



EUROPEAN **MiCROSOFT FABRiC**

Community Conference

STOCKHOLM 24-27 SEPTEMBER 2024

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Patterns for Consistent, Metadata-Driven Processing in Fabric

Ben Jarvis

HARNESSING TECHNOLOGY.
ADVANCING BUSINESS.
ENHANCING LIVES.

telefonicatech.uk

About Me – Ben Jarvis

- CTO, Data & AI at Telefónica Tech
- 10+ years of experience across:
 - Application Development
 - Infrastructure / DevOps
 - Data Engineering
- 6+ years architecting and delivering data & AI solutions in Azure
- Experience of:
 - Azure Data Lake Analytics
 - Azure Synapse
 - Databricks
 - Microsoft Fabric



Agenda

01

Building a Platform Using Fabric

Where is our time spent?

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Benefits of Standardisation

Why do we need it?

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Wrap-Up

How do I get started?

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Principles of Metadata-Driven Processing

How do we do it?

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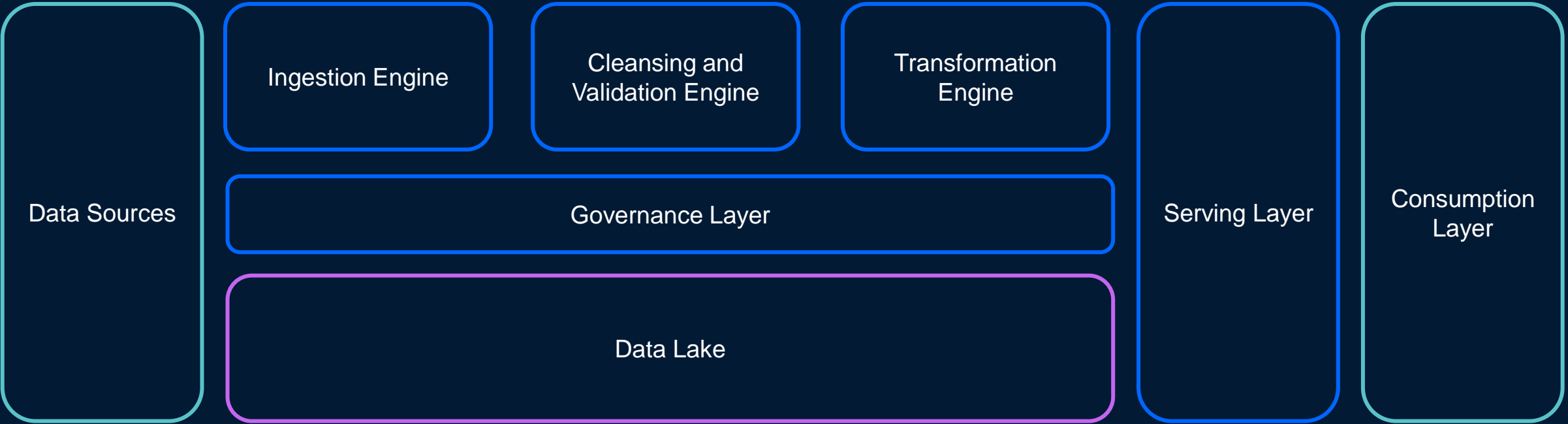
How do I get started?

