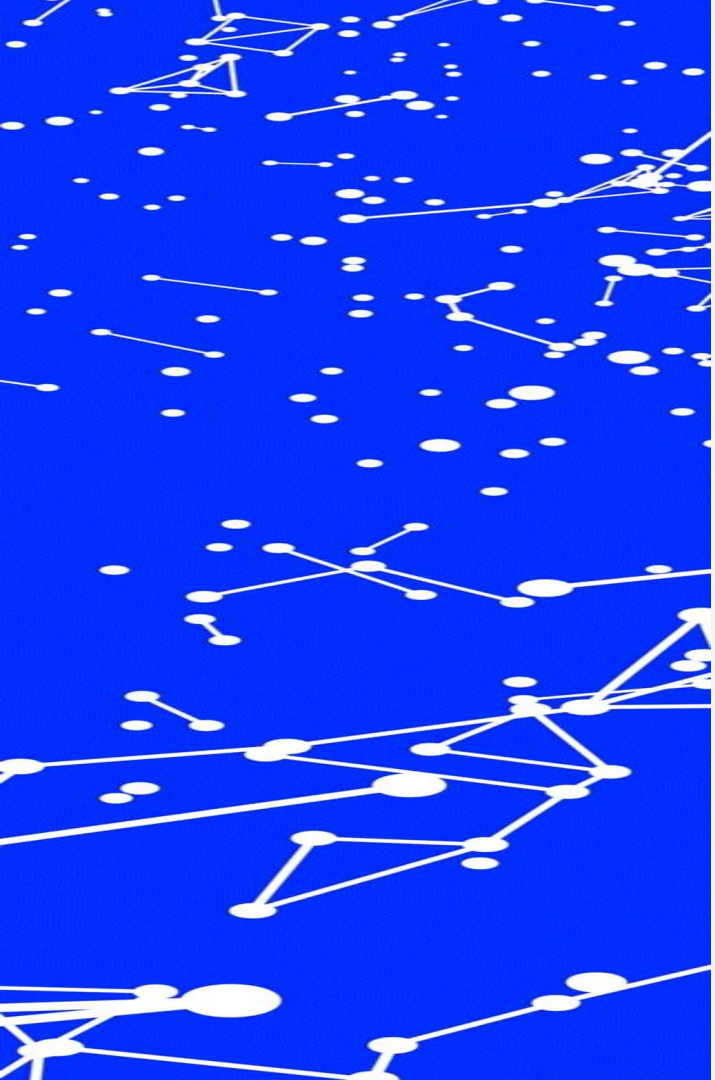

The Peak of Data
and AI 2025

FME in Retail:

Not ALL about location

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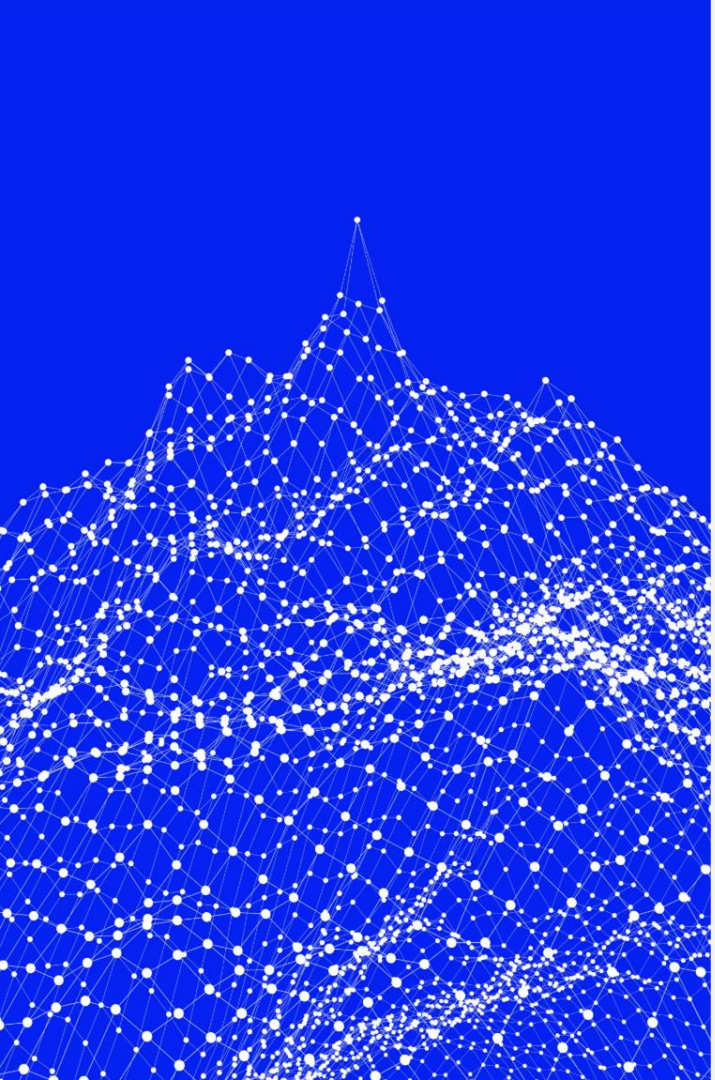


