Microsoft Fabric Ontology
Build your ontology in a no-code way

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Data Platform Next Step - May 2026
Tuesday 2026-06-02
Tyr 15:15 – 16:00

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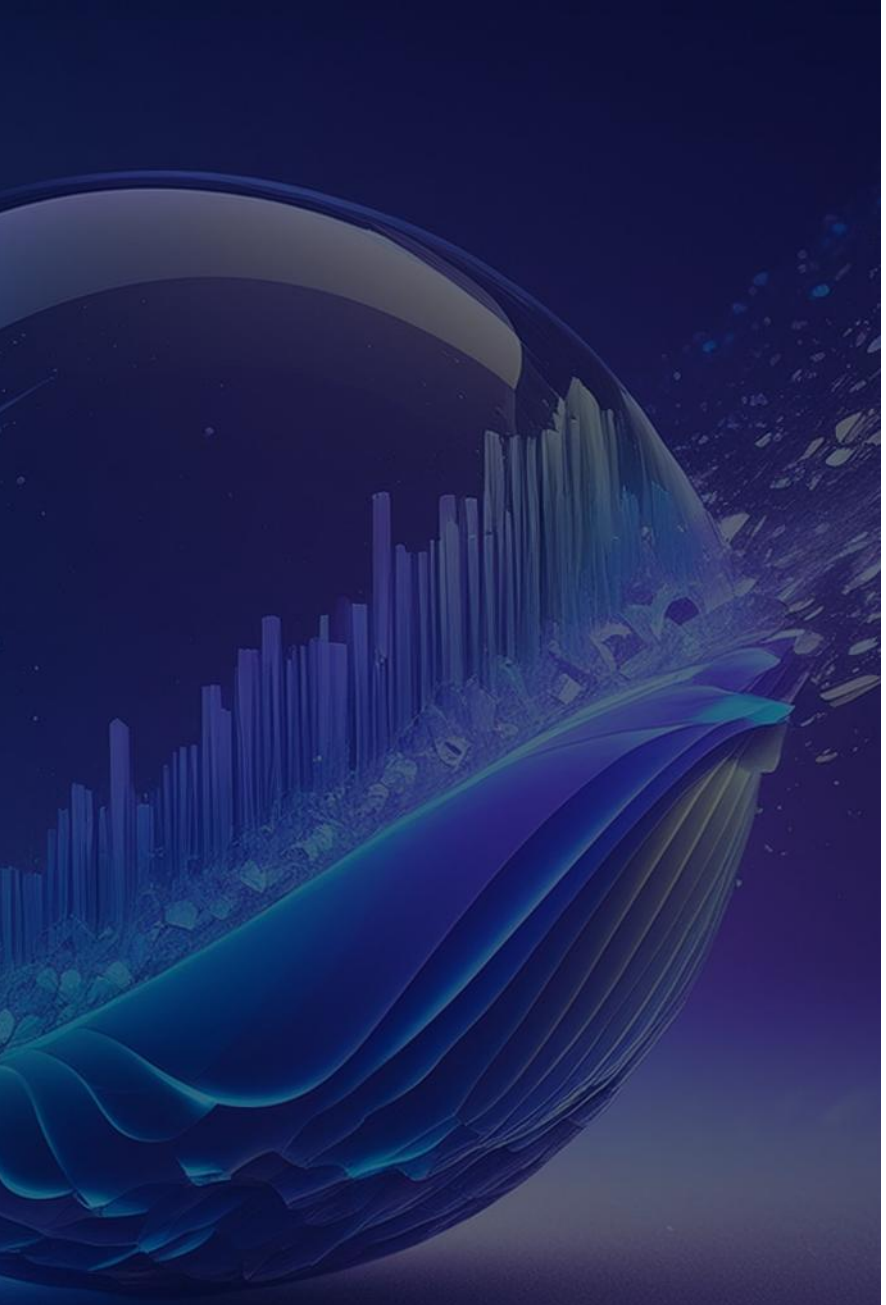
EUROPEAN MICROSOFT FABRIC Community Conference











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Principal architect at SDG Group

Microsoft MVP for Azure IoT
Microsoft MVP for Real-Time Intelligence

Agenda

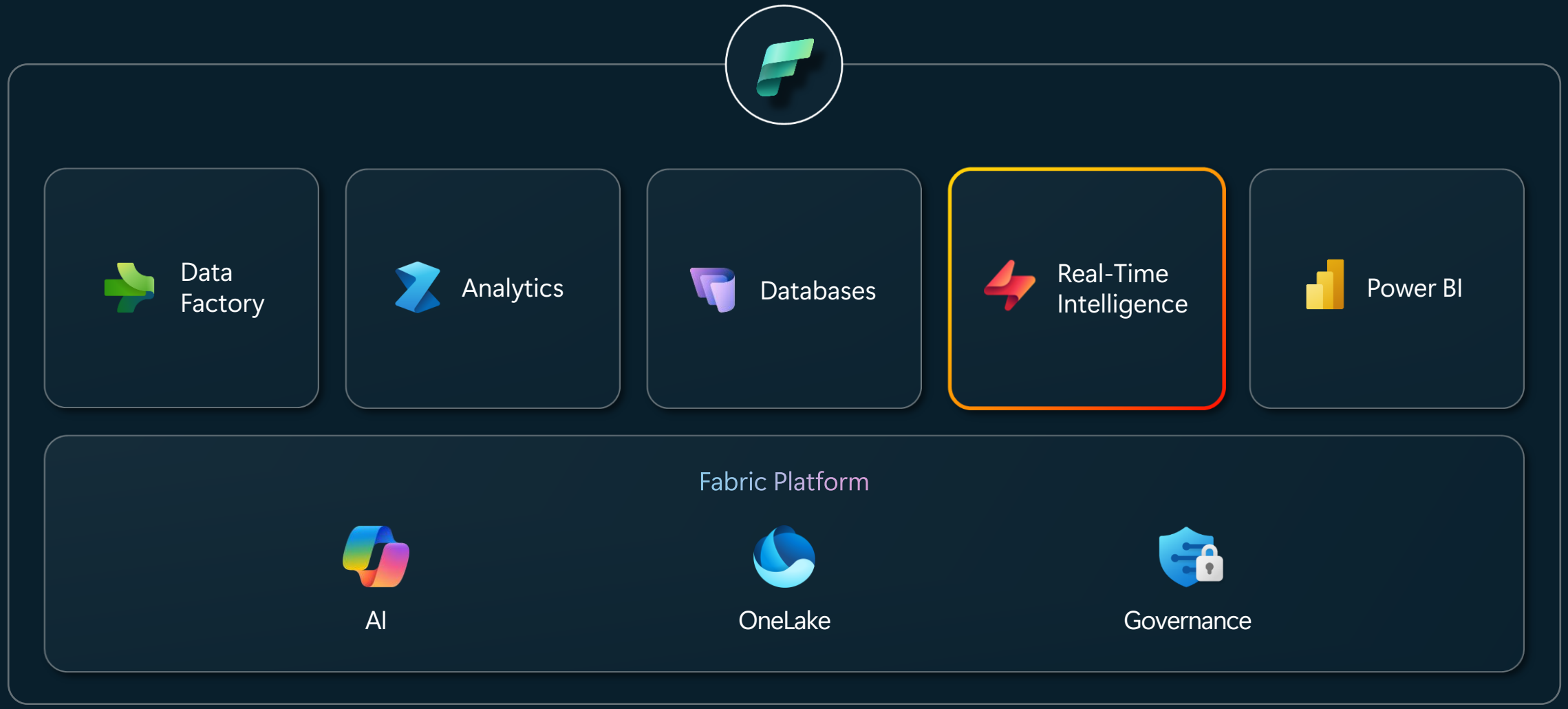
- Fabric Real-Time Intelligence challenges
- The promise of Fabric Ontology

Disclaimer: Fabric Ontology is in Public Preview (round 3)

