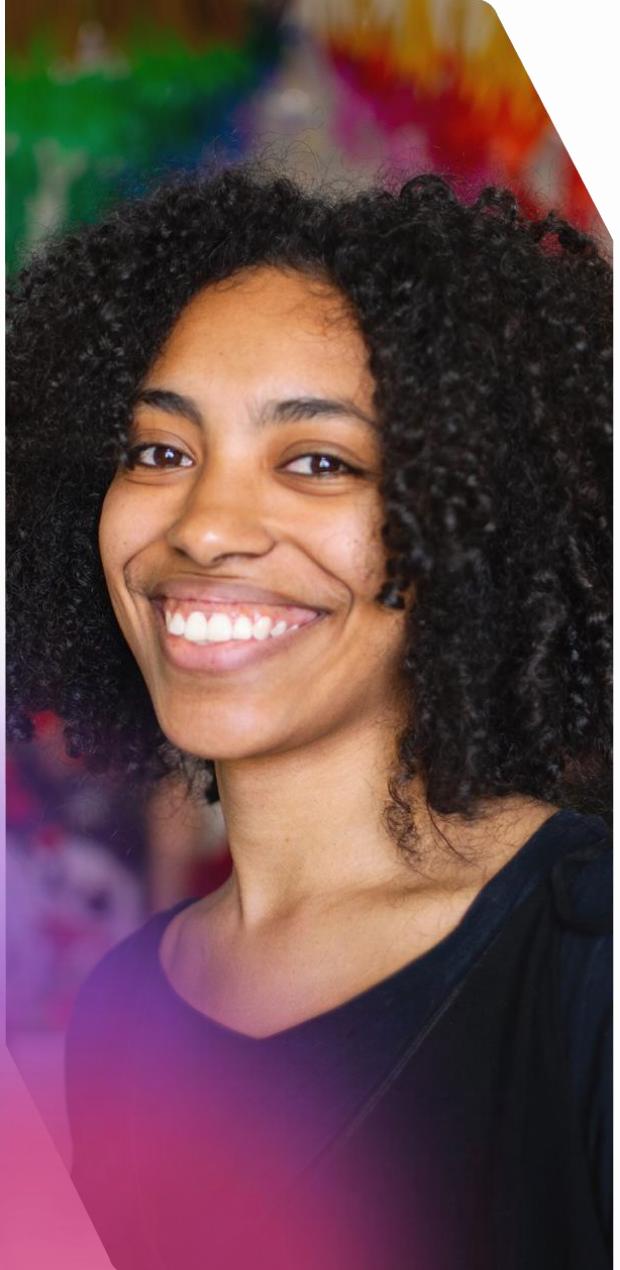




Microsoft

Microsoft Fabric

# Real-Time Intelligence L200 Pitch Deck



**01**

The opportunity with  
streaming data

**02**

Real-Time Intelligence in  
Microsoft Fabric

**03**

A complete SaaS solution

**04**

A single place for data in  
motion

**05**

Rapid solution  
development

**06**

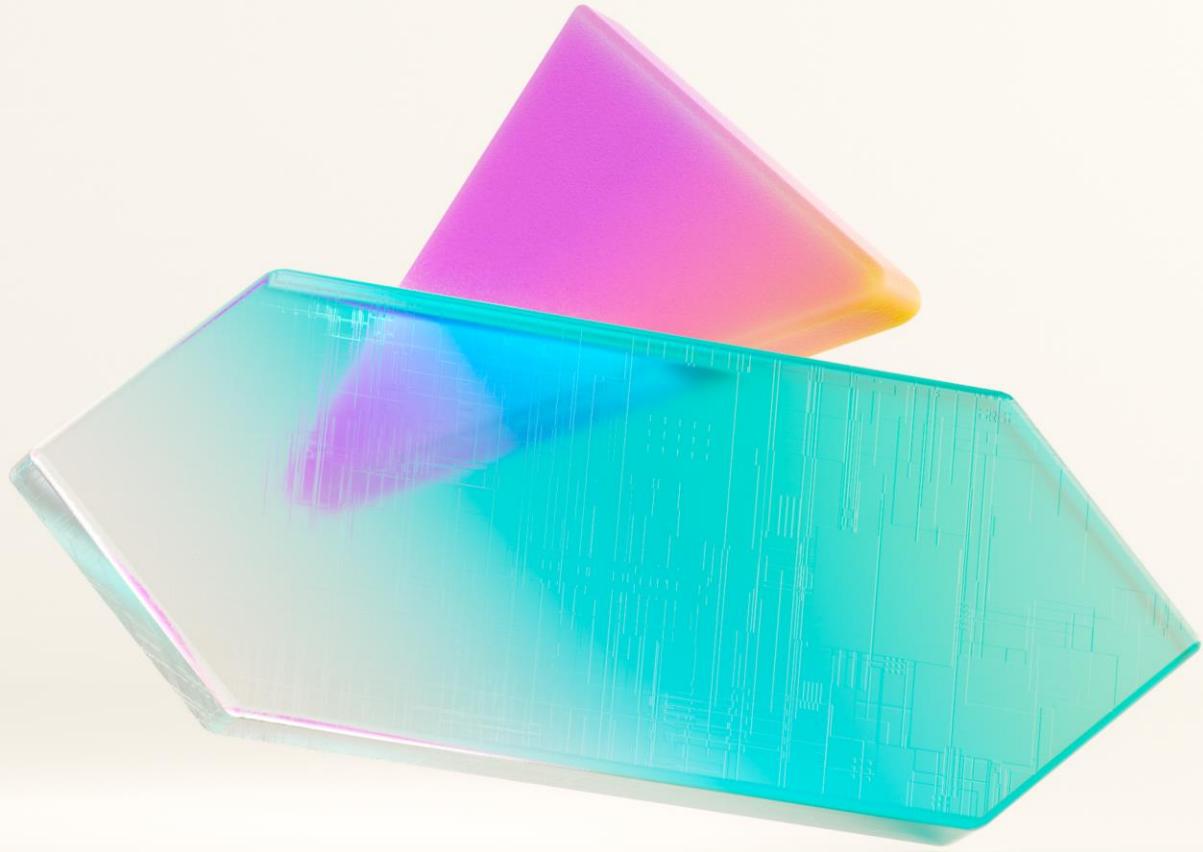
Real-time AI insights

**07**

Use cases

**08**

What we're hearing from  
customers



The opportunity  
with streaming data



There is a rapidly growing set of use cases that need 'real-time' speeds, generating decisions and actions at least **20 times faster** than the blink of an eye."

Forbes, "[Understanding AI and ML in the real-time economy,](#)" February 2024

# Leveraging real-time intelligence can help companies accelerate speed and precision of business



## Operational efficiency

Streamline processes and **make data-driven decisions** with accurate, up-to-date information



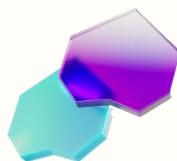
## End-to-end visibility

Gain a **holistic understanding of business health** and discover actionable insights for timely action



## Competitive advantage

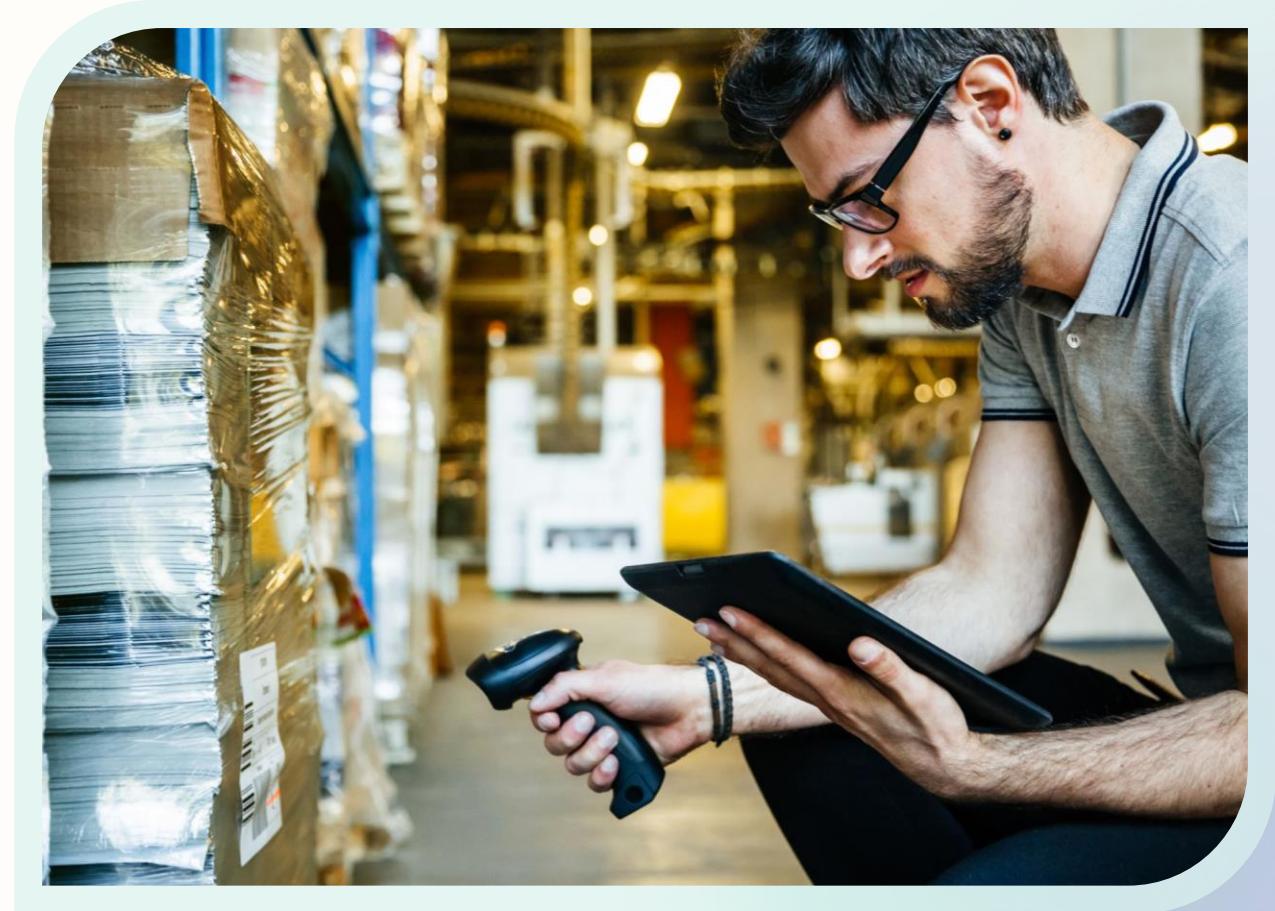
Quickly react to shifting market trends, **identify opportunities and mitigate risk** in real time



# Time-oriented data is difficult to manage, yet critical for success

For customers, it is:

- Challenging to capture high throughput data from disparate sources in real time
- Difficult to model scenarios using event data
- Complicated to choose from array of bespoke technologies and data formats
- Hard to successfully leverage the power of AI against data in real time



# The negative impacts of stale data do not discriminate across industries

Without the ability to leverage time-oriented data, businesses are vulnerable to risk