03

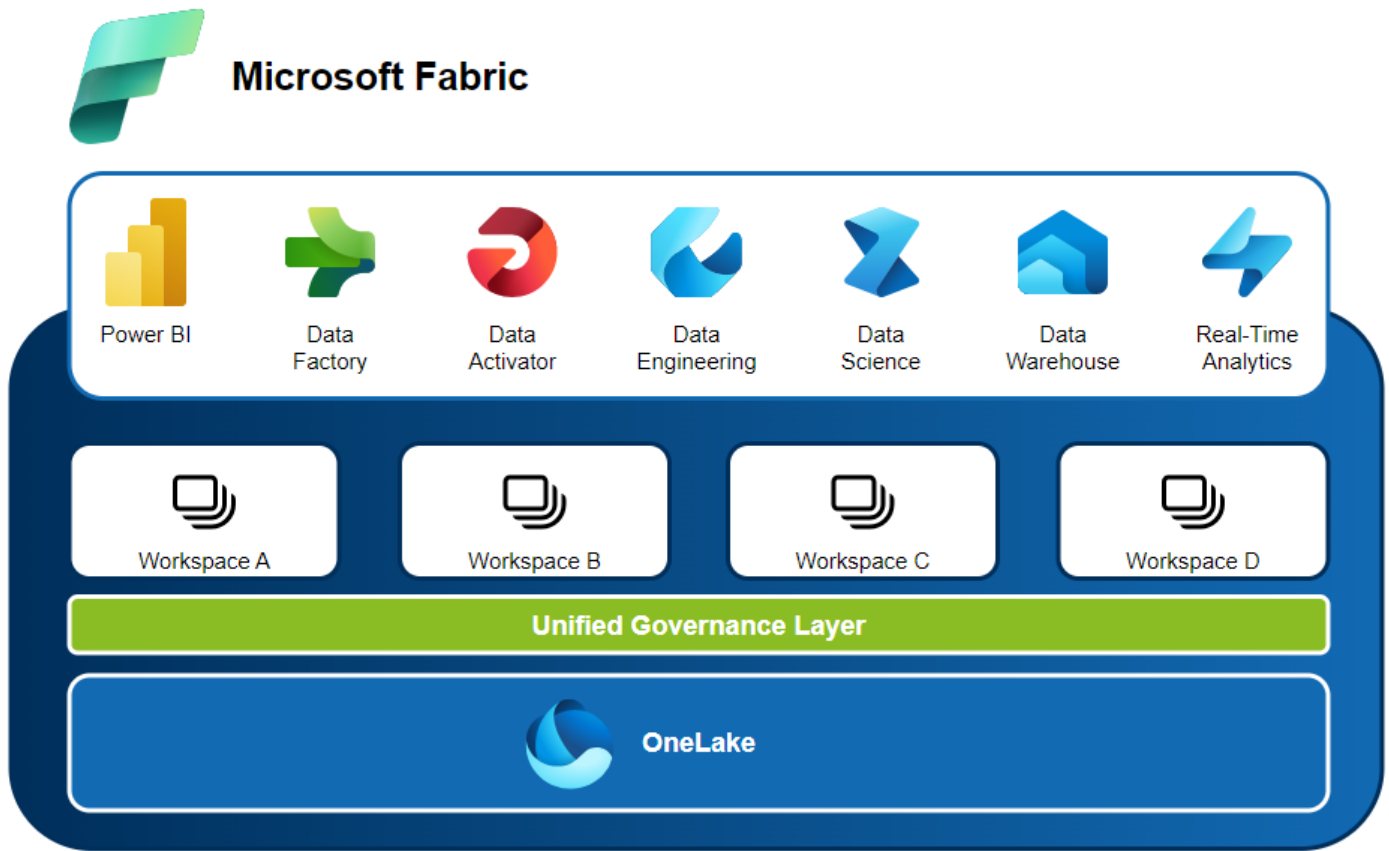
Principles of Metadata-Driven Processing

How do we do it?

