HMS

analytical software

On the evolution of tools in the context of changing business and IT demands

An integrator's perspective

Laila Magin and Dr. David Hipp

12th SDMX Expert Workshop
Amsterdam, 07.10.2024

HMS analytical software

Integration as the alignment of evolving interests

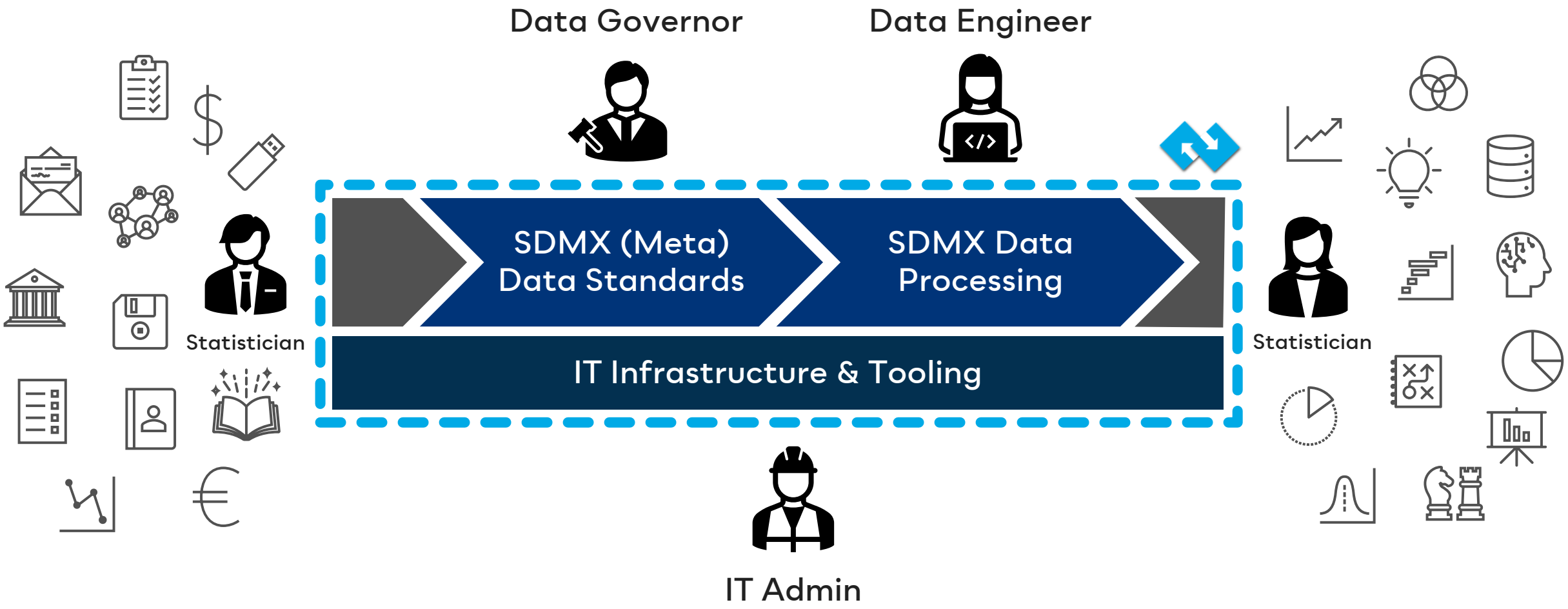
Modern IT solution that is compliant and “fits in”