# Companies need data and analytics capabilities that can keep up with time-oriented data needs

From

Fragmented, fragile tech stack

Advanced skillsets required

Faster batch data processing

To

One, unified SaaS solution

Accessible data and analytics tools

Real-time stream processing

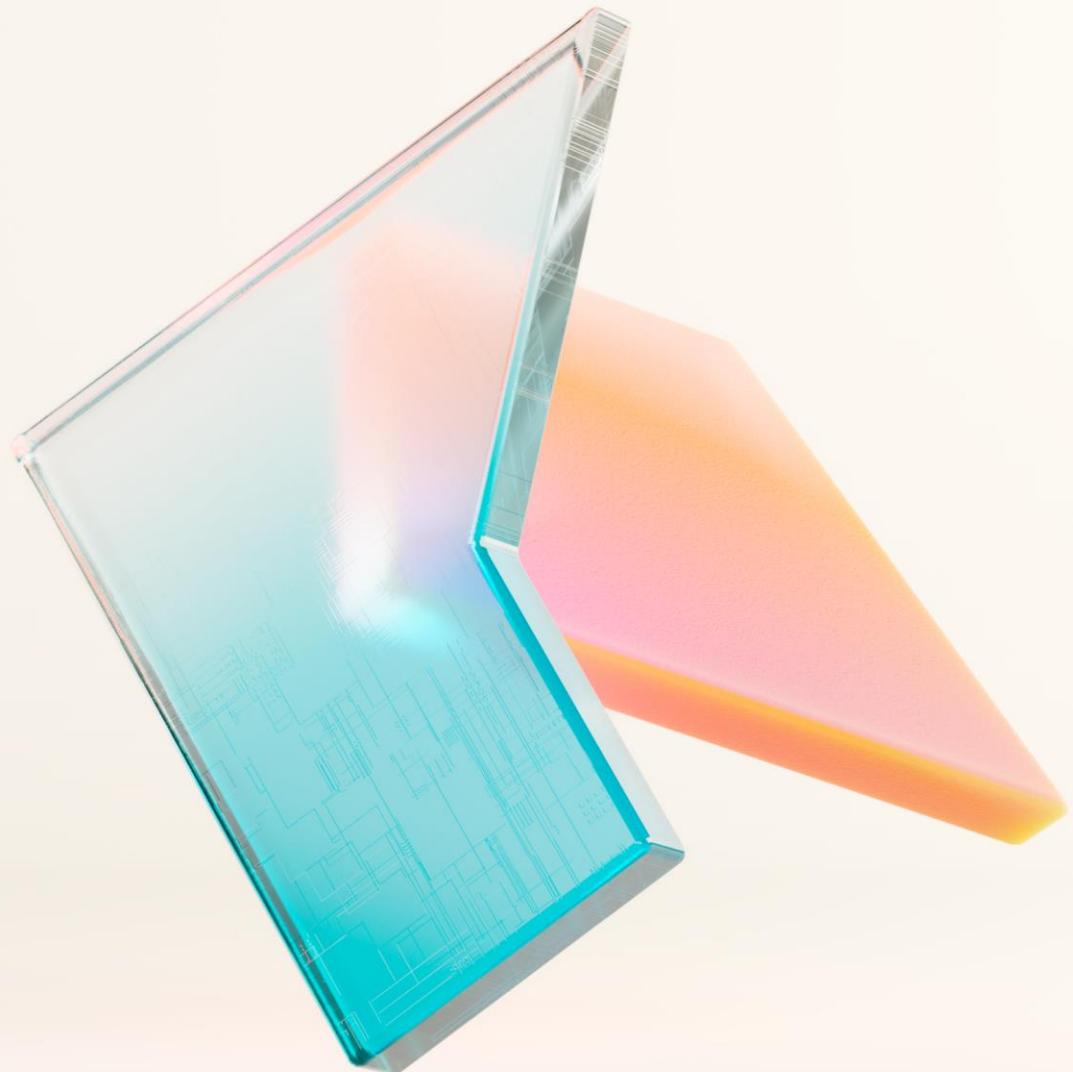


# Opportunities abound across industries when real-time data value is realized



Automotive	Manufacturing	Logistics	Finance & Insurance	Energy & Utilities	Retail	Healthcare
<ul style="list-style-type: none"><li>Connected fleet applications</li><li>Autonomous driving</li><li>Manufacturing R&amp;D</li></ul>	<ul style="list-style-type: none"><li>Quality and throughput improvement</li><li>Predictive maintenance</li><li>Predictive inventory</li></ul>	<ul style="list-style-type: none"><li>Delivery tracking and routing</li><li>Warehouse management</li><li>Supply &amp; demand operations</li></ul>	<ul style="list-style-type: none"><li>Finance automation</li><li>Fraud detection</li><li>Operational efficiency</li></ul>	<ul style="list-style-type: none"><li>Station monitoring, energy leakage detection</li><li>Equipment maintenance &amp; monitoring</li><li>Failure monitoring</li></ul>	<ul style="list-style-type: none"><li>Inventory tracking</li><li>Promotions and buying experiences</li><li>Supply chain management</li></ul>	<ul style="list-style-type: none"><li>Emergency response</li><li>Remote patient monitoring</li><li>Clinical decision support</li><li>Surgical assistance</li><li>Hospital operations</li></ul>





Real-Time  
Intelligence in  
Microsoft Fabric



# Microsoft Fabric

The data platform for the era of AI

## Unify your analytics on a complete, governed platform

Give your data teams all the tools they need in a unified, governed, and secure experience that reduces the cost and effort of integration.

## Establish a trusted data foundation

Integrate data from anywhere into a single, multi-cloud data lake for the entire organization and work from the same copy of data across analytics engines.

## Empower every business user

Empower everyone to uncover insights with the data they need, easy-to-use tools, and visuals embedded in the Microsoft 365 apps they use everyday.

## Fuel your AI innovation

Adopt a data platform that's infused with AI at every layer to help you get more done, faster.



# Microsoft Fabric

Intelligent data foundation



Data  
Factory



Data  
Engineering



Data  
Warehouse



Data  
Science



Real-Time  
Intelligence



Power  
BI



Industry  
Solutions



Powered by AI with Copilot in Microsoft Fabric



Catalog for data in motion

Real-Time Hub



Unified data foundation

OneLake



# Microsoft Fabric

## Intelligent data foundation



Data  
Factory



Data  
Engineering



Data  
Warehouse



Data  
Science



**Real-Time  
Intelligence**



Power  
BI



Industry  
Solutions



Powered by AI with Copilot in Microsoft Fabric



Catalog for data in motion

Real-Time Hub



Unified data foundation

OneLake

# The power of two workloads coming together in one, central place for all your streaming data

## Real-Time Intelligence



Real-Time Hub



Eventstream



Eventhouse



Real-Time Dashboard



Reflex



Real-Time Analytics



Data Activator



# Real-Time Intelligence

The real-time SaaS platform within Microsoft Fabric

## A complete SaaS solution

Leverage a complete, easy-to-use SaaS solution that helps you gain actionable insights from your data, with the ability to ingest, transform, query, visualize, and act on it in real time.

## A single place for data in motion

Pull event streams from Real-Time Hub, a single data estate for data in motion simplifying the ingestion, curation and processing of streaming data from Microsoft and external sources.

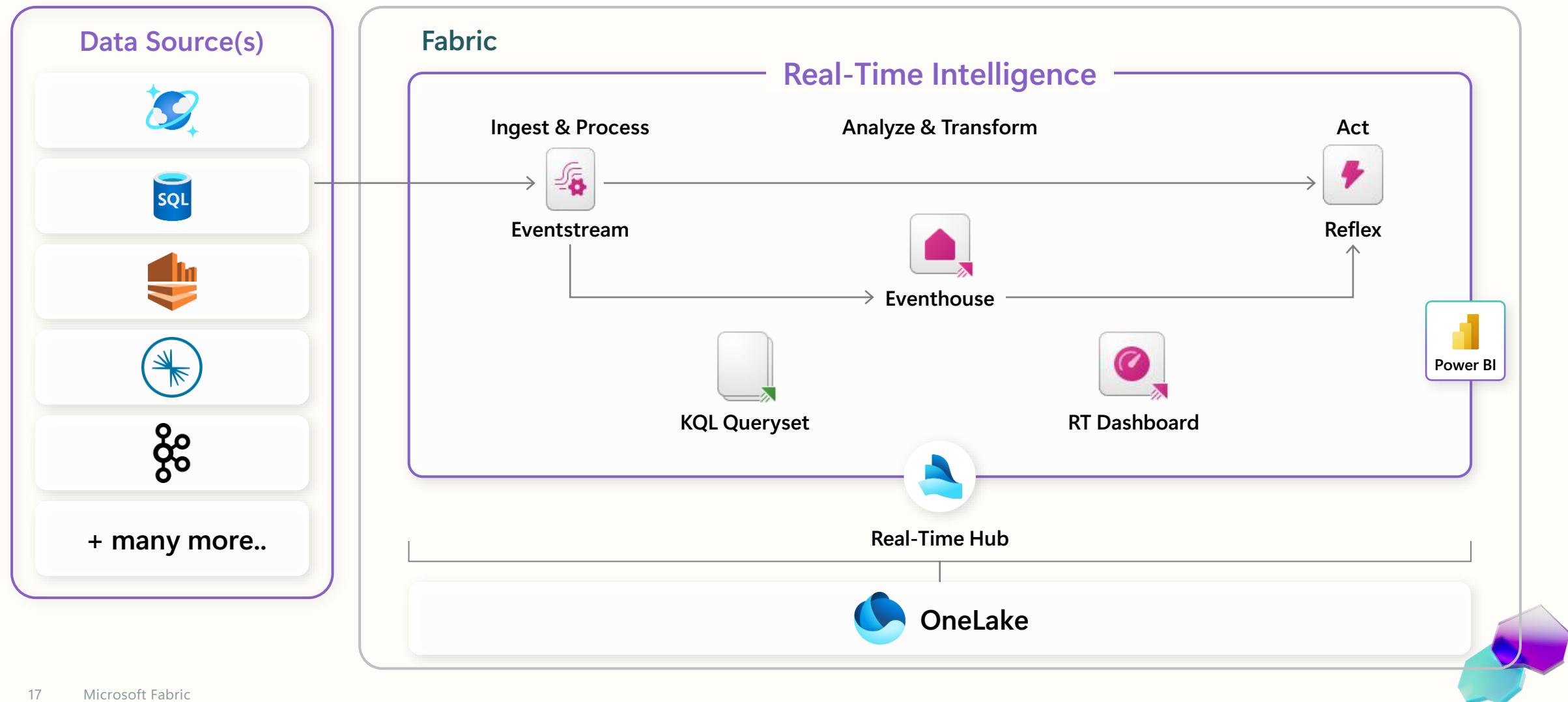
## Rapid solution development

Access a range of no-, low-, and pro-code experiences for everything from business insight discovery to complex stream processing, and application and model development.

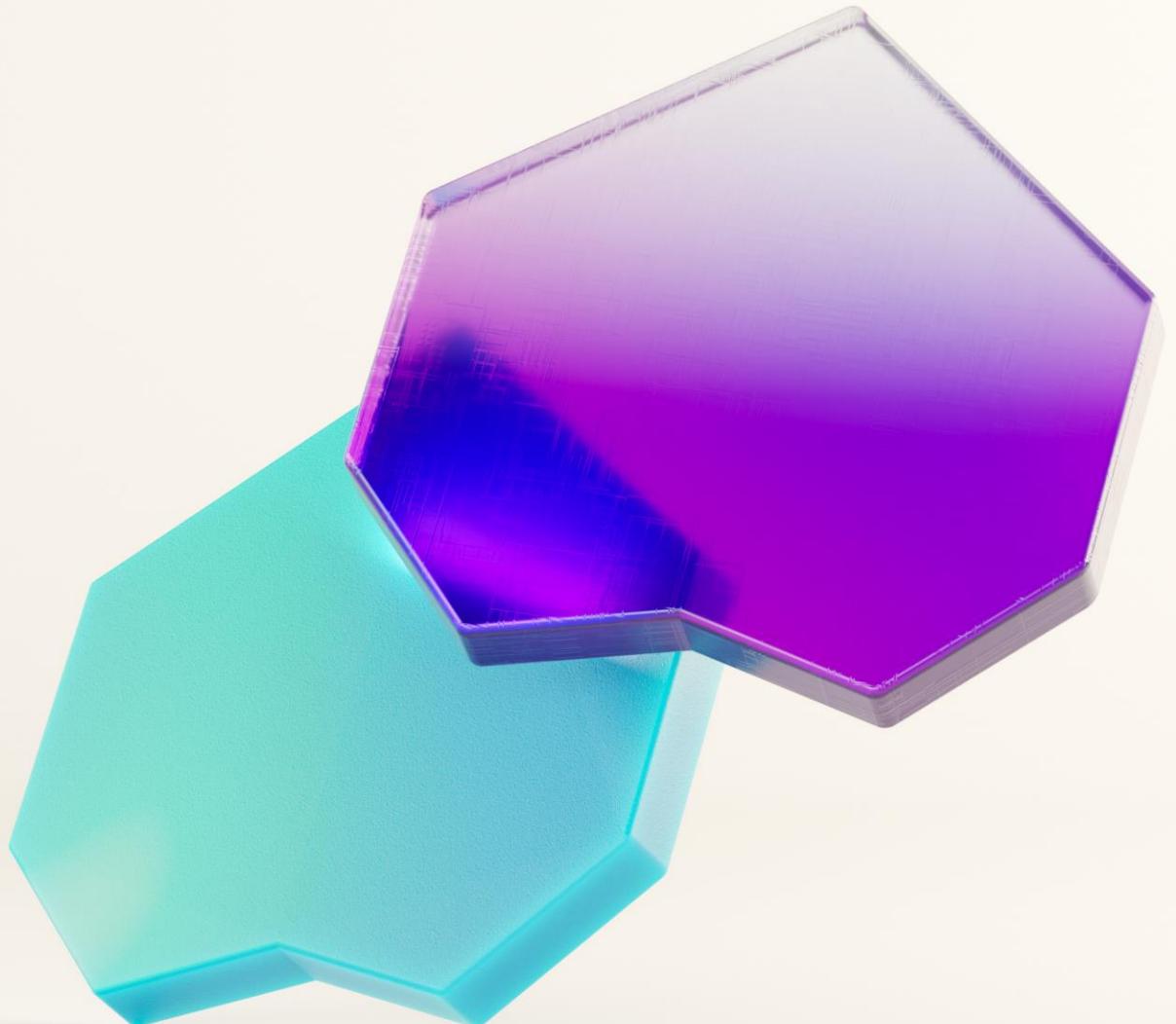
## Real-time AI insights

Scale beyond human monitoring and drive actions with built-in, automated capabilities that anyone in your organization can take advantage of.