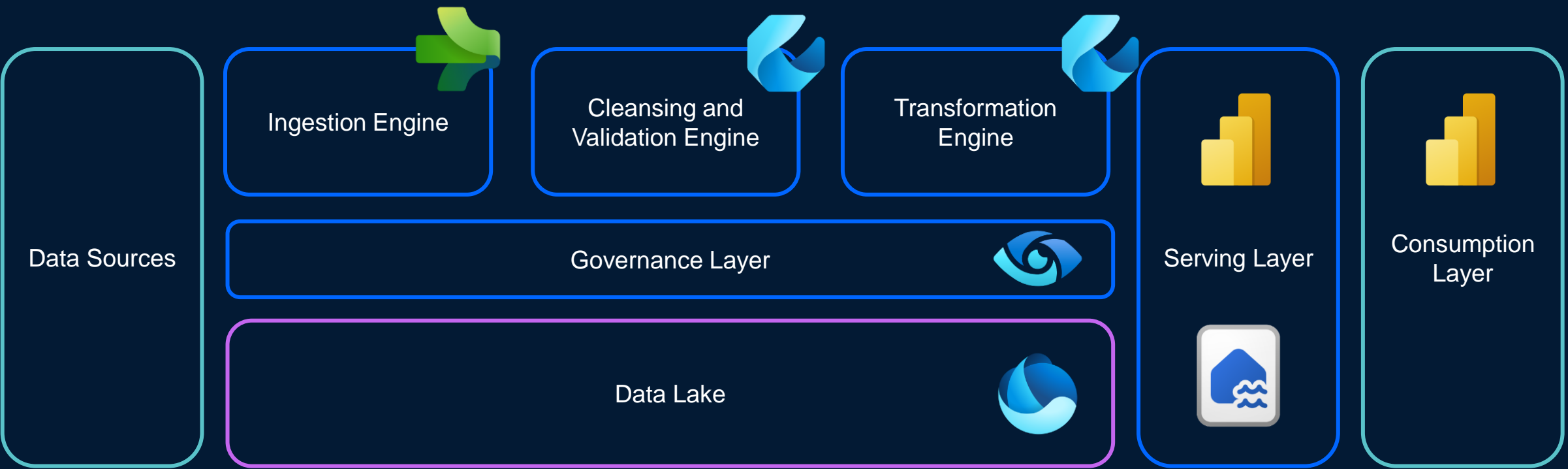
A typical data platform



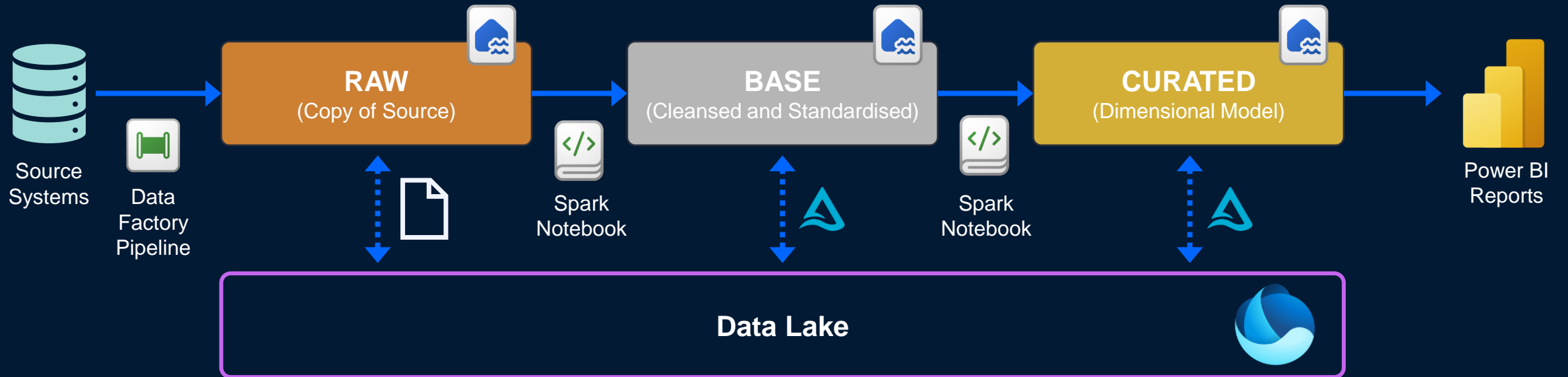
Fabric Overview



A typical data platform in



End-to-end architecture in



Where do we spend our time?

Ingestion



Data Cleansing



Data Quality



Curation



What are the problems?