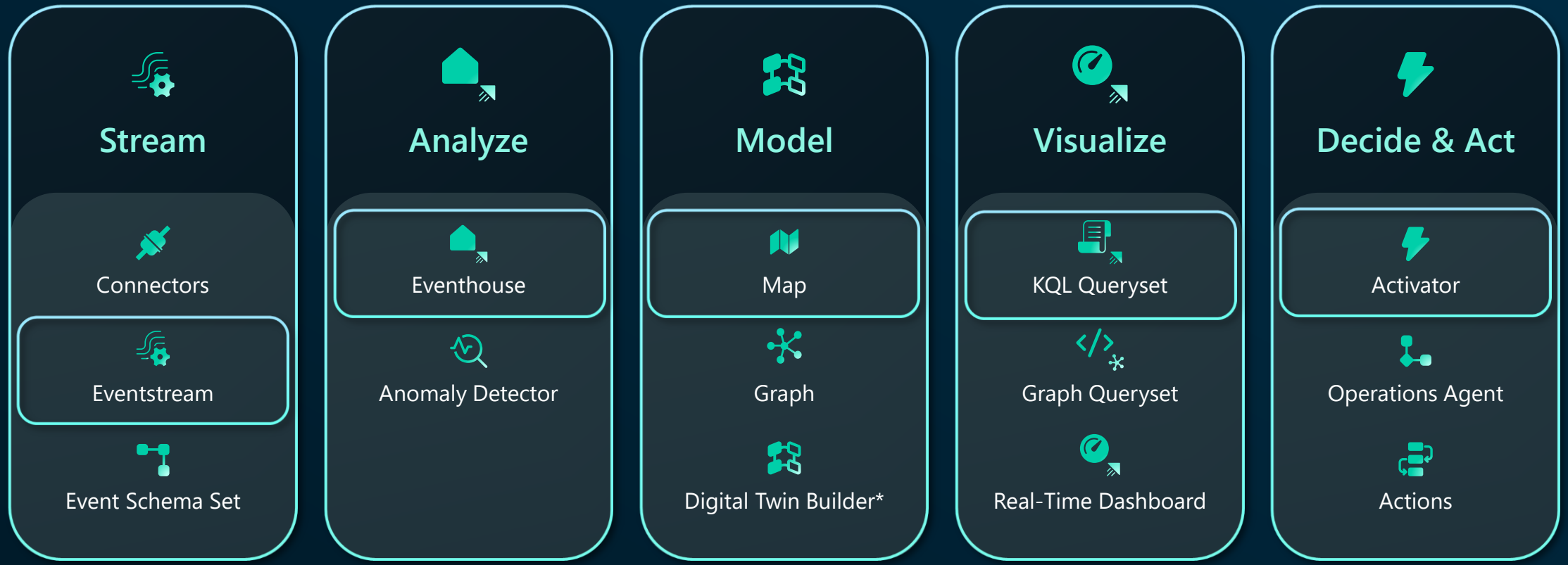
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Microsoft Fabric

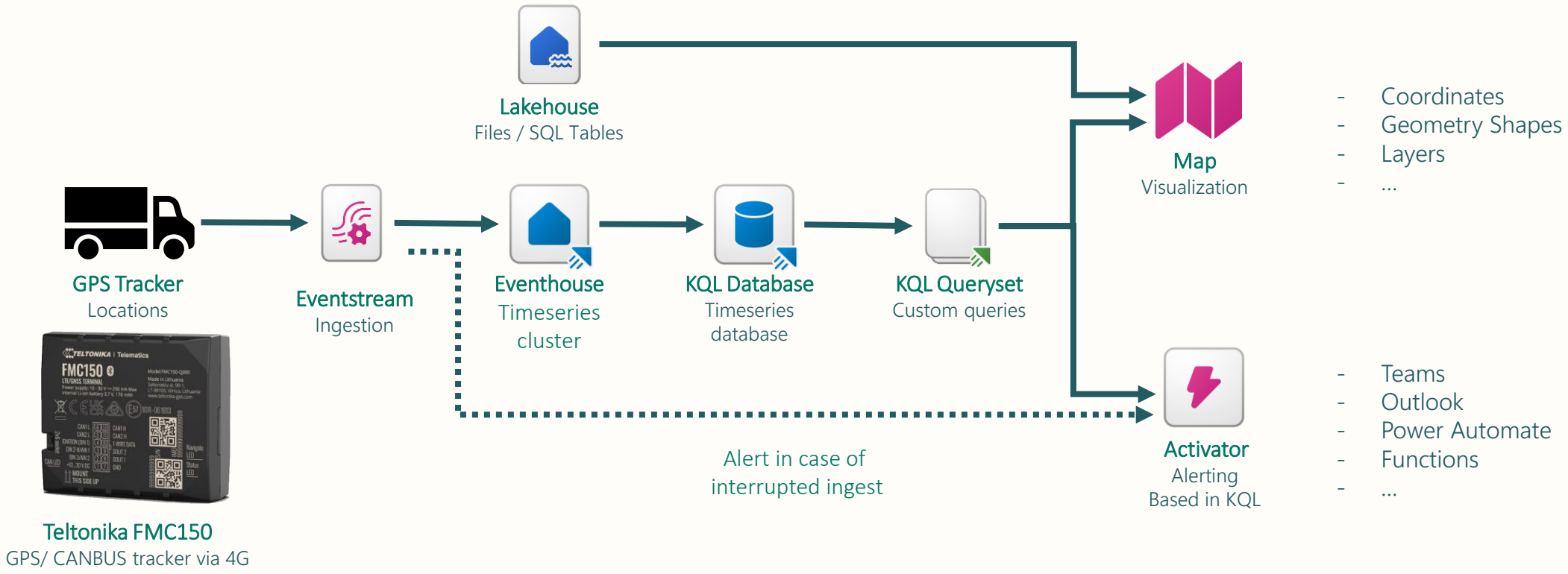
The unified data platform for AI transformation



Real-Time Intelligence in Microsoft Fabric

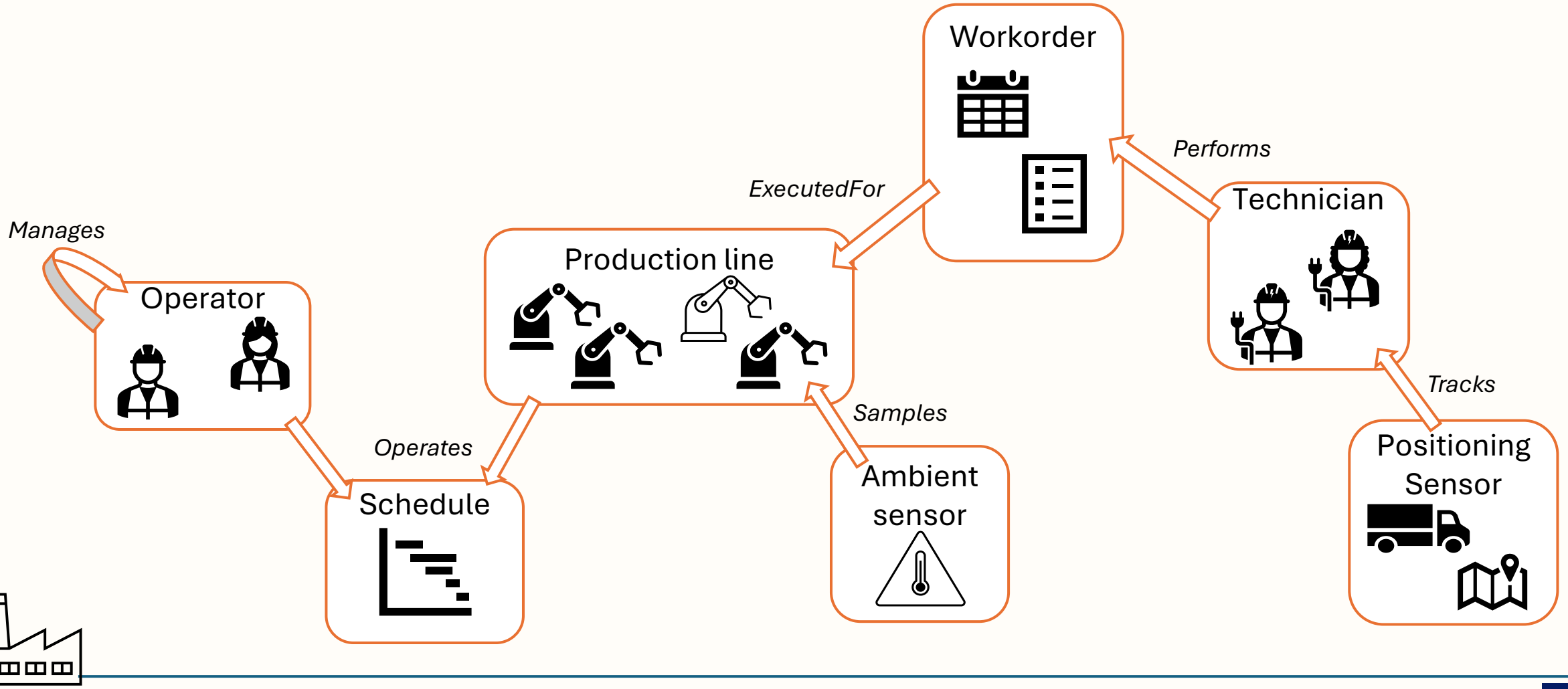


Real-Time Intelligence in Eventstream, Eventhouse, etc.