# Components of Fabric's Real-Time Intelligence







A complete SaaS  
solution



## A complete SaaS solution

Choose from a range of end-to-end capabilities to act quickly on time-oriented data



### Ingest & process all event sources

Connect to a diverse set of streaming sources and leverage no-code and low-code experiences to process and route quickly



### Analyze data event streams

Analyze and transform data streams, using queries and visual exploration to discover insights in real-time



### Act quickly on top of data

Create triggers and set alerts on changing data to respond automatically and set action when specific conditions are detected

# Ingest & process all data sources

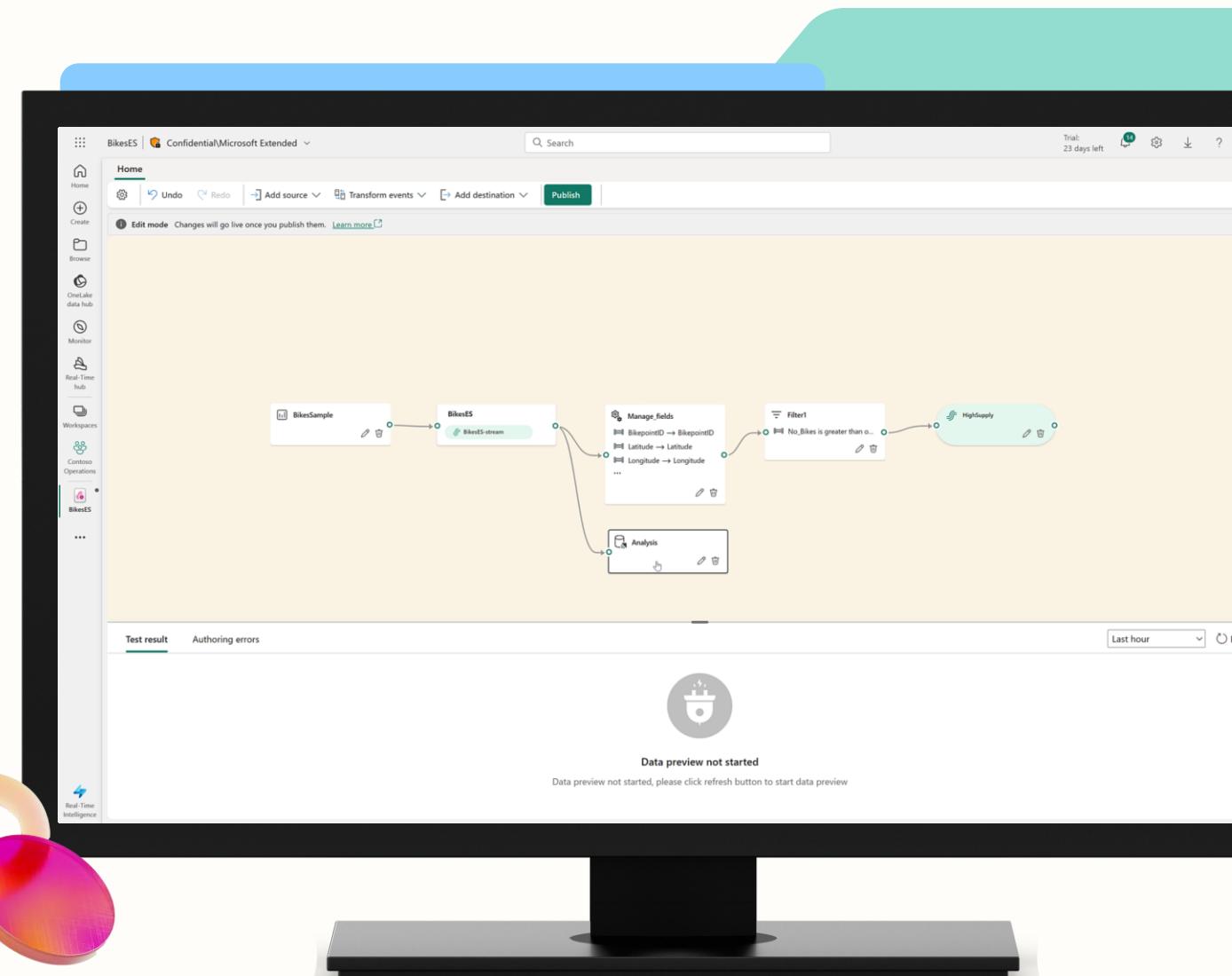
Ingest data from any source, in any data format

Capture, transform and route event data without writing any code

Access out-of-the-box connectors for streaming and event data sources

Process data and enrich real-time events

Route events to other Fabric and 3<sup>rd</sup> party entities



# Analyze data event streams

Manage an unlimited amount of data, from gigabytes to petabytes, with unlimited scale

Use event houses to handle and analyze large volumes of real-time data streams

Monitor and manage multiple databases at once

Create KQL databases and querysets to run, view, and customize queries directly on raw data

Enhance organizational BI reports with enriched data



The screenshot shows the Microsoft Fabric Data Explorer interface. On the left, a sidebar lists databases like Manufacturing\_kdb and Manufacturing\_evh, along with tables such as Bikes, Deliveries, DeliveryStream, DeliveryZones, Inventory, LoyaltyCustomer, NewTracking, SpecializedDelivery, Trucks, Shortcuts, Materialized views, Functions, and Data streams. The main area displays 'Database: Manufacturing\_kdb' with 'Database details' including creation date and region. Below this is a 'Top tables' section showing table names and sizes: Deliveries (948.64 MB), DeliveryStream (903.7 MB), Bikes (81.79 MB), DeliveryZones (1.7 MB), and Trucks (203.44 KB). At the bottom, there's a 'Recently updated functions' section with two entries for 'Deliveries'. To the right, a 'Explore your data' panel contains a code editor with KQL queries, a preview of the 'Table 1' results (BikePointID, Street, Neighbourhood, Latitude, Longitude, No\_Bikes, No\_Empty\_Docks), and a 'Copy query' button.

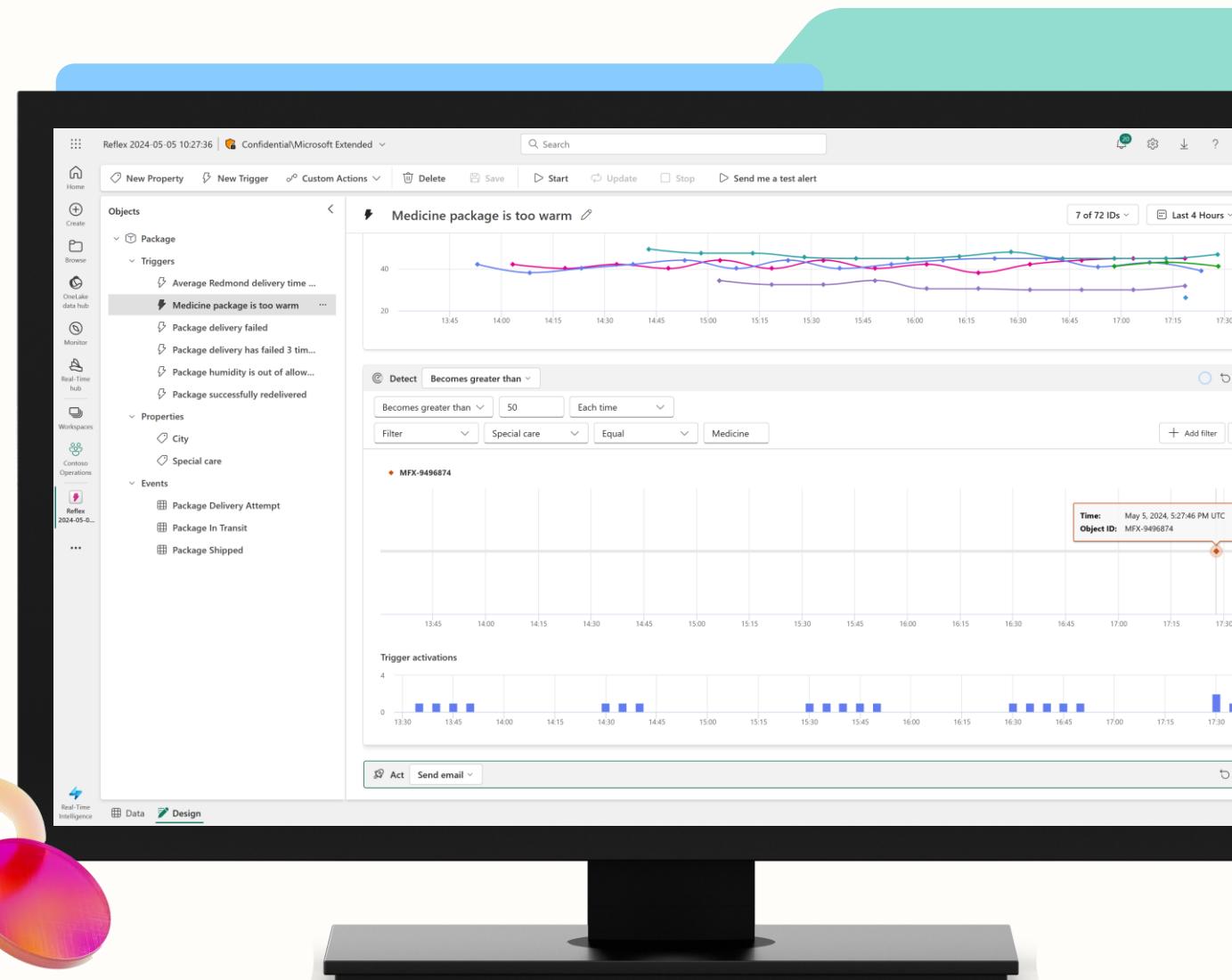
BikePointID	Street	Neighbourhood	Latitude	Longitude	No_Bikes	No_Empty_Docks
BikePoints_357	Howland Street	Fitzrovia	51.5209923	-0.139016	24	6
BikePoints_624	Courland Grove	Wandsworth Road	51.47292	-0.132102	7	33
BikePoints_460	Burdett Road	Mile End	51.5161972	-0.029138	28	5
BikePoints_602	Union Grove	Wandsworth Road	51.4729919	-0.133972	37	8
BikePoints_491	Queen Mary's	Mile End	51.5225067	-0.041378	7	38
BikePoints_492	Maplin Street	Mile End	51.5255	-0.03267	10	29
BikePoints_714	Stewart's Road	Wandsworth Road	51.4731178	-0.137235	15	13
BikePoints_522	Clinton Road	Mile End	51.52994	-0.036017	24	12
BikePoints_531	Twig Folly Bridge	Mile End	51.5301268	-0.042744	0	21
BikePoints_518	Antill Road	Mile End	51.5282249	-0.037471	7	23
BikePoints_550	Harford Street	Mile End	51.5215645	-0.039264	4	19
BikePoints_712	Mile End Stadium	Mile End	51.51854	-0.034903	13	9
BikePoints_763	Mile End Park Leisure Centre	Mile End	51.5205956	-0.032566	24	23