Manual Steps

Time Spent Writing Mundane, Boilerplate Code

Lack of Consistency – Impact on Developer Productivity and Support

Complex Onboarding

Difficulty Future Proofing

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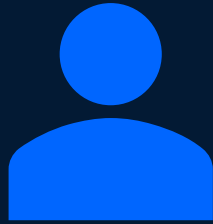
Principles of Metadata-Driven Processing

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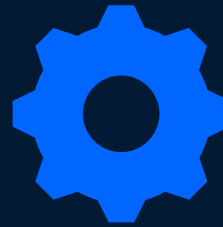
Why standardise?



Drive
Consistency



Increase
Productivity



Reduce
Manual Effort



Future
Proof

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Techniques for building metadata-driven processes

Parameterisation

- ✓ Simple to develop
- ✓ Simple to test
- ✗ Can become complex to debug
- ✗ Limited capability in some tools

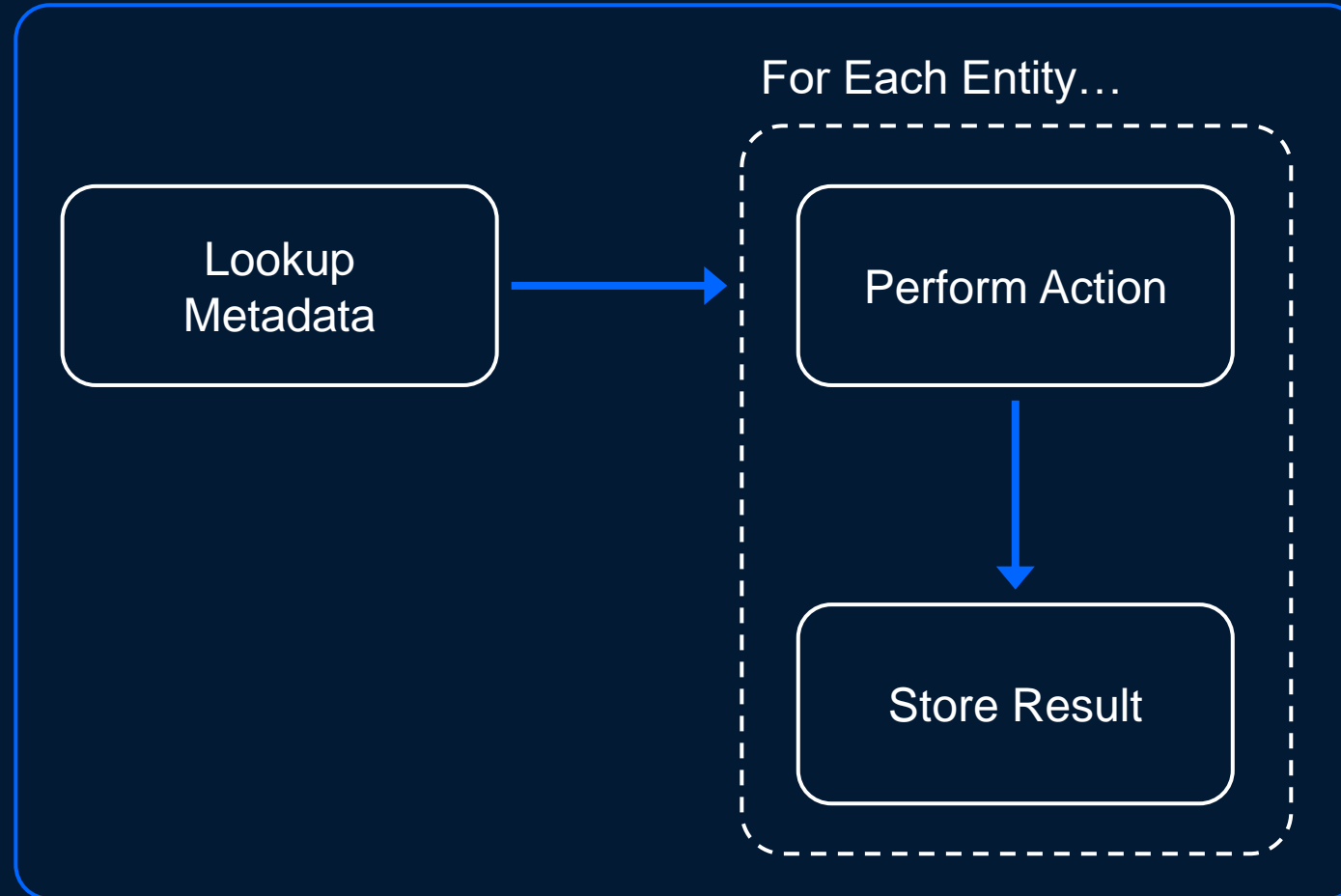
Code Generation

- ✗ More complex to develop
- ✓ Simple to test
- ✓ Simple to debug
- ✓ Can utilise all tools

What does a metadata-driven pipeline look like?