Agenda

1. Initial situation & The Challenge
2. Data Hub
3. Data Analysis
4. Technical Details
5. Conclusion

Initial situation

Our client is a major Swiss retailer with 100+ stores.

Its logistics operations involve ~4,000 file exchanges per day — totaling 12 million data rows per month,including inventory status, promotions, and sales figures.

They need a robust and reliable infrastructure to handle these business-critical processes

The challenges

Strategic decisions require reliable data — but…

Decision-makers depend on massive, diverse data from multiple operational systems.

Yet this data is often incomplete, inconsistent, outdated, or simply wrong, making confident decisions difficult — or impossible.

Requirements

Provide a trusted, automated data foundation

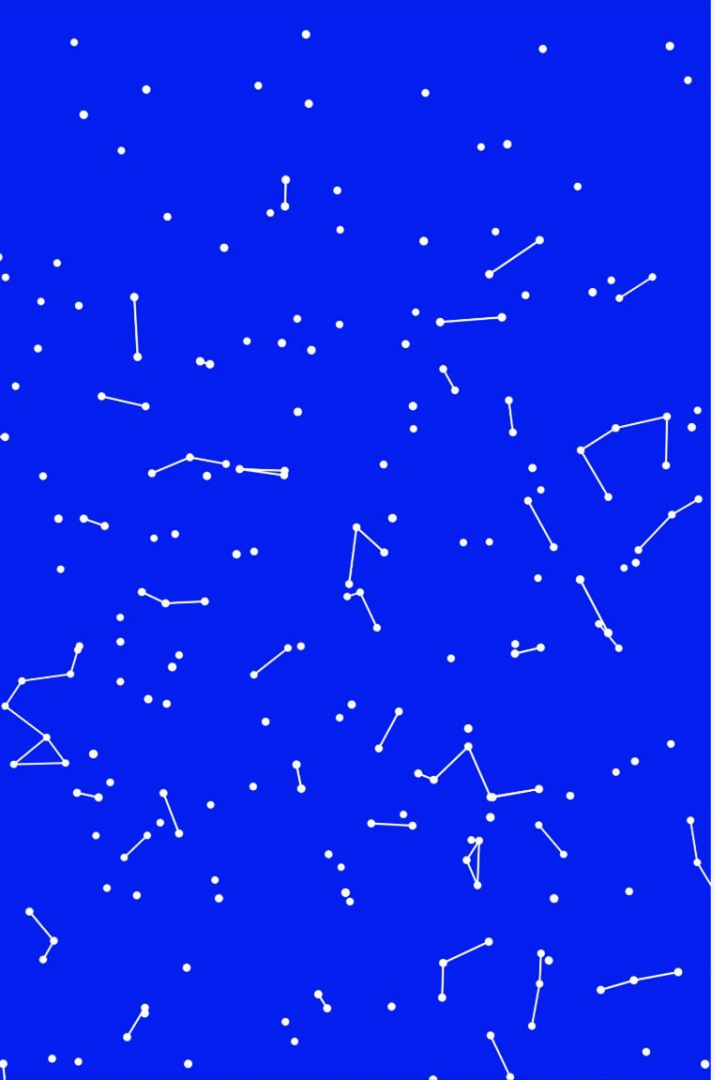
✔ A fully automated repository, continuously fed by all operational systems and stores