# Act quickly on top of data

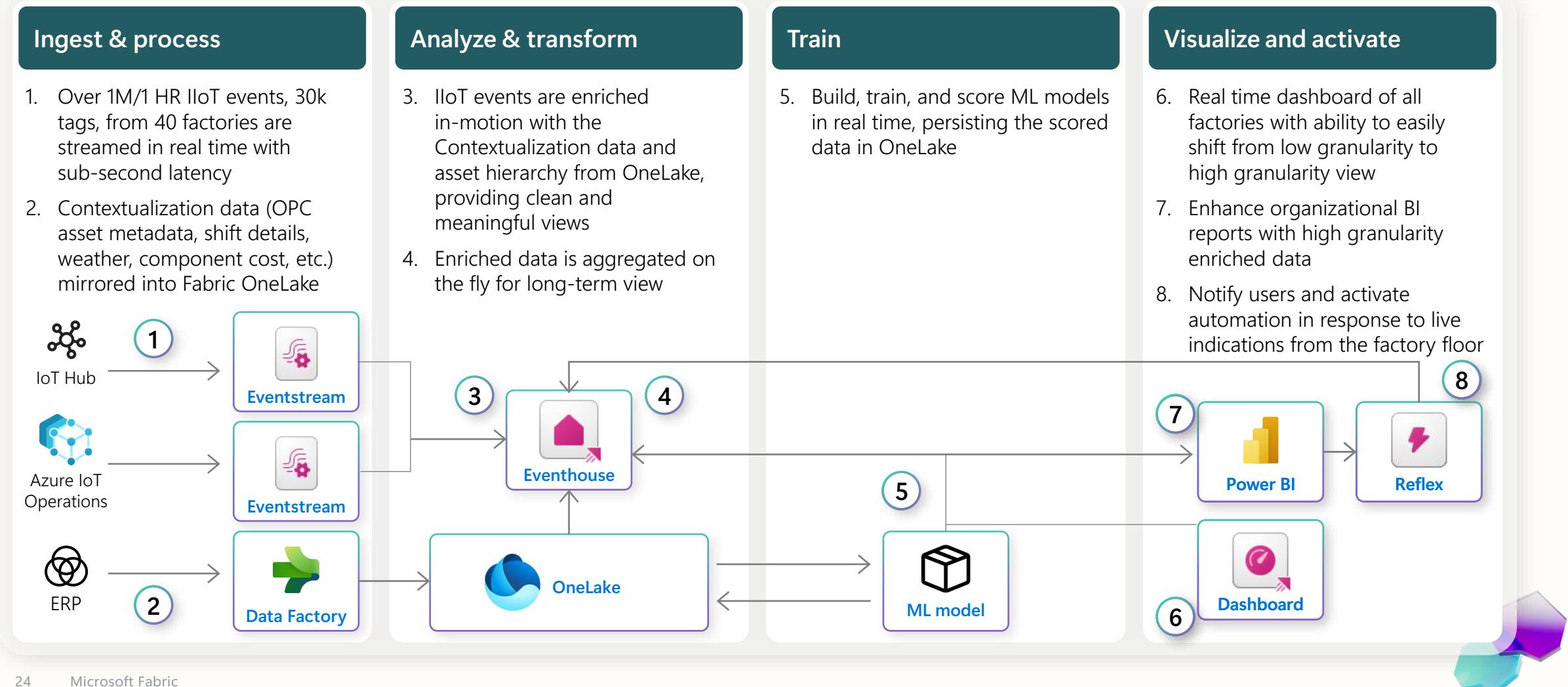
Automatically take actions when patterns are detected in changing data

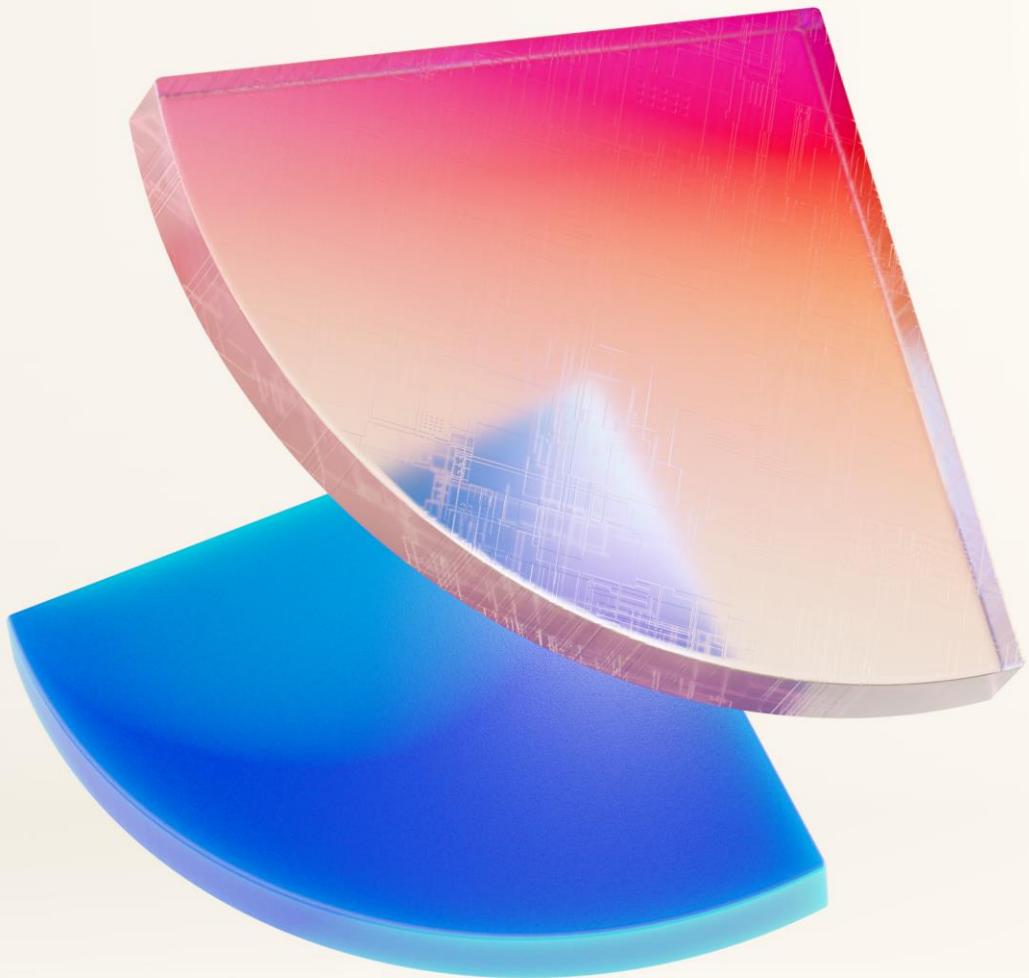
Drive actions on a per instance state that evolves over time

Act on data without needing a deep schema and semantic modeling



# An end-to-end Real-Time Intelligence experience – Connected Factory





A single place for  
data in motion



## A single place for data in motion

Blend your data-in-motion and data-at-rest for accelerated insight discovery



### Access Real-Time Hub

Leverage Real-Time Hub, a large catalog of data-in-motion available on Day 1, brought in with just a few clicks in Get Events



### Work across full event life cycle

Analyze, build lightweight models, and trigger actions over all your data-in-motion, working across the life cycle of events to create derived and enriched streams



### Consume data from anywhere

View all time-oriented data-in-motion from Real-Time Hub, readily available for cross-workload use in OneLake

# Access Real-Time Hub

Find and consume event sources in Real-Time Hub, a single catalog of all streaming sources

Use Get Events and all streaming connectors to easily bring data in

Subscribe to internal and external discrete events

Quickly connect experiences for Microsoft streaming sources like IoT Hub

Access system events emitted by Fabric and Azure storage

Ingest data streams from all clouds (e.g. AWS, Kinesis, Google Pub-Sub, etc.)

Real-Time hub (preview)

Name	Item	Owner	Location	Endorsement	Sensitivity
CosmosDBCDC-goods-stream	CosmosDBCDC-goods	Tessa Kloster (PALMER)	Contoso Operations	—	Microsoft Extended
new_event_stream-stream	new_event_stream	Chami Rupasinghe	SQL DB Native Bug Bash	—	Microsoft Extended
CosmosGoods-stream	CosmosGoods	Tessa Kloster (PALMER)	Contoso Operations	—	Microsoft Extended
CustomAppStream-stream	CustomAppStream	Shiv Kumar	DreamDemoCopilot	—	Microsoft Extended
ThermostatStream-stream	ThermostatStream	Shiv Kumar	DreamDemoCopilot	—	Microsoft Extended
Thermostat	Retail_Eventhouse	—	DreamDemoCopilot	—	Microsoft Extended
ThermostatData	Retail_Eventhouse	—	DreamDemoCopilot	—	Microsoft Extended
Sensors-stream	Sensors	Tessa Kloster (PALMER)	Contoso Operations	—	Microsoft Extended
fabric_event_stream-stream	fabric_event_stream	Reeham Johnson	Power BI Admin and Governance (Fabric)	—	Microsoft Extended
CustomerSensors-stream	CustomerSensors	Tessa Kloster (PALMER)	Contoso Operations	—	Microsoft Extended
SQLCDC-customer-stream	SQLCDC-customer	Tessa Kloster (PALMER)	Contoso Operations	—	Microsoft Extended
Shipments-stream	Shipments	Tessa Kloster (PALMER)	Contoso Operations	(○ Promoted)	Microsoft Extended
HighDemand	Shipments	Tessa Kloster (PALMER)	Contoso Operations	(○ Promoted)	Microsoft Extended
HighSupply	Shipments	Tessa Kloster (PALMER)	Contoso Operations	(○ Promoted)	Microsoft Extended
LowSupply	Shipments	Tessa Kloster (PALMER)	Contoso Operations	(○ Promoted)	Microsoft Extended
OneRiverEvent-stream	OneRiverEvent	Bert Cotton	Power BI Admin and Governance (Fabric)	—	Microsoft Extended
fabric_event_stream-stream	fabric_event_stream	Bert Cotton	Power BI Admin and Governance	—	Microsoft Extended

# Work across full event life cycle

Gain deeper insight into streams with data preview and usage history

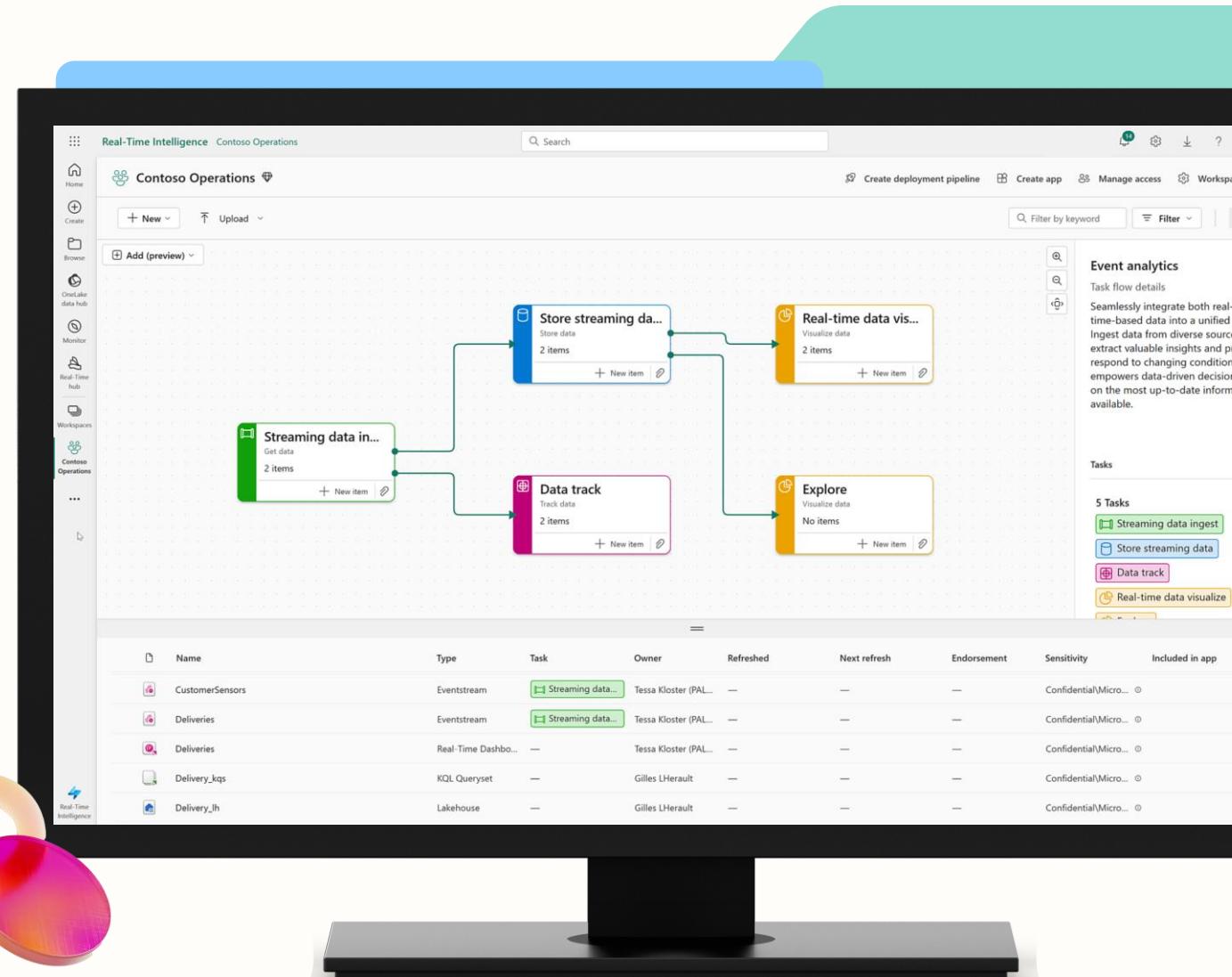
Create triggers through simple, embedded experiences