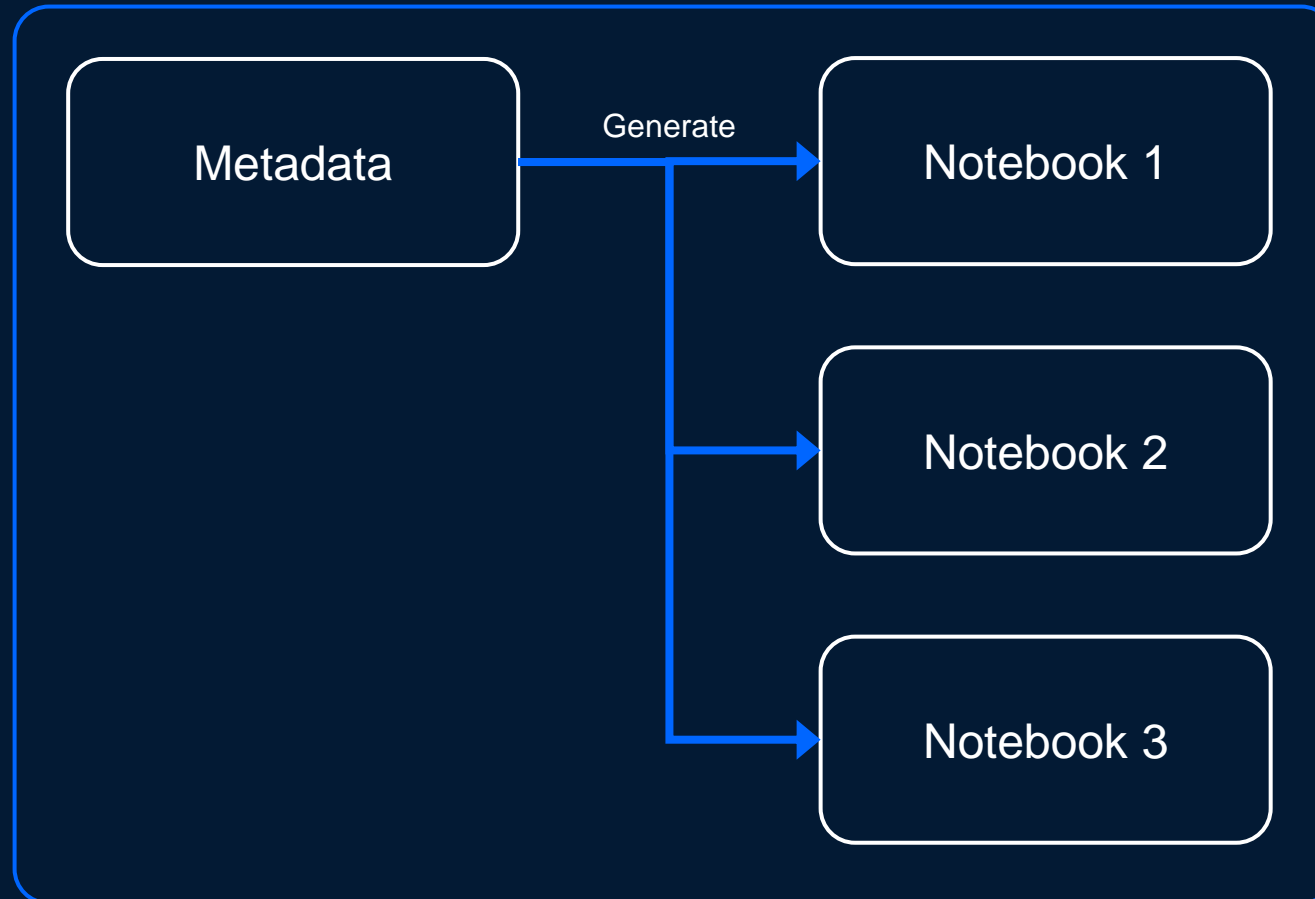
Data Factory Pipeline



