

9th SDMX Global Conference

Empowering Data Communities

Importance of SDMX tools interoperability: FMR and .Stat Suite example

SDMX Global Conference 2023 | Kingdom of Bahrain

Jonathan Challener



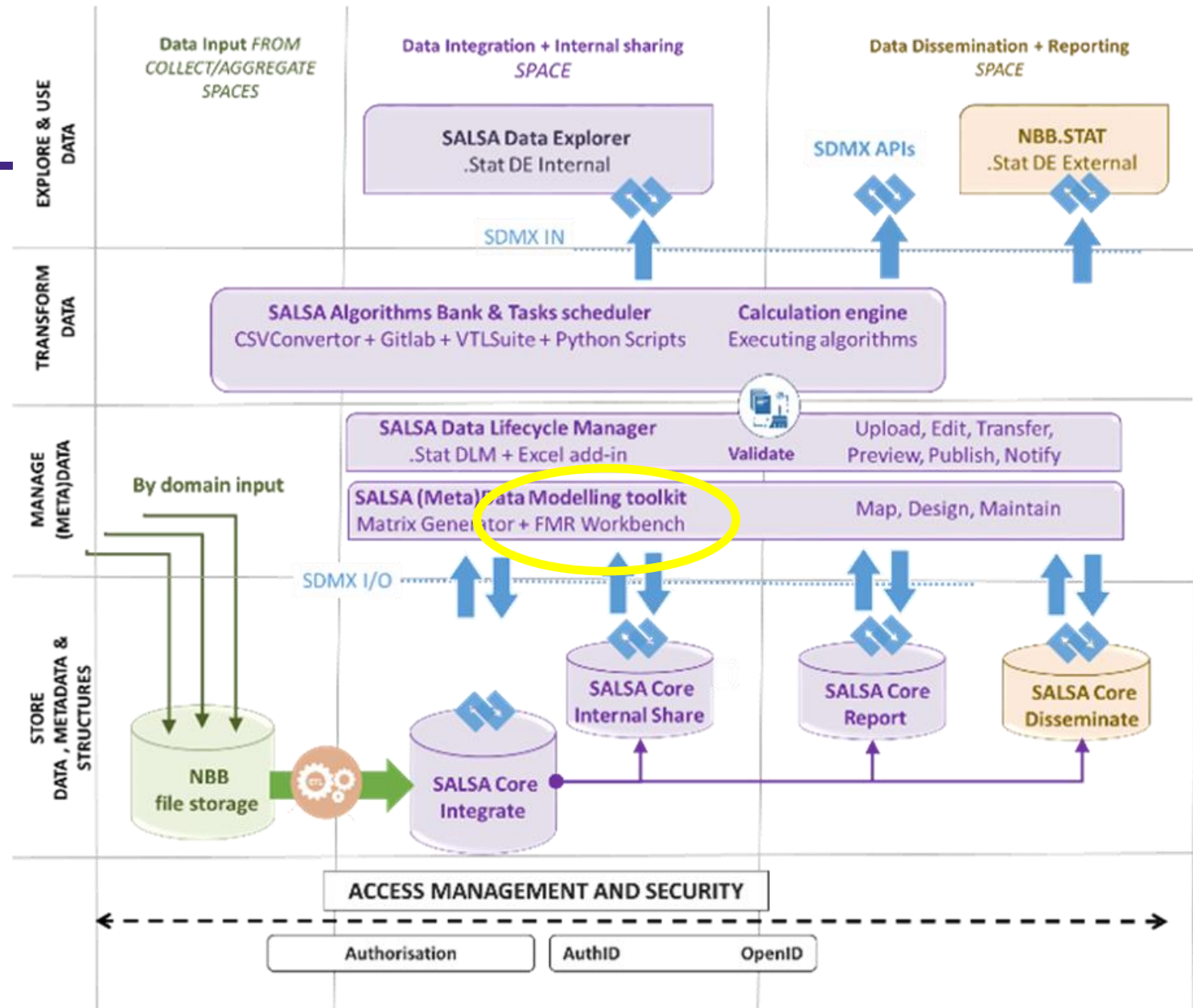
Stratos Nikoloutsos



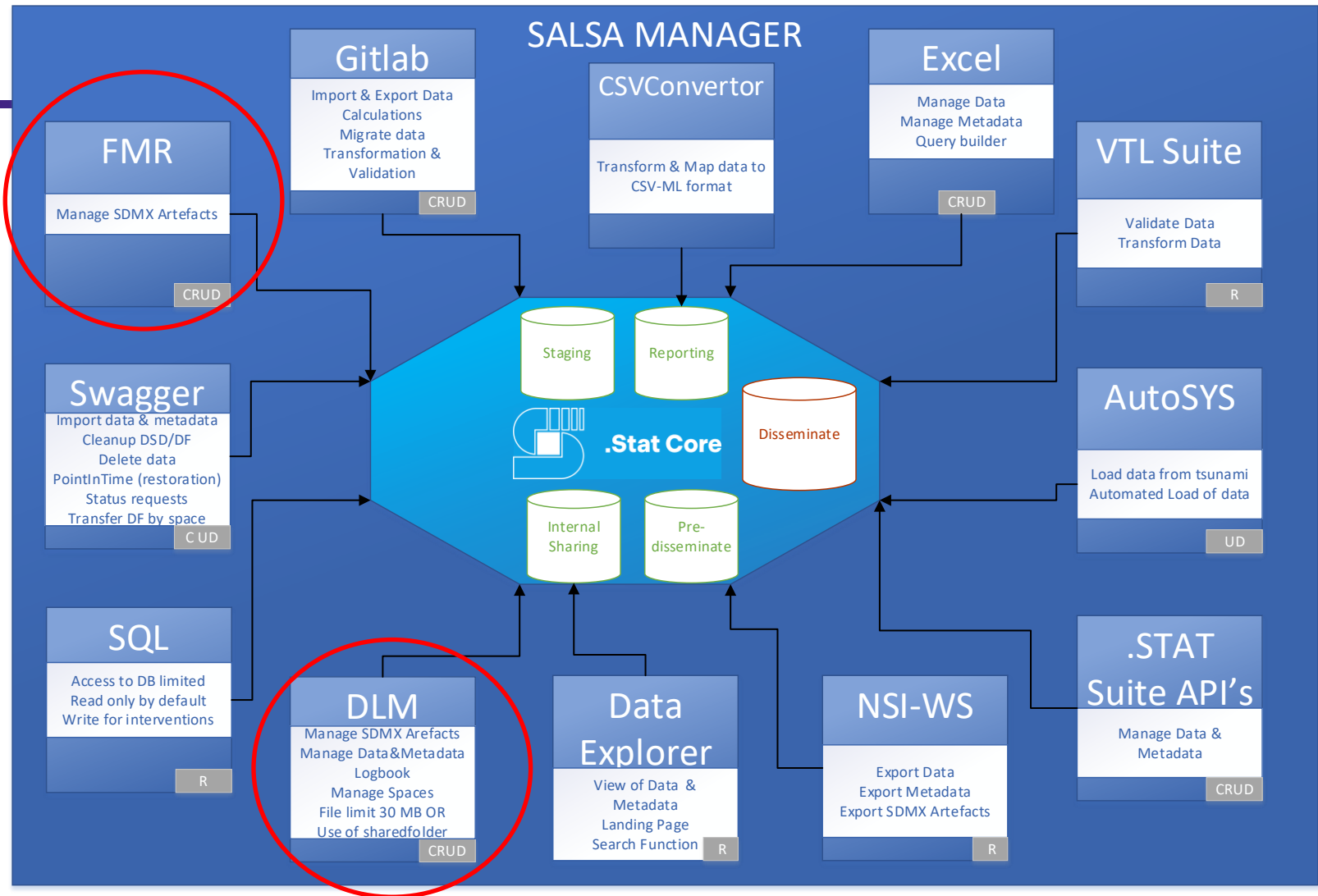
José Vereecken



High level architecture



SALSA Integration model



Maintenance of SDMX Artefacts

SDMX Artefacts using “BE2” agency

- Created and maintained by SALSA administrators
- Used in ALL Spaces
- COP (community of practice) per domain

Official Artefacts (ECB, Eurostat,...)

- Maintained by SALSA-administrators
- in spaces where needed

Other SDMX Artefacts

- Data owners can create artefacts using “own” agency
 - For example, “NBBSF” “NBBCN”
- No support by SALSA-administrators
- Only for internal use

The screenshot displays the Lifecycle Manager interface with several filter sections and a list of artefacts.