Open event streams to process and route events without writing any code

Land in Eventhouse for further analysis

Analyze and build lightweight models

Create derived and enriched streams



# Consume data from anywhere

Find time-oriented data-in-motion readily available in minutes for use in OneLake

Discover events and seamlessly consume them from across organization

Simplify integration of stream processing frameworks

Expose and use well-established open-source APIs, standards, protocols and connectors

Maintain data ownership – data is not trapped in Microsoft's proprietary formats

Integrate seamlessly with other experiences in Microsoft Fabric



The screenshot displays the Microsoft Fabric Real-Time hub (preview) interface. At the top, there's a search bar and a 'Get events' button. Below it, a sidebar lists various data streams and hubs. The main area is titled 'Real-Time hub (preview)' and 'Select a data source'. It features two sections: 'Recommended' and 'All'. The 'Recommended' section includes Azure Event Hubs, Azure IoT Hub, Confluent Cloud Kafka, and Fabric Workspace Item events. The 'All' section lists many more connectors, such as Amazon Kinesis Data Streams, Azure Cosmos DB (CDC), Azure Event Hubs, Azure IoT Hub, Azure SQL DB (CDC), Azure Blob Storage events, Confluent Cloud Kafka, Fabric Workspace Item events, Google Cloud Pub/Sub, and others. The background shows a blurred view of the Microsoft Fabric home page with various data streams and users listed.

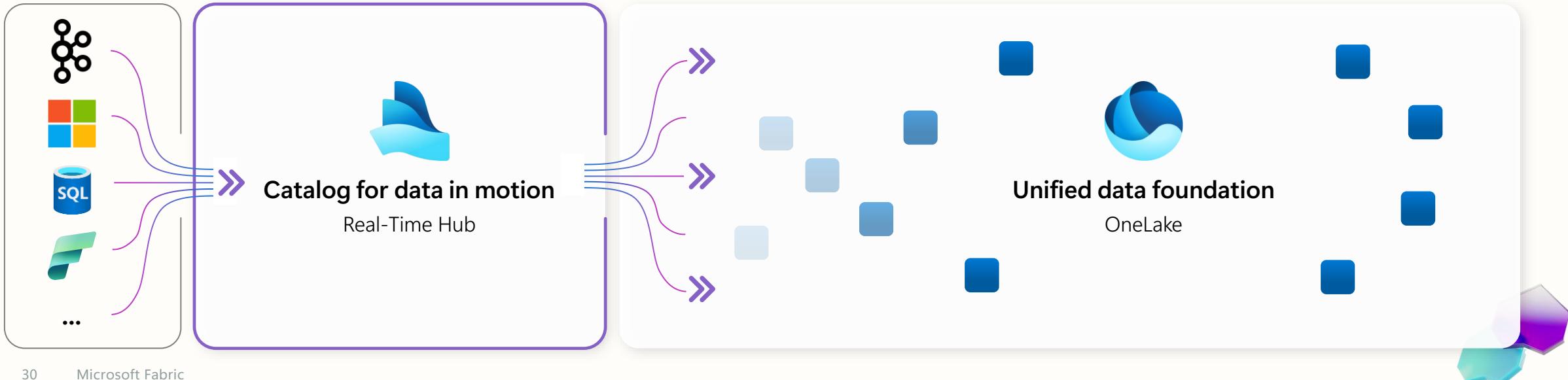
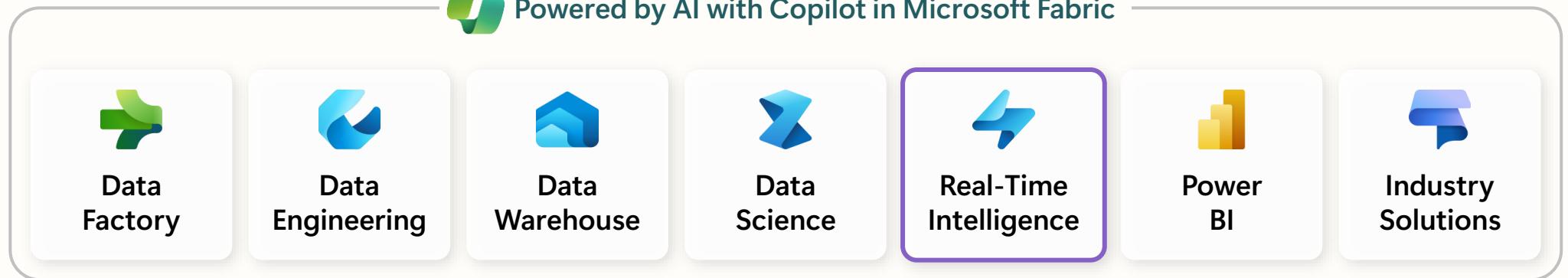


# Real-Time Intelligence

## Real-time platform in Fabric



Powered by AI with Copilot in Microsoft Fabric





Rapid solution  
development



## Rapid solution development

Empower users of all skill levels with a range of tools to take data further



### Extend data with array of experiences

Leverage no-code experiences for non-technical users who are closest to the business and want to extract more value and insights from their data



### Prepare data for enhanced analysis

Use low-code experiences for analysts seeking smoother data preparation and insight exploration, better preparing data for innovation



### Easily build real-time vertical solutions

Build on top of event-driven data experiences, with pro-code experiences and API capabilities for developers to customize solutions and scale to meet demand

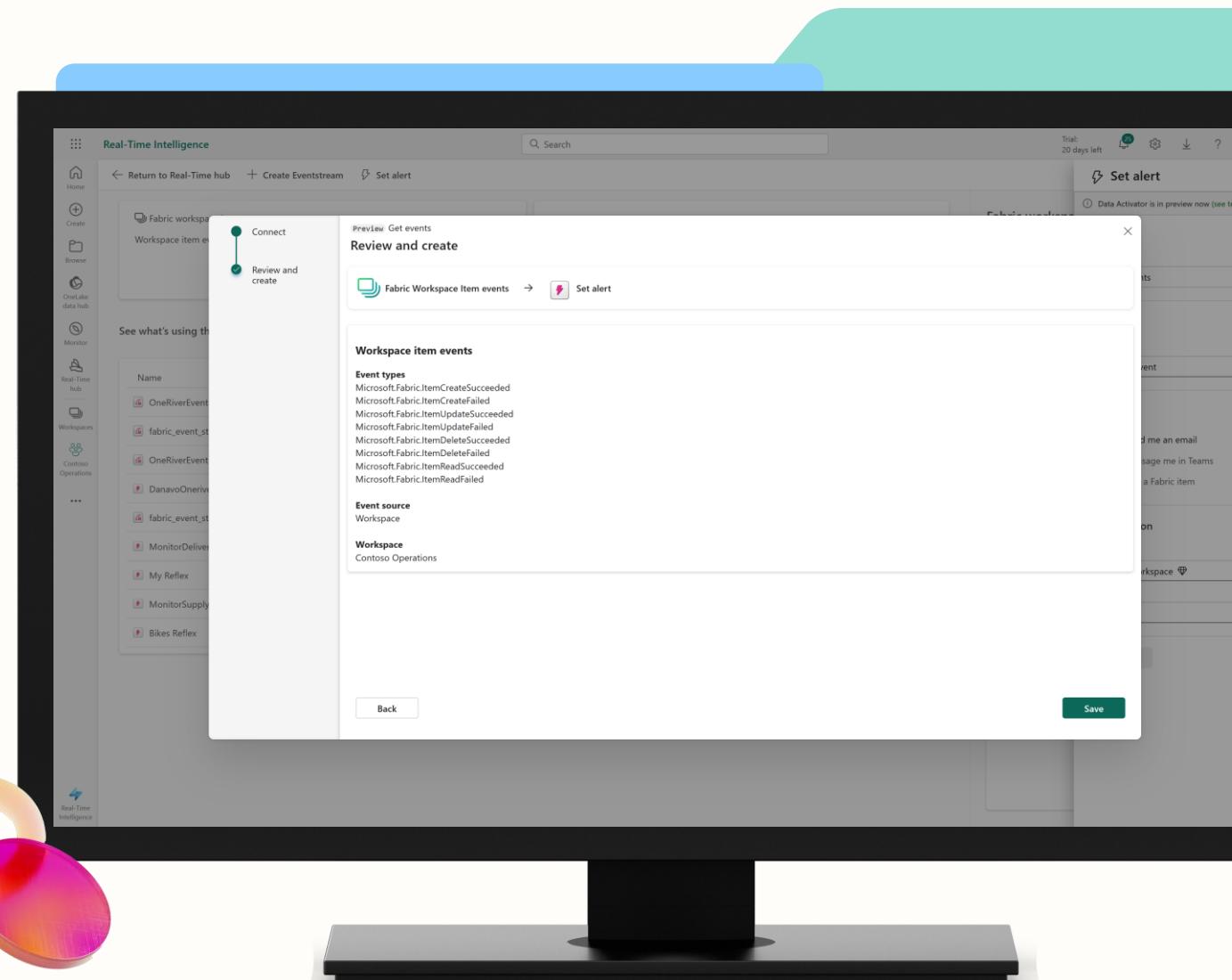
# Rapid solution development – no-, low-, and pro-code experiences

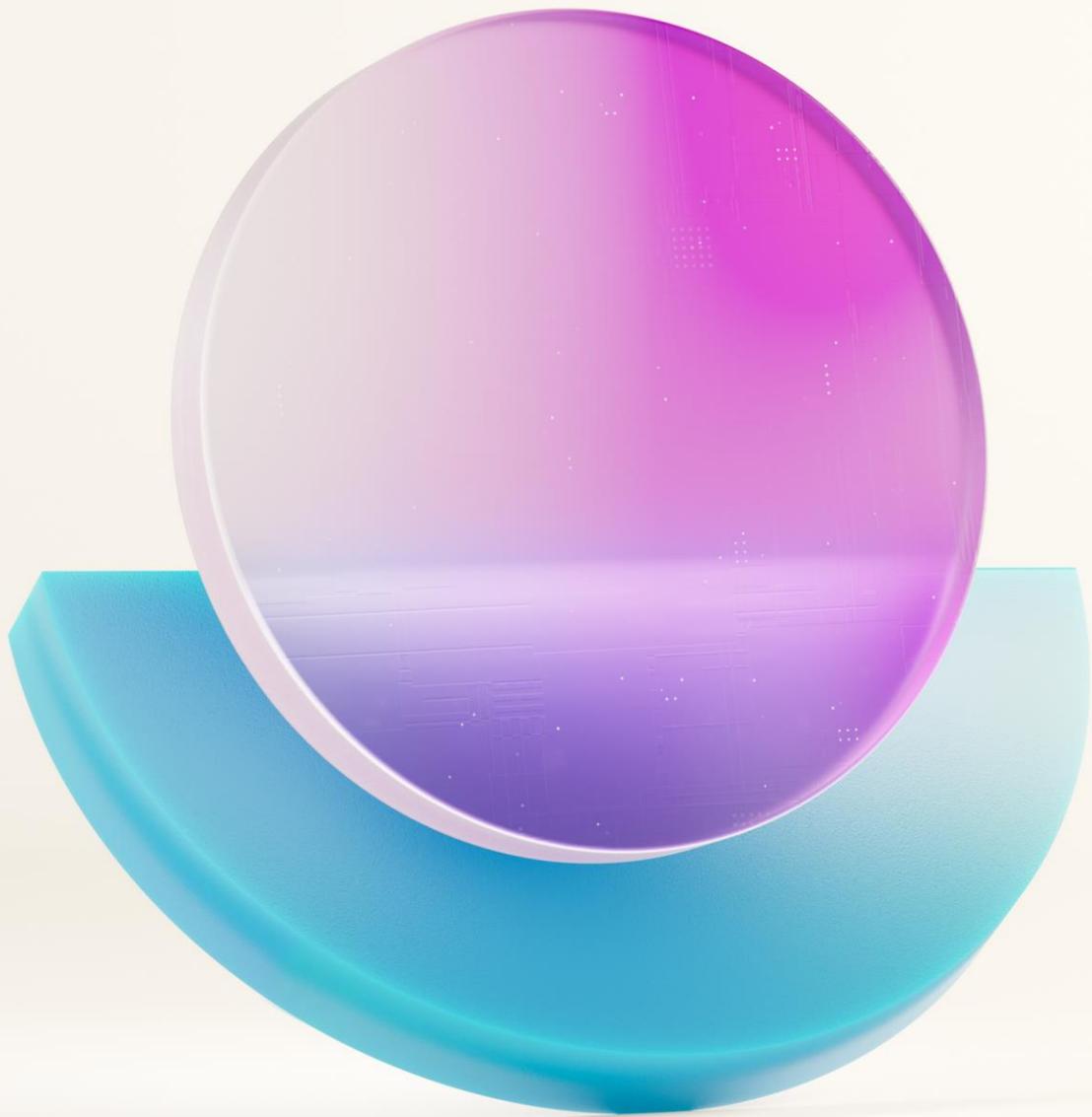
Access wide range of experiences to quickly build production solutions

