

9th SDMX Global Conference

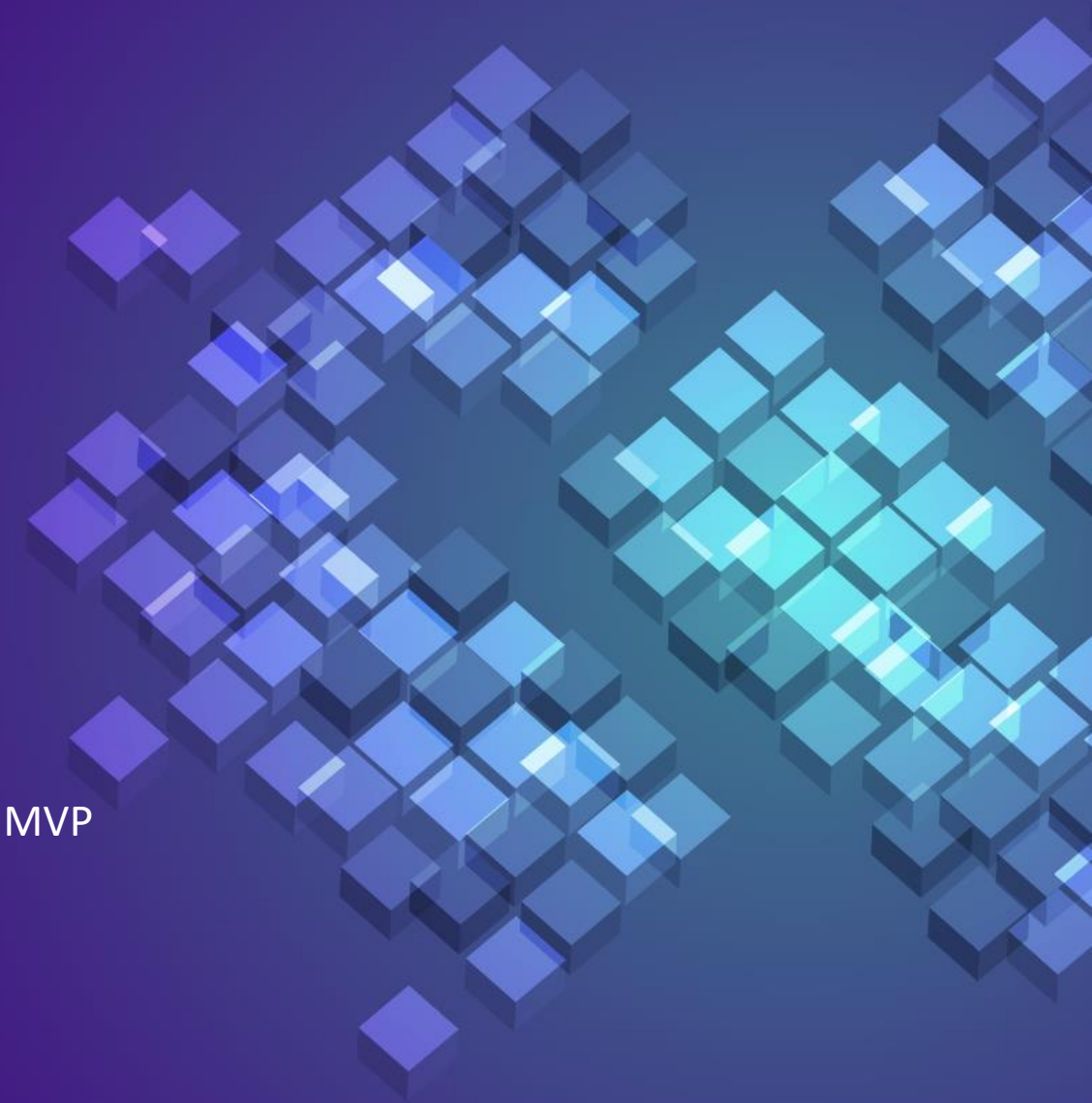
Empowering Data Communities

Democratizing data: How to empower users with new and existing SDMX connectors

David Barraclough, OECD Smart Data Practices Manager

Ruth Pozuelo Martinez, Owner of Curbal AB, Microsoft Data Platform MVP

SDMX Global Conference 2023 | Kingdom of Bahrain



Introduction

- **Connectors:**

A thing which links two or more things together

- **Integration connectors:**

*Components that allow you to easily connect to and **integrate** with **apps** and **data sources***

- SDMX Expert Group **SWOT analysis actions:**

*Leverage **existing tools** and SDMX standard to **improve interoperability***

Integrate SDMX with commercial software

SDMX.org Tools https://sdmx.org/?page_id=4500



The official site for the SDMX community
A global initiative to improve Statistical Data and Metadata eXchange

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Software Tools for SDMX Implementers and Developers

You will find below an alphabetical list of software tools which have been developed by organisations involved in the SDMX initiative. For each tool, a succinct description is provided – you can use the respective links for a more detailed description of the tools' specific features.

