

How Can Microsoft Fabric Have an Impact on Your Business?

Paul Andrew

Co-Founder | Chief Technology Officer



Cloud Formations

Our Offerings



Supporting you on every level. Providing stakeholders with transparent reviews and feedback on planning, rollout and platform architecture.

Advisory



Strategy

Ensuring business value in everything, motivated by use cases, people and process. Aligned to the latest industry standards and concepts.

Partnering for the long term. From development to operations, monitoring and alerting. We'll support your business-critical platforms.

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Scalable platform design using cloud native technology, reducing time to insight for batch, stream and event driven workloads for fabric and mesh architectures.

Knowledge sharing from the experts. Ensuring skills remain relevant for emerging cloud technologies and techniques.

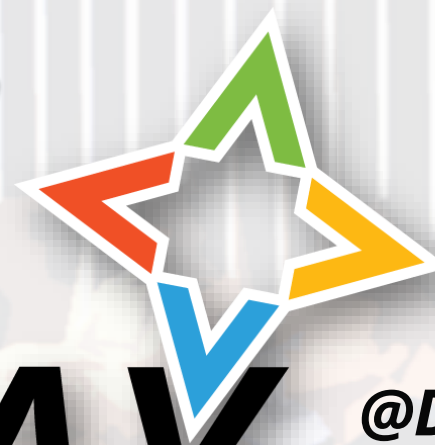
Training



Delivery

Highly experienced engineers to support your implementation, with a full complement of continuous deployment practices and reusable assets.

**Monday 2nd to Friday 6th
October 2023**



DATA RELAY

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DataRelay.co.uk

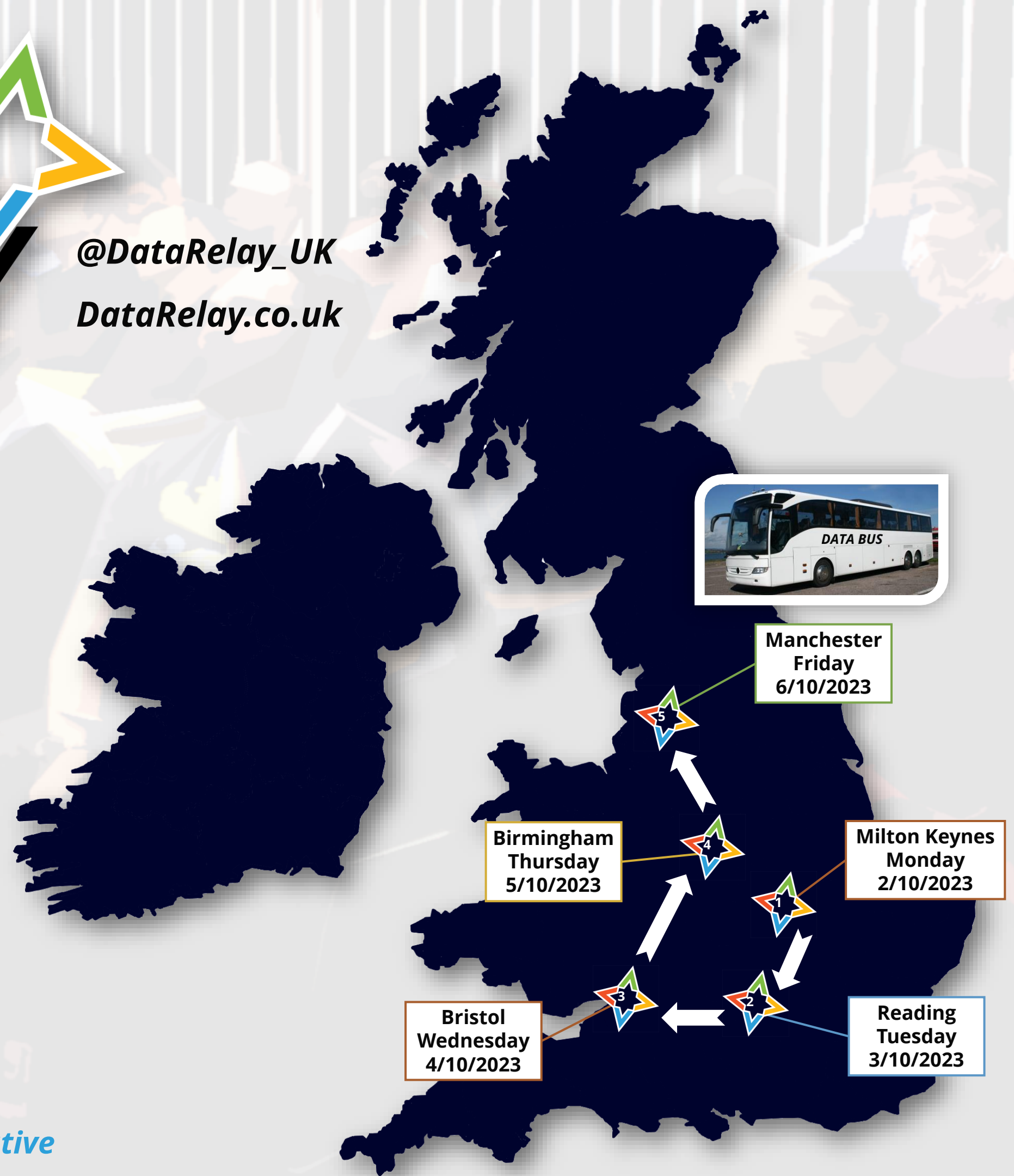
Bletchley Park, Reading, Bristol, Birmingham, Manchester

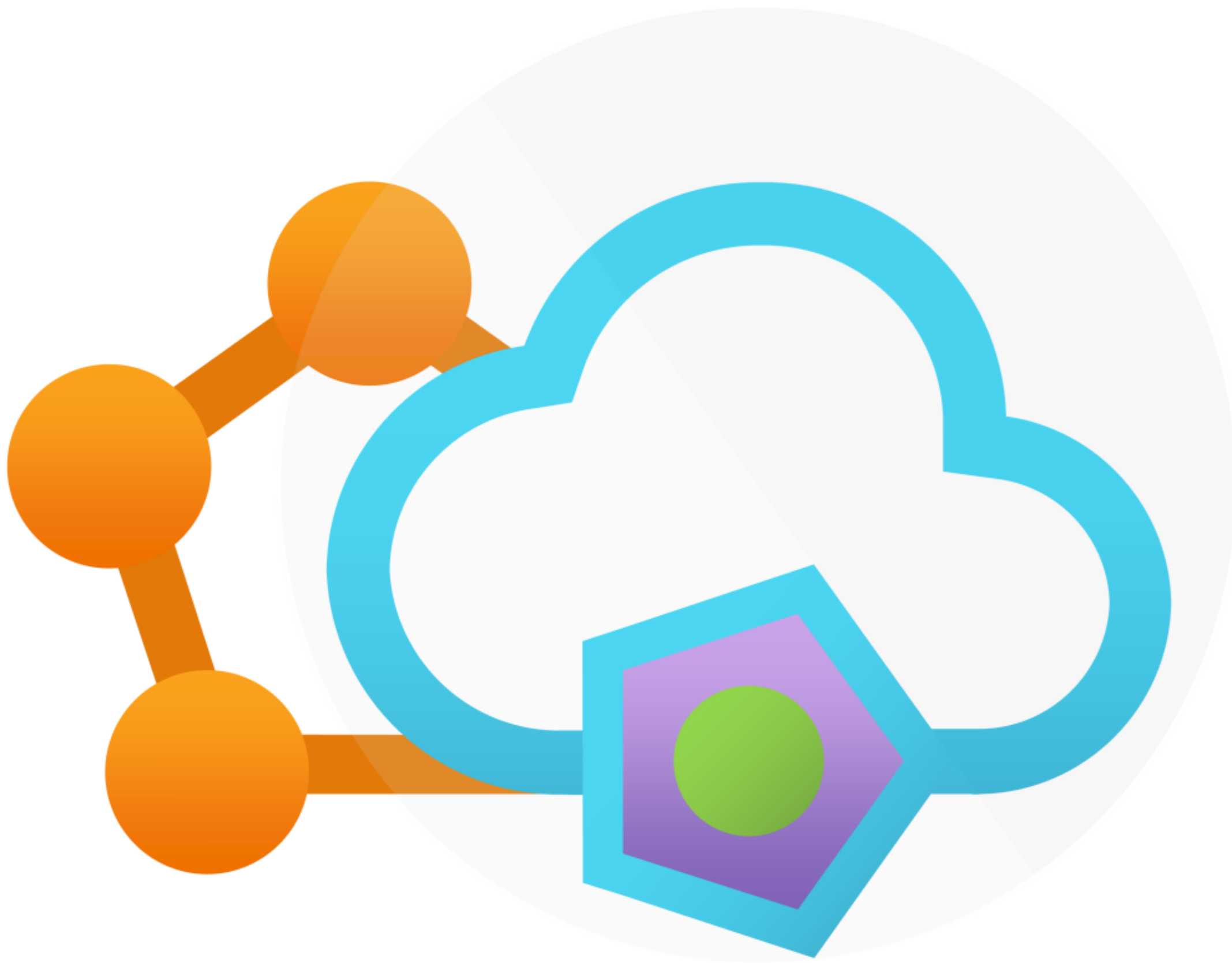


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A FREE UK Wide Microsoft Data Platform Community Initiative





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Cloud Formations

Abstract

All this talk about Data-Ware-Lake-Delta-Beach-House-Lakes (or some combination of that) and Data, Yarn, Fabric integration, everything has got a bit... Meshy! Yes, my friends. The beat of the technology drum is certainly relentless. And with no limits cloud scale and huge innovations from the biggest brains. Two years, it seems, has become the benchmark for tools to live and die by. Reach three years and you almost have a mature product. That said, Microsoft Fabric, the latest offering from global software giant is no exception. But what does this mean for the real world. For the data analysts, engineers and scientists that need to continue answering everyday problems to inform business decisions. In this session we will firmly ignore the hype and focus on the reality. With the pragmatic view of an experienced architect. The problem of gaining insights from our data hasn't changed. So, what does this mean if implemented using Microsoft Fabric. What, why and how is the tooling going to change our daily deliverables in the short term, medium and long term. Join me for these answers and more as we explore the impact of Microsoft Fabric-Server, erm, Power. Resource. Thing!

Q: How Can Microsoft Fabric Have an Impact on Your Business?

A:

Q: ~~How~~ Can Microsoft Fabric
Have an Impact on Your
Business?

A: ~~No~~
Yes

Q: How Can Microsoft Fabric
Have an Impact on Your
Business?

A:

What Does
Q: ~~How Can~~ Microsoft Fabric
~~Have an Impact on Your~~
Mean For Business?

A:

Why Implement
Q: ~~How Can~~ Microsoft Fabric
~~Have an Impact on Your~~
As Part Of ~~Business?~~
Technology Landscape[^]

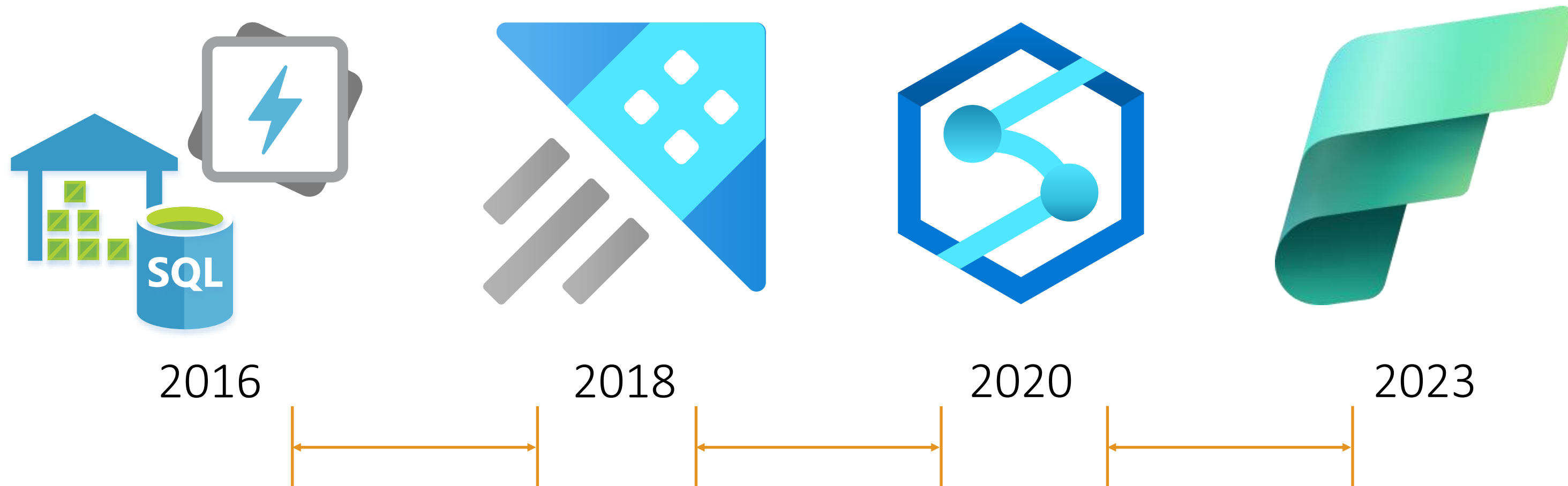
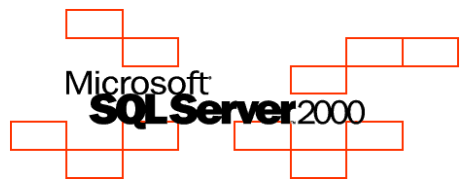
A:

Will
Q: ~~How Can~~ Microsoft Fabric
Have an Impact on Your
Positive or Business?
Negative

A:



Will
~~How Can~~ Microsoft Fabric
Have an Impact on Your
Positive or Business?
Negative



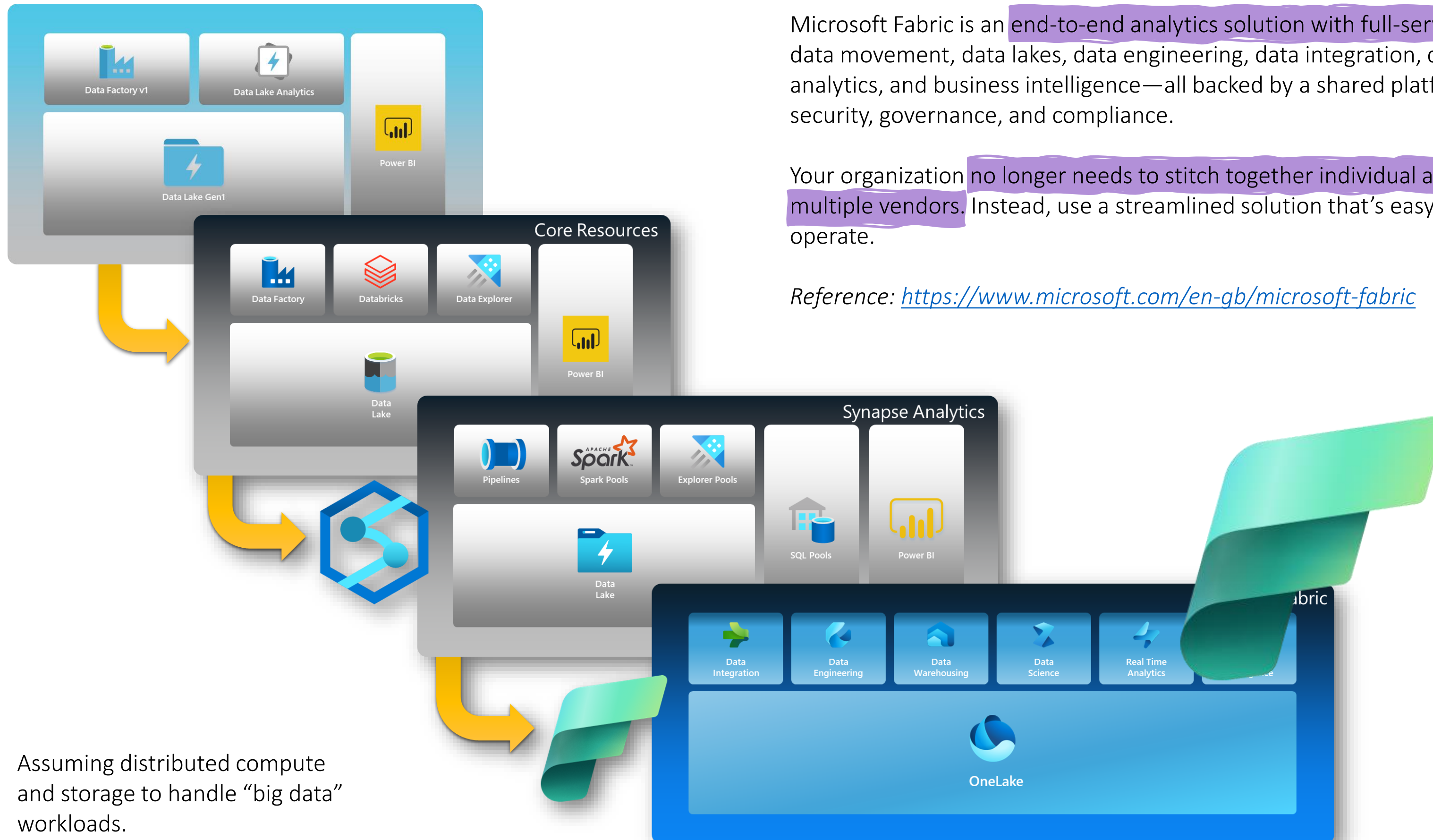


What is Microsoft Fabric? – Vision and Stack Evolution

Microsoft Fabric is an end-to-end analytics solution with full-service capabilities including data movement, data lakes, data engineering, data integration, data science, real-time analytics, and business intelligence—all backed by a shared platform providing robust data security, governance, and compliance.