Leverage custom endpoints and APIs to integrate directly into existing systems

Empower developers with CI/CD tools within their workflows

Gain proven performance at scale across ingestion, querying and storage





Real-time AI  
insights



## Real-time AI Insights

Scale beyond human monitoring and discover unknown unknowns in real time



### Accelerate productivity with copilot experiences

Streamline automation and analysis of event streaming data and accelerate productivity with AI-assisted copilots throughout Fabric



### Prepare data for AI and ML

Increase real-time insight discovery and get data ready for use in best-in-class AI and ML models to drive your business forward



### Advance business with natively-integrated tools

Take advantage of the full Microsoft ecosystem, using natively-integrated tools and capabilities to do more with your data

# Real-time AI insights – and more to come!

Leverage Copilot to automate routine tasks and act as an interactive aide

Easily generate KQL queries with copilot experience

Monitor data and automatically drive alerts when anomalies are detected

Use real-time insights to build and scale advanced ML models in Azure Machine Learning

Create generative AI experiences on top of your time-oriented data with Azure AI Studio



The screenshot shows the Microsoft Fabric KQL Editor interface. On the left, there's a sidebar with various data sources like BikesQS, Manufacturing\_kdb, and BikeES. The main area displays a KQL query:

```
// what is the total number of bikes by neighborhood and street
// summarize totalNoBikes=sum(No_Bikes) by Neighbourhood
// what is the total number of bikes by neighborhood and street
// summarize totalNoBikes=sum(No_Bikes) by Neighbourhood, Street
// what is the total number of bikes and total number of docks by neighborhood
// summarize totalBikes=sum(No_Bikes), totalDocks=sum(No_Empty_Docks) by Neighbourhood
```

Below the query, a table titled "Table 1" shows the results:

Neighbourhood	totalBikes	totalDocks
Battersea	767,151	1,811,492
Chelsea	1,025,125	453,359
Strand	1,178,044	1,056,621
Mile End	836,128	1,228,694
Fitzrovia	863,769	399,663
Knightsbridge	661,864	799,599
Victoria	540,081	627,186
West Chelsea	575,657	523,774
St. John's Wood	536,185	499,946
Bayside	623,707	836,793
Sands End	744,302	607,420
West End	466,617	271,655
Belgravia	283,397	457,025

To the right, the "Copilot" pane is open with the question "What do you want to know about the data?". It shows a generated KQL query: "Bikes | summarize totalBikes=sum(No\_Bikes), totalDocks=sum(No\_Empty\_Docks) by Neighbourhood". Below it, previous questions are listed: "what is the total number of bikes by neighborhood and street" and "what is the total number of bikes by neighborhood". A note at the bottom says "AI-generated content can have mistakes. Make sure the generated KQL is accurate. Review terms".



Use cases

# A real-time operations management experience

Real-Time Intelligence in Microsoft Fabric in action



Thomas K. Sr. VP of Operations

Thomas was not satisfied with the visibility his operations teams had into their supply chain and made the case to his COO that they should switch to using Microsoft Fabric for its built-in real-time analytics capabilities to get a better understanding of their value chain.

12:30 PM

1

Microsoft Fabric ingests all of Thomas' company's streaming sources, internal and external, into Real-Time Hub. From their suppliers to their internal operations to their distribution channels to their customers, Thomas gains a comprehensive view of company operations at any given moment.

12:45 PM

4

Thomas receives an alert and sees a piece of equipment that needs maintenance earlier than expected. Looking at service logs to track previous similarities, Thomas easily queries the real-time machinery data to understand and address what happened in seconds. Active and real-time data monitoring will pick up any future discrepancies.

12:50 PM

3

As a global company that ingests as many as 8 billion real-time data points daily, Thomas can diagnose and troubleshoot system lags, connectivity problems and distribution fleet health. Fabric collects network, device health and real-time application performance from users' devices as often as every few seconds, so Thomas is always up to speed.

1:00 PM

2

Thomas needs his systems to be able to process vast quantities of data. Since Real-Time Intelligence is reactive and scales automatically, Thomas doesn't need to worry – it scales to meet demand, accommodating massive data inflows with low latency and fast load time.

1:30 PM

5

Seamless integration with other Fabric experiences, allow Thomas to process and analyze logs, customer feedback and other data to ensure operations are running smoothly.

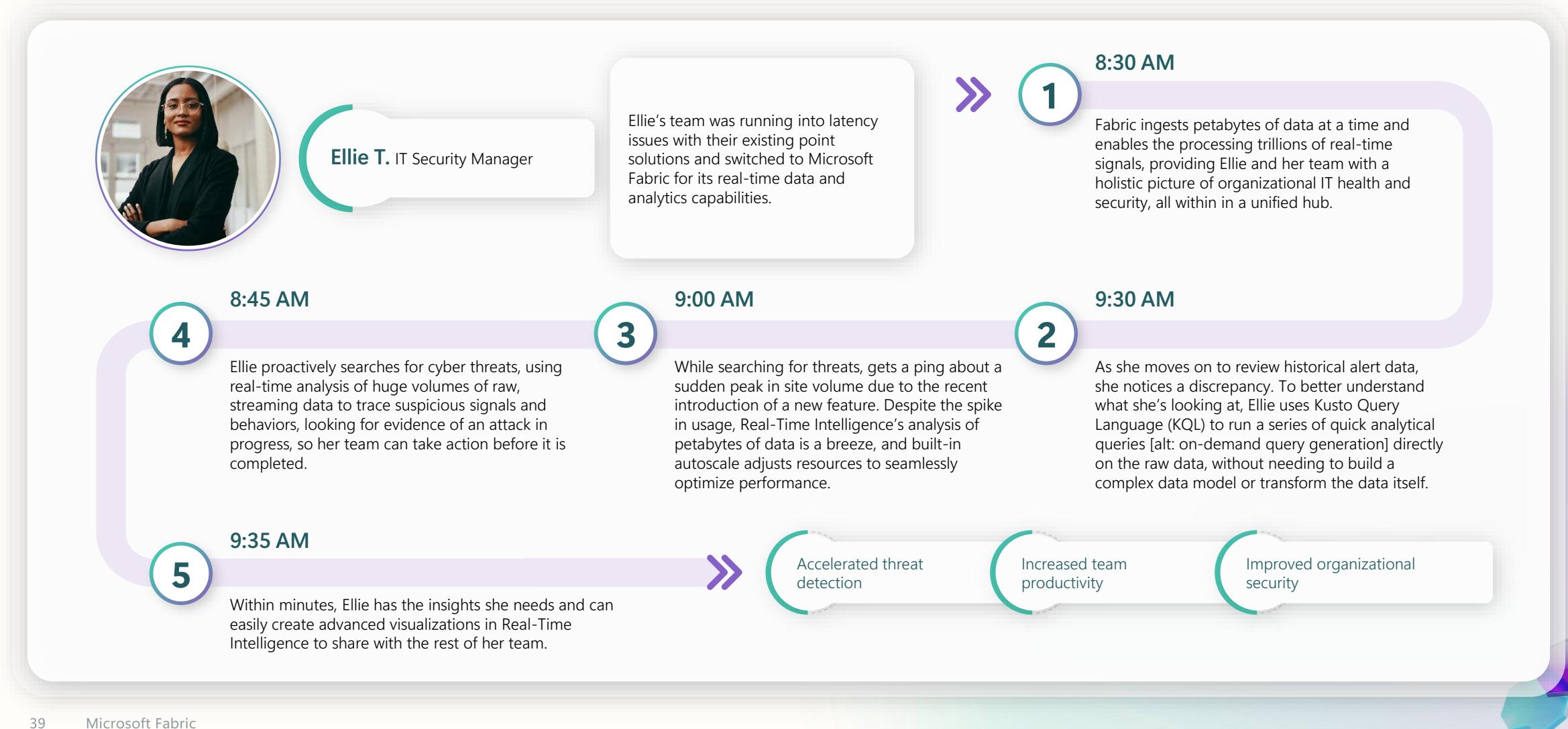
Predictive maintenance & improved throughout

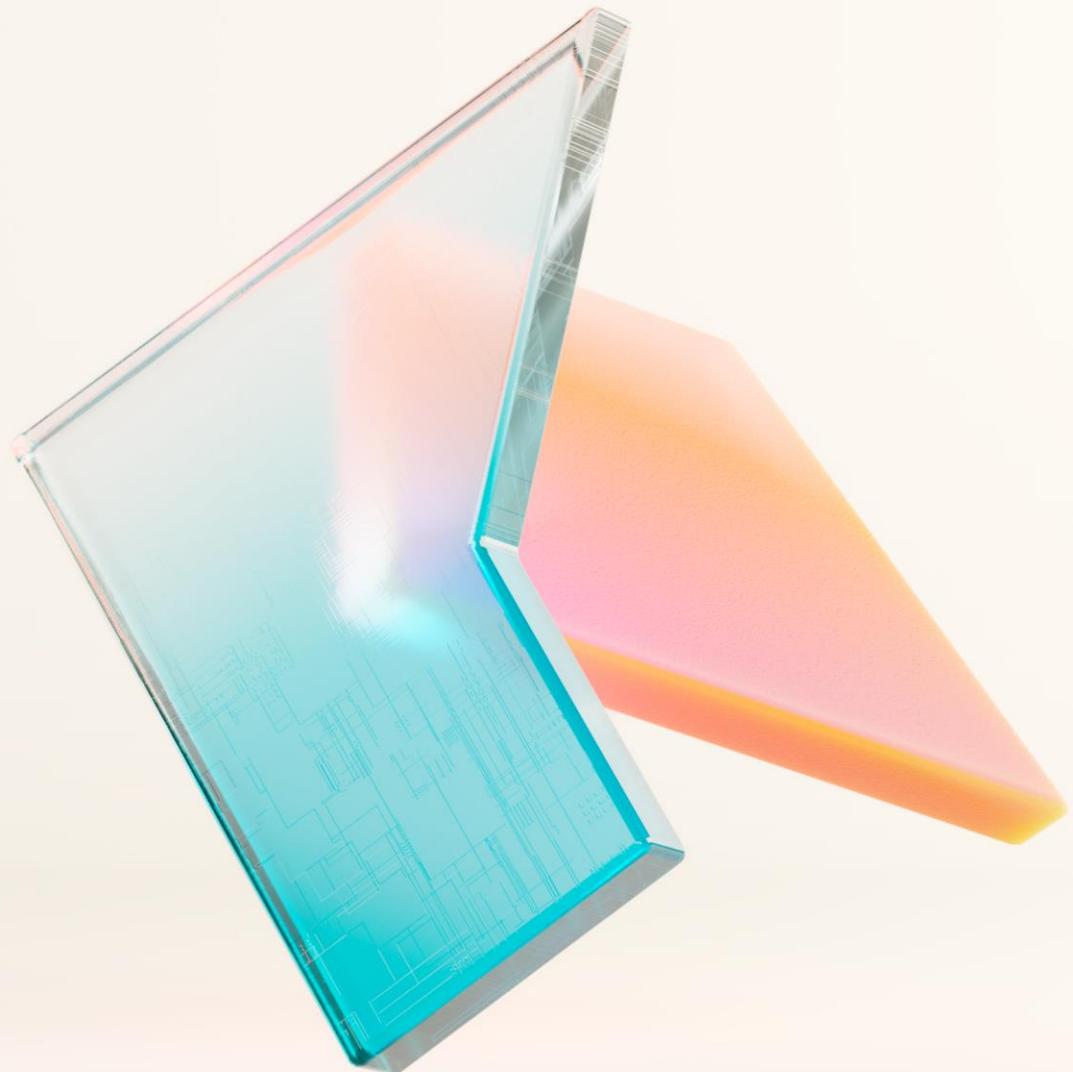
Improved customer satisfaction

Increased visibility and efficiencies

# A real-time cybersecurity experience

## Real-Time Intelligence in Microsoft Fabric in action





What we're  
hearing from  
customers



# One NZ democratizes data access, enabling customer support with Microsoft Fabric Real-Time Intelligence

“

Previously, you needed to be a data engineer or scientist to access and understand customer information. Now we're making it user-friendly, so anyone can easily make data-driven decisions.