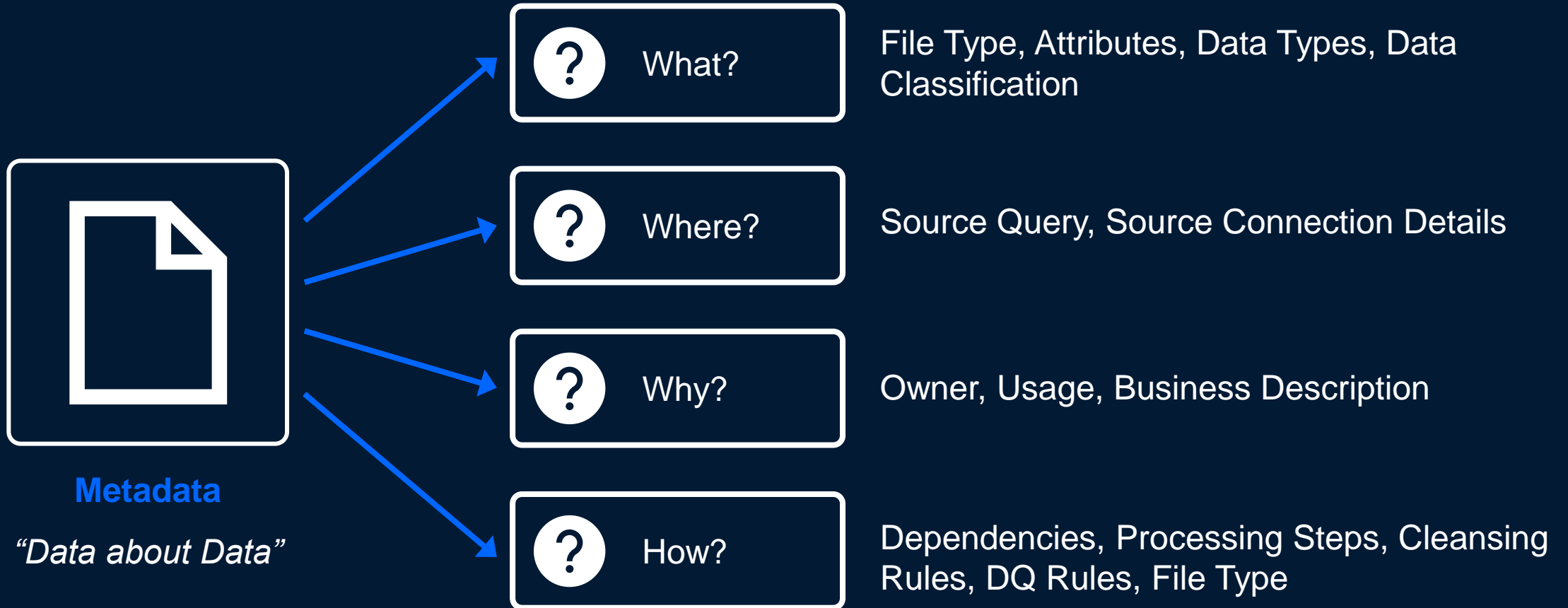
How does code generation work?



