Event-driven workflows: Unlocking the power of data activator in Microsoft Fabric

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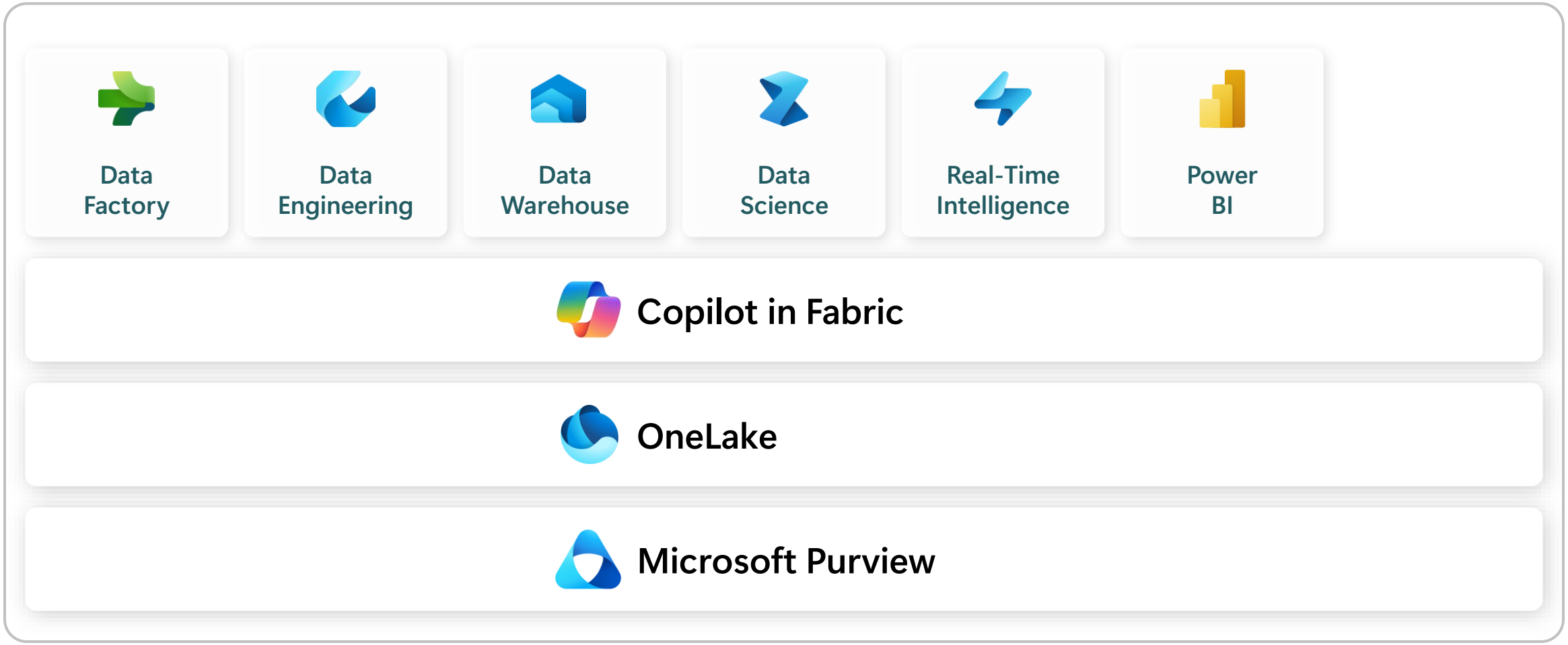
Microsoft Fabric

The data platform for the era of AI

From		To
Multiple analytics services	»	Unified stack
Disconnected data sources	»	All the data in one place
Isolated application	»	Entire estate
Gen AI bolt on	»	Gen AI built in