Filter by space:

- Disseminate
- Internal Sharing
- Pre Disseminate
- Report Exchange
- Report Internal
- Staging

Filter by external source:

No filter

Filter by type:

- Agency scheme
- Categorisation
- Category scheme
- Codelist
- Concept scheme
- Content constraint
- Dataflow
- Data structure definition
- Hierarchical codelist

Filter by category:

Internal Sharing

> Internal Sharing category scheme - BE2:BE2INTSH(1.0)

Search and List:

I'm looking for

Navigation: K < 1 2 3 4 5 6 7 > X

- Codelist Accounting entry code list
[CL_ACCOUNT_ENTRY] | [1.4] | ✓ Final | IMF
- Codelist Adjustment
[CL_BUSSURVM_ADJ] | [1.0] | BE2
- Codelist Adjustment
[CL_BUSSURVQ_ADJ] | [1.0] | BE2
- Codelist Adjustment indicator
[CL_ADJUSTMENT] | [1.0] | BE2
- Codelist Adjustment indicator
[CL_ADJUSTMENT] | [1.4] | ✓ Final | ESTAT
- Codelist Adjustment indicator code list
[CL_ADJUSTMENT] | [1.0] | ECB
- Codelist Area code list
[CL_AREA] | [1.0] | BE2
- Codelist Area code list
[CL_AREA_EE] | [1.0] | ECB
- Codelist Area code list
[CL_AREA] | [1.13] | ✓ Final | IMF

Maintenance of SDMX Artefacts

NBB User Requirements:

- ✓ User-Friendly
- ✓ Non-SDMX Experts
- ✓ Wizard mode
- ✓ Manual manipulations
- ✓ Multiple spaces
- ✓ Direct link with .STAT Suite
- ✓ Only SDMX Artefacts – No Data

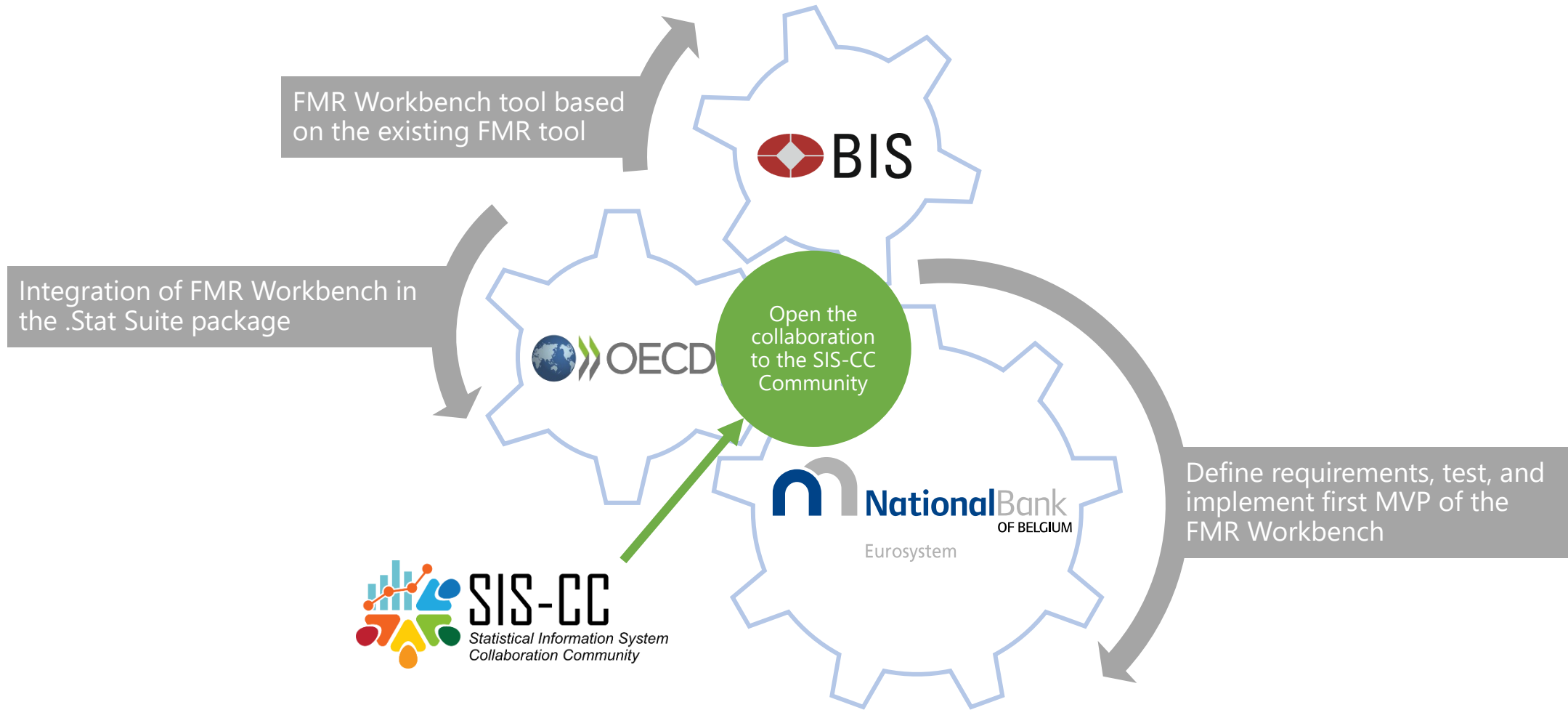
The screenshot displays the FMR Workbench interface. The main content area is titled "Data Structure Definitions" and shows a table of definitions. The table has columns for "Id" and "Name". The data rows are as follows:

Id	Name
BE2	DS_BOPRESERV
BE2	DS_CONF_TEST
BE2	DS_CPI
BE2	DS_NAT_REG_CAP
BE2	DSD_AMOLO
BE2	JOV_BOP
BE2	JV_BOP
BE2	NA_PENS

Below the table, there is a section for "Data Structure Definition Details" with tabs for "References", "Export SDMX-ML 3.0", "Export Excel", and "View Data Structure Definition". The details section shows fields for URN, URL, Description, Annotations, Valid From, Valid To, and Dataflows.

.STAT Suite is our central storage for SDMX Artefacts used in multiple Applications

Catalyst for increased collaboration



SIS-CC

Members



STATEC

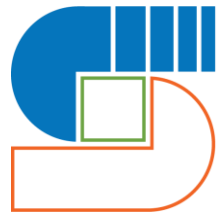


Partners



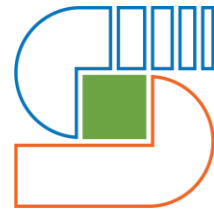
SIS-CC (“the Community”) is a reference open-source community for official statistics, focusing on product excellence and **delivering concrete solutions to common problems through co-investment and co-innovation.**

.Stat Suite open-source platform



.Stat Data Explorer

...to explore data and develop various reporting and dissemination experiences

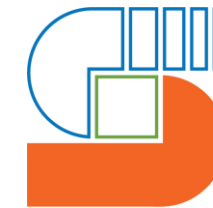


.Stat Core



SDMX Native

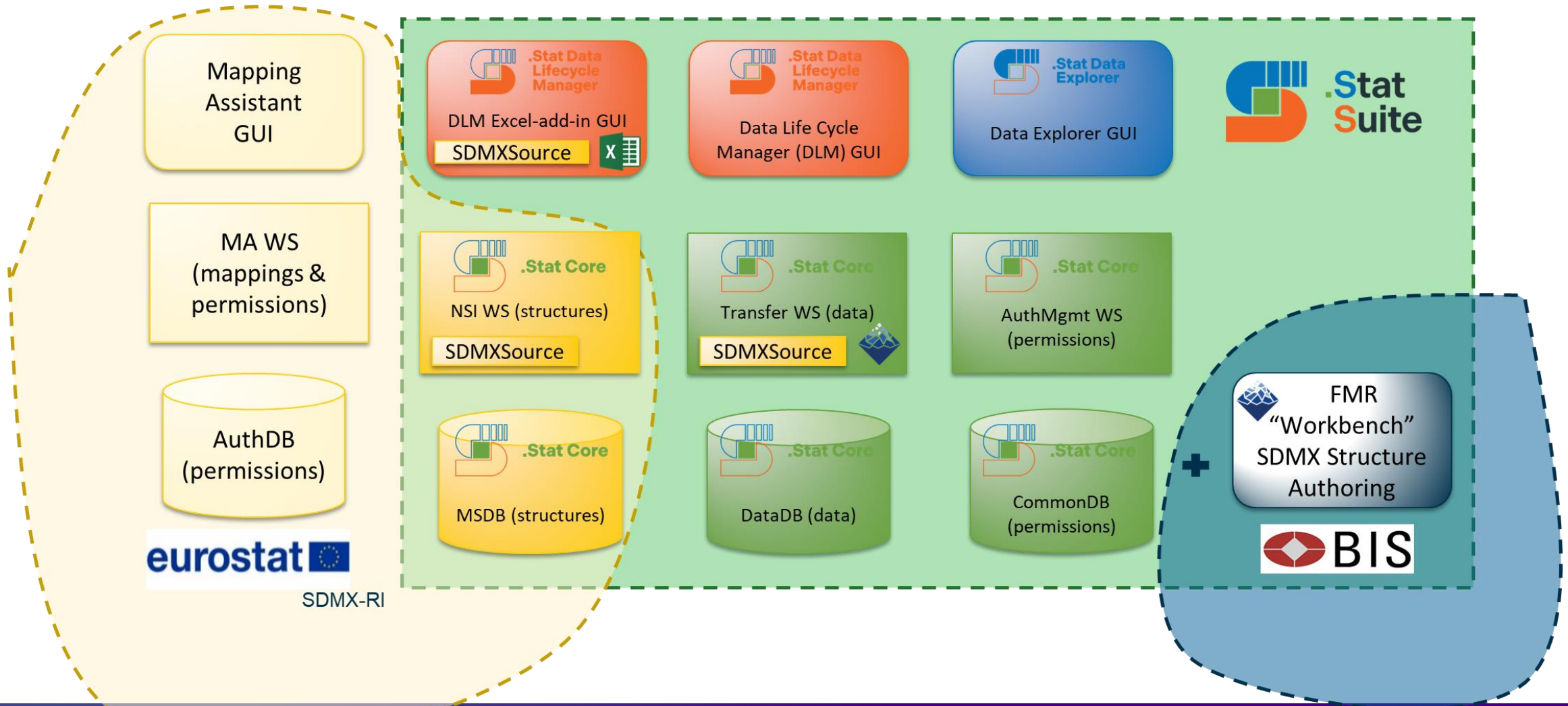
...'SDMX-native', building on best practices in statistical data modelling.



.Stat Data Lifecycle Manager