A more realistic Real-Time solution

Introducing context data



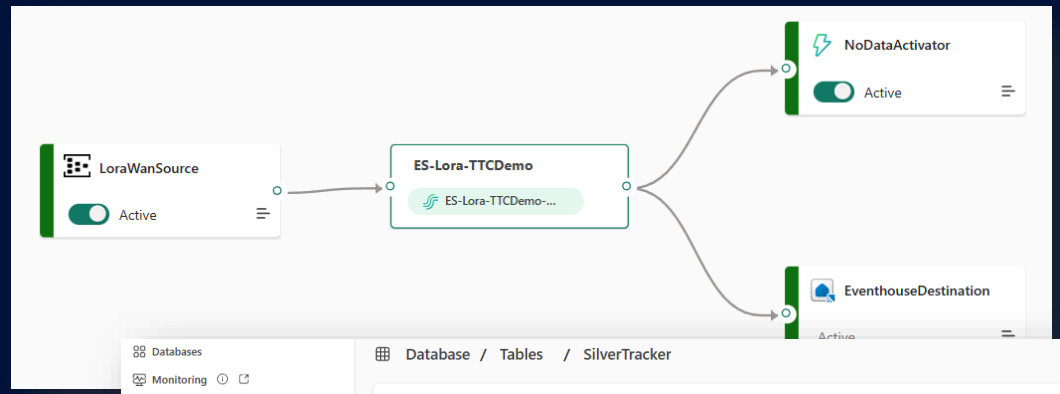
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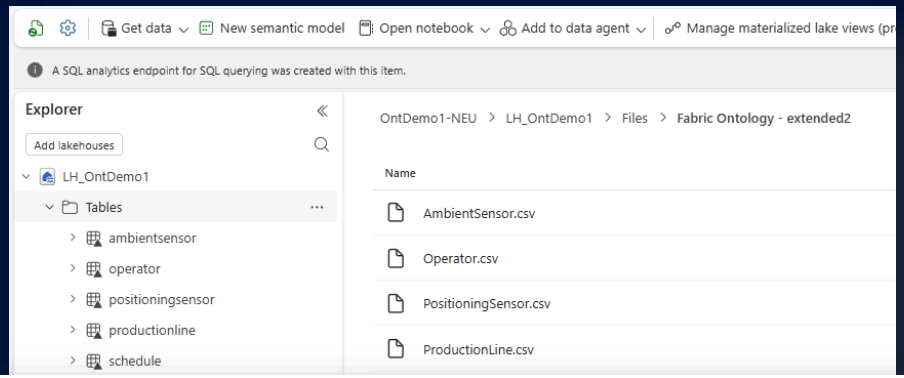
Fragmented logic in **Fabric RTI**

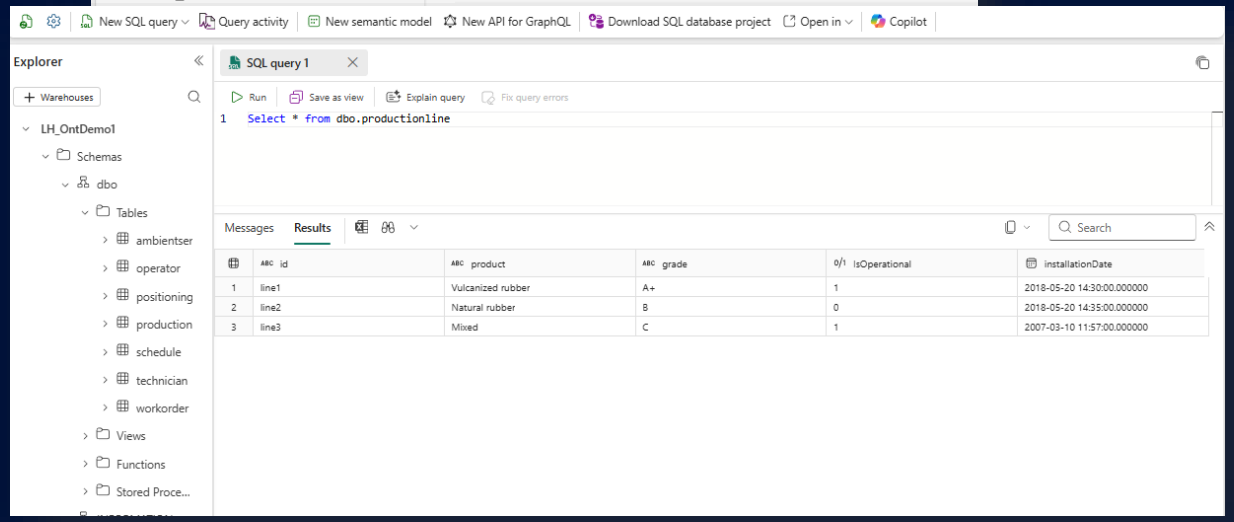
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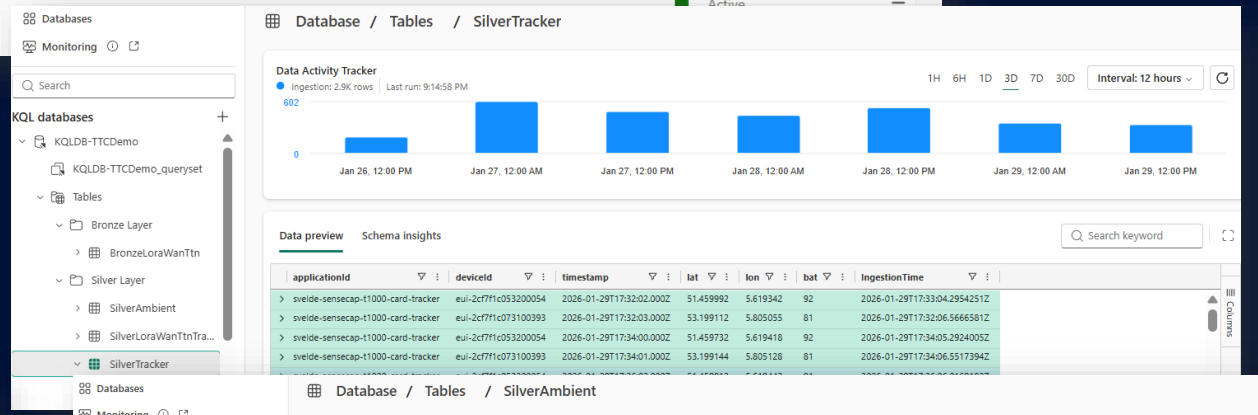
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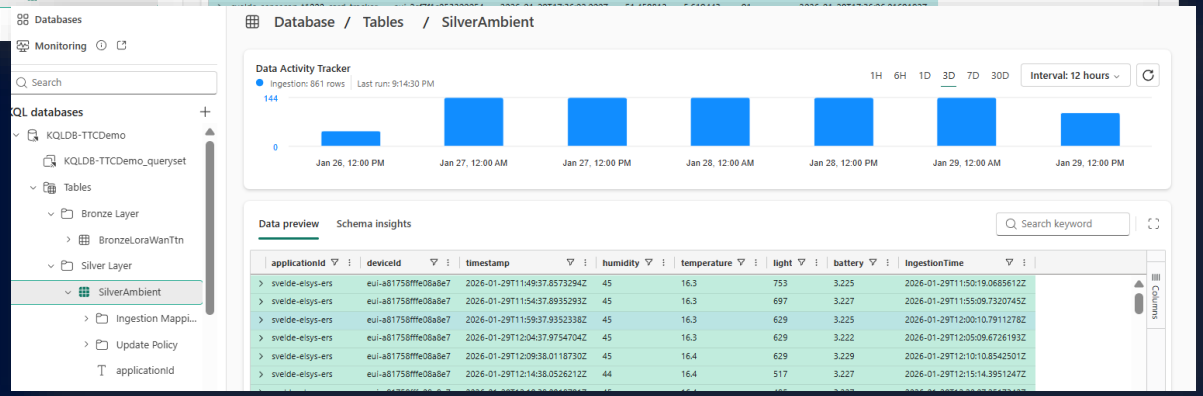
Fragmented logic in **Fabric RTI**