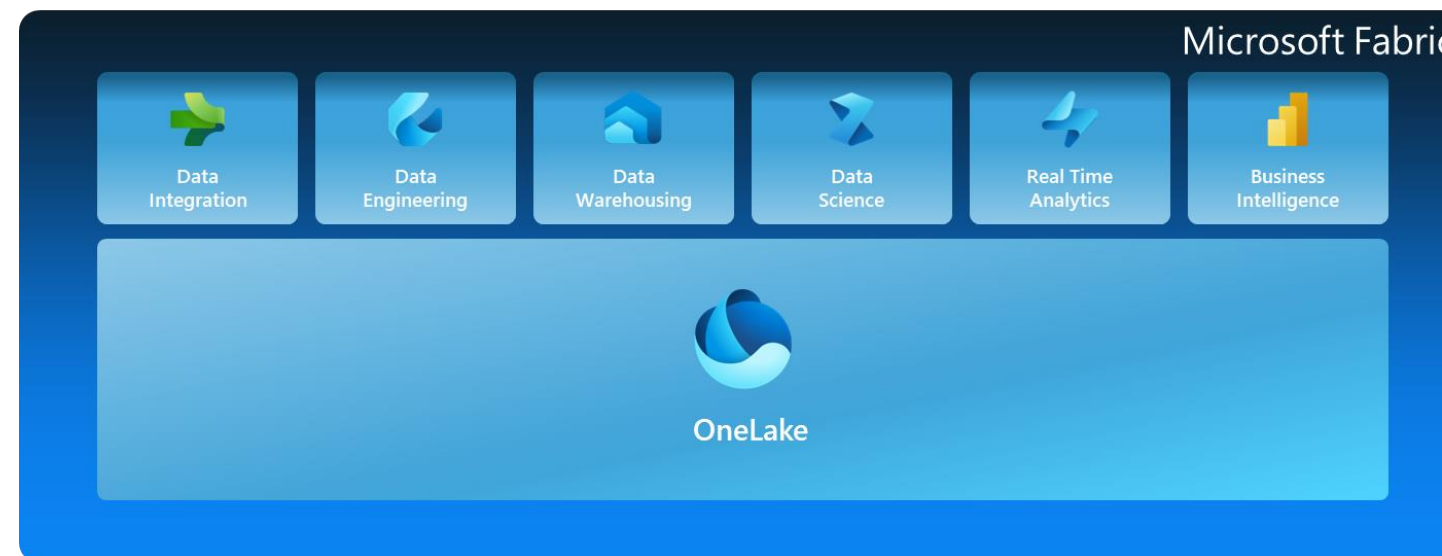
Your organization no longer needs to stitch together individual analytics services from multiple vendors. Instead, use a streamlined solution that's easy to connect, onboard, and operate.

Reference: <https://www.microsoft.com/en-gb/microsoft-fabric>

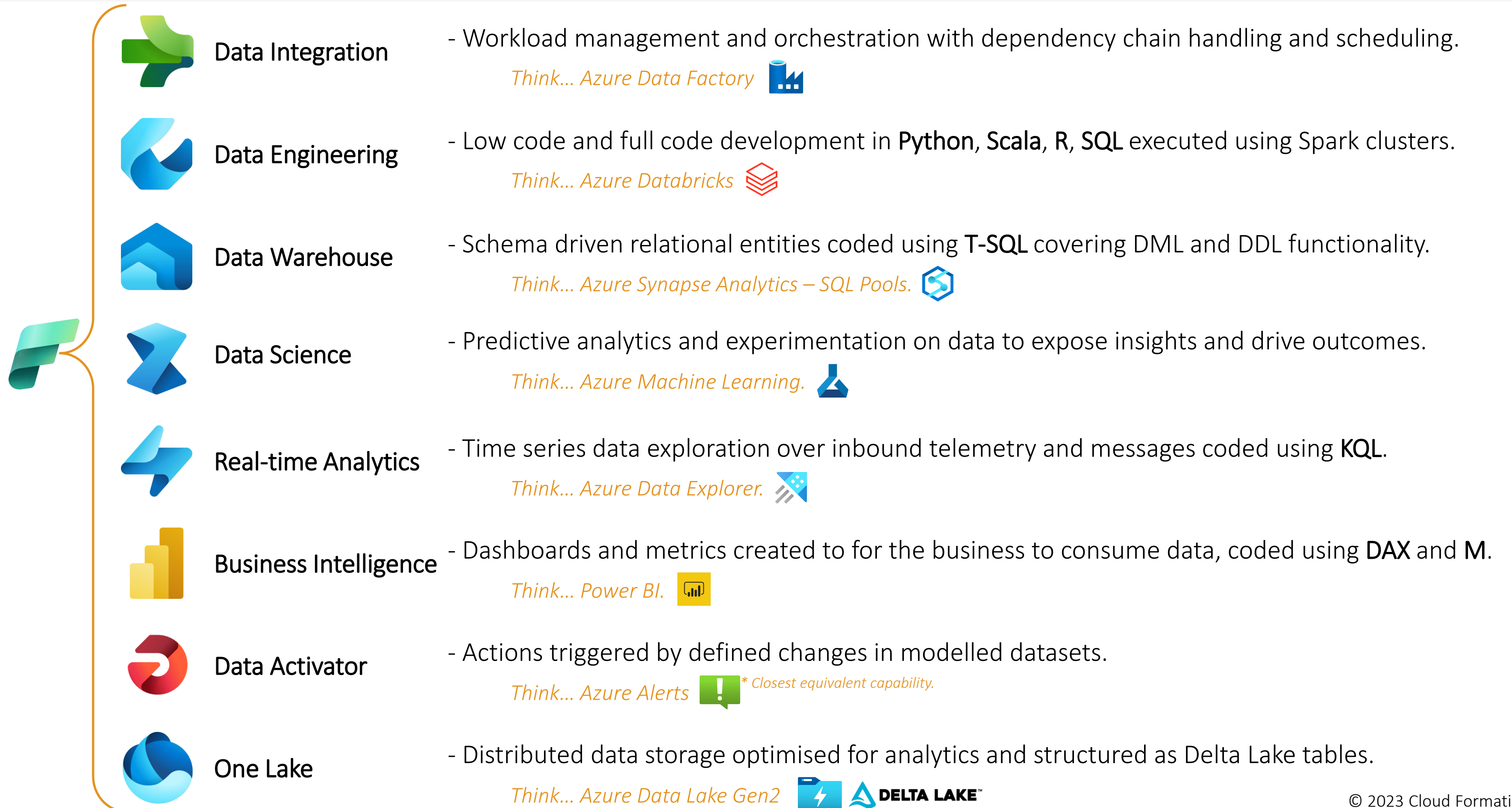


Assuming distributed compute and storage to handle “big data” workloads.

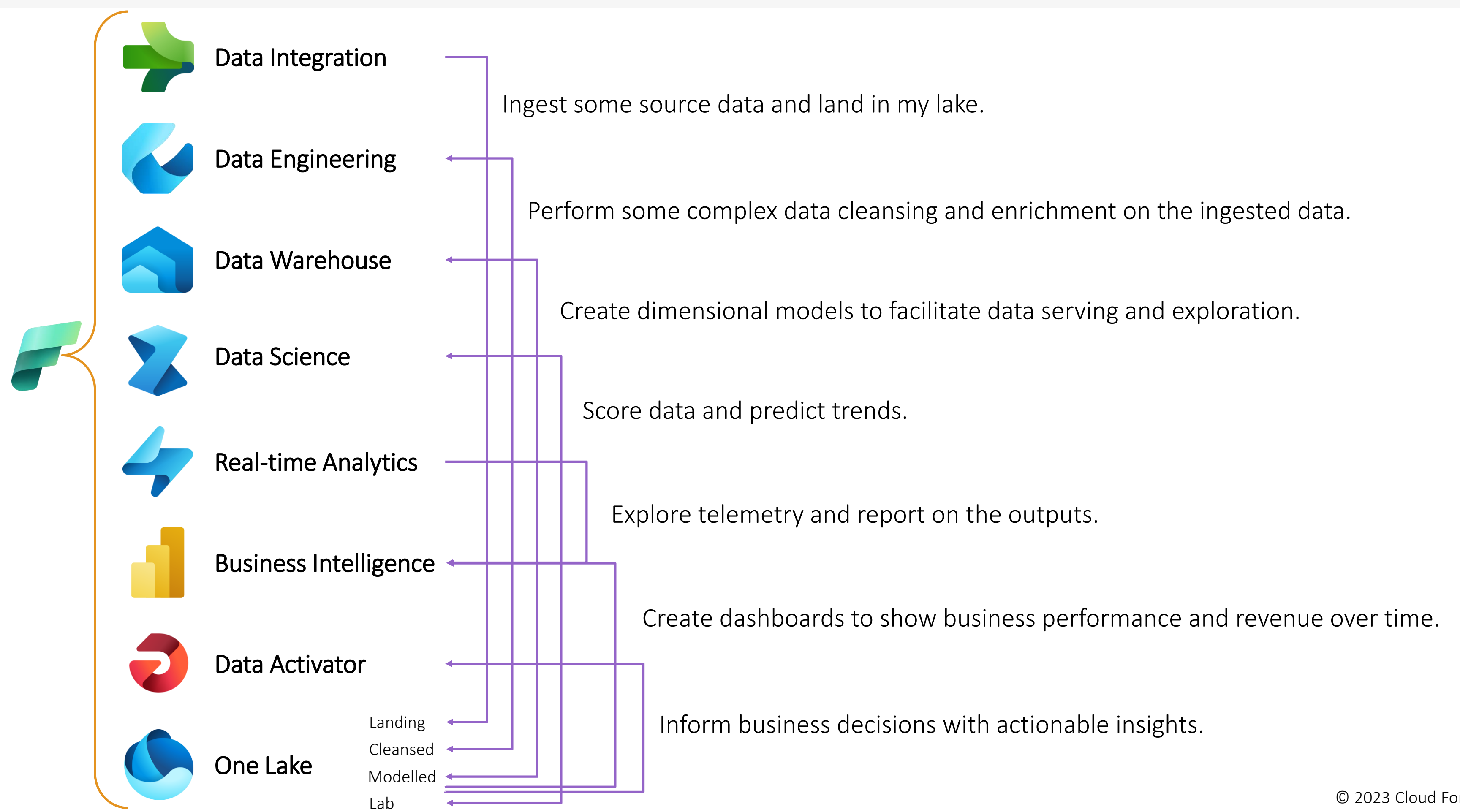
What is Microsoft Fabric?



What is Microsoft Fabric? - Experiences vs Technical Capabilities



What is Microsoft Fabric? – As a “Traditional” Development Workflow



Q: How Can Microsoft Fabric
Have an Impact on Your
Business?

A:

1. Simplifying Compute Consumption & Running Costs

1. Simplifying Compute Consumption & Running Costs



Data Integration



Data Engineering



Data Warehouse



Data Science



Real-time Analytics



Business Intelligence



Data Activator



One Lake



Compute



Storage

Capacities

SKU	Capacity Units	Power BI SKU	Power BI v-cores
F2	2	-	0.25
F4	4	-	0.5
F8	8	EM/A1	1
F16	16	EM2/A2	2
F32	32	EM3/A3	4
F64	64	P1/A4	8
F128	128	P2/A5	16
F256	256	P3/A6	32
F512	512	P4/A7	64
F1024	1024	P5/A8	128
F2048	2048	-	256

Reference:

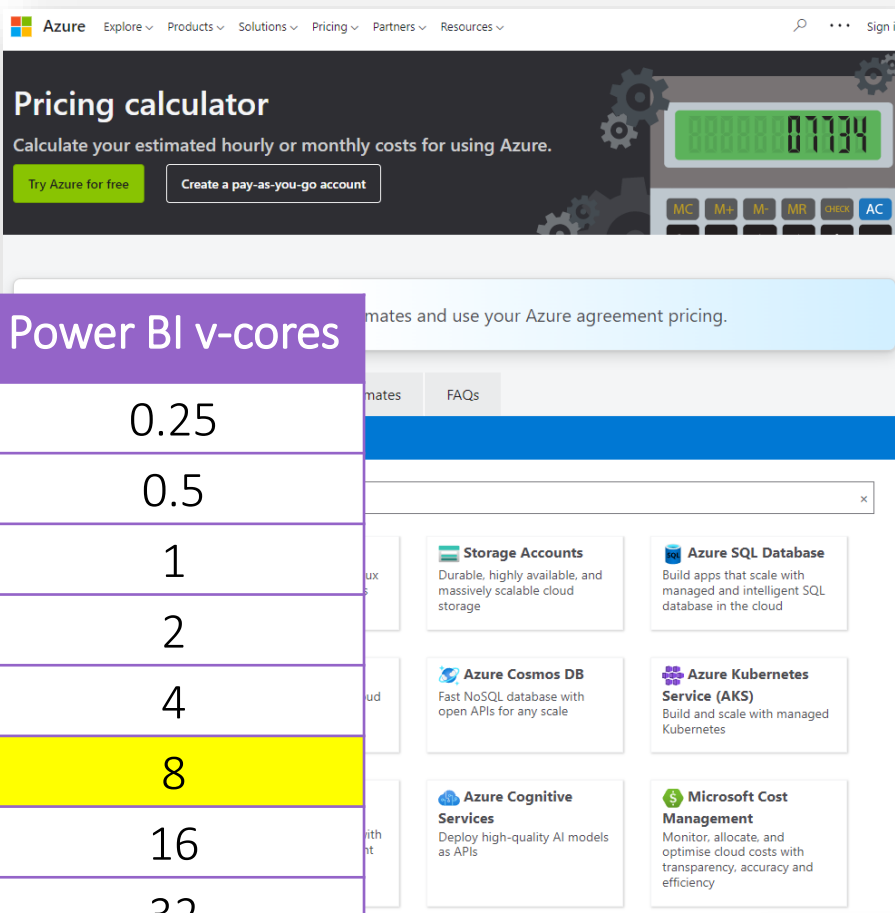
<https://blog.fabric.microsoft.com/en-us/blog/capacity-metrics-in-microsoft-fabric>