Functioning organization that excels in producing statistics

Enabled employees that can effectively contribute

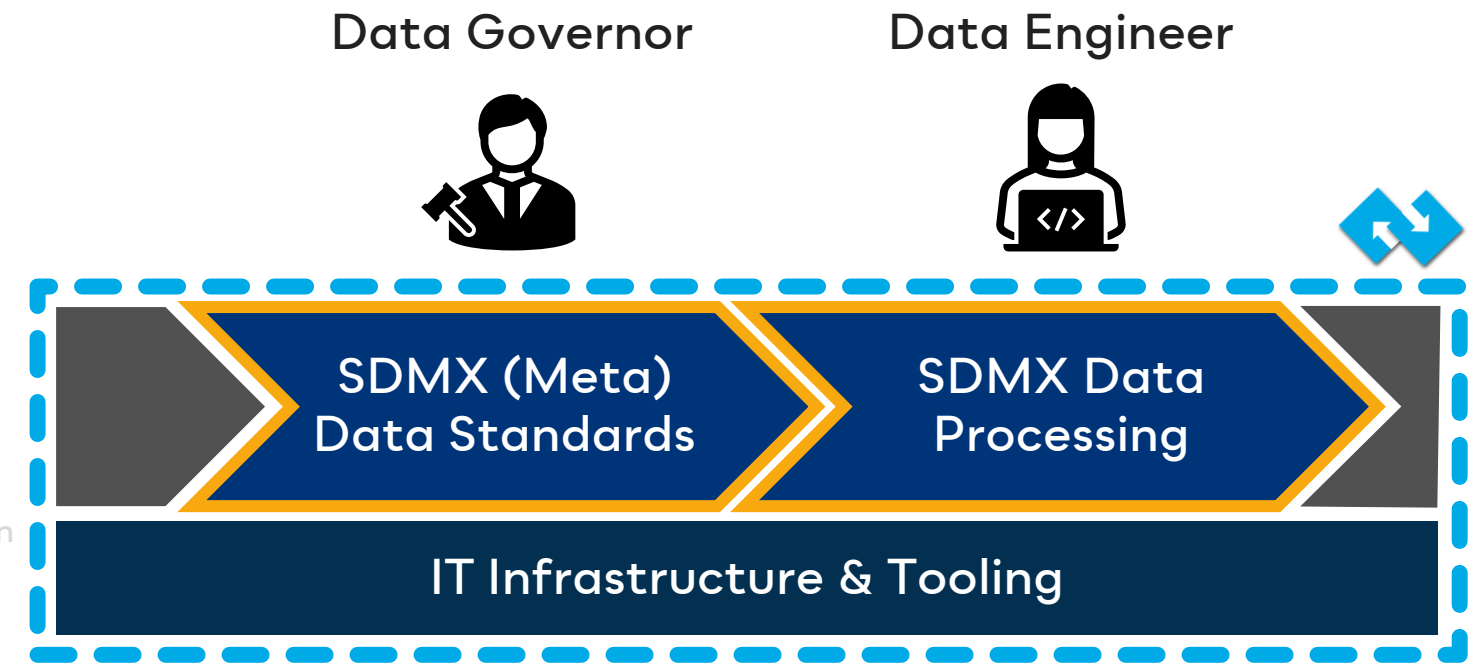
HMS analytical software

All hands on the SDMX data supply chain



HMS analytical software

Unlocking the SDMX business case



Data Governors and Engineers need tools that are ...

- effective and simple to use (for each user group)
- automated (to the highest degree possible)
- customizable to organizational needs (if necessary)
- delivered and maintained appropiatly

HMS analytical software

Metadata Exchange Management: Setup

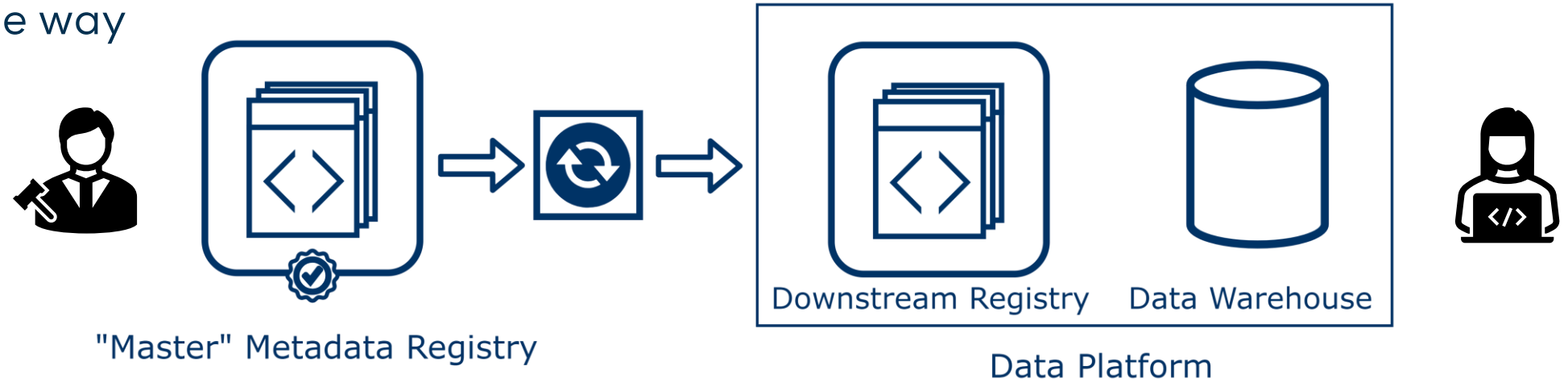
- Architecture:
  - „Master“ Metadata Registry (metadata management)
  - Data Platform (metadata consumer)