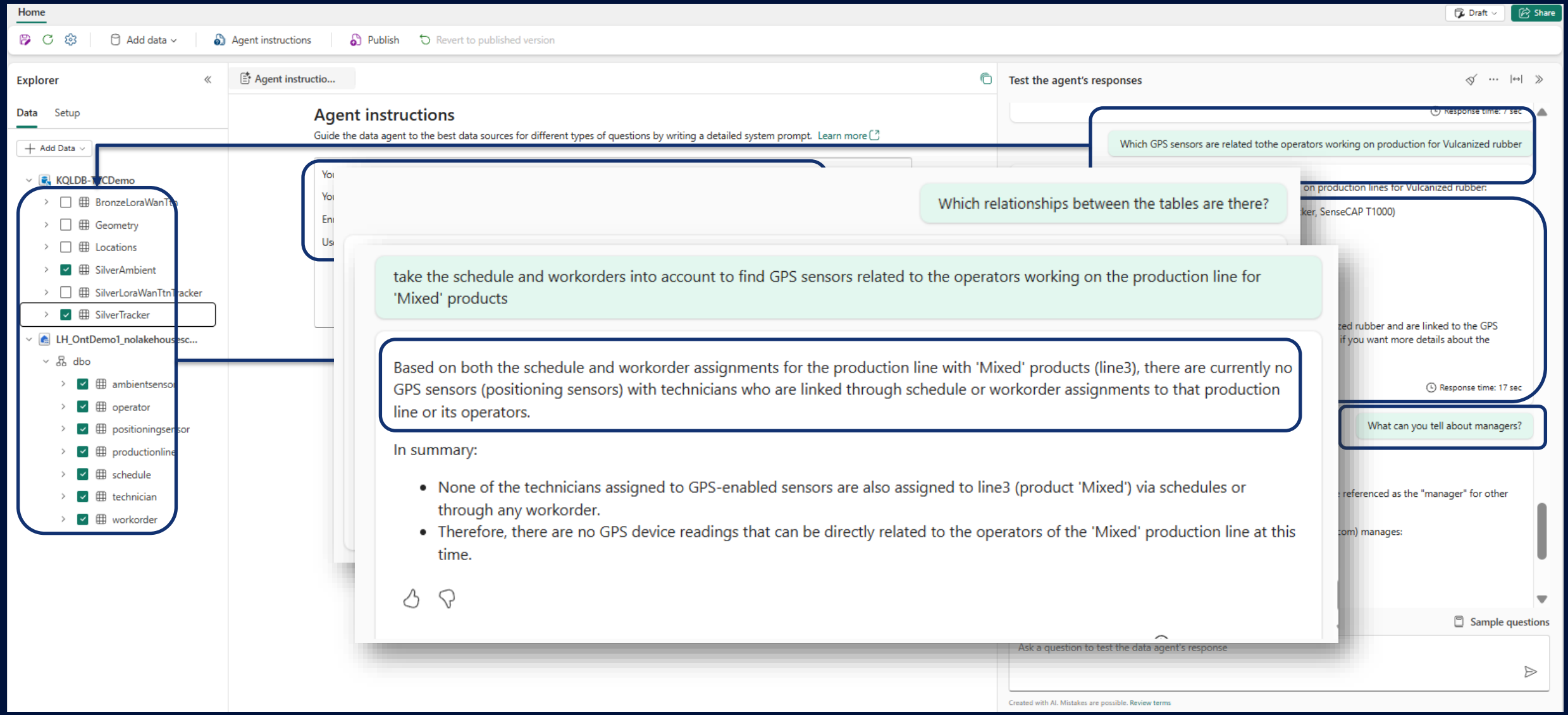




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Fragmented logic in **Fabric RTI**



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The Fabric IQ difference

TODAY

Interpreting tables without business context and connection to actions



AI Agents

THE FUTURE

Grounded in live, unified business context connected to operational actions



AI Agents



Microsoft Fabric

The unified data platform for AI transformation

Data Factory

Analytics

Databases

Real-Time Intelligence

IQ

Power BI

Fabric Platform

Copilot

OneLake

Governance



Microsoft Fabric

The unified data platform for AI transformation

IQ

Semantic Models

Ontology

Graph

Data Agents

Operations Agents

Fabric Platform

Copilot

OneLake

Governance

Fabric Ontology **concepts**

Entity type (aliases: node type, class)
- Noun (Shipment, Product, or Sensor, etc.)

Property
- Tags, facts (description, name, startdate, status, temperature, etc.)
- A primary key (combination) and a description are required

Relationship (alias: edge)
- Verb (Has, Contains, Operates, etc.)

Data binding
- Connection between entity types with data tables to expose the entity instances

Entity instance (aliases: Entity node, twin, instance) = Semantic tree = Knowledge Graph
- Concrete occurrence of an entity type, populated from data bindings (like a semantic row)

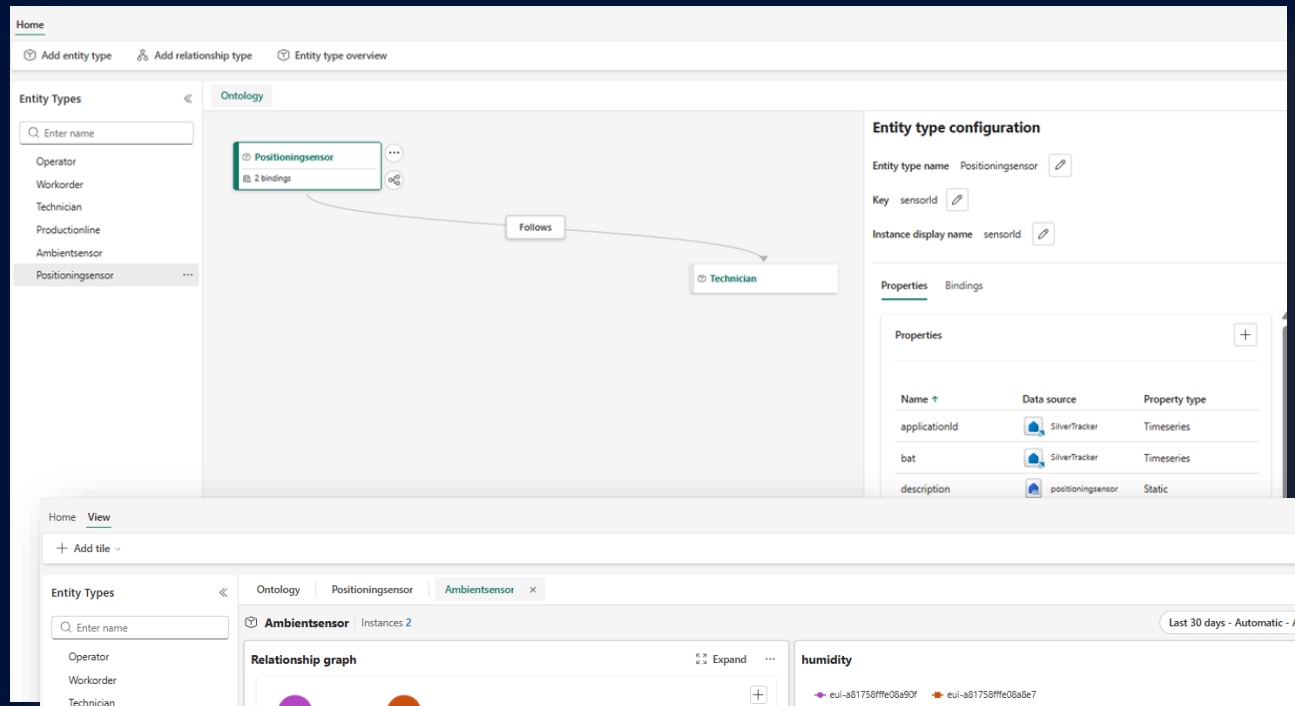
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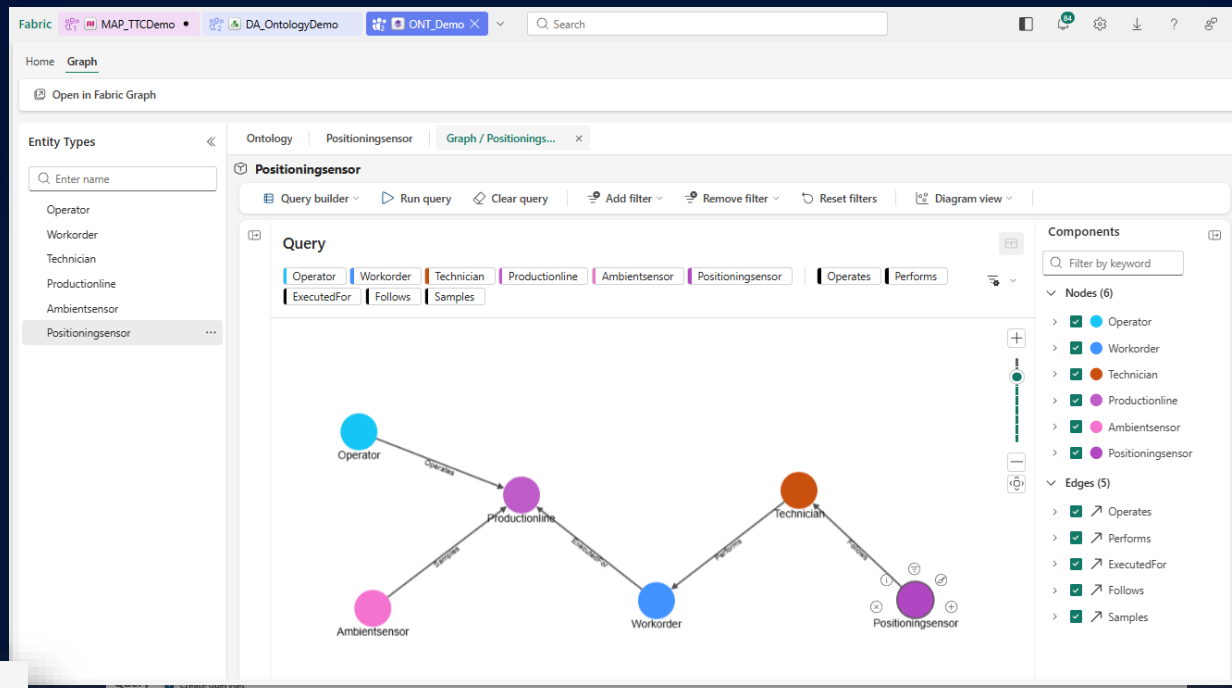
Demo
Fabric **Ontology**