✔ Guaranteed data quality and traceable origins

Empower data scientists, local and centralized managers

✔ Full control over the data they need

✔ Fast, reliable access to actionable insights through the use of dashboards



Section 1

Datahub

(Data Repository)

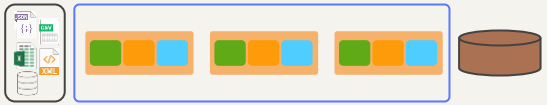
FME by Safe Software

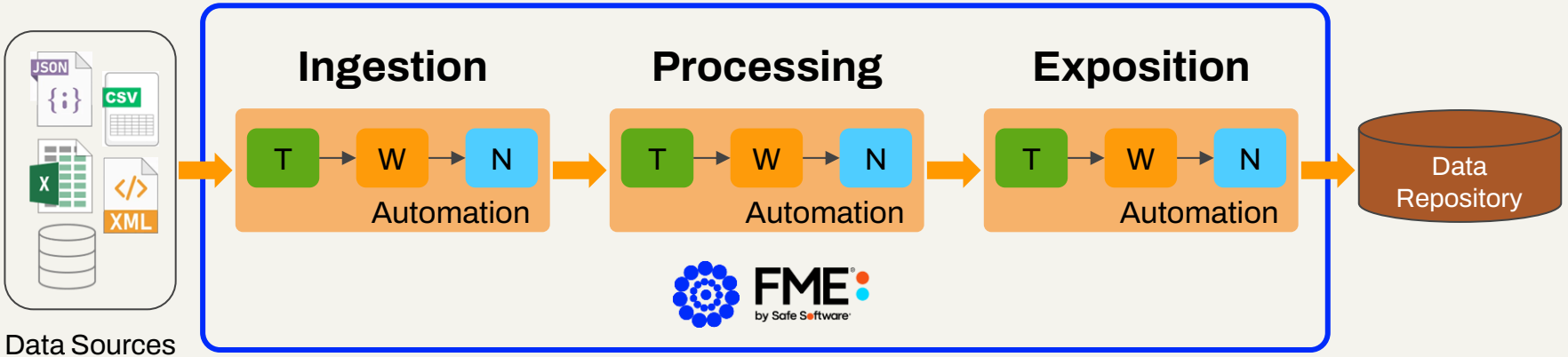
What is a Datahub?

A centralized platform that unifies and manages large volumes of data from fragmented sources across the organization — enabling seamless integration and access.

Datahub

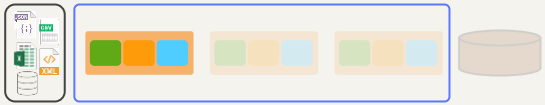
Overview





Datahub

Ingestion - Key principles

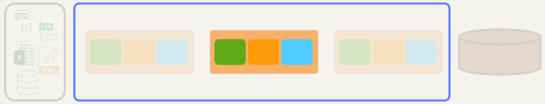


Prepare and load the data

- Isolate data sources to make sure that they have no impact on each other
- Load all data as a uniform data format (TEXT) to maximize load success
- Tag every record with a traceability “tag” to identify data source (lineage)