HMS analytical software

Metadata Exchange Management: Setup

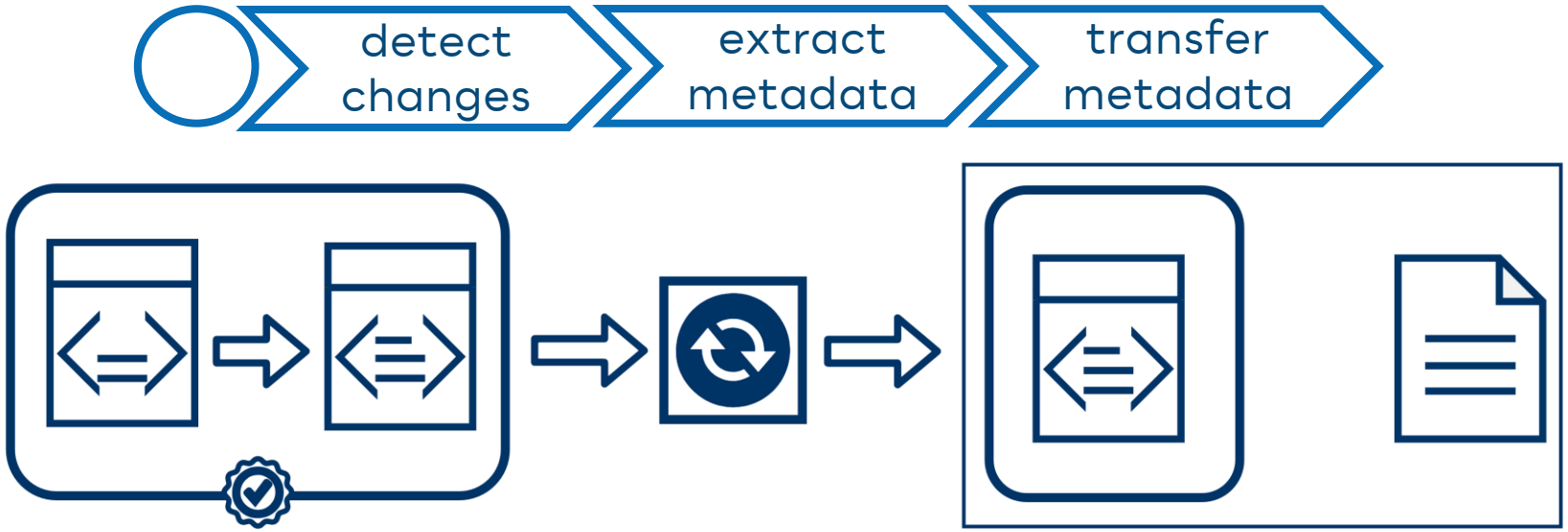
- Architecture:
  - „Master“ Metadata Registry (metadata management)
  - Data Platform (metadata consumer)
  - Synchronization Tool (connect metadata sources)