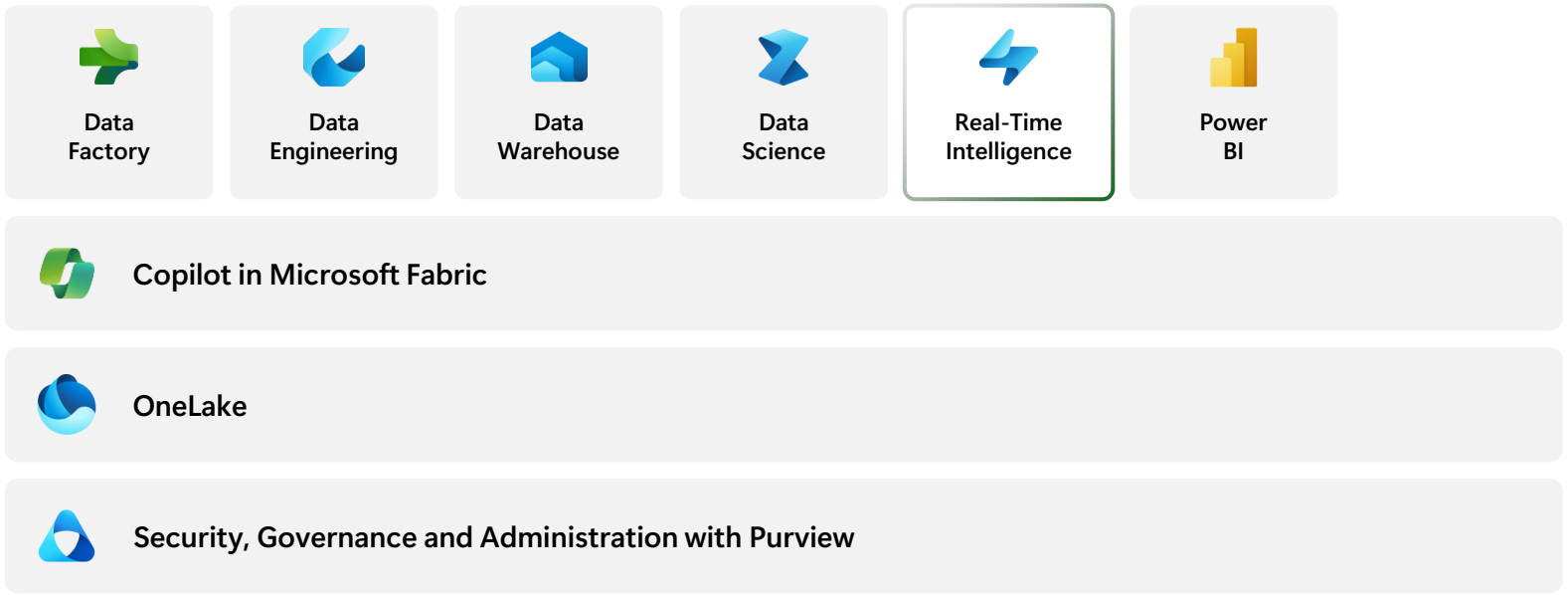
Microsoft Fabric



Seven key workloads for end-to-end analytics

Data Factory	Unify your data estate with a data integration experience and 300+ data transformations to easily solve the most complex ETL scenarios
Data Engineering	Enable data engineers to design, build, and maintain infrastructures at scale using World-class Spark platform with great authoring experiences to
Data Warehouse	Provide industry-leading SQL performance and scale, fully separating compute from storage for independently scaling and natively storing data in open Parquet/Delta Lake
Data Science	Empower data scientists and analysts to quickly build, deploy, and operationalize sophisticated AI directly within Fabric
Real Time Intelligence	Ingest streaming data with high granularity, dynamically transform streaming data, query data in real-time for instant insights, and trigger actions
Power BI	Make better, data-driven decisions with the world's leading business intelligence platform that turns unrelated sources of data into coherent, interactive insights