<https://learn.microsoft.com/en-us/fabric/enterprise/licenses>

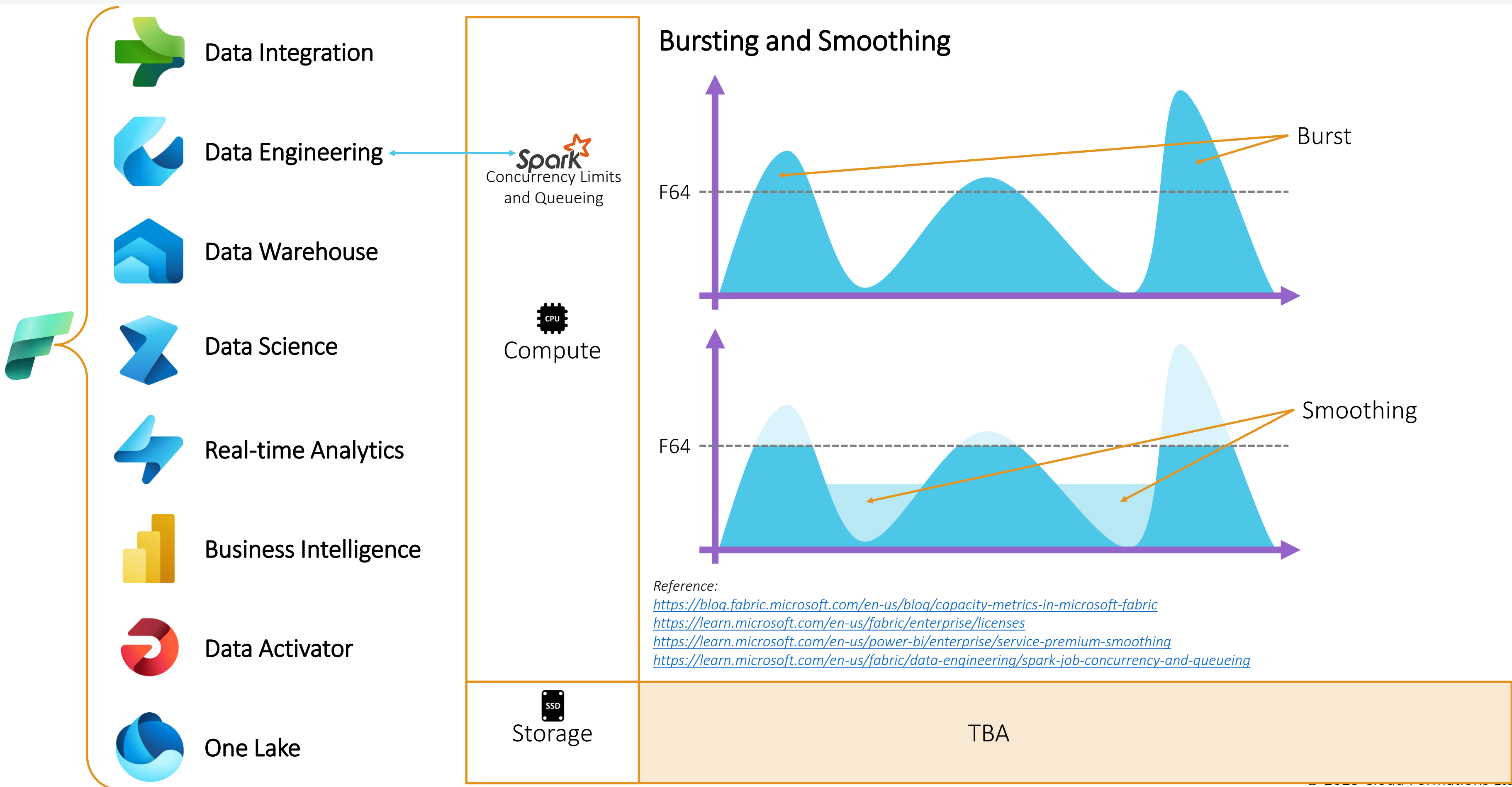
<https://learn.microsoft.com/en-us/power-bi/enterprise/service-premium-smoothing>

<https://learn.microsoft.com/en-us/fabric/data-engineering/spark-job-concurrency-and-queueing>

TBA



1. Simplifying Compute Consumption & Running Costs



Q: How Can Microsoft Fabric
Have an Impact on Your
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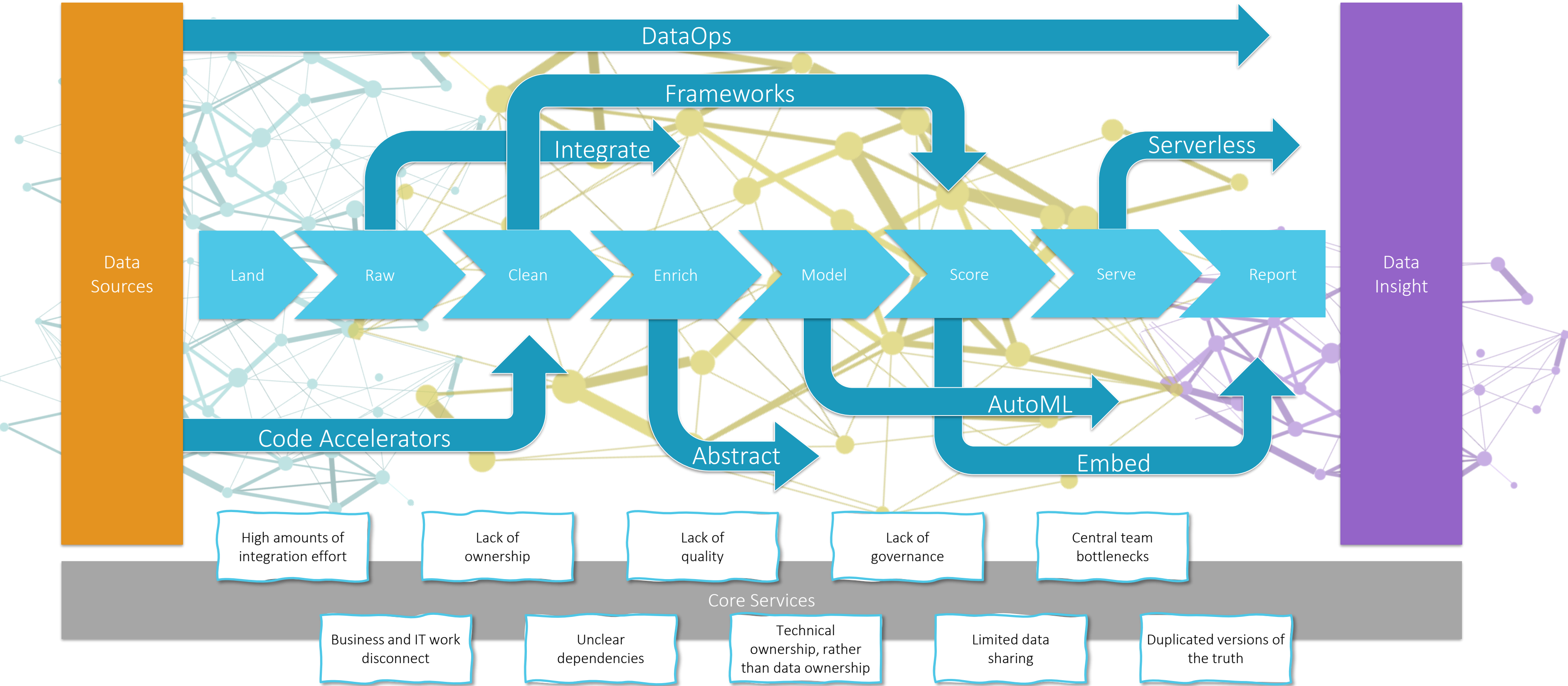
A:

1. Simplifying Compute Consumption & Running Costs
2. Accelerating Time to Insight

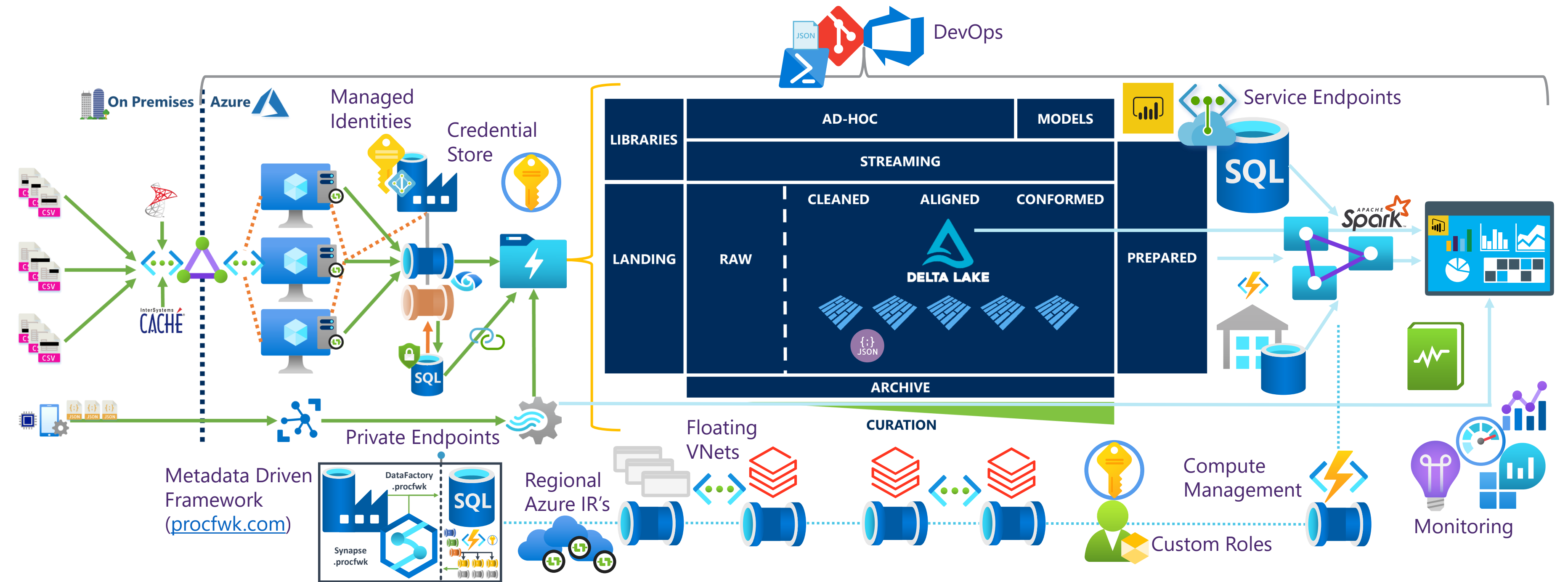
2. Accelerating Time to Insight



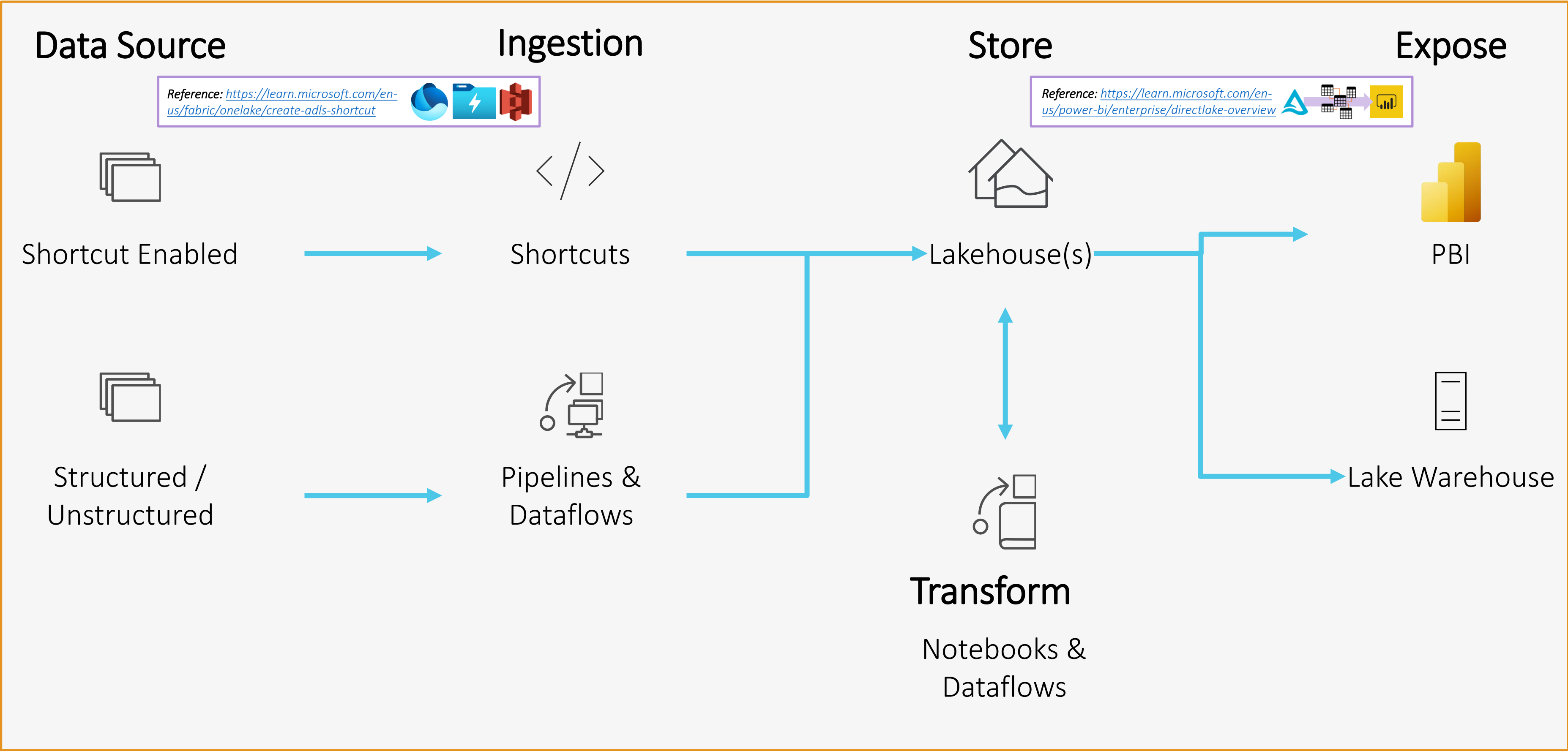
2. Accelerating Time to Insight



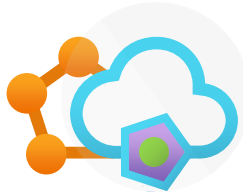
2. Accelerating Time to Insight



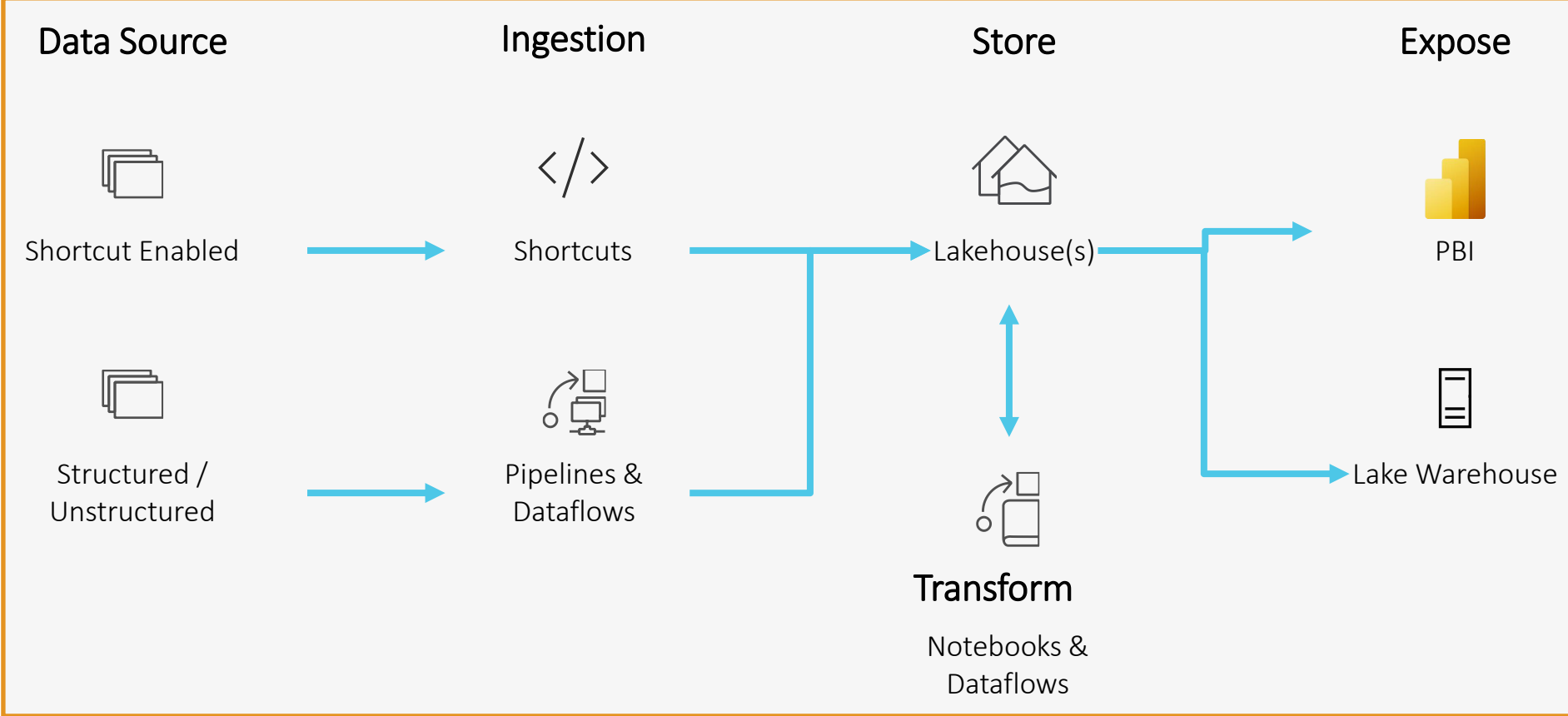
2. Accelerating Time to Insight



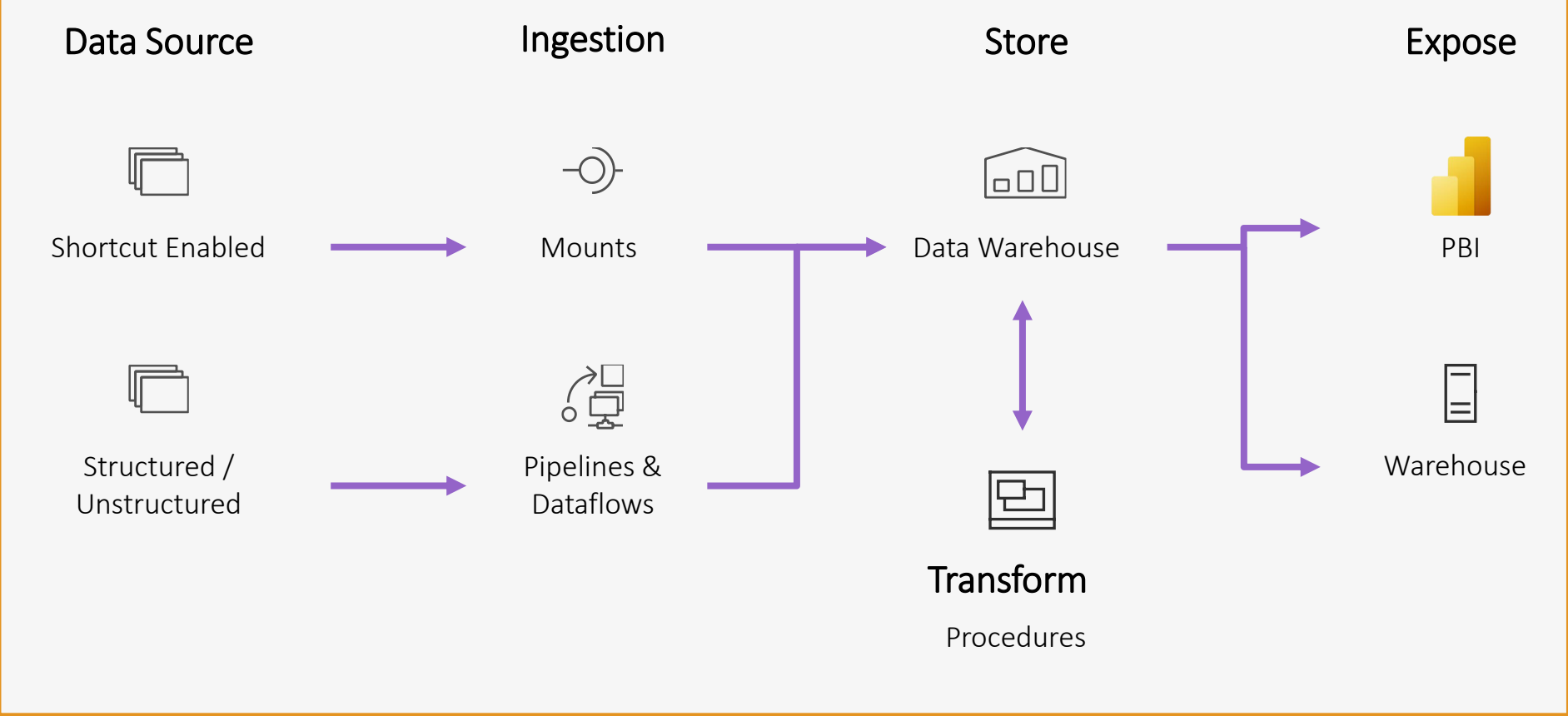
Microsoft Fabric – ‘Happy Paths’ (Patterns)



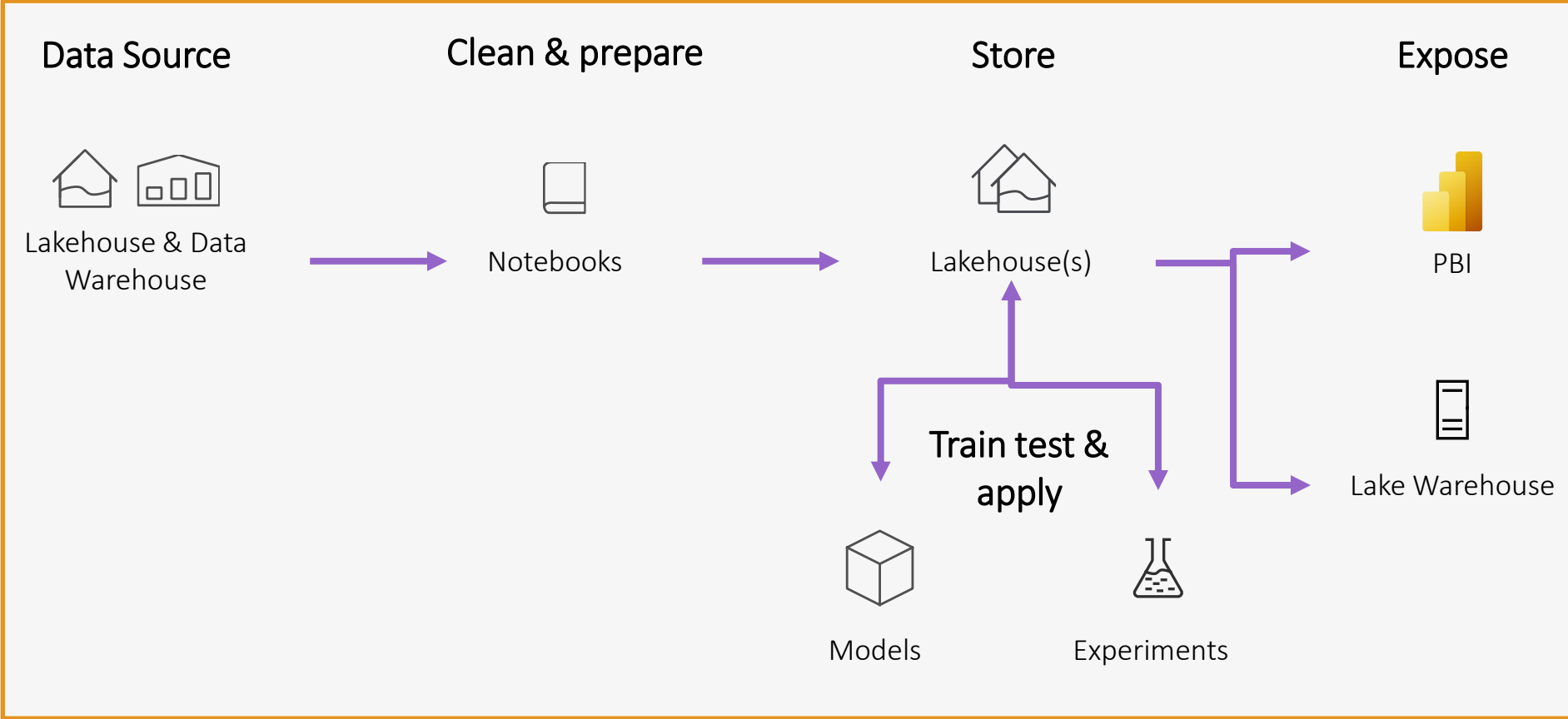
Lakehouse



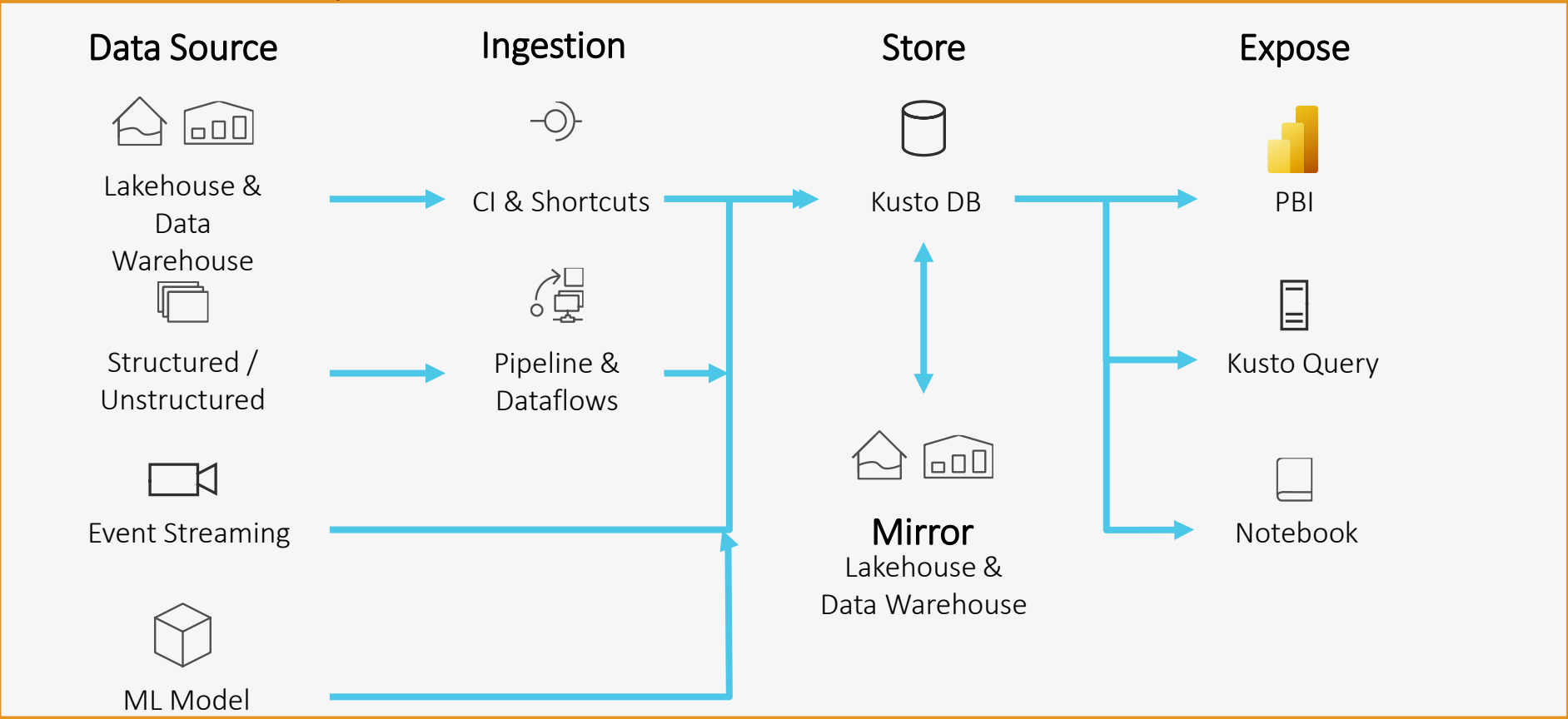
Data Warehouse



Data Science



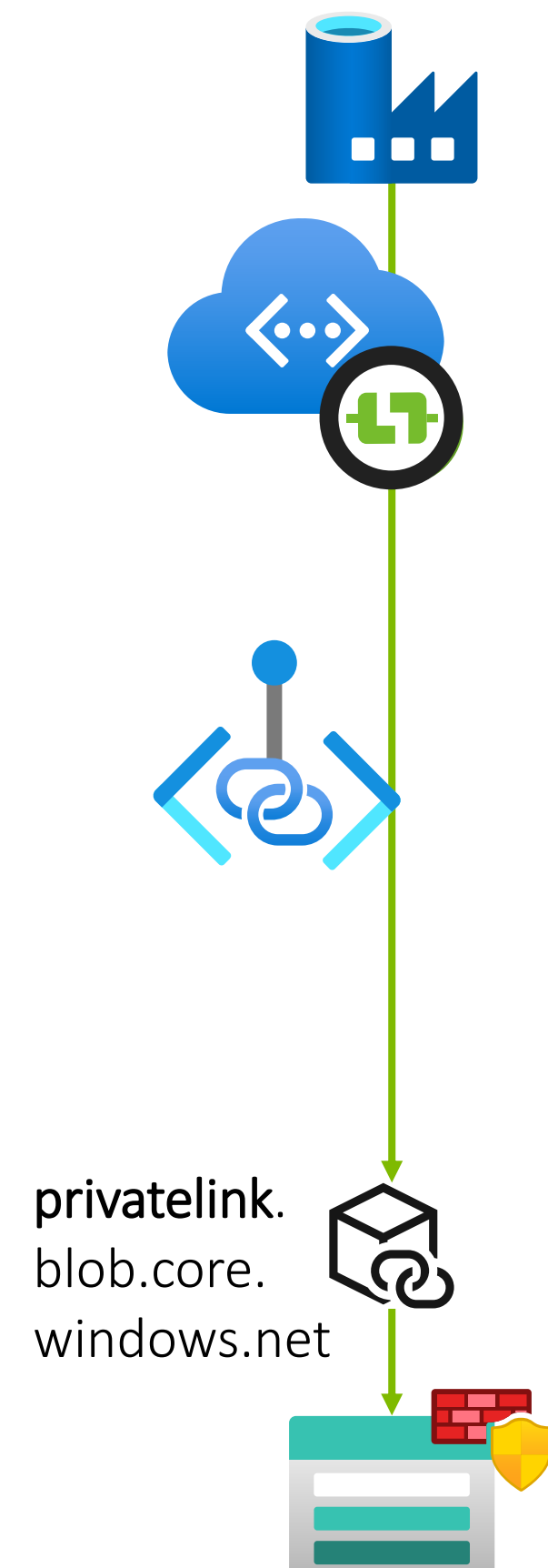
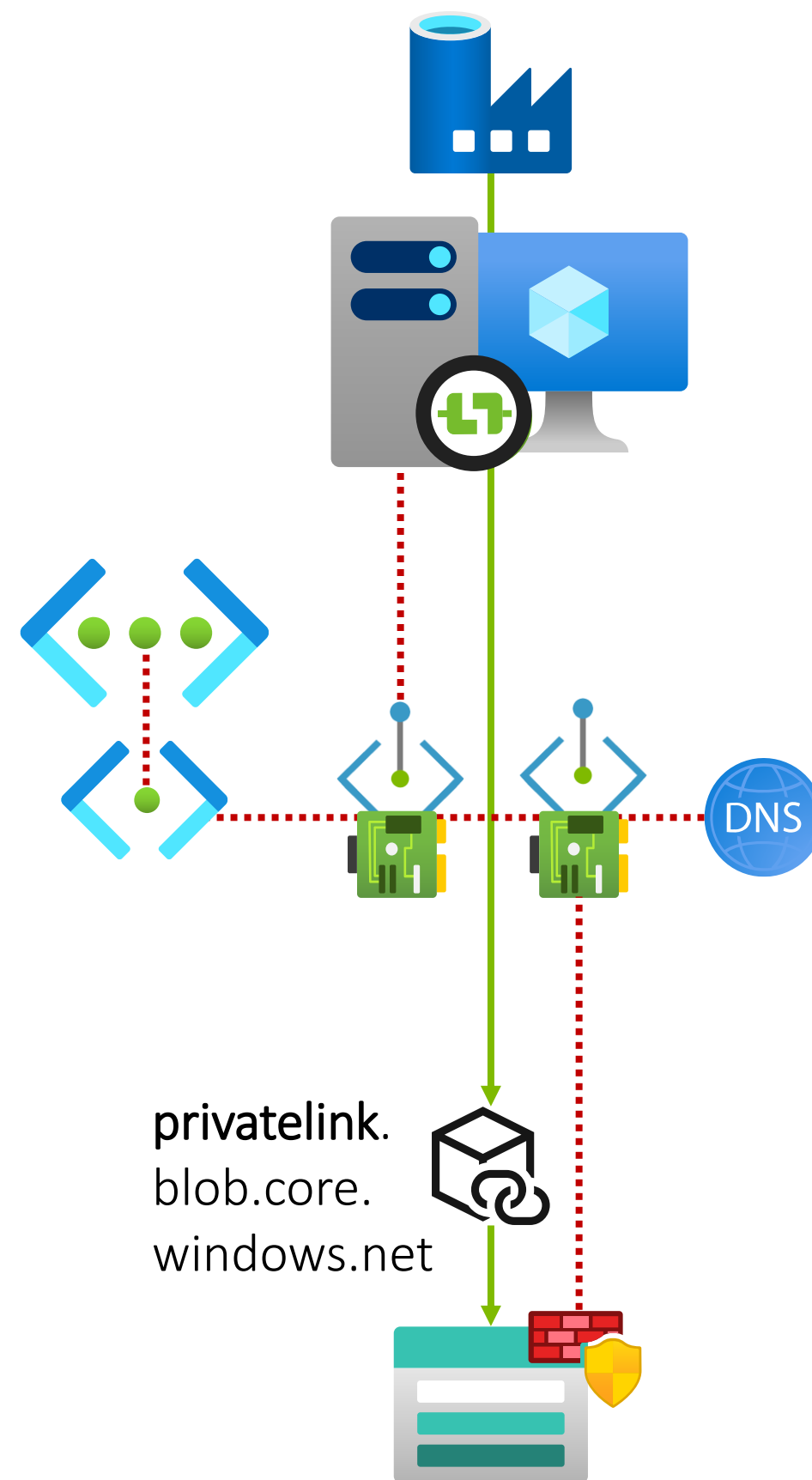
Real-Time Analytics