- Solution approach: **Real Time Sync**
  - Near real time sync
  - One way

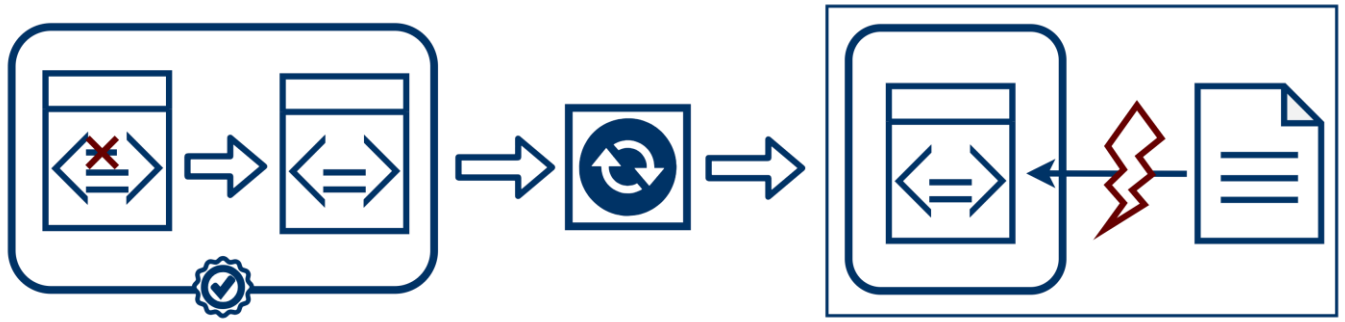


HMS analytical software

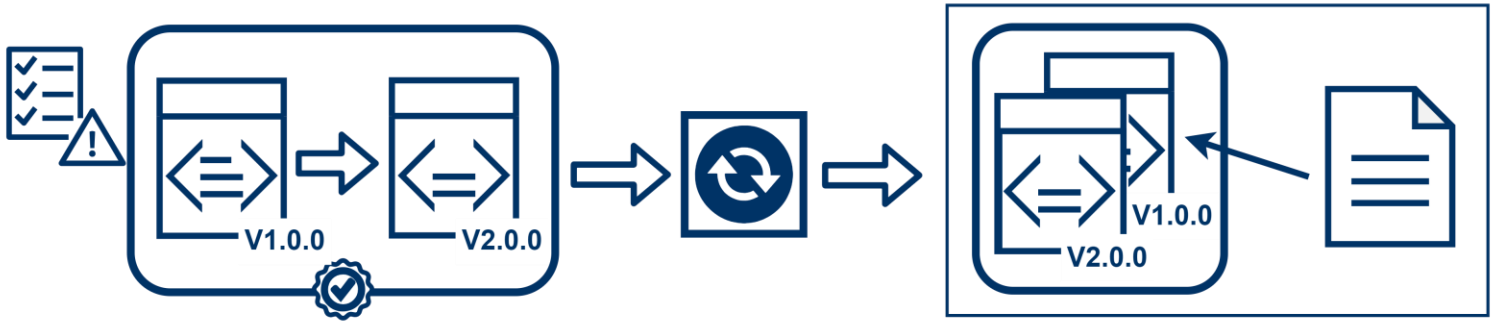
Standard Case: Add Codelist Entry



Edge Case: Remove Codelist Entry

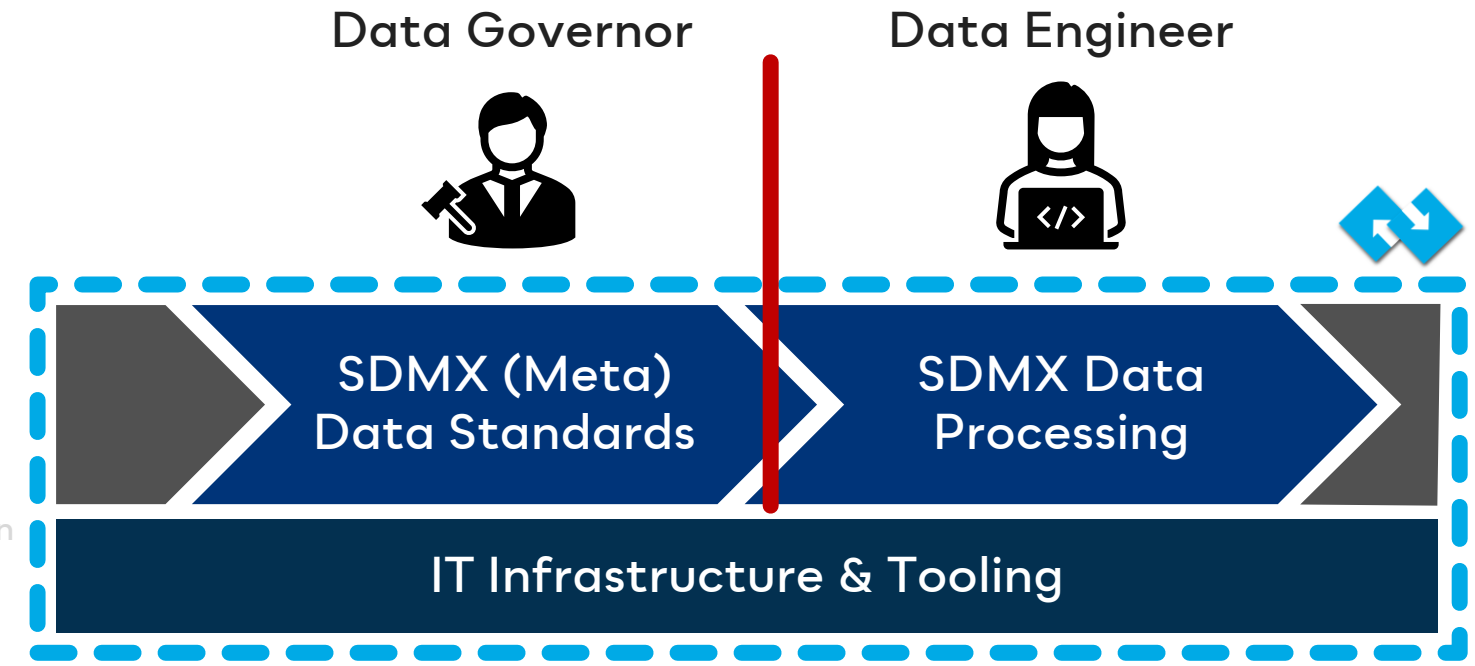


Use SDMX 3.0 with semantic versioning



HMS analytical software

Scenarios where Real Time Sync is not an option



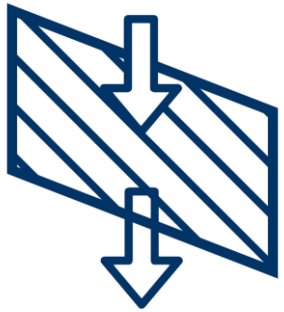
If there is NO ...

- Trust (in sufficient quality, compliance, sem.-vers.)
- API-contracts
- Process timing and managed dependencies

HMS analytical software

Alternatives to „Real Time Sync“ solution

- **Configured Real Time Sync**
  - Filter synchronization object
    (specify consumed metadata by Ids and/or by types)
  - Optional: add an approval step for specific structures



- **Batch Sync**
  - Metadata is sysnchronized at specified times
  - Scheduled or manually triggered

