calendar of meetings**
- **First workshop**  
(Washington D.C., September 6-7, 2001)

# 6-7 September 2001: the first Workshop

## Workshop on Statistical Data and Metadata Exchange (SDMX)

Sponsoring Institutions: BIS, ECB, EUROSTAT, IMF, OECD, and the UN  
Host Institution: International Monetary Fund  
Washington, D.C. September 6–7, 2001

Venue: Third Floor Meeting Halls A and B, IMF Headquarters Building, 700 19<sup>th</sup> Street, NW

### First Day – Thursday, September 6

Start	End	Topic	Panel
0830	0915	Registration for Participants	
<b>The Starting Point: Objectives and Context</b>			
0915	1245	<p><i>As information sharing is the main goal of the Workshop, this part of the program provides ample opportunity for the speakers to bring to our attention the kind of achievements their institutions have made in the SDMX domain and the kind of stakeholder interests that need to be taken into consideration as we look to future developments.</i></p> <ul style="list-style-type: none"> <li>Opening Statement by Host Institution</li> <li>Electronic Data Interchange for Statistical Information: The Evolution of GESMES/CB and Latest Developments</li> <li>coffee break</li> <li>Internet-based Metadata Dissemination: the Dissemination Standards Bulletin Board and Glossaries</li> <li>Global Perspectives on Business Requirements: Stakeholder Considerations</li> </ul>	<p>Chair: Mrs. Carol S. Carson (IMF)</p> <p>Ms. Gabriele Becker (BIS), Mr. Christos Androvitsaneas (ECB), and Ms. Ann McPhail (IMF)</p> <p>Mr. Robert Di Calogero (IMF), Mr. Marco Pellegrino (EUROSTAT), and Mr. Denis Ward (OECD)</p> <p>Mr. Kenneth G. Coates (CEMLA), Mr. R. B. Barman (Reserve Bank of India) and Mr. Louis Venter (South African Reserve Bank)</p>
1245	1430	lunch break	
<b>Emerging Developments: Technology as a Means to an End</b>			
1430	1800	<p><i>This part of the program extends our information sharing focus to the latest advances in enabling technology and includes some case studies about how these ideas are starting to be implemented. An exercise in looking into the future has also been added to help spark our thinking about future opportunities in the business of statistical information exchange.</i></p>	Chair: Mr. Paul Van den Bergh (BIS)

## First common statement, distributed prior to the initial workshop

Statistical Data and Metadata Exchange (SDMX)

### Mission Statement by Participating Institutions

The BIS, ECB, EUROSTAT, IMF, OECD, and the UN have joined together to focus on business practices in the field of statistical information that would allow more efficient processes for sharing of data and metadata within the current scope of our collective activities.

The goal is to explore common e-standards and ongoing standardization activities that have the potential to allow us to gain efficiency and avoid duplication of effort in our own work, the work of our constituents, and the work of data consumers in the field of statistical information.

We intend to accomplish this by pursuing the following operational objectives:

- establish common open standards that encapsulate statistical data and metadata for the purpose of sharing these data and metadata with other parties;
- follow a step-wise approach that enables the delivery of practical solutions in a timely manner;
- focus on common syntax and semantics within broad areas of statistical data and metadata;
- keep abreast of related standards developments and their impact on our objectives; and
- ensure international recognition of these standards by:
  - engaging public and private sector constituencies of data providers and users;
  - creating an open collaborative process to develop these standards; and
  - promoting and supporting global implementation of these standards.

The sponsoring institutions will initiate electronic forums through which work on specific topics may be moved forward. Plenary meetings will be used to consolidate the work of the forums. Participation in these activities is open to our respective constituents and all other parties who share our common goal. More information about SDMX and its activities is available on the SDMX web site, [www.sdmx.org](http://www.sdmx.org).

# 2002: From the Idea to the Standard

## Initial discussions → growth in political adoption

<https://unstats.un.org/unsd/statcom/33rd-session/documents/standards-E.pdf>

Statistical Commission  
Thirty-third session  
5-8 March 2002  
Item 7 (c) of the provisional agenda  
**Activities not classified by field**

Background Document  
01 March 2002

### Report of the International Monetary Fund on Common Open standards for the Exchange and Sharing of Socio-economic Data and Metadata: the SDMX Initiative

Prepared by the Bank for International Settlements, the European Central Bank, the International Monetary Fund, the Organization for Economic Co-operation and Development, the Statistical Office of the European Communities and the United Nations Statistical Division

### Record of Meeting of **SDMX Coordinating Group** June 17, 2002 at IMF Paris Office

#### Attendees

BIS  
Stuart Feder

ECB  
Christos Androvitsaneas  
Bernard Bodenstorfer

EUROSTAT  
Ray Conlon

IMF  
James McKee

OECD  
Gerard Salou  
Denis Ward

## Pilot projects → Growth in technical refinement

1. Practical case study on emerging e-standards (Paul Van den Bergh)
2. Batch time series data exchange (Paul Van den Bergh, Steven Keuning)
3. Metadata common vocabulary (Enrico Giovannini)
4. Metadata repositories (Carol Carson)







Born in  
21<sup>st</sup>  
century

## Challenges on the Way

- Parallel workstreams
- Fragmented data exchange and duplication of work
- Lack of a common standard for data and metadata exchange
- Problems with efficiency, interoperability, comparability
- Technical issues: complex standardisation, compatibility issues, implementation effort
- Organisational issues: time zones, governance, priorities
  - Collaborative engine: Trust and common vision between large organisations
  - Collaboration across countries and agencies
- Political issues: balancing institutional needs

(SLOW WORK)





# SDMX achievements: 1, 2, 3



ISO 17369: 2005/2013/...