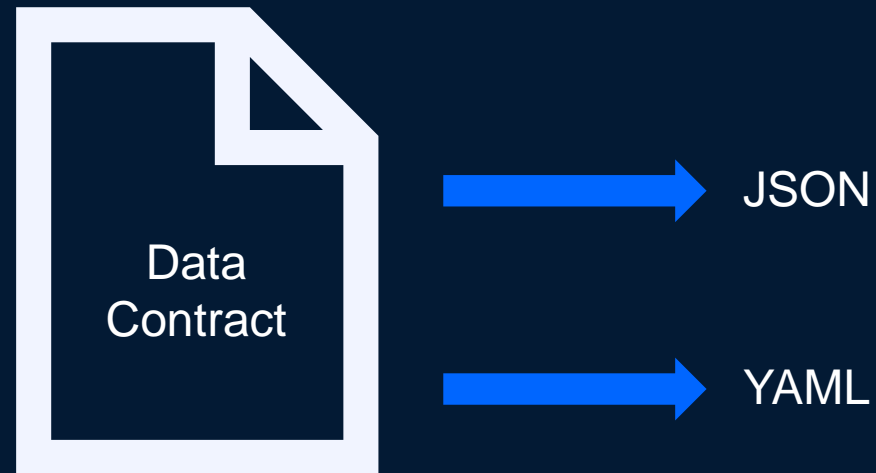
Python Script



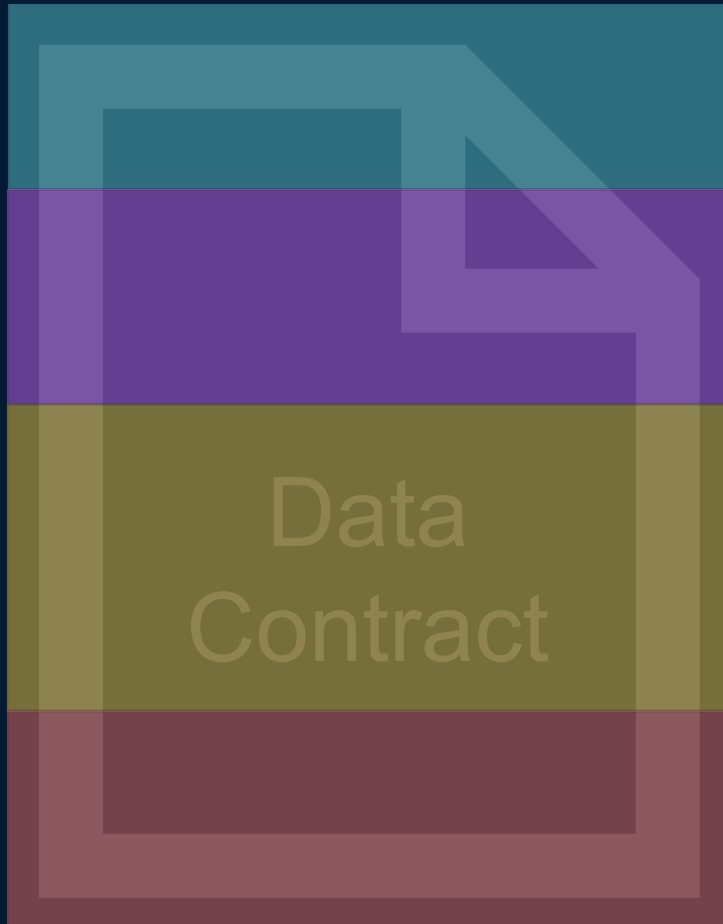
What is metadata?



What is a data contract?



What is a data contract?



Unique ID, Name, Description, Owner

Source Details, Source Query

Column Name, Data Type, Classification

Dependencies, Processing Steps, Data Quality Rules

How does this work in ?

Parameterisation

Ingestion



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Where can we take it from here?