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Have an Impact on Your
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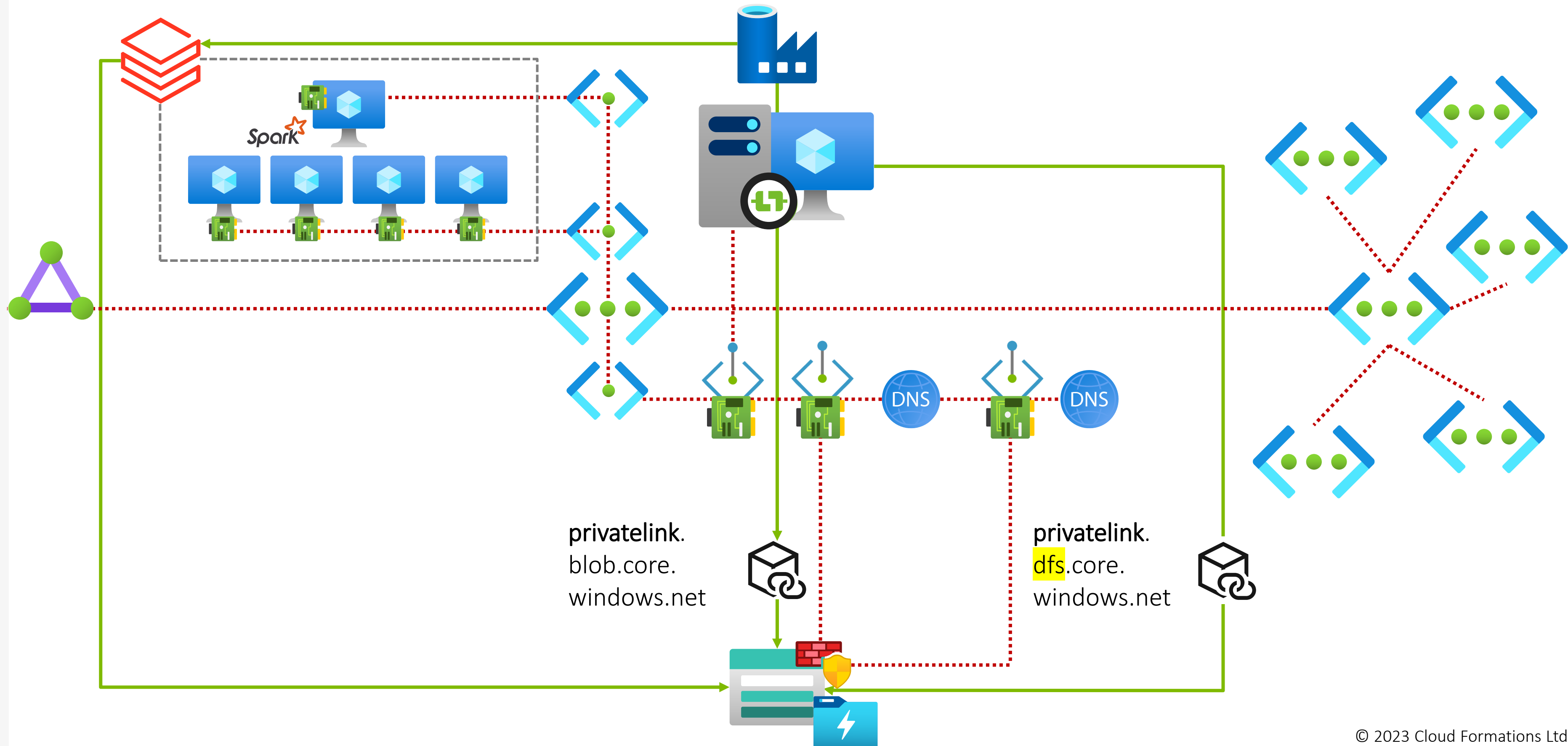
1. Simplifying Compute Consumption & Running Costs
2. Accelerating Time to Insight
3. Unified Tooling – Avoiding Complex Infrastructure



3. Unified Tooling – Avoiding Complex Infrastructure



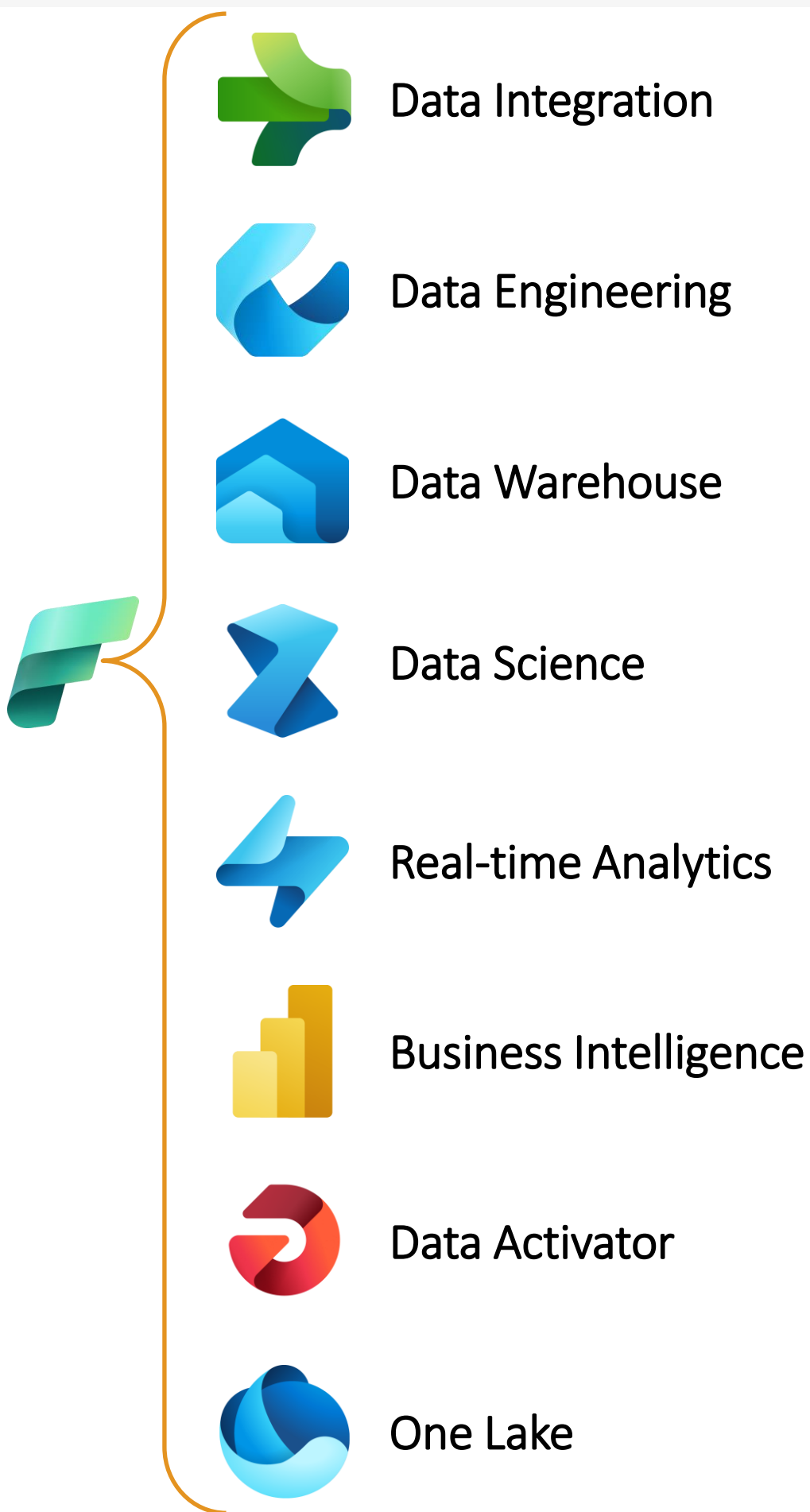
Cloud Formations - Knowledge Transfer & Training



3. Unified Tooling – Avoiding Complex Infrastructure



Cloud Formations - Knowledge Transfer & Training



Self-Hosted	Infra as a Service (IaaS)	Platform as a Service (PaaS)	Software as a Service (SaaS)
Applications	Applications	Applications	Applications
Data	Data	Data	Data
Runtime	Runtime	Runtime	Runtime
Middleware	Middleware	Middleware	Middleware
Operating System	Operating System	Operating System	Operating System
Virtualization	Virtualization	Virtualization	Virtualization
Servers	Servers	Servers	Servers
Storage	Storage	Storage	Storage
Networking	Networking	Networking	Networking

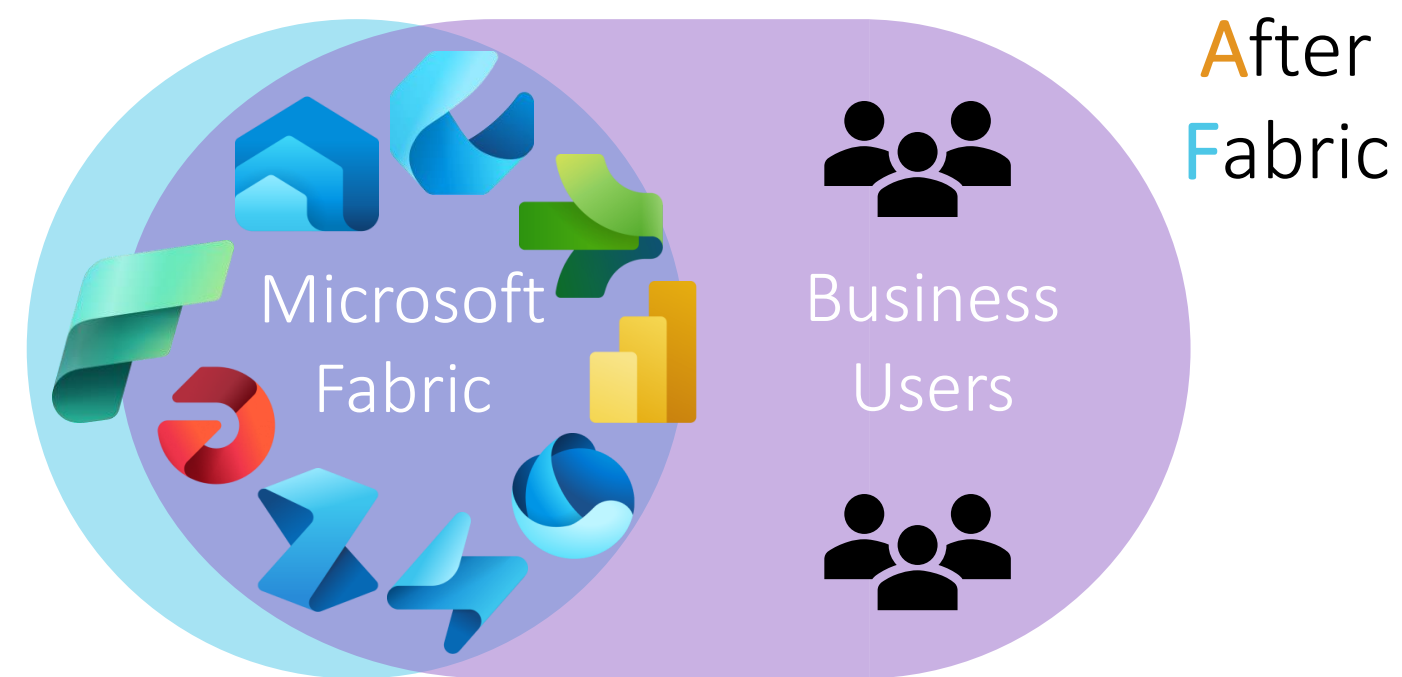
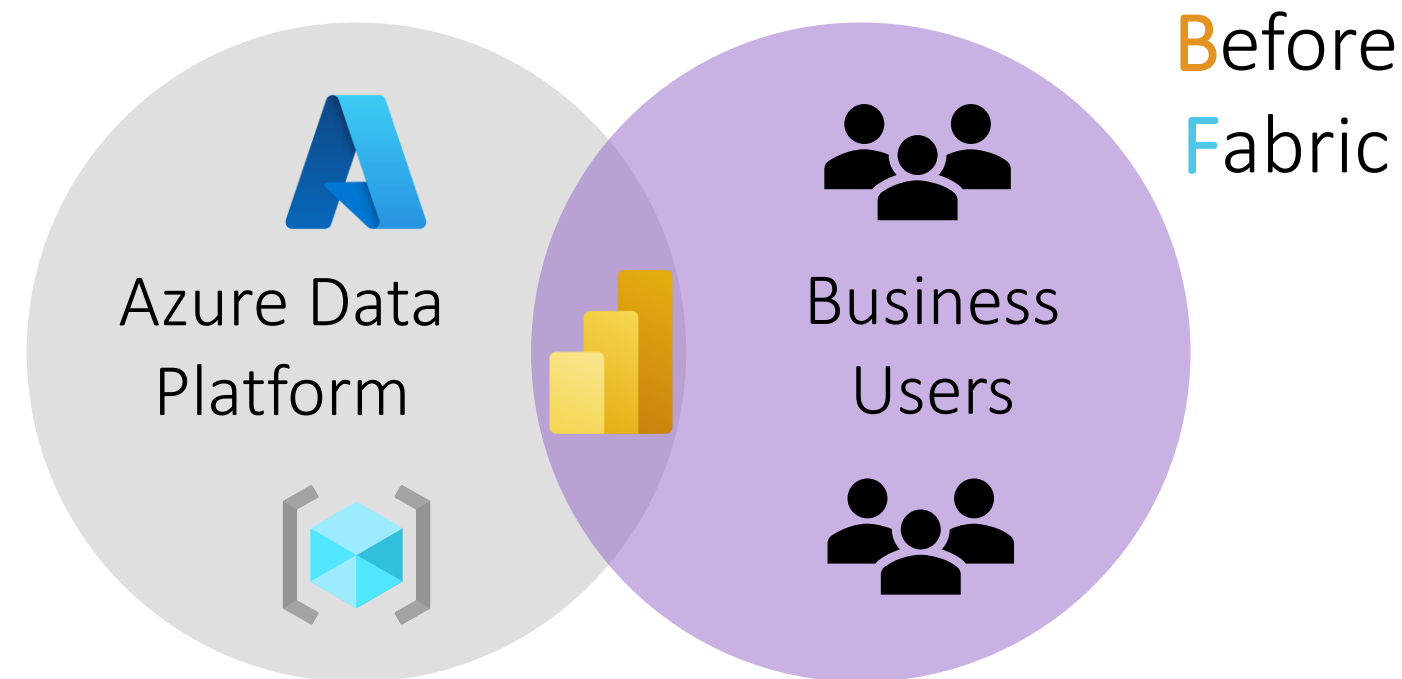
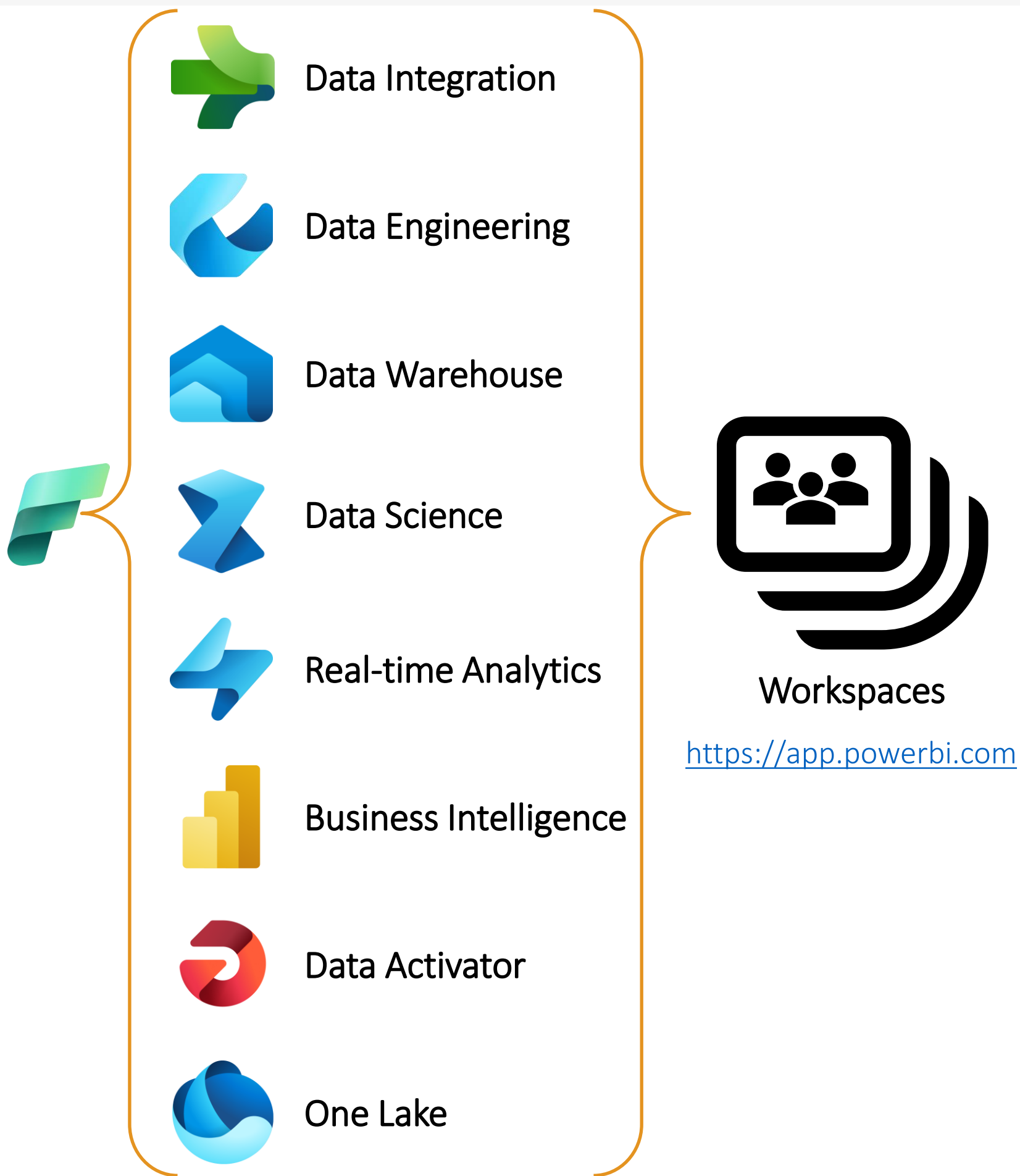
Fabric as a Service (FaaS)
Mesh as a Service (MaaS)

Q: How Can Microsoft Fabric
Have an Impact on Your
Business?