*– Strathan Campbell, Channel Environment Technology Lead, One NZ*



## Situation

Seeking to improve customer experience, New Zealand telecom giant, One NZ, wanted to take its performance to the next level. Increasing data volumes were leading to delayed refresh rates and One NZ needed a solution with real-time data and analytics capabilities they could easily implement with their existing systems.

## Solution

One NZ selected Microsoft Fabric's Real-Time Intelligence (RTI) and went from concept to delivered product in just two weeks. Using event streams to ingest data from external data sources and run analytics on top of its real-time streaming data, One NZ was able to generate immediate actions on their data for quicker decision-making.

## Impact

With Microsoft Fabric's RTI, One NZ has improved overall customer experience. All teams have access to high quality data that can be used in ML models, plus, dashboards are updated 6x faster than before, so agents can identify customer behavior patterns and respond to customers more quickly than ever.





# Dener Motorsport gains real-time race and car insights with Microsoft Fabric

PORSCHE  
CARRERA CUP  
BRASIL

“

Before we used Microsoft Fabric and real-time analytics, it was probably 30 minutes before the engineers who knew that something was wrong with a car could get the data, analyze it, and have a result. Today the process is done within minutes.

– Dener Pires, CEO, Dener Motorsport

## Situation

The Porsche Carrera Cup Brasil is a premier racing event, produced annually by Dener Motorsport. Given the prestige of the Porsche brand, expectations are high, but race information and reporting did not live up to the brand image, with manual solutions that prevented the sharing of time-critical information.

## Solution

Dener Motorsport partnered with Microsoft Fabric, leveraging its streaming analytics capabilities, as well as improved data storage and reporting. Using Fabric, Dener Motorsport created a new architecture able to ingest all their data streams, analyze them and distribute findings to team managers and race participants.

## Impact

With this new, unified architecture, Dener Motorsport can better maintain car health, using Fabric's real-time analytics for faster identification of vehicular problems, having reduced the time to insight from half an hour to a matter of minutes. This keeps drivers safer, sustains optimal car performance, and keeps the cars in good condition.



# What other customers are saying

"This cloud solution has empowered us to easily understand and act on high-volume, high-granularity events in real-time with fewer resources."

"Our data now informs immediate actions—reallocating resources or preemptively solving customer issues."

"We will now have more accurate information at our fingertips. Higher-quality data also means greater potential for machine learning, IoT, and AI-powered workloads. We expect to drive a lot of innovation."

"Our clients have built out reports tracking IoT data. Water utility services use high-frequency sensors to keep track of water quality. Now users can ensure quality with near real-time analytics that save time in both generating reports and chasing down data."

"With IoT data and AI insights, we can quickly identify geographic areas where our customers are buying fewer replacement parts from us, for instance. We can then take the needed steps to win back that business."



# Get started today



Set up your free Microsoft Fabric trial

[>link to source](#)



Learn more about Real-Time Intelligence

[>link to source](#)



Watch Build 2024 sessions

[>link to source](#)



Stay up to date with Fabric

[>link to source](#)



Learn more with Mechanics

[>link to source](#)



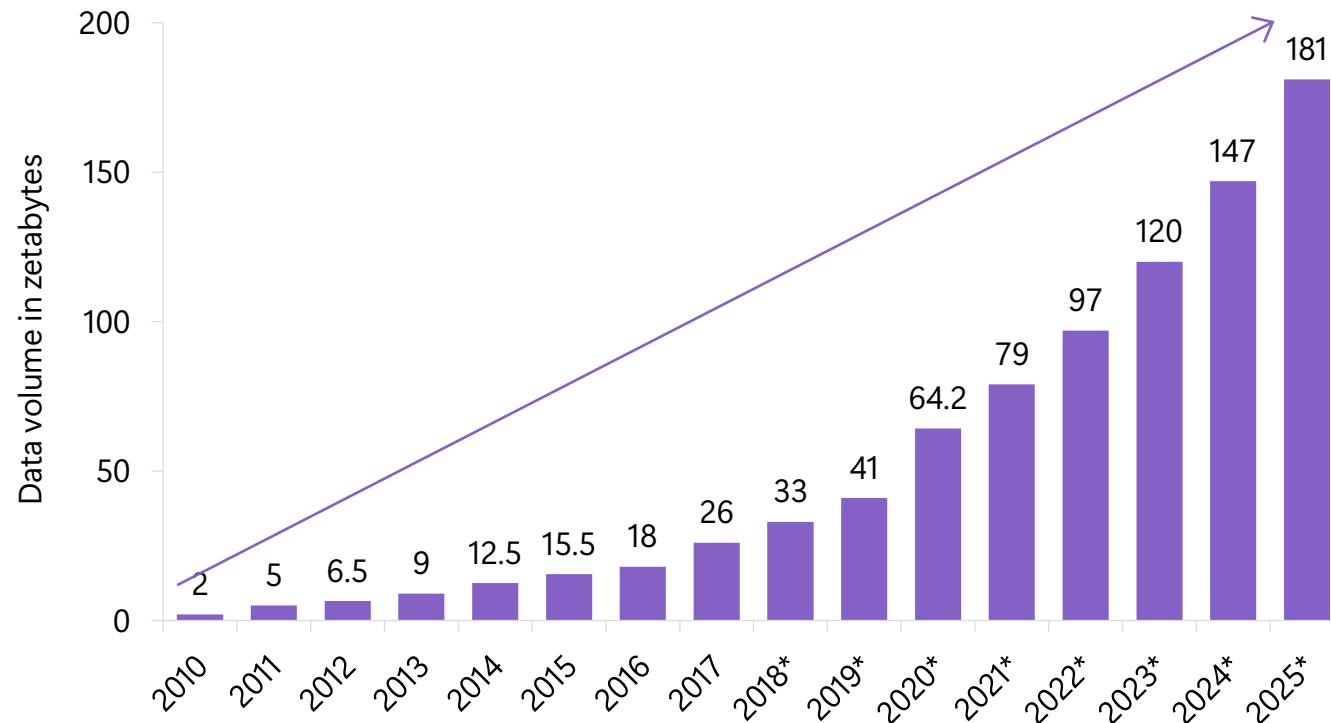
Thank you

# Appendix

# 54ZB of data will need real-time processing

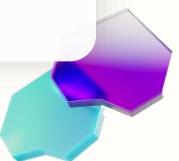


180ZB+ of data volume by 2025

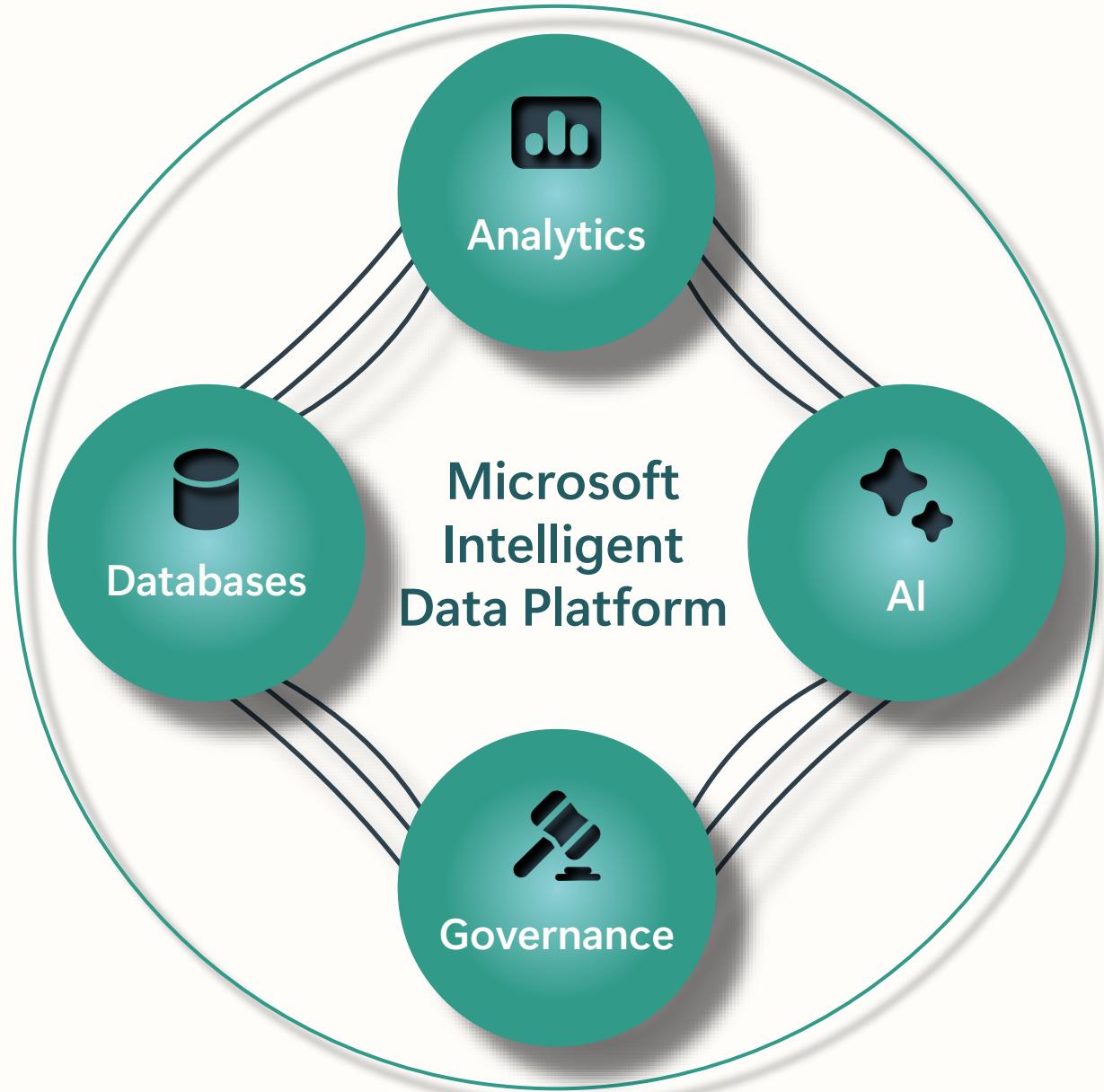


According to IDC's forecasts,  
nearly 30% of the world's  
data will need real-time  
processing by 2025

Source: Statista, IDC



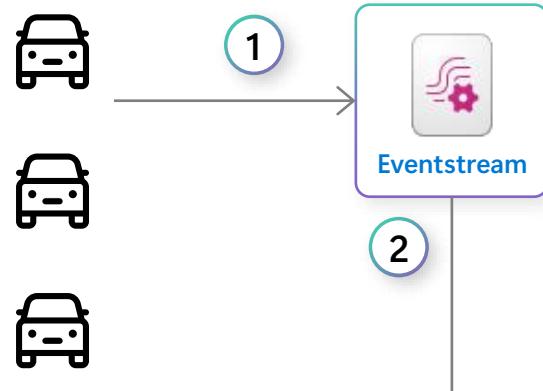
Transform your  
business with  
Microsoft's unified  
analytics solutions