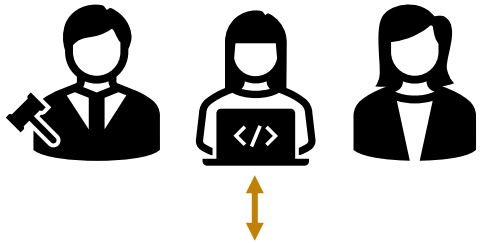
Case study Implementing Real Time Sync

Enterprise IT Requirements:

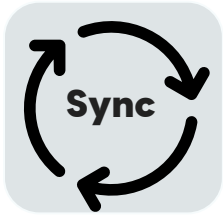
- ✓ Security (SSO, MFA, Zero Trust)
- ✓ Observability & Reproducibility
- ✓ Availability, Reliability & Scalability
- ✓ Agility (from prototype to production)
- ✓ Interoperability (with other IT & services)
- ✓ Platform-agnostic (no vendor lock in)

Infrastructure as Code

GitOps



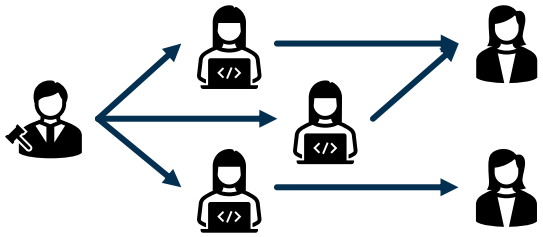
Integrated User Experience



kubernetes

On Premise

Conclusion Evolution requires continuous re-aligment



?

All sides need to be considered and aligned to provide the aimed-for SDMX outcomes

Setup applicable in many scenarios:
One tool for one role, multiple data dissemination platforms, migration to new tool, increased automation and integration

What do you see as the main challenges in the collaboration of Data Governors with Data Engineers?

HMS
analytical software

HMS
analytical software