...to manage the (macro)data lifecycle for official statistics (design, collect, process, disseminate).

Component-based Architecture > Cooperative “Business Model”



The BIS Fusion Metadata Registry project

- BIS owned and developed
- [BIS Open Tech](#) initiative – platform for sharing statistical and financial software as public goods
- Free and open source (permissive Apache 2.0 licence)
- FMR 11 is SDMX 3.0 compliant
- Used extensively within the BIS, for the SDMX Global Registry, for the IMF SDMX Central and by institutions worldwide
- Distributed through <https://sdmx.io>
- Java webapp – runs on any platform
- [Docker image available](#) – quick start in 10 minutes



Main FMR use cases

Centralise and govern statistical metadata

- Externalise and centralise metadata
- Metadata governance – gain control
- Improve metadata maintainability
- Metadata reuse
- Harmonisation of concepts

Enables
'metadata-driven'
solutions

Data collection

- Publish structural metadata for data reporters
- Generate Excel data reporting forms
- Validate received datasets

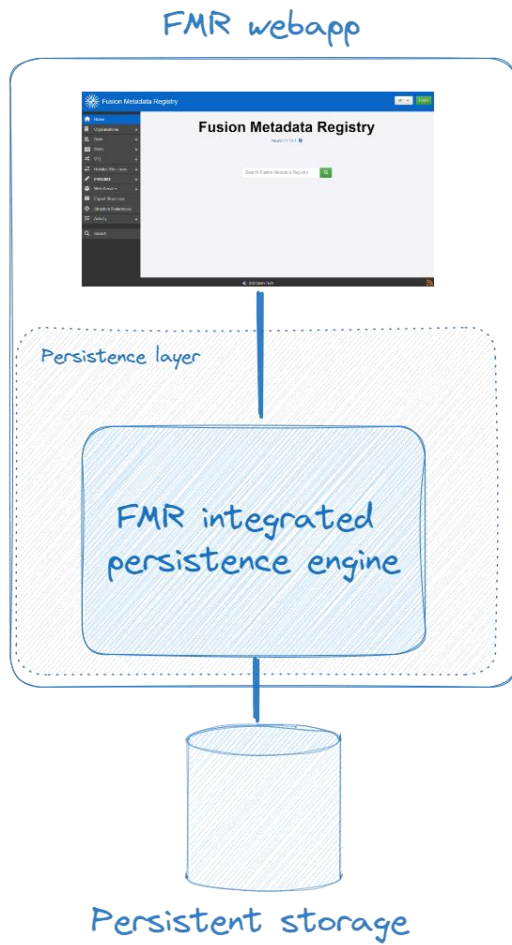
Data reporting

- Validate SDMX data prior to submission
- Convert data between SDMX formats
- Data mapping – transform data to the collector's DSD