Datahub

Processing



- **Define data validation rules**

  Ensure consistency, completeness, and accuracy

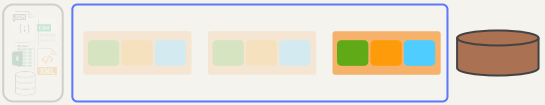
- **Enforce correct data types**

  Convert TEXT data based on actual content

- **Run asynchronously & in parallel**

  Maximize performance by leveraging all system resources

Datahub



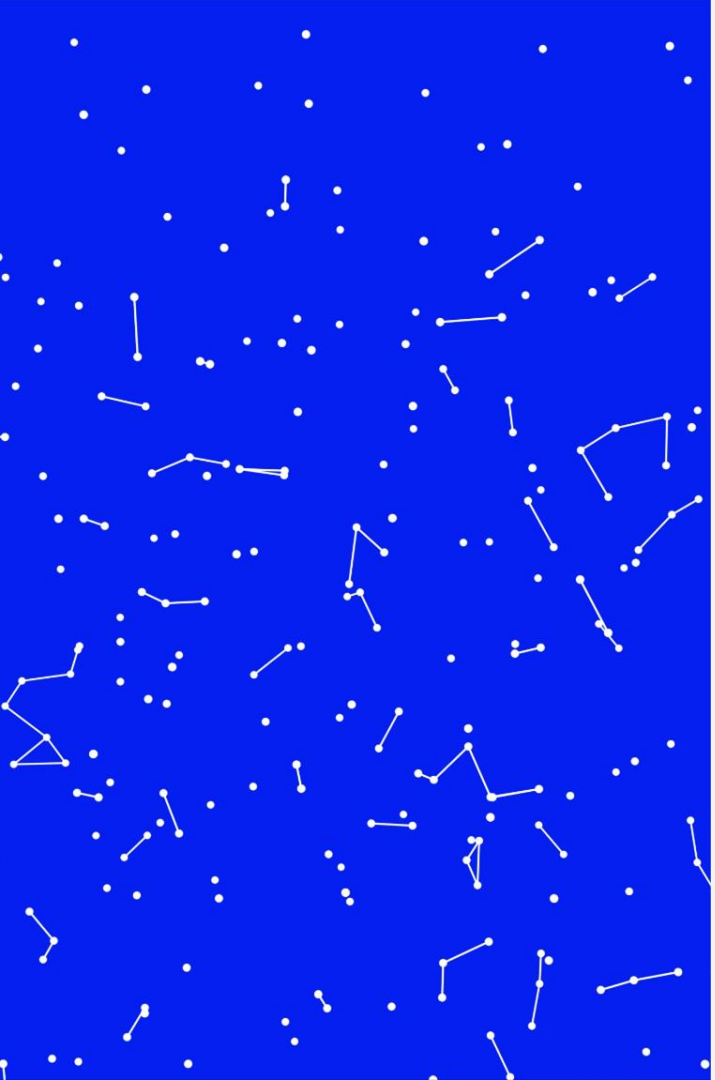
Exposition

Exposition sets the stage for reporting and Dashboard tools. It requires that:

The data repository is independent from source systems, with a loosely coupled architecture that ensures flexibility and resilience.

Each record includes complete lineage and traceability, allowing for full visibility of its origin.

To comply with GDPR, all personal identifiers are pseudonymized, replaced with artificial tokens to protect sensitive information.