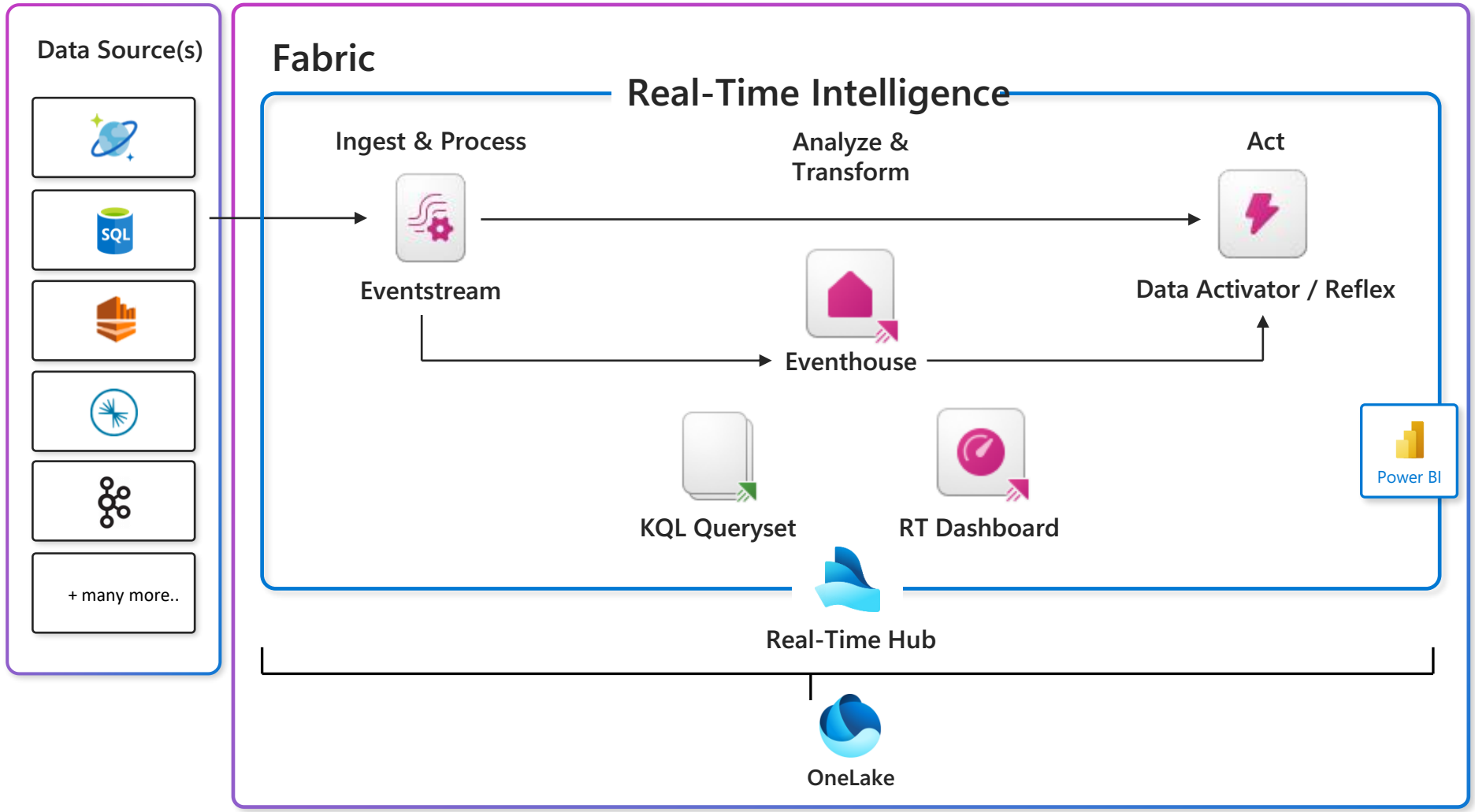
Real-Time Intelligence workload



- Ingest, transform, query, visualize, and act on data in real time.
- Simple ingestion, curation and processing of streaming data in the Real-Time Hub, a single data estate for data in motion.
- No-, low-, and pro-code experiences for everything from business insight discovery to complex stream processing.
- Create triggers on changing data to act automatically when conditions are met.
- Streamline analysis of event streaming data with Copilot in Fabric.

Real-Time Intelligence scenario

End-to-end analytics scenario



Overview of Data Activator in Fabric

An event-driven feature that allows organizations to automate workflows and derive insights in real time. It bridges the gap between data collection and actionable triggers by using real-time data streams and business rules to activate downstream processes.