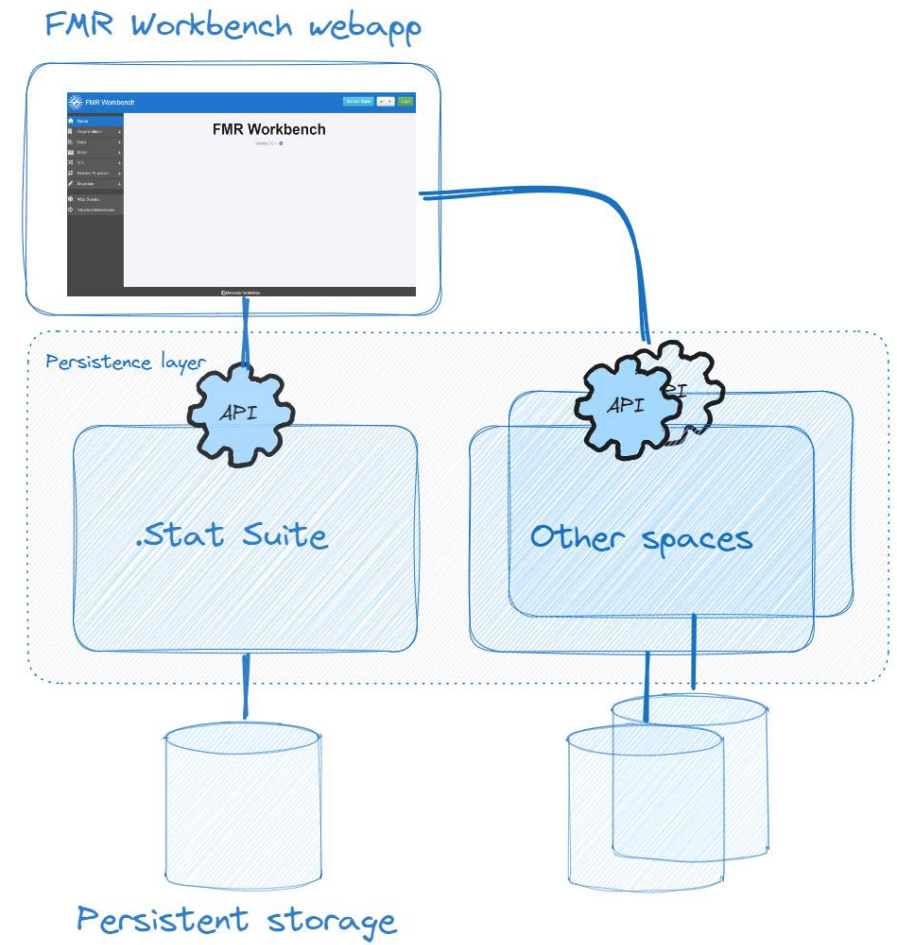
SDMX structures authoring / maintenance

- Create and modify SDMX structures interactively using the web user interface
- SDMX REST API for automation

FMR vs FMR Workbench



FMR	FMR Workbench
Common SDMX structural metadata registry engine and UI	
Integrated persistence (MySQL, MS SQL Server, Oracle SQL)	Delegates persistence to decoupled SDMX structure repositories (Spaces)
Can sync with other FMR instances	Works with any space compliant with SDMX v1 or v2 REST API



How far have we gone? What's next?

- The first release of the FMR Workbench is under testing
 - FMR Workbench online (fwb.sdmxcloud.org)
 - Docker installation possible
- Tickets with findings will be added on GitHub

- Ongoing FMR Workbench User Group
 - Coordinated by NBB
 - BIS and SIS-CC participating
- Next: User Group to convene for prioritizing the tickets
 - <https://github.com/orgs/bis-med-it/projects/9>

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Thank you for your attention!

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