A:

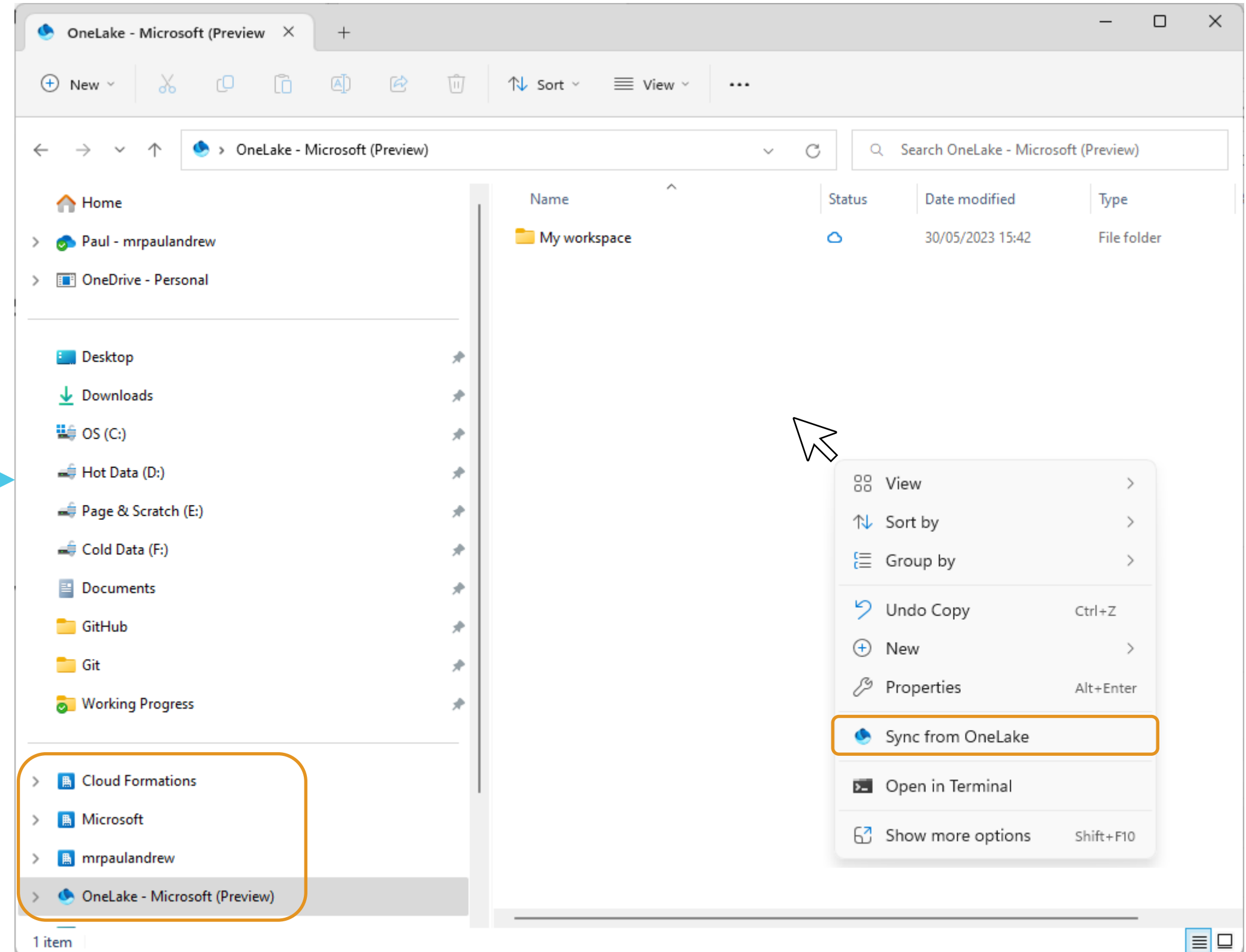
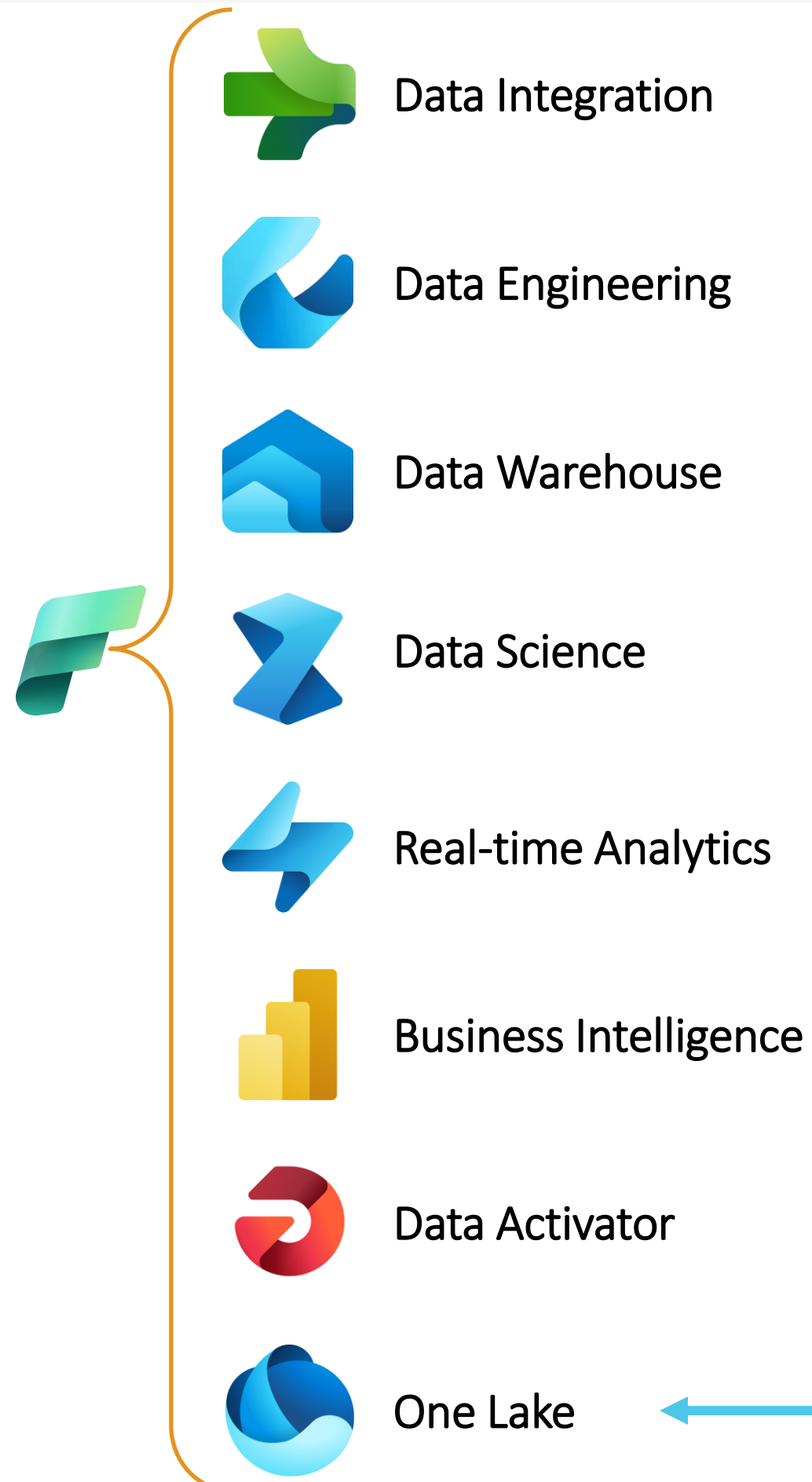
1. Simplifying Compute Consumption & Running Costs
2. Accelerating Time to Insight
3. Unified Tooling – Avoiding Complex Infrastructure
4. Empowering Business Users

4. Empowering Business Users





4. Empowering Business Users



Reference: <https://learn.microsoft.com/en-us/fabric/onelake/onelake-file-explorer>

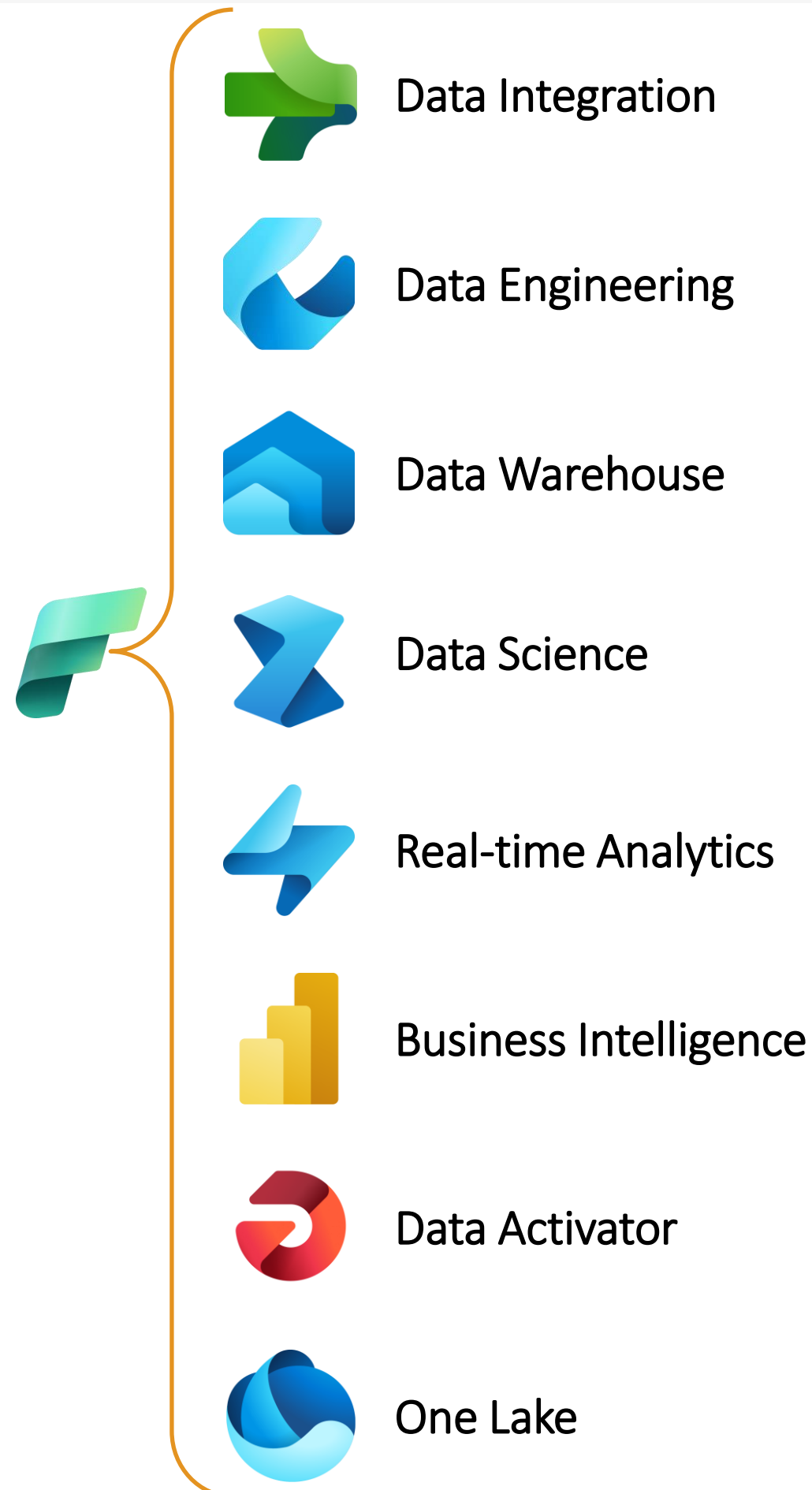
Q: How Can Microsoft Fabric
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2. Accelerating Time to Insight
3. Unified Tooling – Avoiding Complex Infrastructure
4. Empowering Business Users
5. Driving Innovation



5. Driving Innovation – Improving Productivity



“Show me the top 10 most profitable products sold in the last 6 months by category and region.”

“Give me a summary of my meetings today.”

“Draft an announcement ready for my next event.”

“Write a SQL script to aggregate my sales data.”

“Create a DAX measure for the average numbers of customers that subscribe to my website per week.”

“Build a dashboard for all sales this month with visuals showing a breakdown by product owner.”