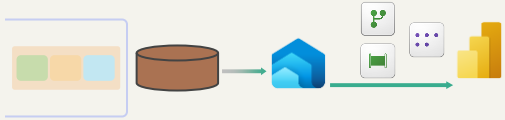
Section 2

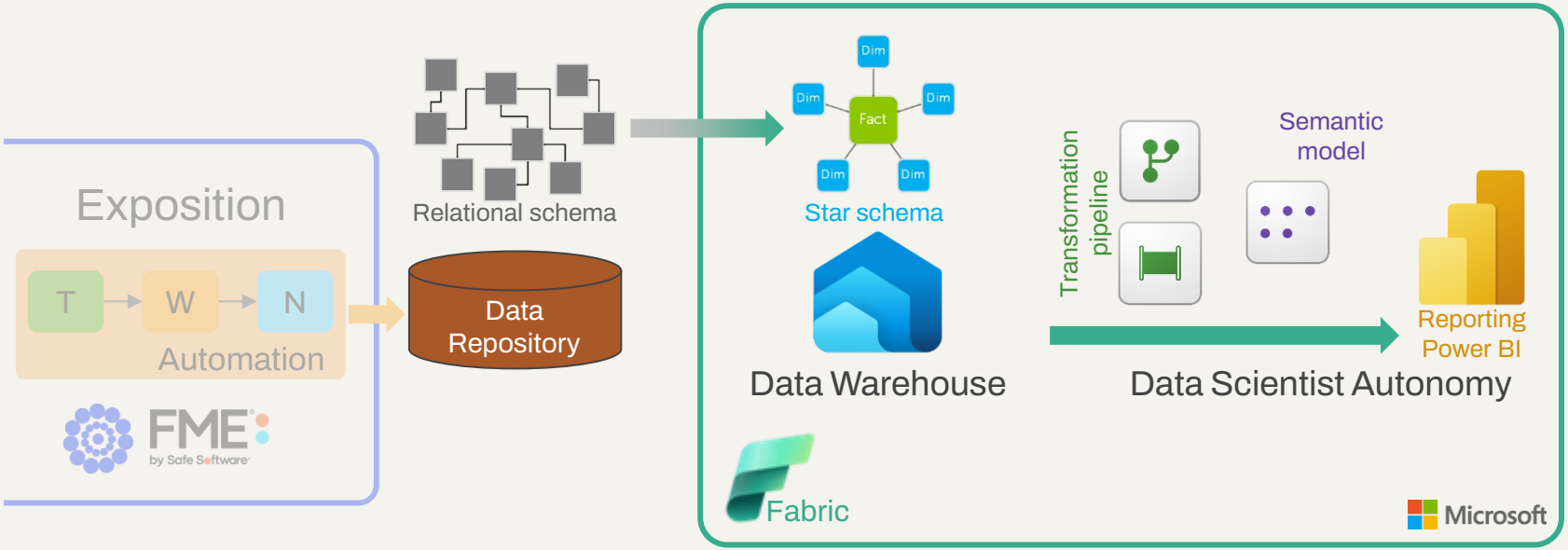
Data Analysis

Microsoft Fabric

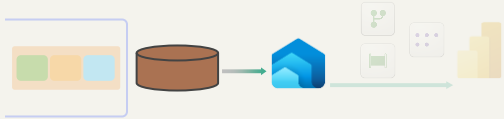
Data Analysis

Overview





Data Analysis



Data Warehouse

Make use of data optimized for analytics

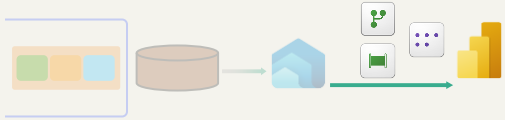
Star schema modeling
Structured for fast and efficient analytical queries

Data model transformation
Tailored to enhance performance and reporting capabilities

Managed database
Dynamically allocates resources and scales automatically based on workload