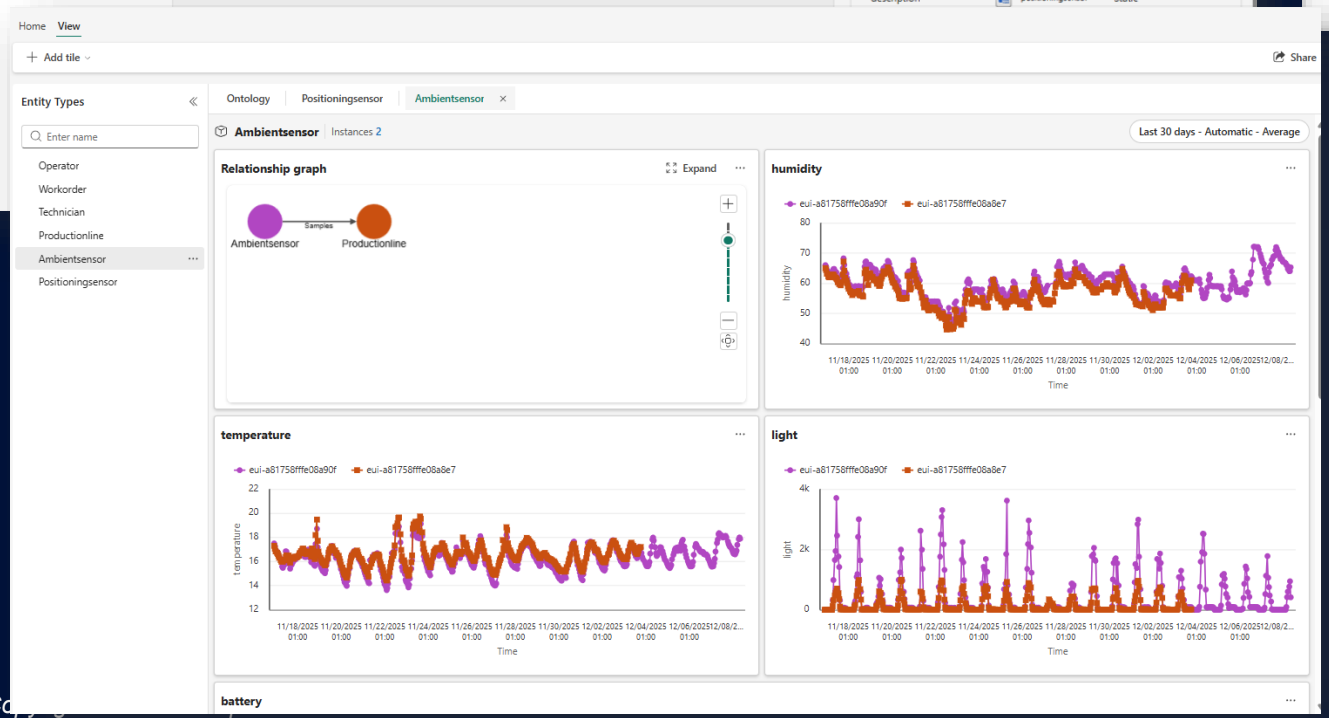
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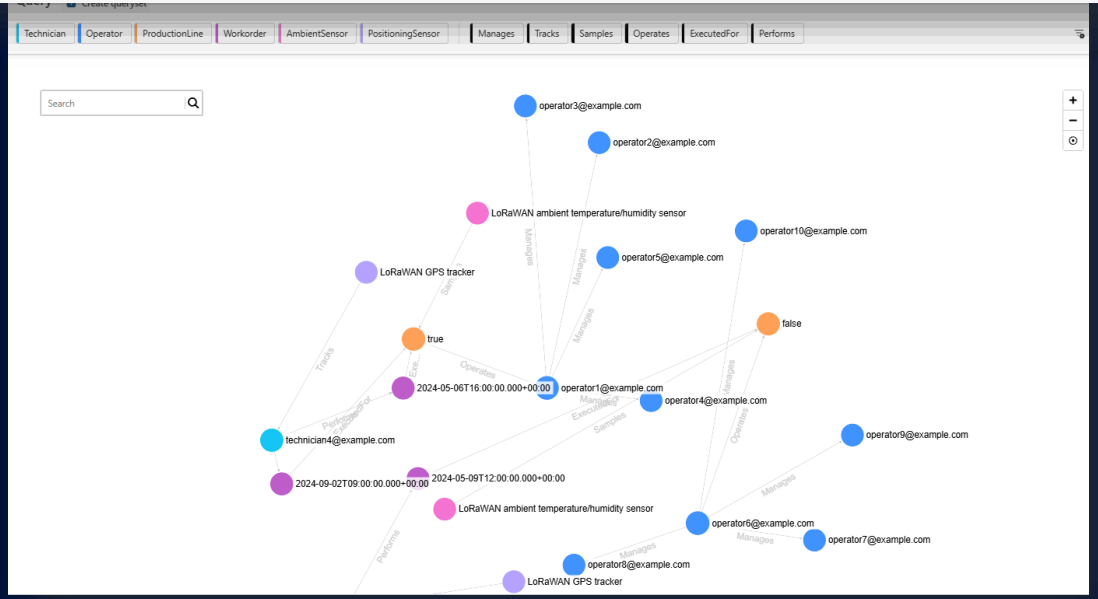
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Fabric Ontology **UX**