# An end-to-end Real-Time Intelligence experience – Fleet Management

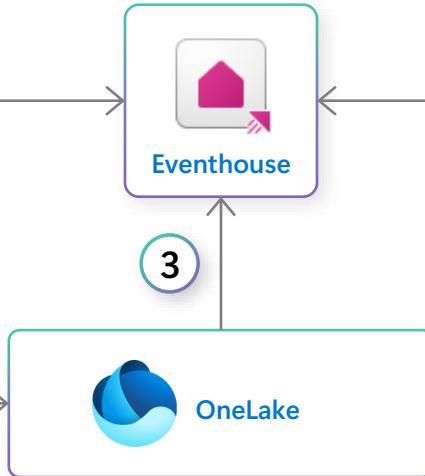
## Ingest & process

1. Telemetry messages from connected fleets are encoded in various formats such as Protobuf, Avro or JSON
2. After streaming the messages to Fabric Eventstreams via MQTT they are accessible in Real-Time Hub



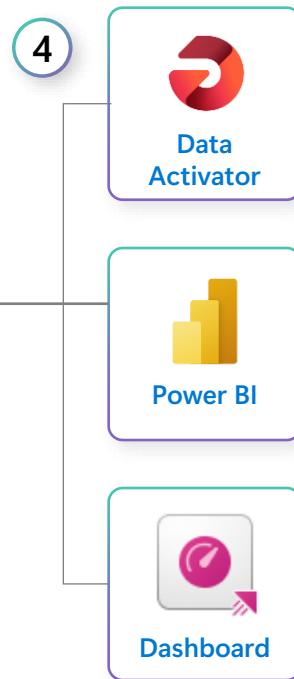
## Analyze & transform

3. Eventstream decodes, validates, transforms and enriches the raw data and sends it to Eventhouse, where it is available for query and mirrored to OneLake

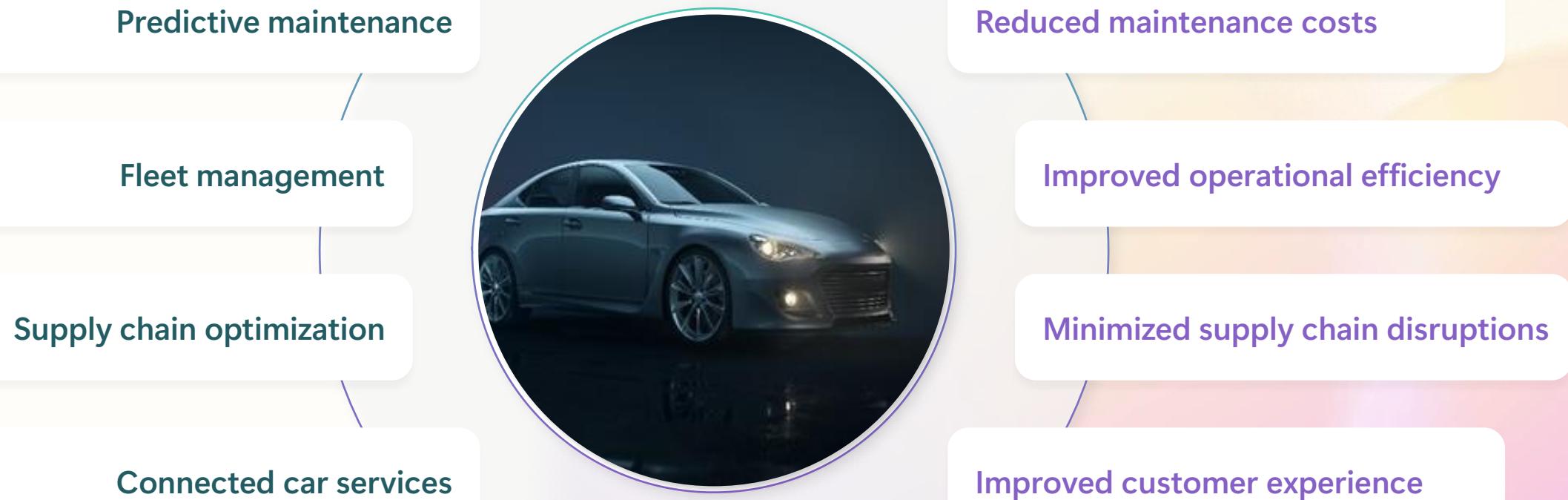


## Visualize and activate

4. Data Activator is used to create alerts on anomalies in the decoded signals



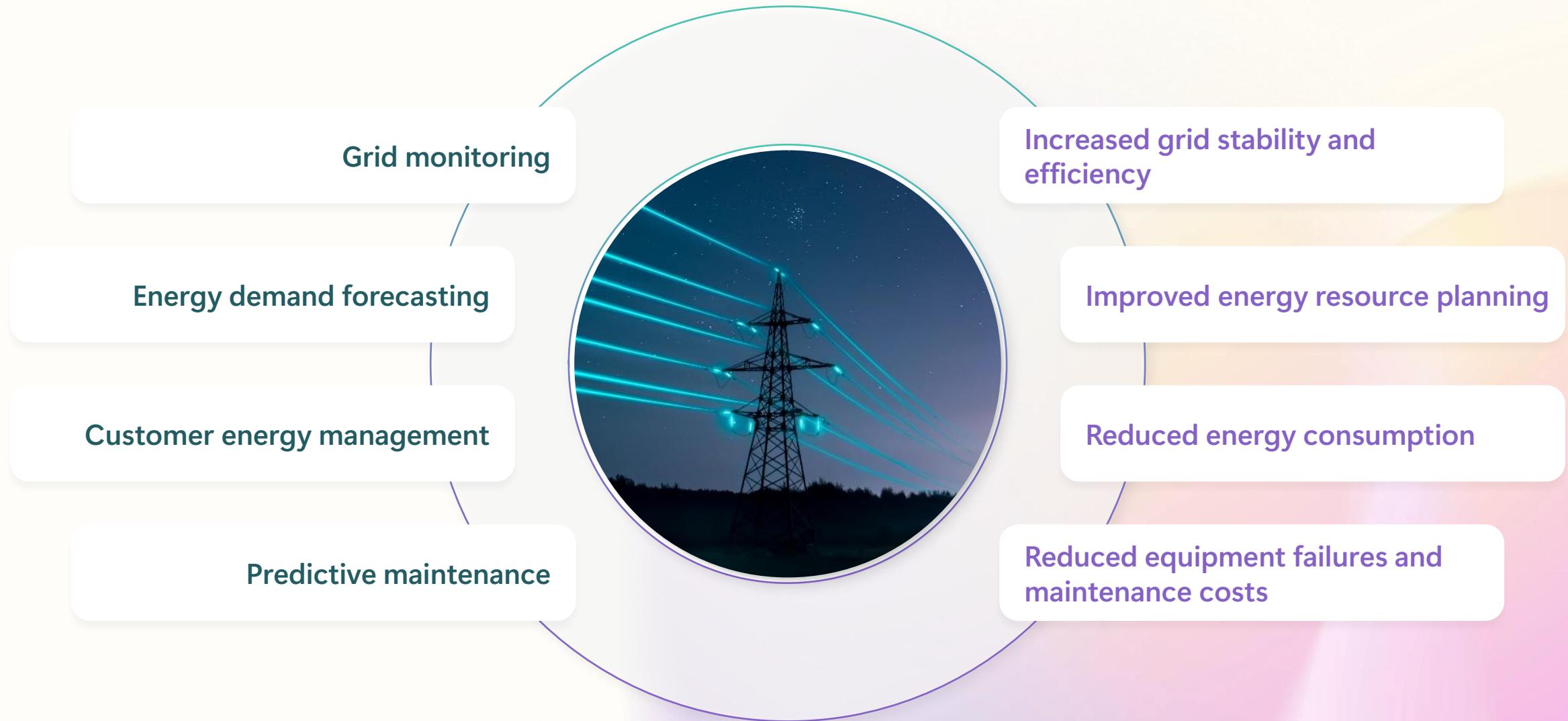
# Automotive use cases



# Logistics use cases



# Energy & Utilities use cases



# Manufacturing use cases

Predictive maintenance

Quality control

Inventory management and demand forecasting

End-to-end visibility and risk management



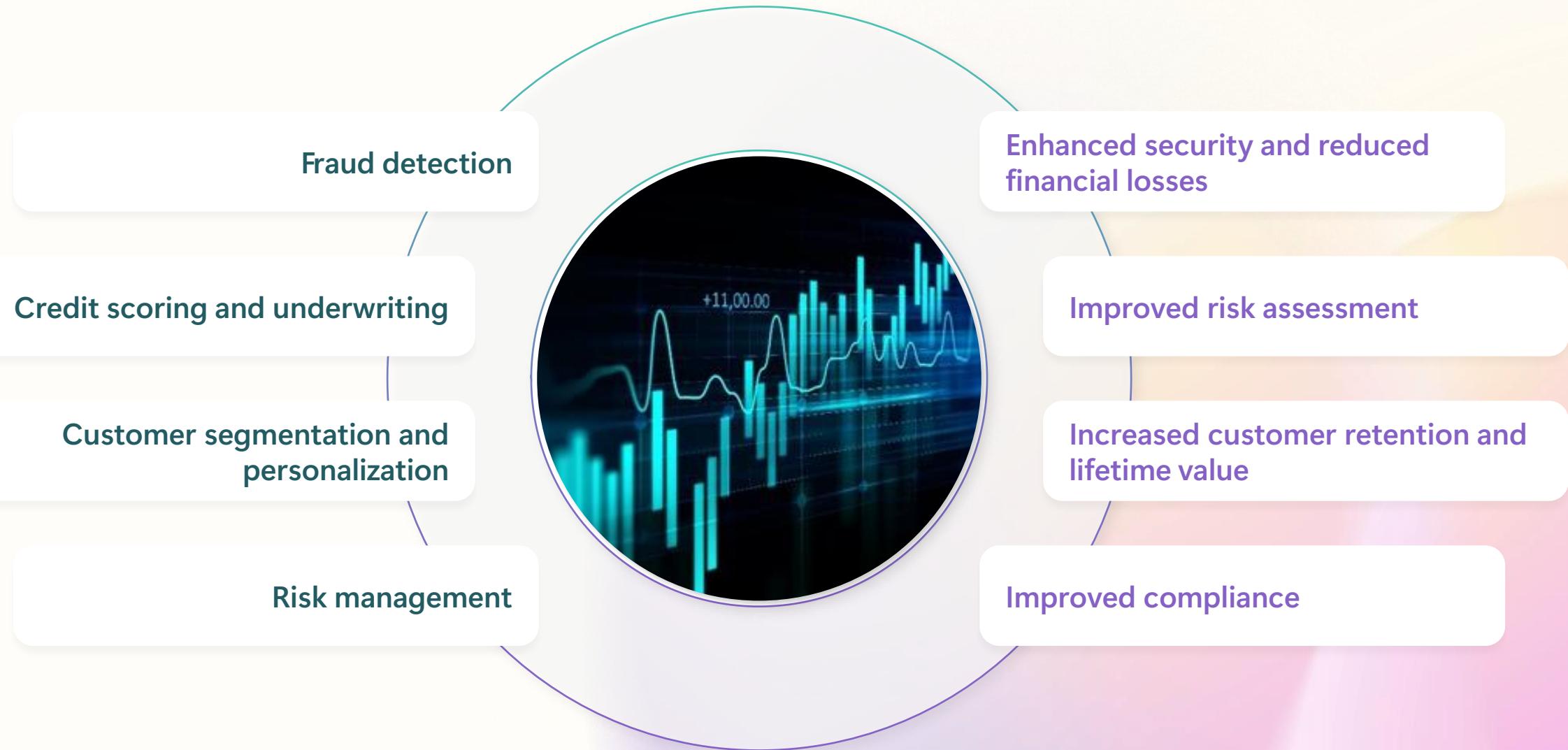
Extended equipment lifespan and increased throughput

Improved quality and reduced defect rates

Reduced inventory carrying costs

Improved supply chain resilience

# Finance & Insurance use cases



# Retail use cases

Inventory management and demand forecasting

Dynamic pricing

In-store analytics

Personalized marketing



Improved product availability

Increased revenue and competitiveness

Enhanced operational efficiency

Increased customer lifetime value and brand loyalty