WIKIPEDIA
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Microsoft 365 Copilot 10 languages

Article Talk Read Edit View history Tools

From Wikipedia, the free encyclopedia

Microsoft 365 Copilot is an **artificial intelligence** assistant feature for **Microsoft 365** applications and services.^{[1][2][3]} Announced by Microsoft on March 16, 2023, the tool builds on **OpenAI**'s advanced **GPT-4 large language models** (LLMs) and incorporates **Microsoft Graph** in order to convert user text input into content in Microsoft 365 apps, such as **Word**, **Excel**, **PowerPoint**, **Outlook**, and **Teams**.^[1] Copilot is being marketed with a focus on productivity for its users, with 20 initial testers as of March 16, 2023.^{[1][4]} In May 2023, Microsoft expanded access to 600 customers willing to pay for early access, with the office apps^[5] and services getting new Copilot features.^[6] Although there are public concerns about the chatbot, including **hallucinations** and racial or gender bias, experts believe that Copilot may change the way that Microsoft users work and collaborate.^[7] Microsoft announced during the Build 2023 conference that it is adding the AI assistant Copilot to Windows 11. The Windows Copilot service is directly integrated with Windows 11 and users can access it through the taskbar.^[8]

Developer(s)	Microsoft
Type	Chatbot
License	Proprietary

Reference: <https://powerbi.microsoft.com/en-us/blog/introducing-microsoft-fabric-and-copilot-in-microsoft-power-bi/>

https://en.wikipedia.org/wiki/Microsoft_365_Copilot

<https://blogs.microsoft.com/blog/2023/03/16/introducing-microsoft-365-copilot-your-copilot-for-work/>

@BenniDeJagere

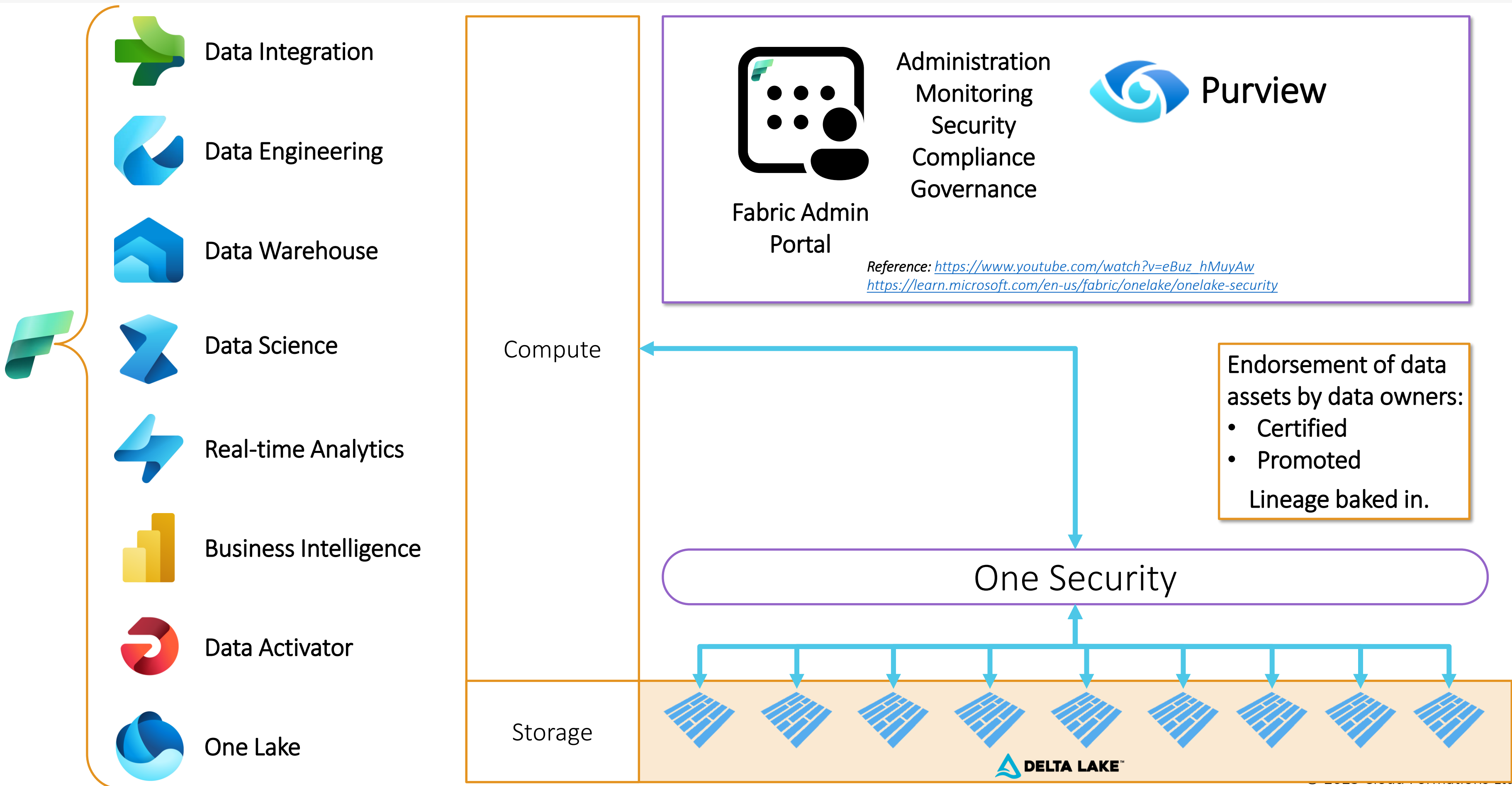
Senior Program Manager Fabric CAT

Q: How Can Microsoft Fabric Have an Impact on Your Business?

A:

1. Simplifying Compute Consumption & Running Costs
2. Accelerating Time to Insight
3. Unified Tooling – Avoiding Complex Infrastructure
4. Empowering Business Users
5. Driving Innovation
6. Improving Governance

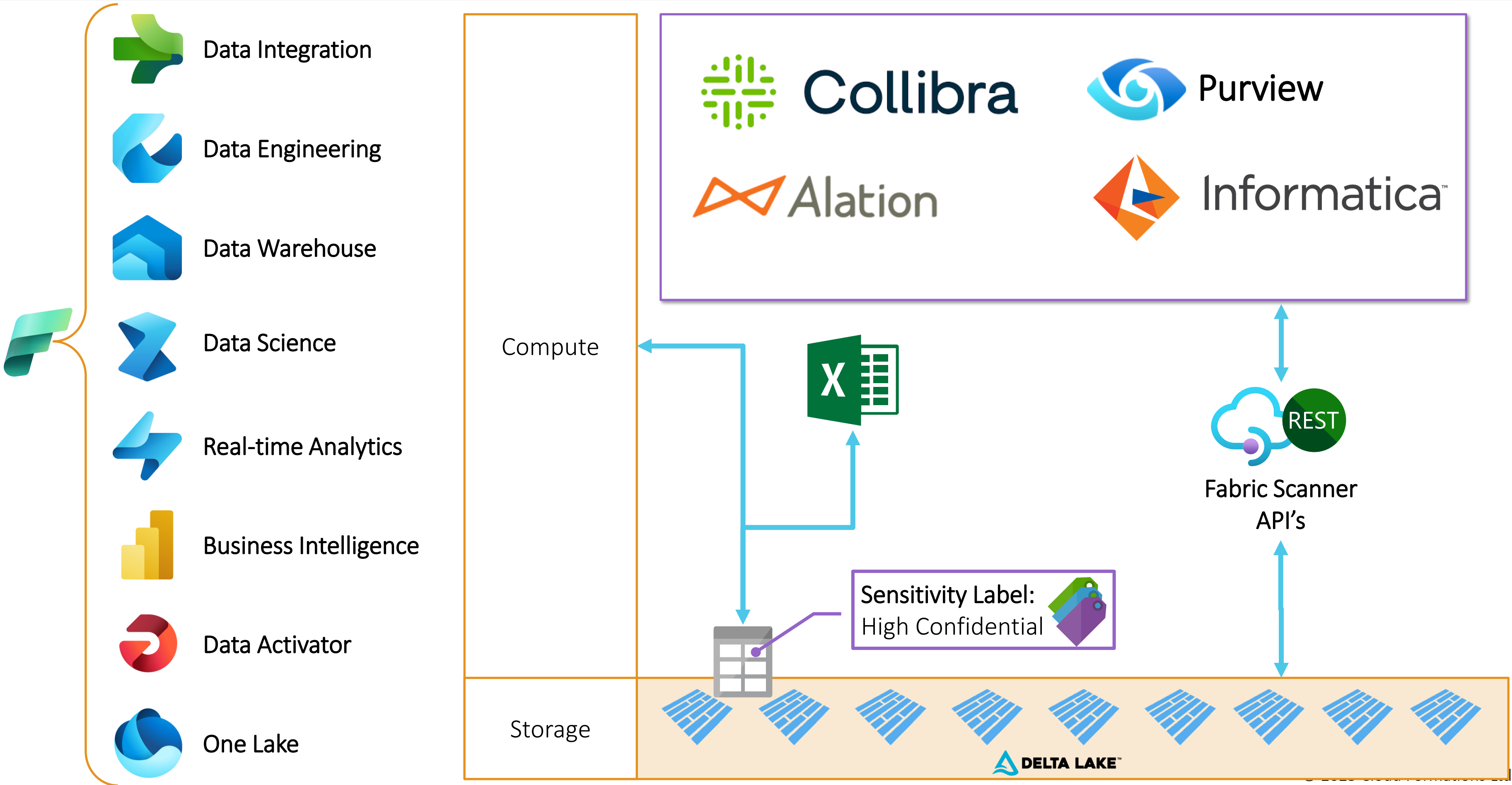
6. Improving Governance – One Security & Admin



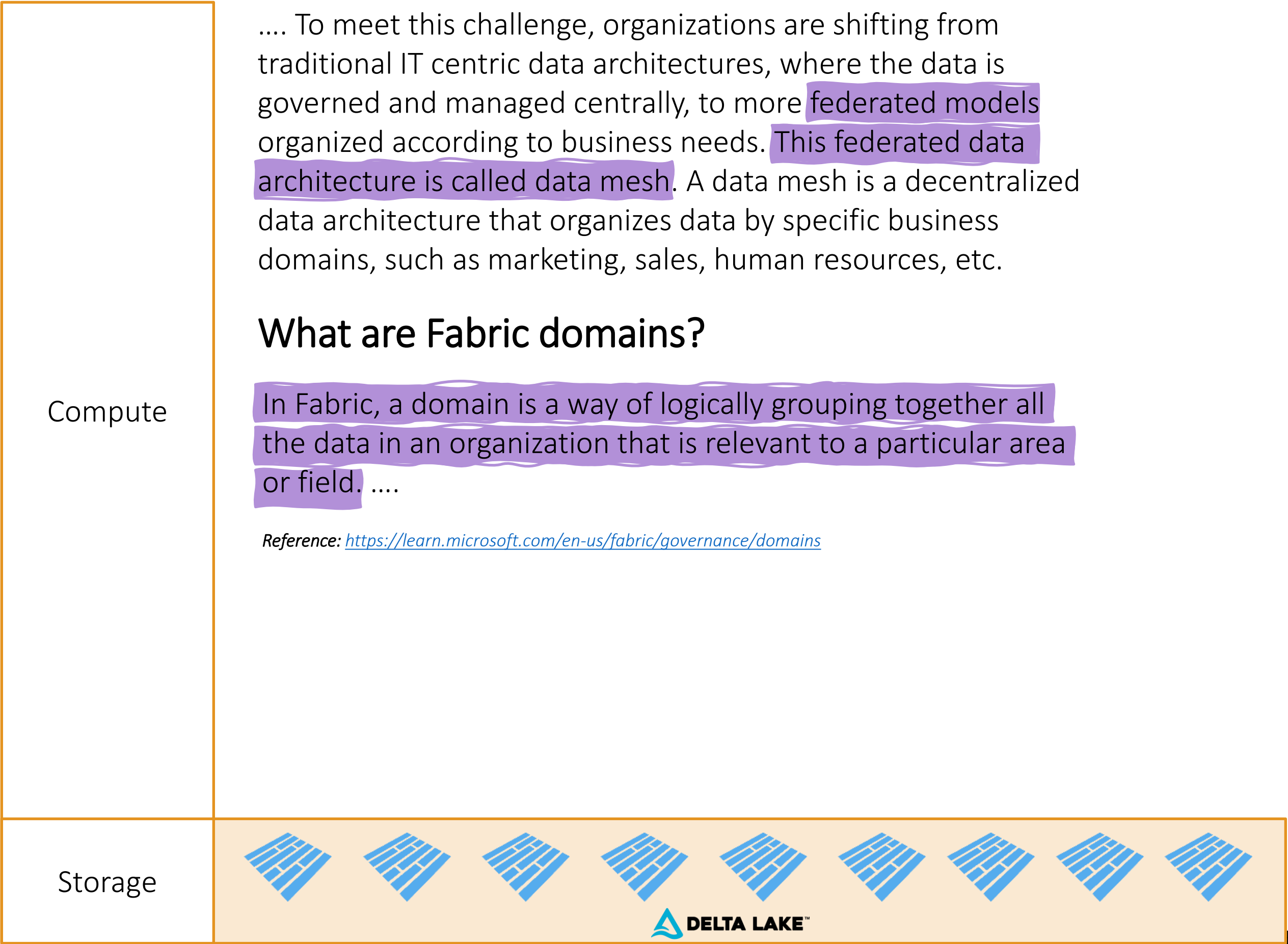
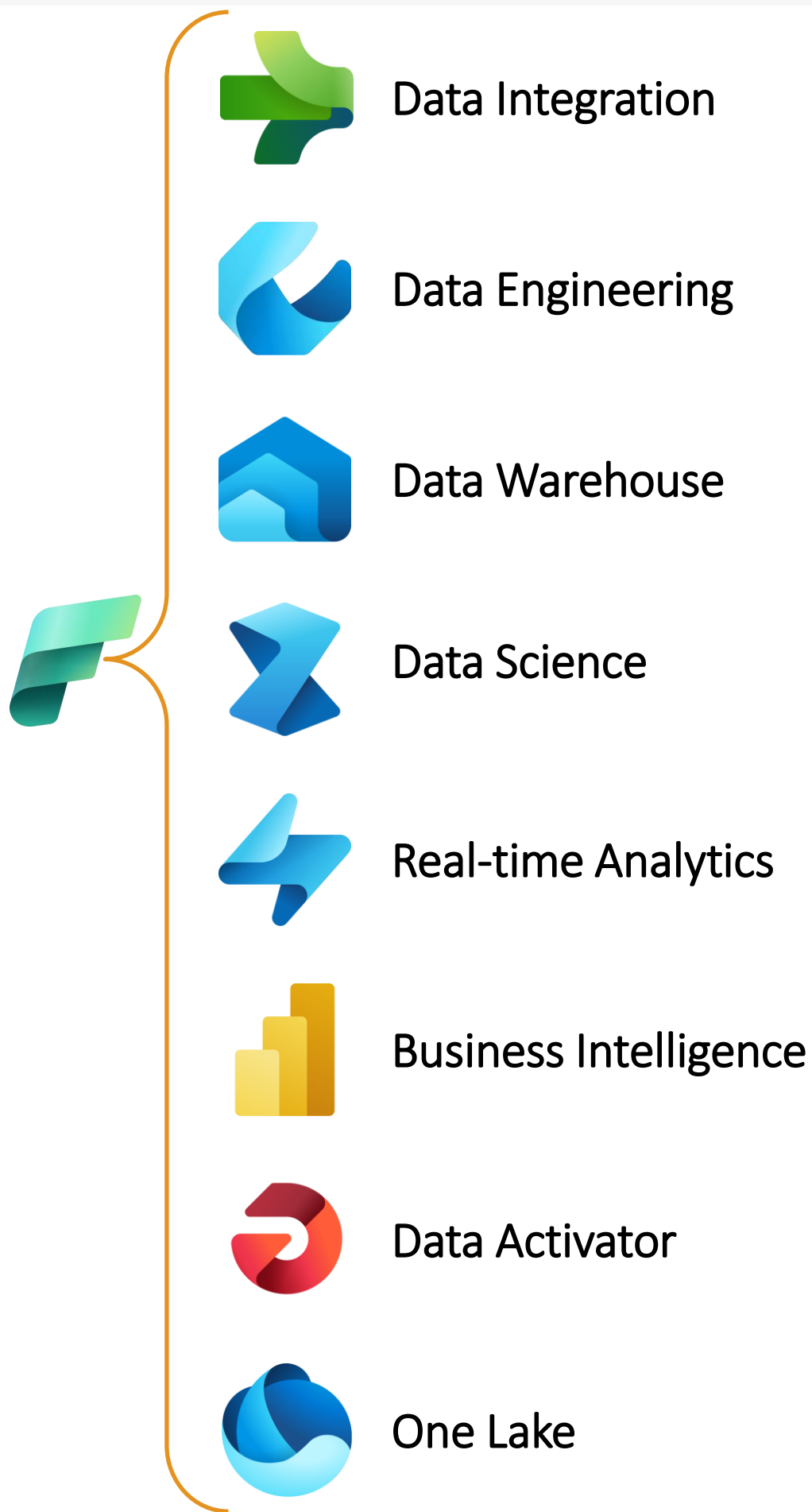
6. Improving Governance – Sensitivity & Tooling