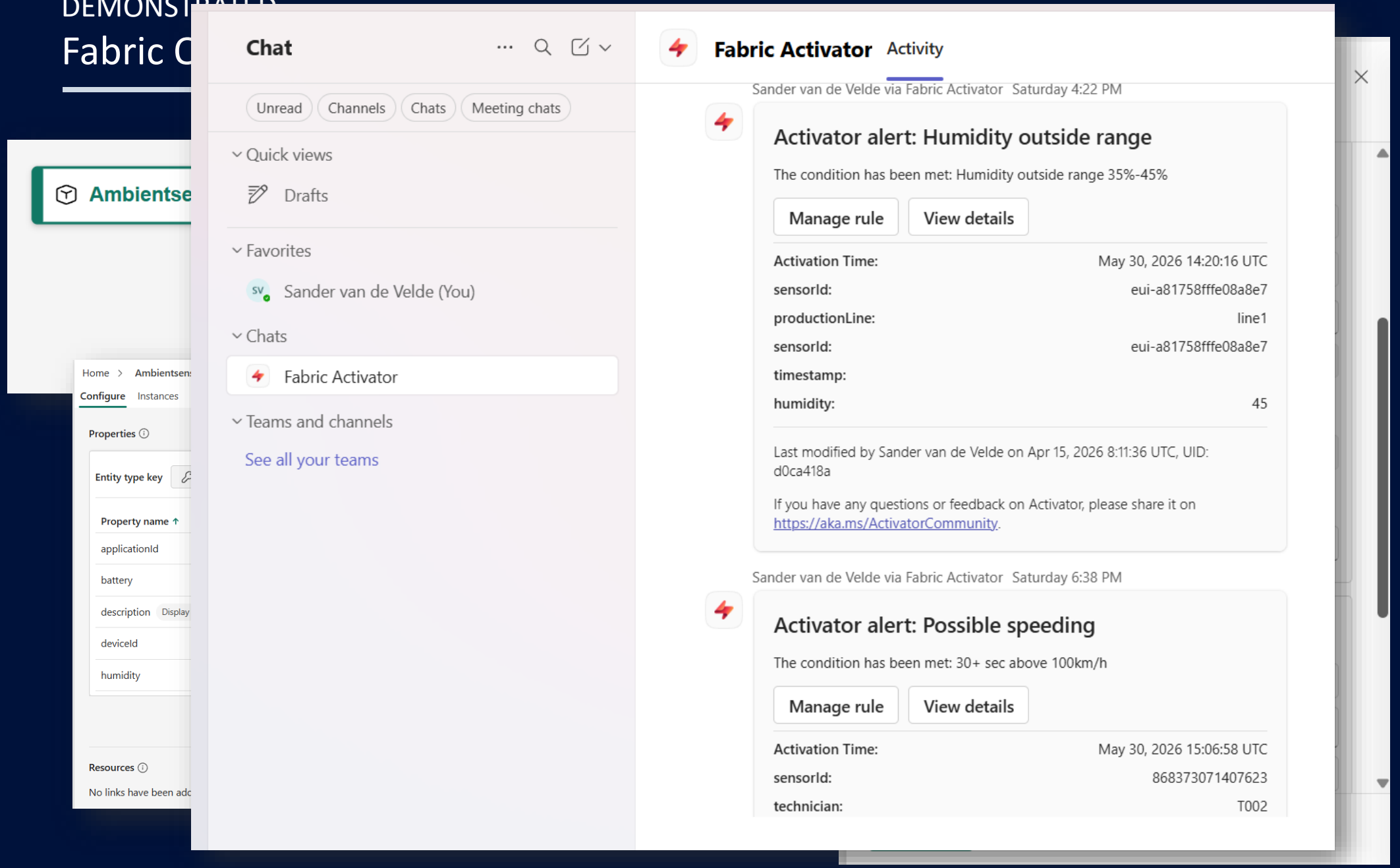






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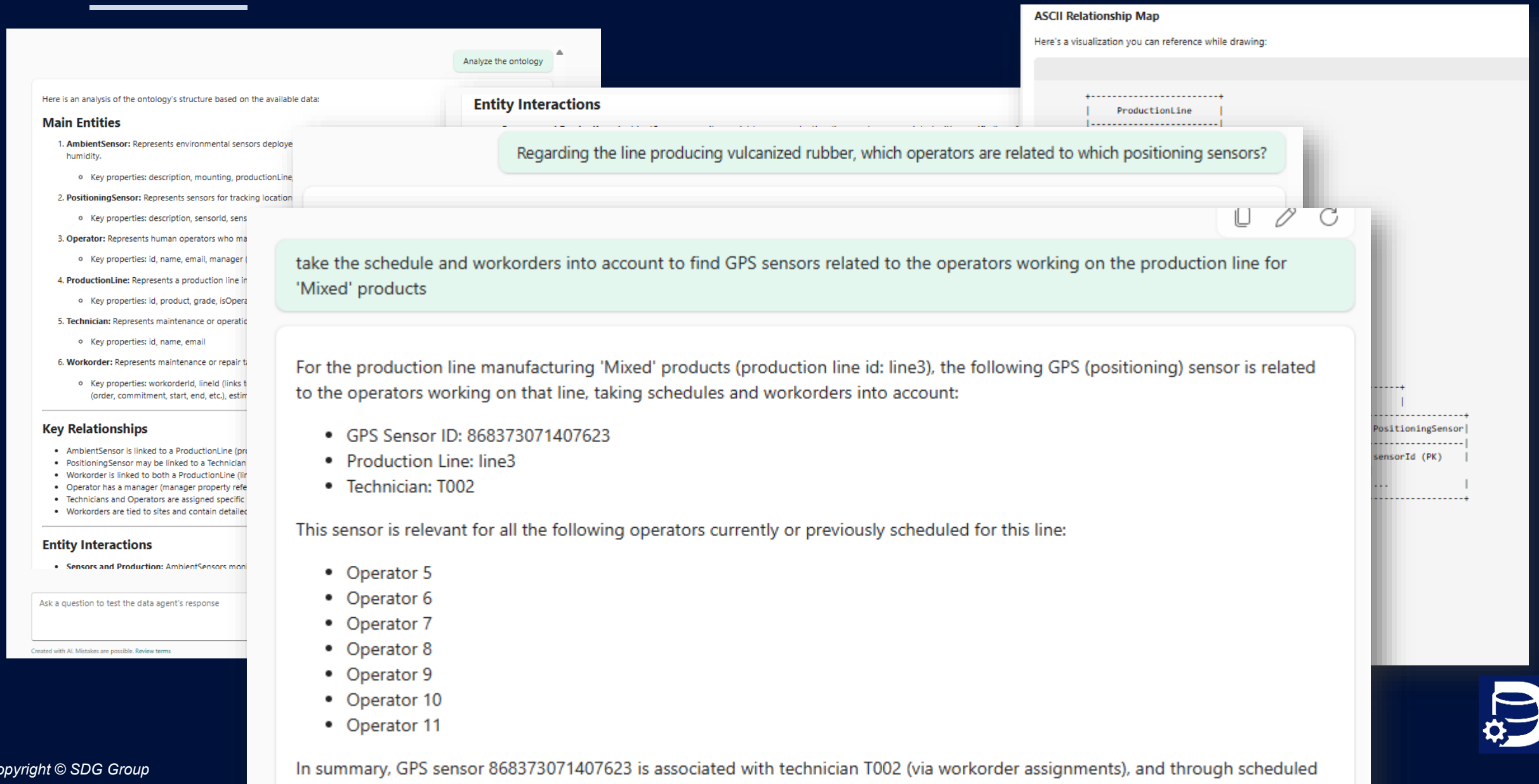
Fabric C



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Fabric Ontology **Agentic usage**



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Improvements are added every week

Fabric Ontology **MCP**



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How to **build** a Fabric Ontology

1. By hand in the Fabric UX

2. Generating via Fabric Semantic Model one-step wizard
   Expect rework

3. Via REST API
   Message format is undocumented

4. RDF (machine-readable graph format) support?
   https://microsoft.github.io/Ontology-Playground/

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Eventhouse KQL / Graph GQL

Digging deeper into Ontology queries

Natural languages via Data Agent

- First, a NL2Ontology layer is executed
- This uses GQL for Fabric Graph and KQL for Fabric Eventhouse