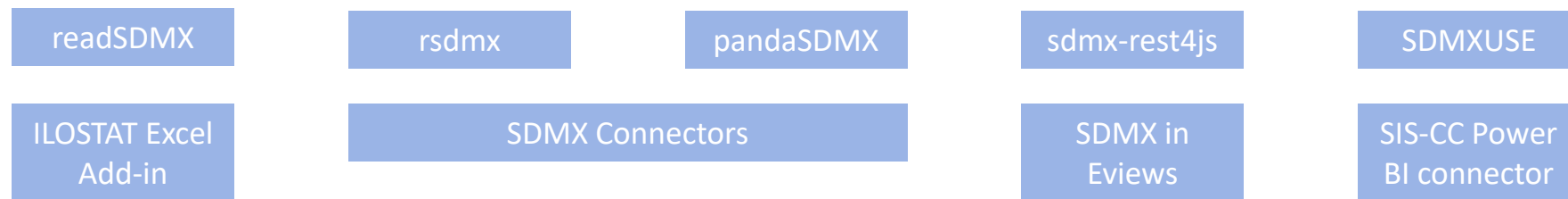
If your organisation is ready to offer IT tools to the SDMX user community, please contact the SDMX Secretariat (contact@sdmx.org) so that they can be included in the Repository.

Functional Mapping

Data reporting/ dissemination	Manage/ Store Structural metadata	Author Structural metadata	SDMX collection/ provisioning/ validation	Data discovery (DCAT, Schema.org)	Code libraries	Connectors	Transform/ transcode	Data/ref metadata editing	Data visualisation
	Euro-SDMX Registry	Data structure wizard	SDMX Java Suite		SDMXSource	pandaSDMX	Fusion Transformer		Flex-CB Vis Framework
.Stat Suite		SDMX Matrix Generator	XSD Generator		SDMX.NET	SDMX Connectors	SDMX convertor		
		DSD Constructor	SDMX Central		OpenSDMX	readSDMX	SMART		
	Fusion Registry Community					rsdmx	Mapping assistant		
	Fusion Registry Enterprise					SDMX Experiments	SDMX CSPA Transformation		
SDMX iStat Toolkit						SDMX in Eviews			
SDMX-RI						SDMXUSE			
						ILOSTAT Excel Add-in			
						sdmx-rest4js			

Mapping of Connectors to Technology

R	Matlab	SAS	Eviews	Excel	Python	Power BI	Stata	Javascript



Mapping of Connectors to Licencing

“Open source”	Free software license	Apache License, Version 2.0	Open source (GPL -3)	IS/MIT/BSD-2



readSDMX
ILOSTAT Excel Add-in

rsgmx
SDMX Connectors

pandaSDMX

sdmx-rest4js
SDMX in Eviews

SDMXUSE
SIS-CC Power BI connector



All connectors are free, most are open source

How and why are SDMX connectors created?

Some examples


Read SDMX

Motivation

Matthew DeQueljoe (OECD statistician):

I need a way to **quickly** parse large SDMX data messages into **R data frames**.

Development

- Matthew had light development experience
- Estimated development time for a C++ developer: **2 weeks** 

Outcome

- The connector is open source and available on SDMX.org:
https://sdmx.org/?page_id=8368
- Used in production processes

SIS-CC SDMX Power BI Connector

Motivation:

- SIS-CC members need a way to **easily** create **Power BI** visualisations from SDMX datasets.
- Integrate SDMX with **market leading** data visualisation software



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SIS-CC SDMX Power BI Connector

Development

- Project managed by David Barraclough (me) and outsourced to Curbal (Ruth's company)
- **Delivery took only 2 months** from initial specification.
- Applied **Microsoft certification** – several months for approval
- The connector is **open source**, source can be downloaded from [Gitlab](#)

SIS-CC SDMX Power BI Connector

Outcome

- It has been used in **multiple agencies for many dashboards.**
- Microsoft approved the connector as an **official Power BI connector.**
- A first - SDMX is now **part of the Microsoft platform.**
- SIS-CC webinar held with over 200 participants

"It's amazing to see how quickly a valuable decision-support dashboard like this could be put together through Power BI"

Phil Bright, GIS, Innovation and Dissemination Lead from the Pacific Community Statistics for Development Division.

"We can easily embed the visualisations on any website where the media and general public can interact with them and even print, download or share them in social networks."

Iulian Pogor, Data Architect and Statistical Tools Engineer at the International Labour Organisation

Demo of SIS-CC SDMX Power BI connector

Ruth Pozuelo Martinez



Opportunities for SDMX connectors

- Reference metadata processing
- Integration with programming languages, e.g. SQL/NoSQL, C/++/#, etc.
- Integration with other standards such as DDI, XBRL, etc.
- Integration with other platforms such as Google workspace, Data commons
- Microdata, Geospatial, Big data, AI
- Upgrade existing connectors to use SDMX 3.0 features
- Linking to automation/orchestration platforms, e.g. Gitlab pipelines

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Thank you!

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