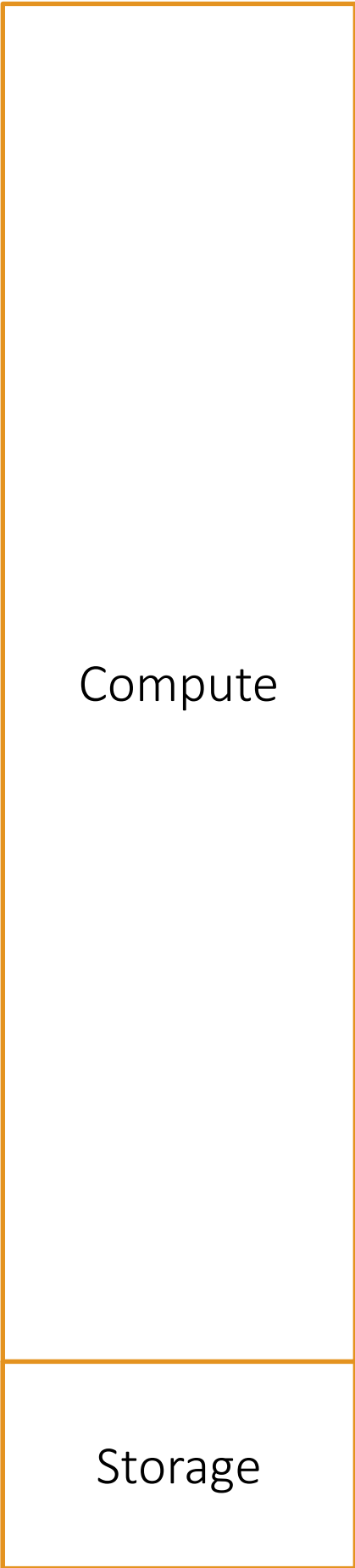
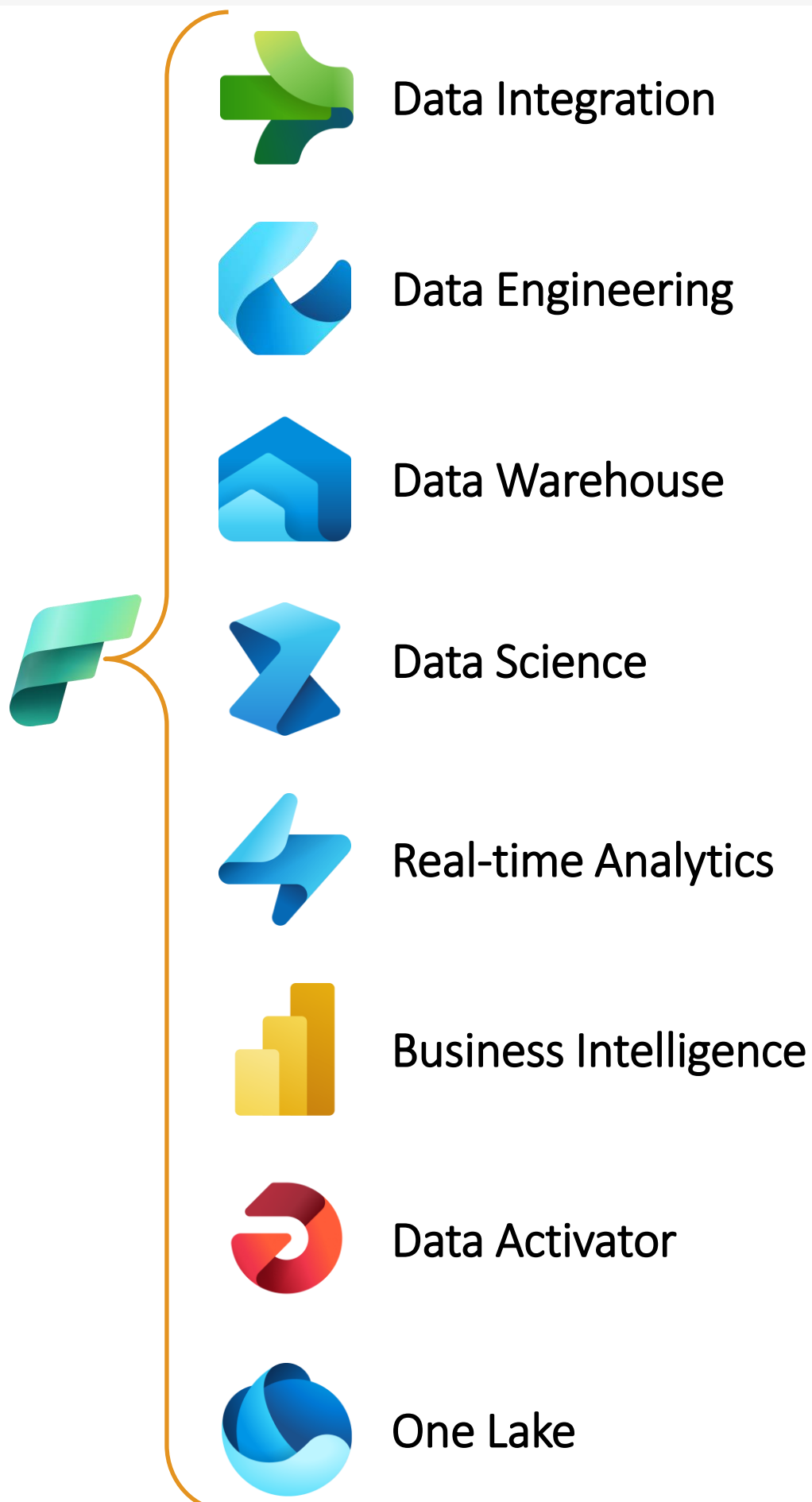
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6. Improving Governance – Domains



6. Improving Governance – Domains

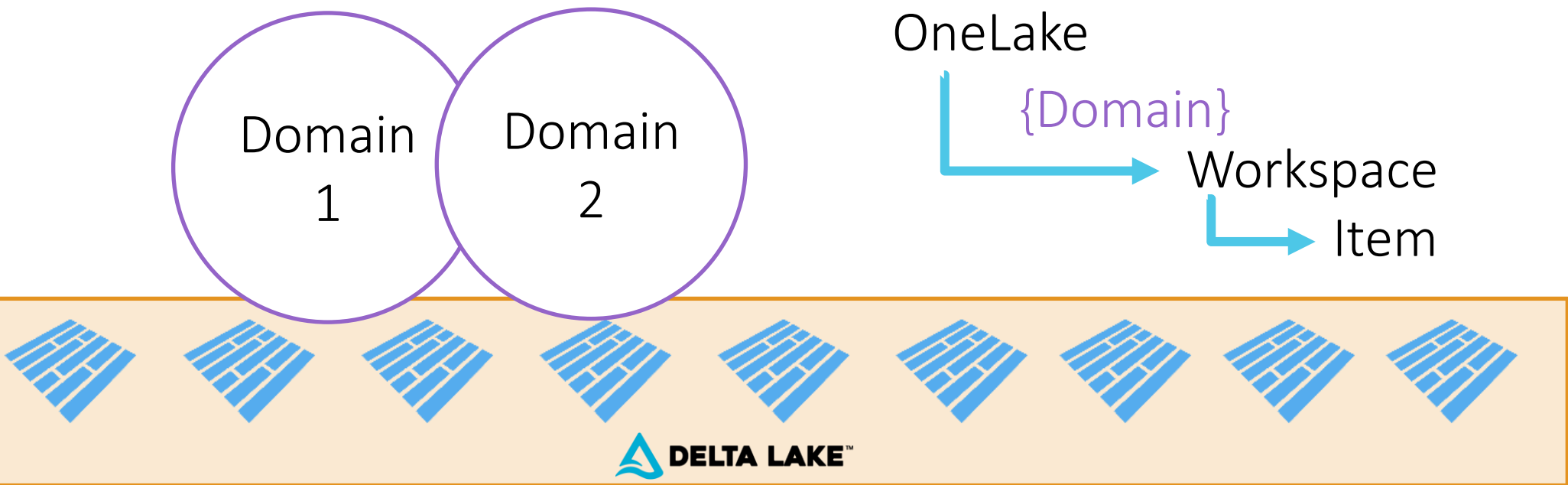


.... To meet this challenge, organizations are shifting from traditional IT centric data architectures, where the data is governed and managed centrally, to more federated models organized according to business needs. This federated data architecture is called data mesh. A data mesh is a decentralized data architecture that organizes data by specific business domains, such as marketing, sales, human resources, etc.

What are Fabric domains?

In Fabric, a domain is a way of logically grouping together all the data in an organization that is relevant to a particular area or field.

Reference: <https://learn.microsoft.com/en-us/fabric/governance/domains>



Q: How Can Microsoft Fabric
Have an Impact on Your
Business?

In Summary

But: Full Source Control.
Private Network Connectivity.
Key Vault Integration.
A New URL.
One Security.
Comprehensive Monitoring.

A:

1. Simplifying Compute Consumption & Running Costs
2. Accelerating Time to Insight
3. Unified Tooling – Avoiding Complex Infrastructure
4. Empowering Business Users
5. Driving Innovation
6. Improving Governance

Q: How Can Microsoft Fabric Have an Impact on Your Business?





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Simplified Running Costs

The Azure Price Calculator is a complex tool for many Resources with a vast array of abstract levers and knobs to tweak, before getting close to understanding cloud running costs. Now with Microsoft Fabric the metrics have been simplified to compute and storage.

Compute defined as 'capacities' with a simple size and number of units, resulting in a monthly cost, but charged per min. In the future (as with all compute) Microsoft plan to offer discounts for reserved instances. While keeping the default pay-as-you-go options in place.

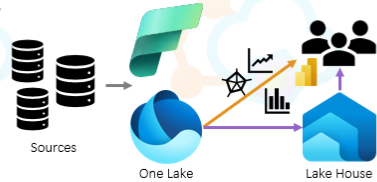
Note: From a Power BI Premium perspective, a P1 SKU is equivalent to a Fabric F64 SKU.
Reference: <https://blog.fabric.microsoft.com>



Accelerated Time to Insight

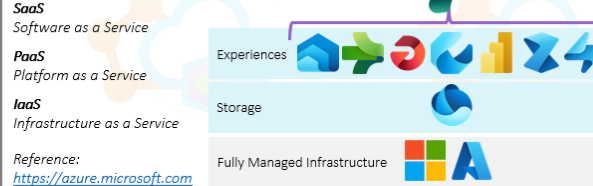
Getting from source data to insight is the goal for all businesses, to understand trends and stay ahead of the competition. In Microsoft Fabric, data can be landed in One Lake and **accessed directly** through Power BI and other tools. This reduces delivery friction and avoids long running/nightly processing jobs. The trade-off being, business users are exposed to the raw datasets, not yet curated. But this trade could be acceptable in 60% of cases where the demand for data is high across the business.

Once initial demand is met, **data curation processes** can execute to support complex outputs and regular performance reporting.



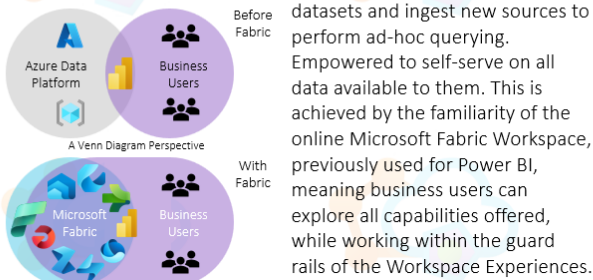
Unified Tooling - Avoiding Complex Infrastructure Builds

With a complete software suite including, all required data handling capabilities, the need to frontload complex platform builds and infrastructure deployments is mitigated. Resources are fully integrated across the Microsoft Fabric Experiences avoiding brittle service to service configuration. This, including reduced data movements with a common storage plane provided by One Lake.



Empowered Business Users

Self-service data analytics is a long-standing aspiration for all businesses. An aspiration that often-required large amounts of data transformation and a comprehensive semantic layer for serving. Now with Microsoft Fabric, unified Power Platform tooling, such as Power Query, low code Data Flows and Power BI, users can manipulate



Driving Innovation

The Microsoft Fabric unified tooling coupled with offerings like Microsoft Copilot means an explosion in creativity. Full code and citizen developers have to ability to shortcut the fundamentals and deliver innovative solutions at speed. Solutions that could drive business automation and deliver insights at scale, through natural language.



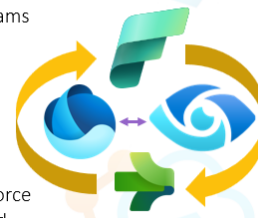
It should be the ambition of all technical professionals in the IT industry to automate themselves out of a role. Not to mean the role is obsolete. But, to mean an evolution in tasks that free up time for professionals to focus on the next wave of complex projects.

Reference: <https://blogs.microsoft.com>

Improved Governance

Disparate, poorly integrated systems has always been the nemesis of good data governance. Now with Microsoft Fabric and its single One Lake storage layer for all compute Resources, integration, classification, cataloguing and lineage, tracking can be delivered with ease.

This offers the ability for data and IT teams to control dataflows in one location. Assured that sensitive attribute classifications can be applied once and propagated to all Experiences within Microsoft Fabric. Then as the offering matures the expectation is that a comprehensive security model will enforce such data handling for users end-to-end.



Reference: <https://learn.microsoft.com>

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Cloud Formations - Point of View

How Can Microsoft Fabric Have An Impact On Your Business

Answer: Simplified Running Costs. Accelerated Time to Insight. Unified Tooling- Avoiding Complex Infrastructure Builds. Empowered Business Users. Driving Innovation. Improved Governance.

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An Evolution of Cloud Technology to Microsoft Fabric

Having an understanding of how Microsoft has evolved its data product offerings over the last decade can greatly inform the technical direction and implementation of these resources for your business.

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An Evolution of Cloud Technology to Microsoft Fabric

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Community Content



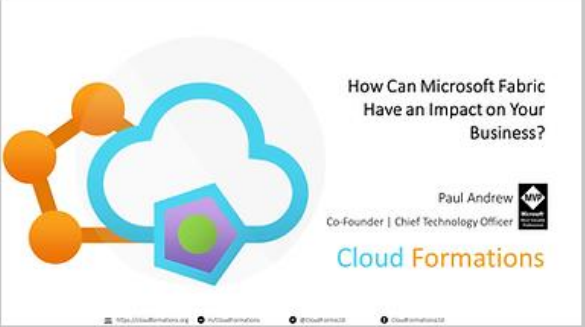
How Can Microsoft Fabric Have an Impact on Your Business?

Speaker: Paul Andrew

Date: 13 July 2023

Hosts: Microsoft Fabric- UK User Group

PDF of Slides

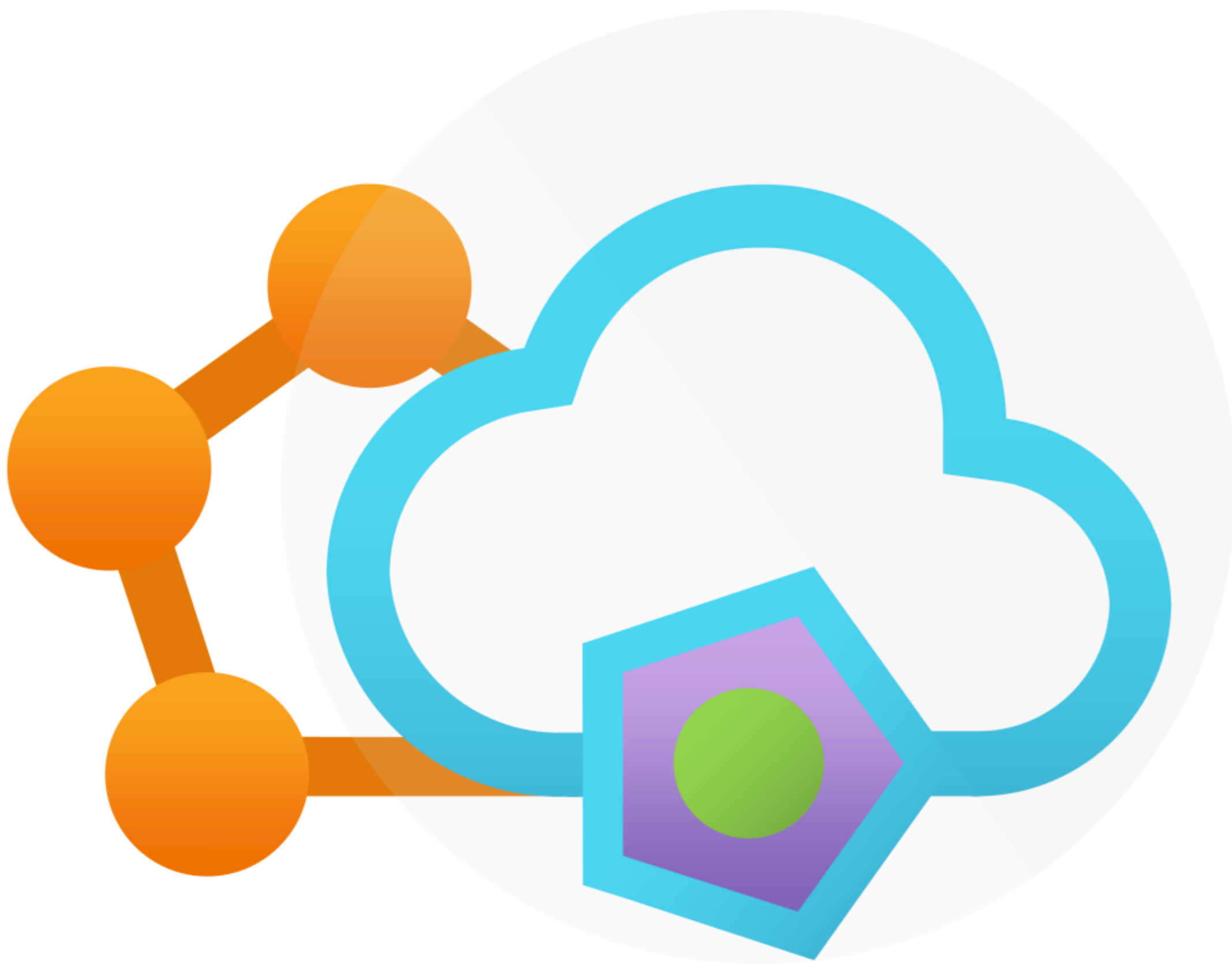


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Co-Founder | Chief Technology Officer

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Thank You




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