Using the underlying query languages directly

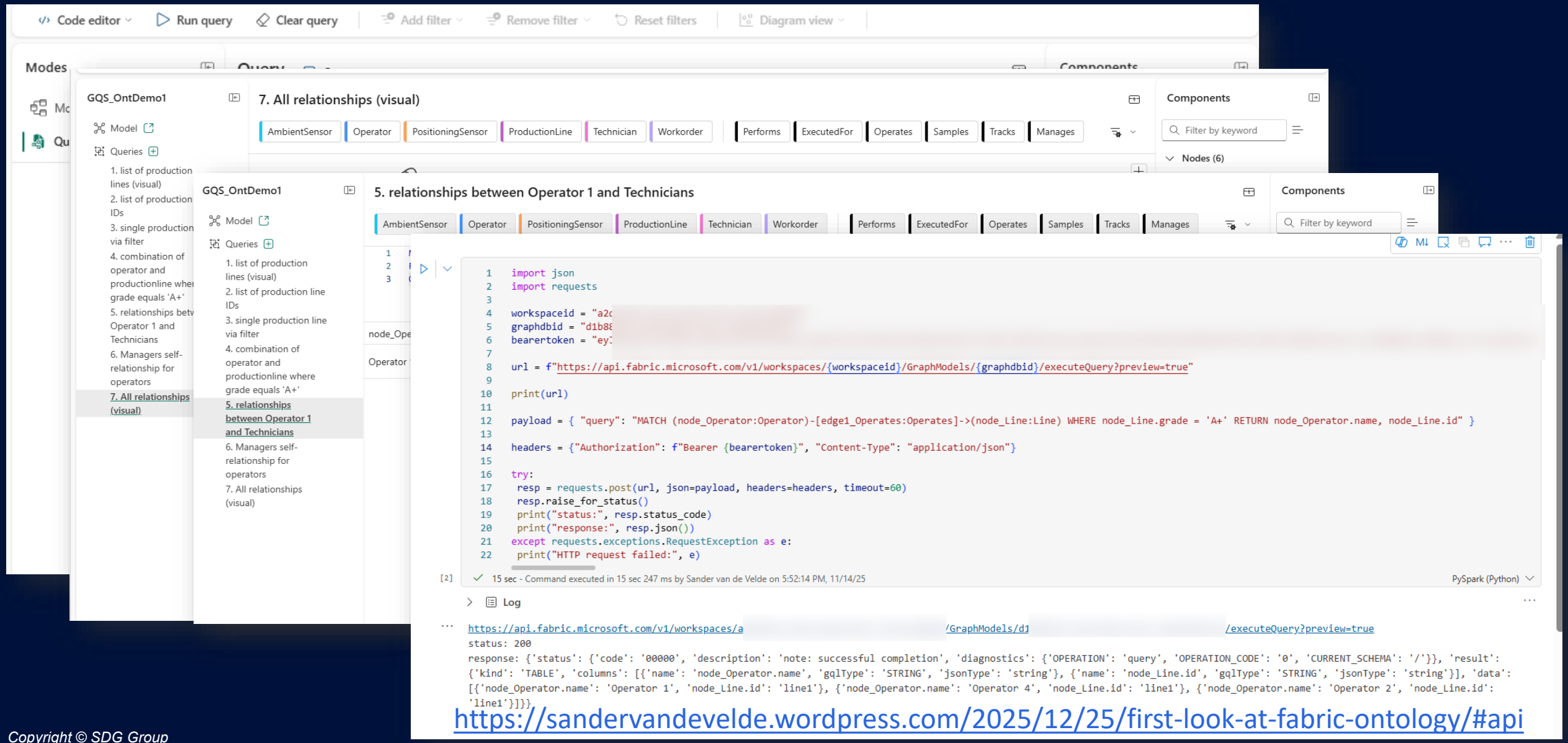
- Fabric Eventhouse KQL
- Fabric Graph GQL
- Lakehouse SQL

Pro-code experience via Fabric Functions or Fabric Notebooks

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Demonstrated

Digging deeper into GQL queries



https://sandervandevelde.wordpress.com/2025/12/25/first-look-at-fabric-ontology/#api

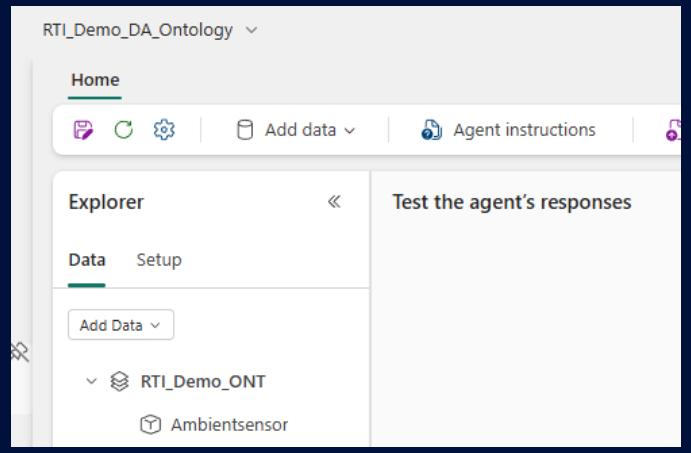
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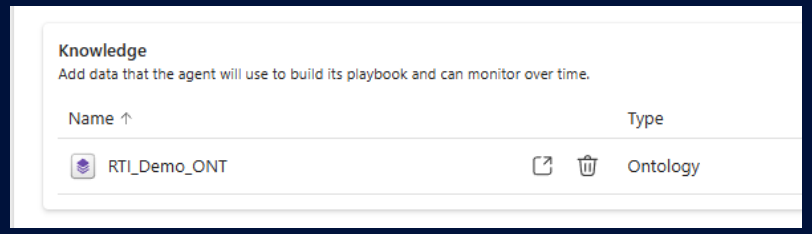
Fabric Ontology

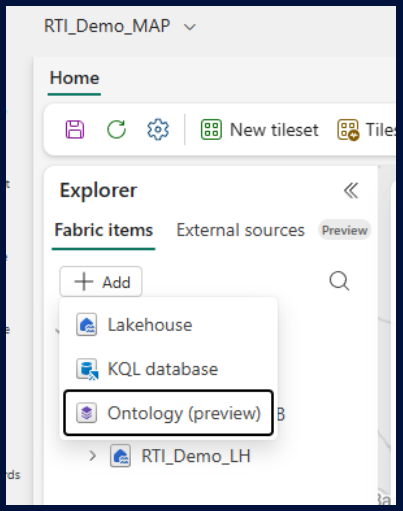
Current state

Fabric Ontology is positioned as a central hub for formalized enterprise data

- Already integrated with Data Agent, Operations Agent, Fabric Maps
- Specialized Ontology Remote MCP support is promissing
- No (UX) support for base nodes / base entities (yet)
- Rules and Alert via Activator integration
- No real-time updates