Key Features of Data Activator:

- Event-Driven Architecture - Monitors and reacts to real-time data changes.
- No-Code/Low-Code Interface - Simplifies workflow creation without extensive coding knowledge. Takes actions when patterns or conditions are detected in changing data.
- Seamless Integration - Connects with Fabric services like Power BI, Synapse, and Azure Data Explorer.
- Customizable Rules - Allows users to define specific conditions and thresholds for actions.
- Alerts and Notifications - Triggers alerts, emails, or other notifications based on pre-defined conditions.

Use Cases:

1.Operational Efficiency:

1. Trigger automatic reordering of inventory when stock levels fall below a certain threshold.
2. Send alerts for anomalies detected in IoT device data.

2.Customer Engagement:

1. Notify a sales team when a key client interaction event occurs in real time.
2. Trigger personalized marketing campaigns based on customer behavior.

3.Risk Management:

1. Monitor transactions for potential fraud and alert the security team.
2. Trigger actions to mitigate system failures or downtimes.

An end-to-end Real-Time Intelligence experience connected Factory

Ingest & process

1. Over 1M/1 HR IoT events, 30k tags, from 40 factories are streamed in real time with sub-second latency
2. Contextualization data (asset metadata, shift details, weather, component cost, etc.) into Fabric OneLake

Analyze & transform

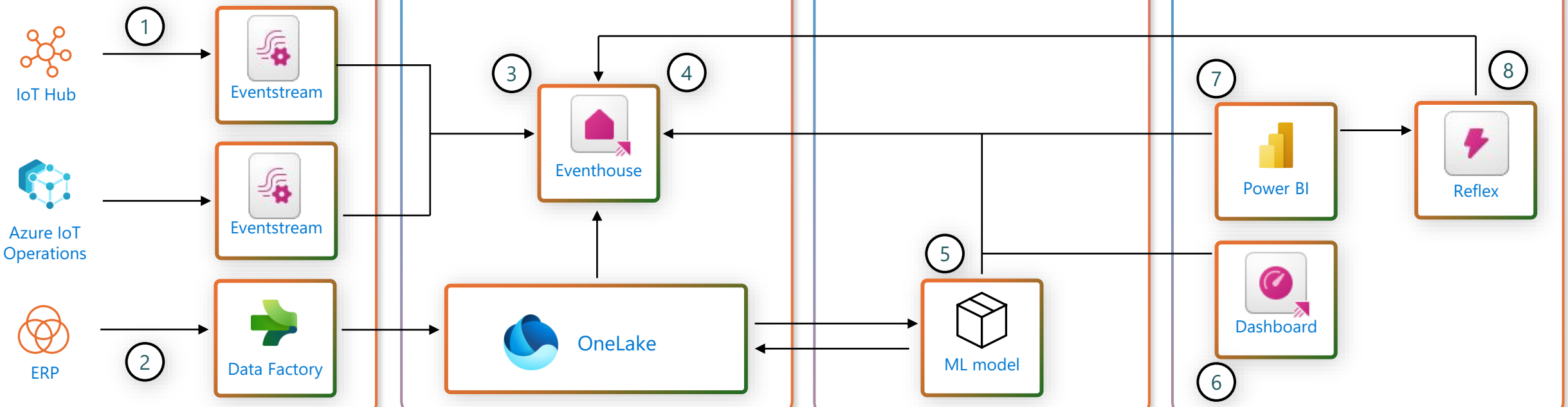
3. IoT events are enriched in-motion with the Contextualization data and asset hierarchy from OneLake, providing clean and meaningful views
4. Enriched data is aggregated on the fly for long-term view

Train

5. Build, train, and score ML models in real time, persisting the scored data in OneLake

Visualize and activate

6. Real time dashboard of all factories with ability to easily shift from low granularity to high granularity view
7. Enhance organizational BI reports with high granularity enriched data
8. Notify users and activate automation in response to live indications from the factory floor



Questions?