Data Analysis

Data scientist independence



From Data to Decisions

TRANSFORM

Aggregate & enrich

- Create new indicators
- Clean, standardize, and prepare for analysis

MODEL

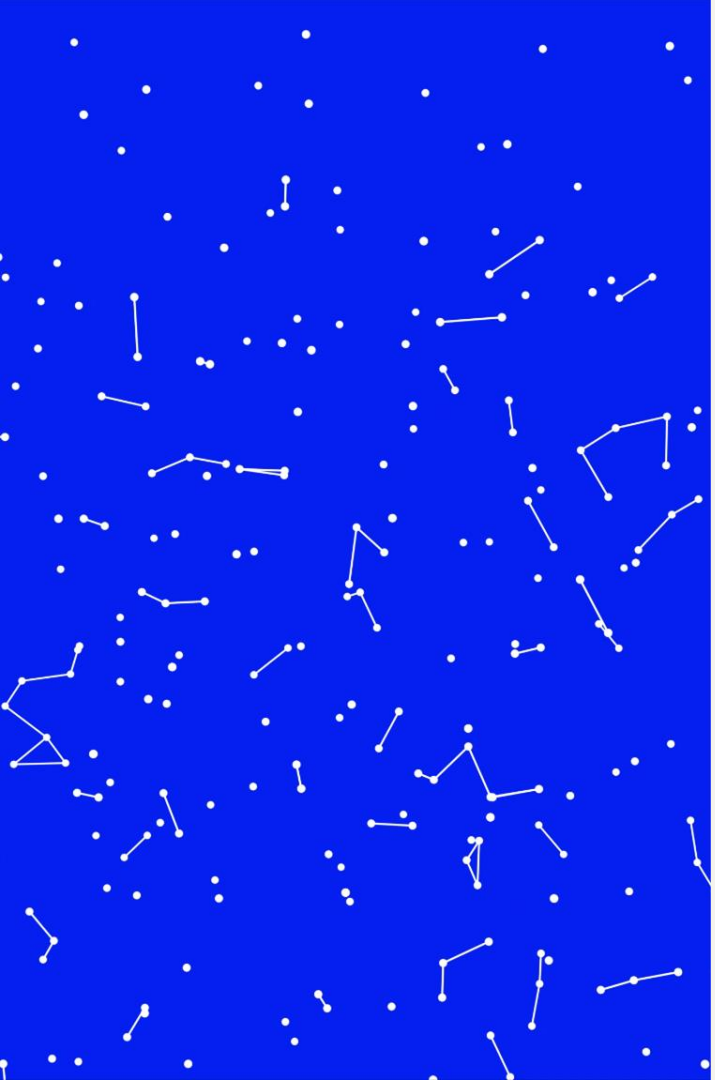
Build a semantic layer

- Specialized data models
- Translate technical data into business-friendly views

ACT

Deliver dashboards and reports

- Support strategic and operational decisions
- Empower teams with reliable, real-time