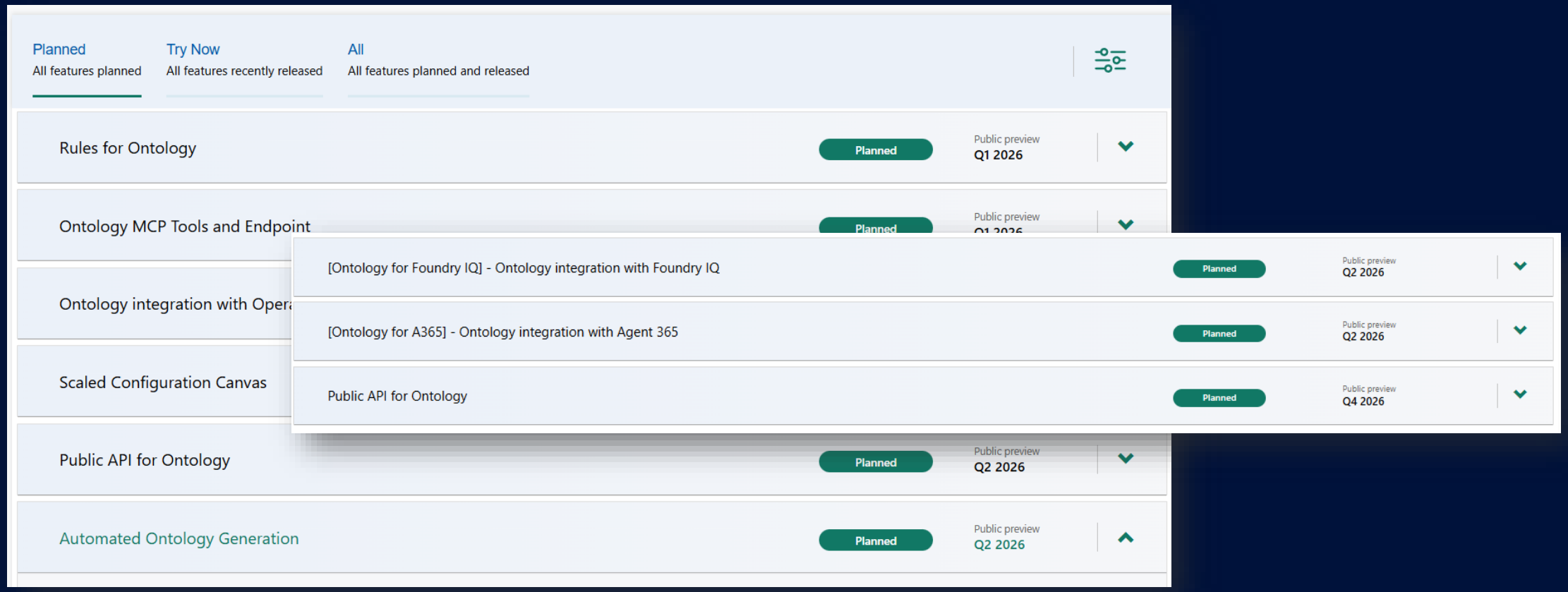




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Fabric Roadmap for **IQ**

Most of what we have seen is still in Public Preview



https://roadmap.fabric.microsoft.com/?product=iq

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Call for **Action**

Try out the Microsoft Fabric trial
https://learn.microsoft.com/en-us/fabric/fundamentals/fabric-trial

Join the Fabric Community portal
https://community.fabric.microsoft.com/

Join local Fabric community events
https://community.fabric.microsoft.com/t5/Events/ct-p/Events

Join the Microsoft Fabric Community Conference #FabCon
Next: Europe, Barcelona https://fabriccon.com/

Check out my 30+ posts about Fabric RTI
https://sandervandevelde.wordpress.com/

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Thank you!
Q&A

Build your ontology in a no-code way using Microsoft Fabric Ontology



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Principal architect at SDG Group

Microsoft MVP for Azure IoT
Microsoft MVP for Data Real-Time Intelligence

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SDG Group at a glance



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Business agility is the ability of an organization to adapt quickly to market changes, both internally and externally. This cannot exist without becoming a truly data-driven company.

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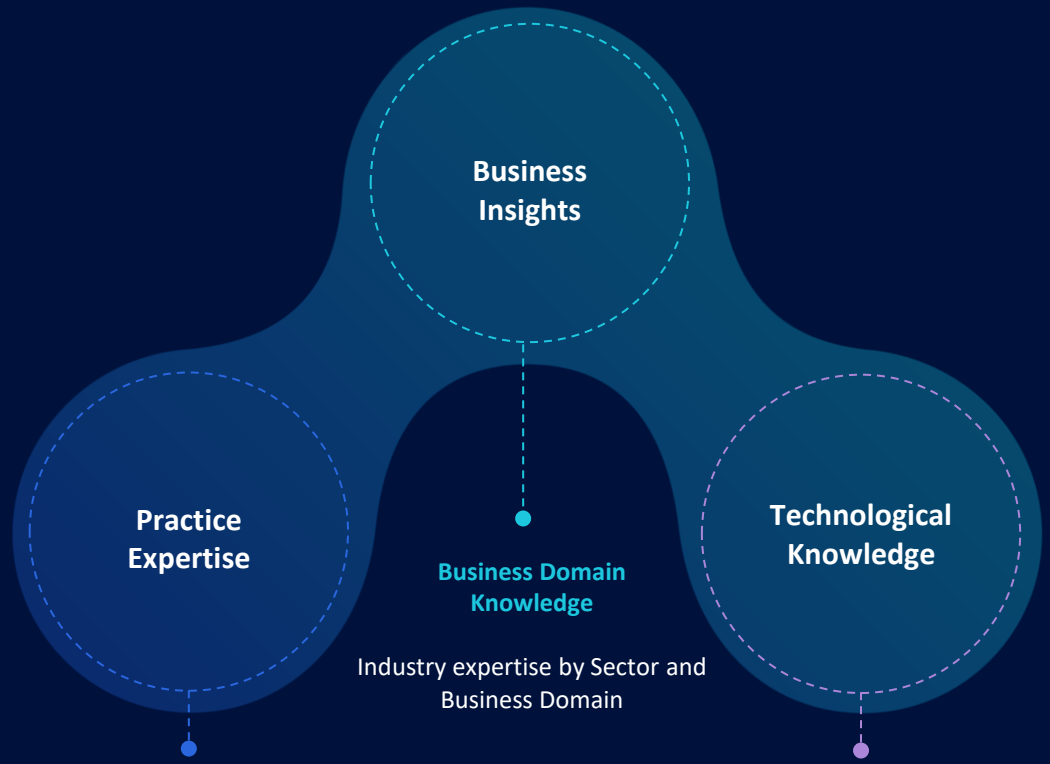
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The three **pillars**

SDG Group works on the pillars of a **Triple Expertise**, incorporating business process skills by domain, with a technological knowledge and a partnership with the most important and innovative software providers. We also add to our portfolio cutting-edge laboratories and the development of advanced analytics & AI technologies.



Business Domain Knowledge

Industry expertise by Sector and Business Domain

Practice Expertise in All Data, Analytics & AI Domains

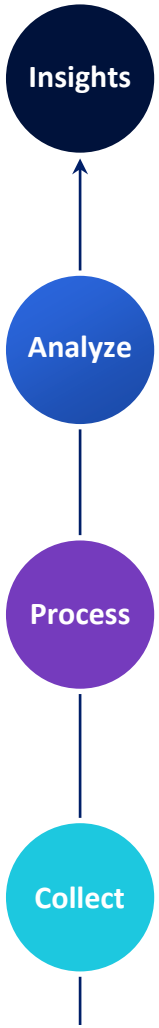
Decision Intelligence & Analytics
Data Management & Engineering
Business Insights, Strategy & Performance Management

Strong Tech Foundation & Tech-neutral Spirit

Strong Partnerships with Market Leaders
Best-of-breed Market Recognition
Vendor Independent Advice & Selection

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Data & Analytics Value Proposition



Insights & Performance Improvement

BUSINESS INSIGHTS

- Actionable Data into Business Insights
- Identification of data needed to produce insights
- Synthetization of analytics model results into actionable insights

PERFORMANCE MANAGEMENT

- CPM & Integrated Planning
- Financial Consolidation
- Process Mining & Discovery
- CFO & Controlling Office
- SOP Planning

OPERATIONAL ANALYTICS

- Embedded Analytics
- Data Activation
- Model Servicing
- Conversational Agents
- Real Time Insights

BUSINESS ANALYTICS

- Executive Analytics
- Data Storytelling
- Business Process Analytics
- Self-service

AI & BUSINESS SCIENCE

- Computer Vision
- NLU & NLP
- Graph Analytics
- Online & Reinforcement Learning

MODERN DATA MANAGEMENT

- DataOps & DataFabric
- Enterprise DWH Strategies
- Data Observability
- Master Data Management
- Business Model Curation

EXTREME DATA ENGINEERING

- Streaming ingestion
- Real-time analytics
- Streaming Data Activation
- Iot and Enterprise Data Integration

ANALYTICS FOUNDATION

- Descriptive Analytics Platforms
- MLSystems & AI Systems
- MLOps & Biops
- Headless BI

INFRA & CLOUD ENGINEERING

- Cloud & MultiCloud Blueprints
- Cloud migration & Adoption blueprints
- IoT Integration Framework
- Stream integration

DATAWARE

- Composable Analytics
- Custom solutioning
- Data intensive applications
- UX/UI
- Executive Dashboards

INFRA & CLOUD OPTIMIZATION

- FinOps
- DevSecOps
- Policy Enforcement
- Cross-cloud Compliance
- Data Continuity Services

Data & Analytics Foundation

Cross Areas

STRATEGY & TRANSFORMATION

- Roadmap 2 Cloud
- Data Strategy & Governance
- Analytics Roadmap
- Transformation Programs
- Data Trends & Benchmarks
- Data Mesh
- Knowledge Discovery
- Semantic & Metrics Layers
- Data Governance Frameworks
- Compliance

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- Demand Management
- Supply Forecasting
- Predictive Maintenance
- Portfolio & Asset Optimization

DATA COMPLIANCE

- Industry Compliance
- Data Sovereignty

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