2008: SDMX recognised and supported as the preferred standard at UN level

Version 1.0

GESMES/TS

09/2004

Version  
1.0

Version 2.0

SDMX-EDI, SDMX-ML  
SDMX Registry

11/2005

Version  
2.0

Versions 2.1, 3.0,...

Simplified formats, web services,  
improved data and metadata  
structures

04/2011

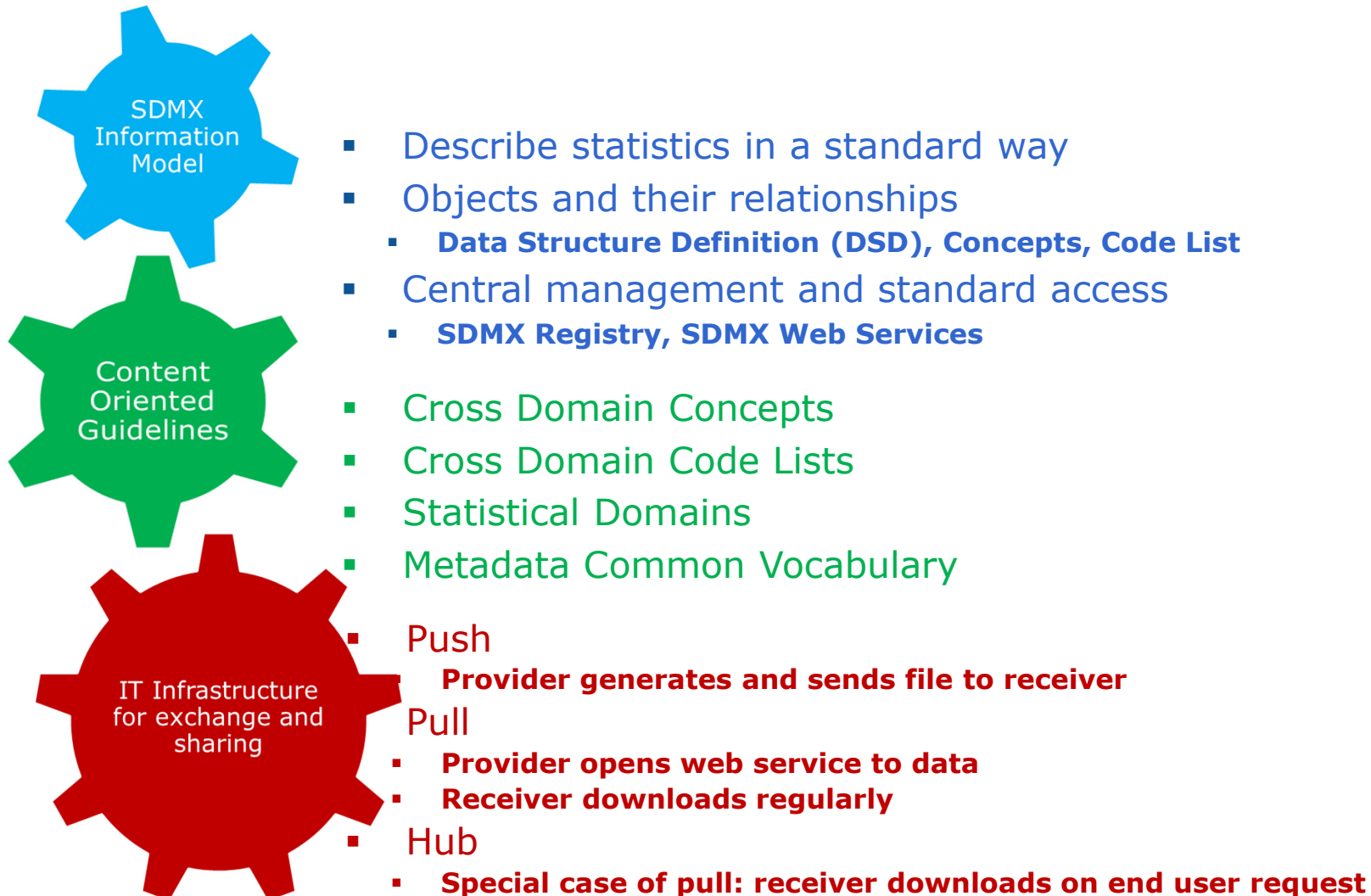
Version  
2.1

2021-2025

Version  
3.0/3.1

# SDMX Components

(a complex machinery...for simple use)





# Lessons: all good standards change...

***Standards change over time (versions)***



***Changes always have some impact on users***

- Users are not expected to always use the latest version
- Standard-setting organizations must provide support for several versions of the standard, all of which are in use



***Dangers***

- too much change may discourage adoption  
but
- not giving users the functionalities that they want will also discourage adoption

# Lessons from 'Golden Years' (and why it still matters)

1. **Collaboration beats competition in infrastructure projects**
2. **Building on the ongoing need for interoperability and data sharing, setting up a collaborative framework and a clear governance**
3. **Start small, scale big: work on capacity-building, free software tools, and agreed data flows** (e.g. national accounts, BoP, demography, census,...)
4. **Open standards accelerate innovation**
5. **Use SDMX for what it can give throughout the statistical cycle**

## All lessons applicable to other projects

(example: **VTL** for [data validation and transformation](#): going beyond SDMX by taking the common parts of GSIM, SDMX and DDI as for the representation of concepts and any kind of data - started in Rome, 13 November 2013)

# Thanks for your attention !

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