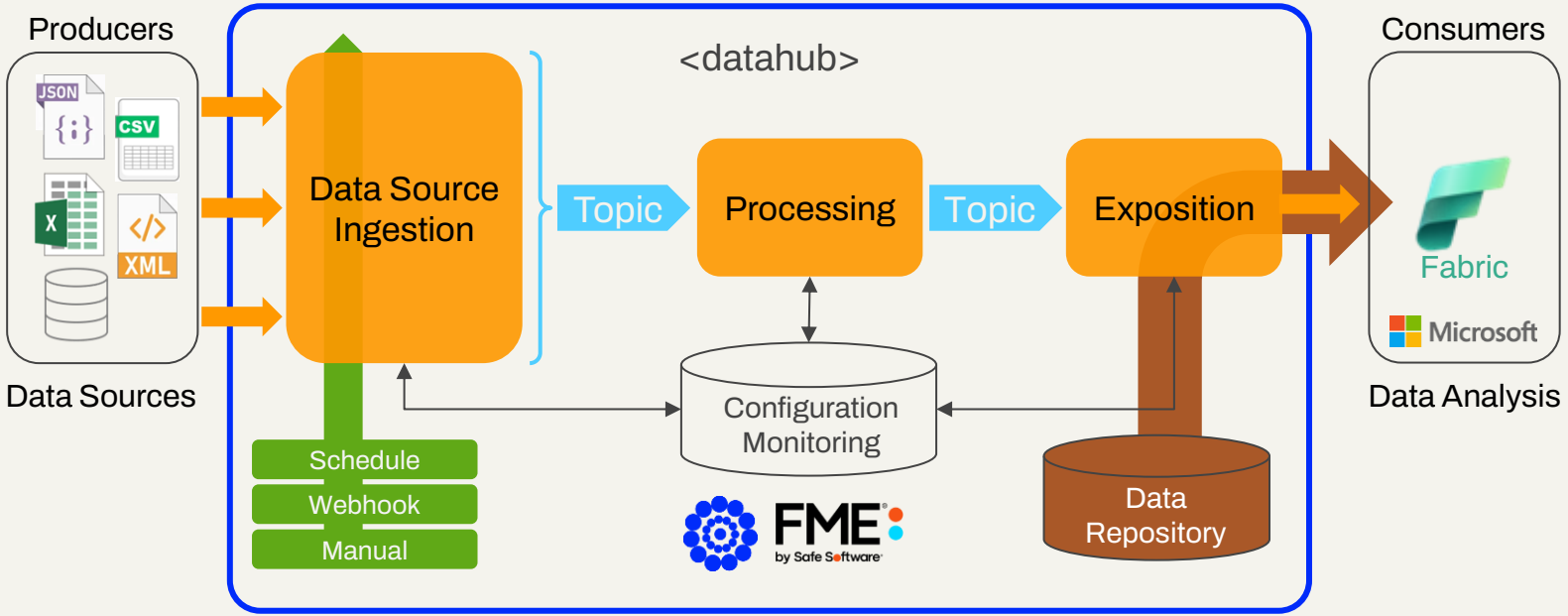


Section 3

Technical Details

Technical Details

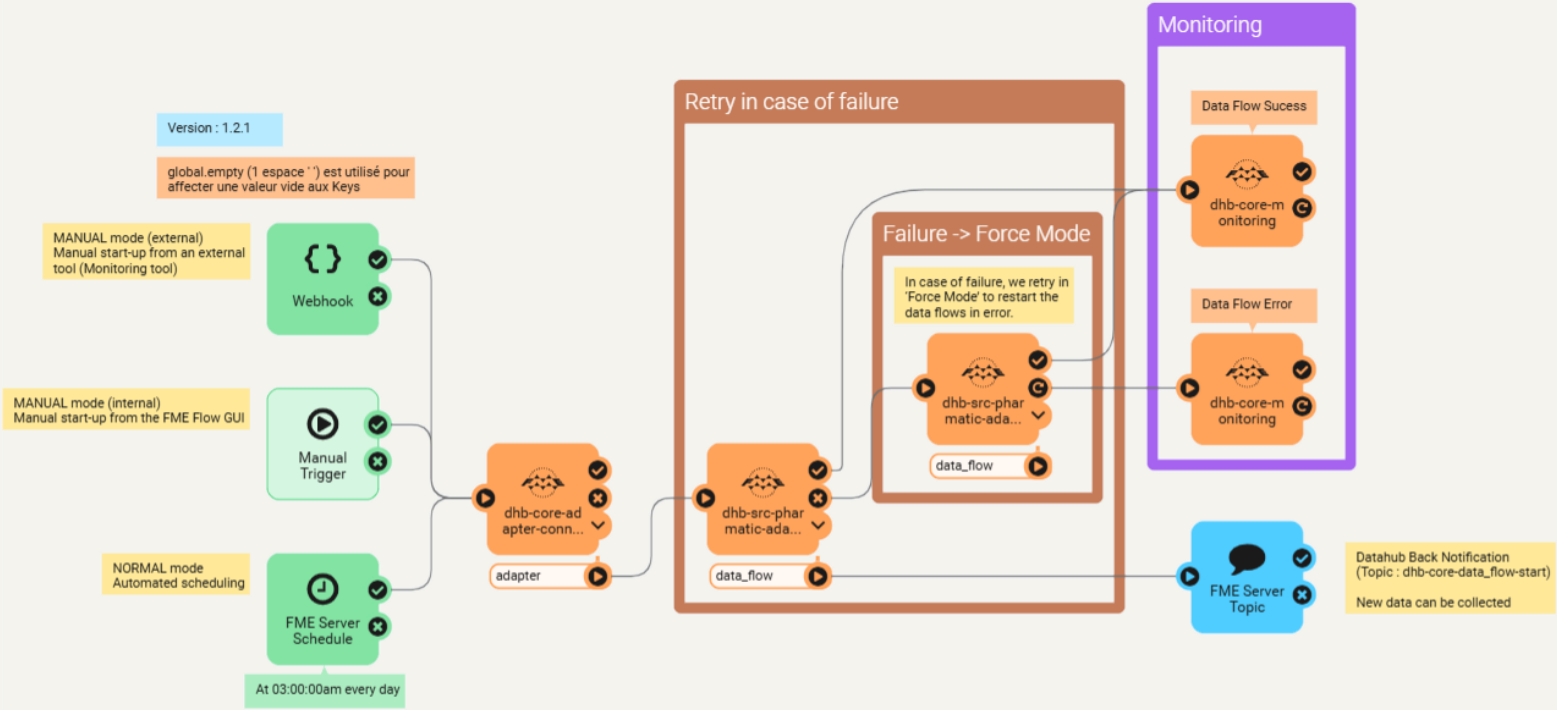
Overview



Automation | Notification | Trigger

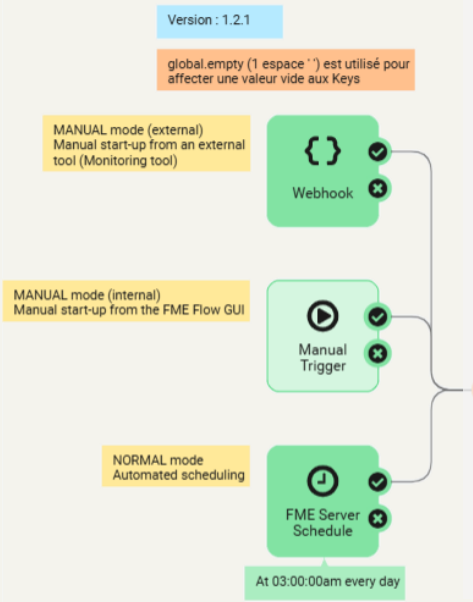
Technical Details

Ingestion - Overview



Technical Details

Ingestion - Trigger



Trigger

Automations are started at a scheduled time

Can also be started manually

- Internal : Automation App
- External : Webhook

Technical Details