- Extend auditing / error handling
- Implement further data quality screen types
- Implement further code generation patterns – unknown members, Type 2 SCDs, fact tables etc
- Add unit tests

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Useful Resources



<https://github.com/benjarvis18/FabCon2024>



<https://opendatacontract.com/>



<https://datacontract.com/>

Get in Contact



<https://www.linkedin.com/in/benjarvis18/>



<https://x.com/BenJarvisData>



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Connect with community members, ask questions, and learn more about Fabric



aka.ms/FabricUserGroups

Find a user group that matches your interests in your area or online



aka.ms/SuperUsers

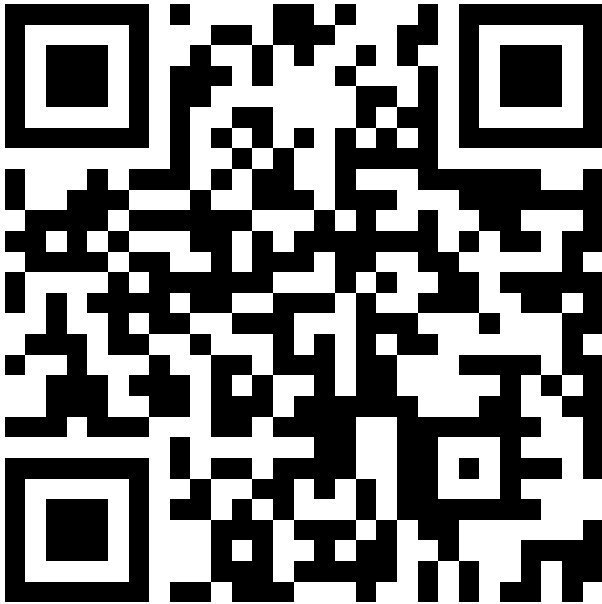
Spread your Fabric knowledge, insights, and best practices with others



aka.ms/MVP

Technology experts that share their knowledge and passion with the community

FREE Microsoft Fabric



Certification Exam

Are you ready to get Fabric certified by the end of October?

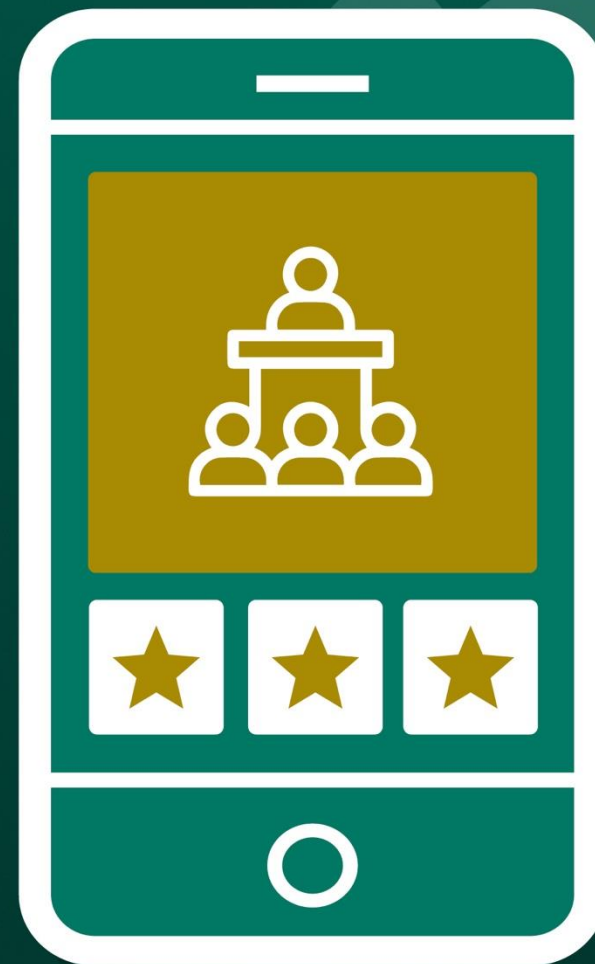
Claim your **100% discount voucher** for Exam DP-600: Fabric Analytics Engineer.

Come find us in the Community Lounge under the Get Certified banner to learn more!

aka.ms/FabCon24/IAmReady



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Unify your data to unlock AI innovation