Ingestion - Fail-safe Mechanism

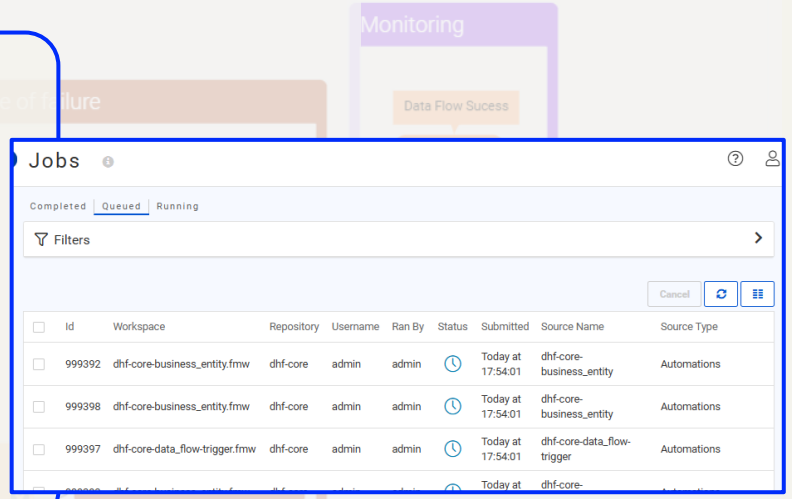
Retry on data error or temporary unavailability

Technical Details

Ingestion - Notification

Asynchronous Datahub notification

Efficient job execution
- Run when ready
- Parallel execution



For years, the Swiss have demonstrated their ability to climb summits... we are now tackling the peak of data integration (and AI).

Thank You

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