DATA+AI SUMMIT 2022

How to Implement a Semantic Layer for your Lakehouse

Make Your Data Speak the Language of Your Business

ORGANIZED BY databricks

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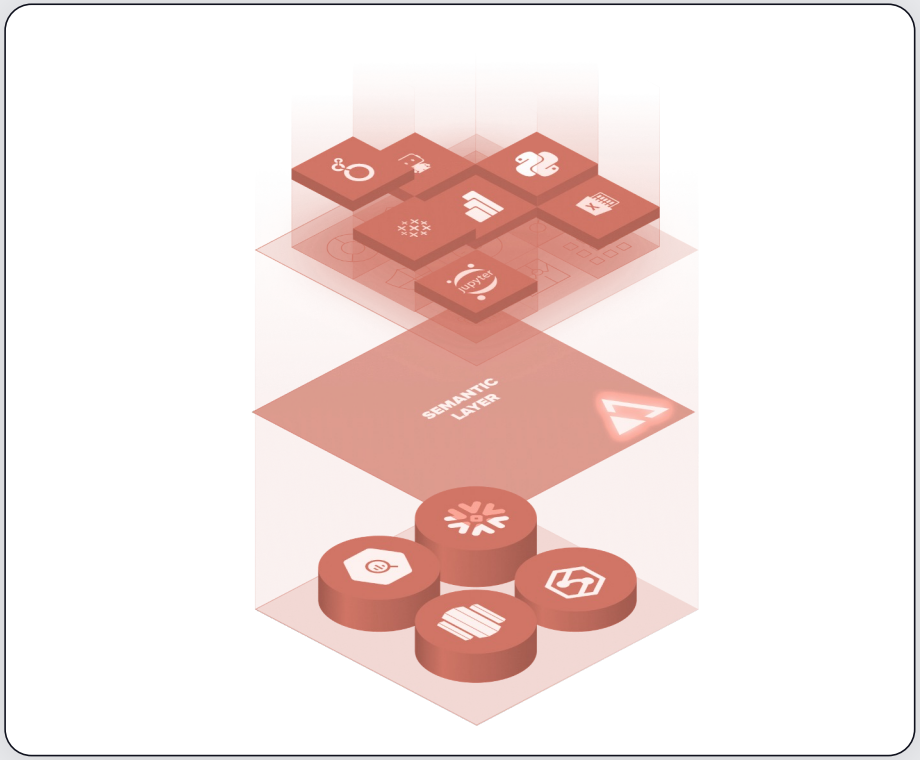
"A semantic layer is a **business representation** of corporate data that helps end users access data autonomously using **common business terms**."

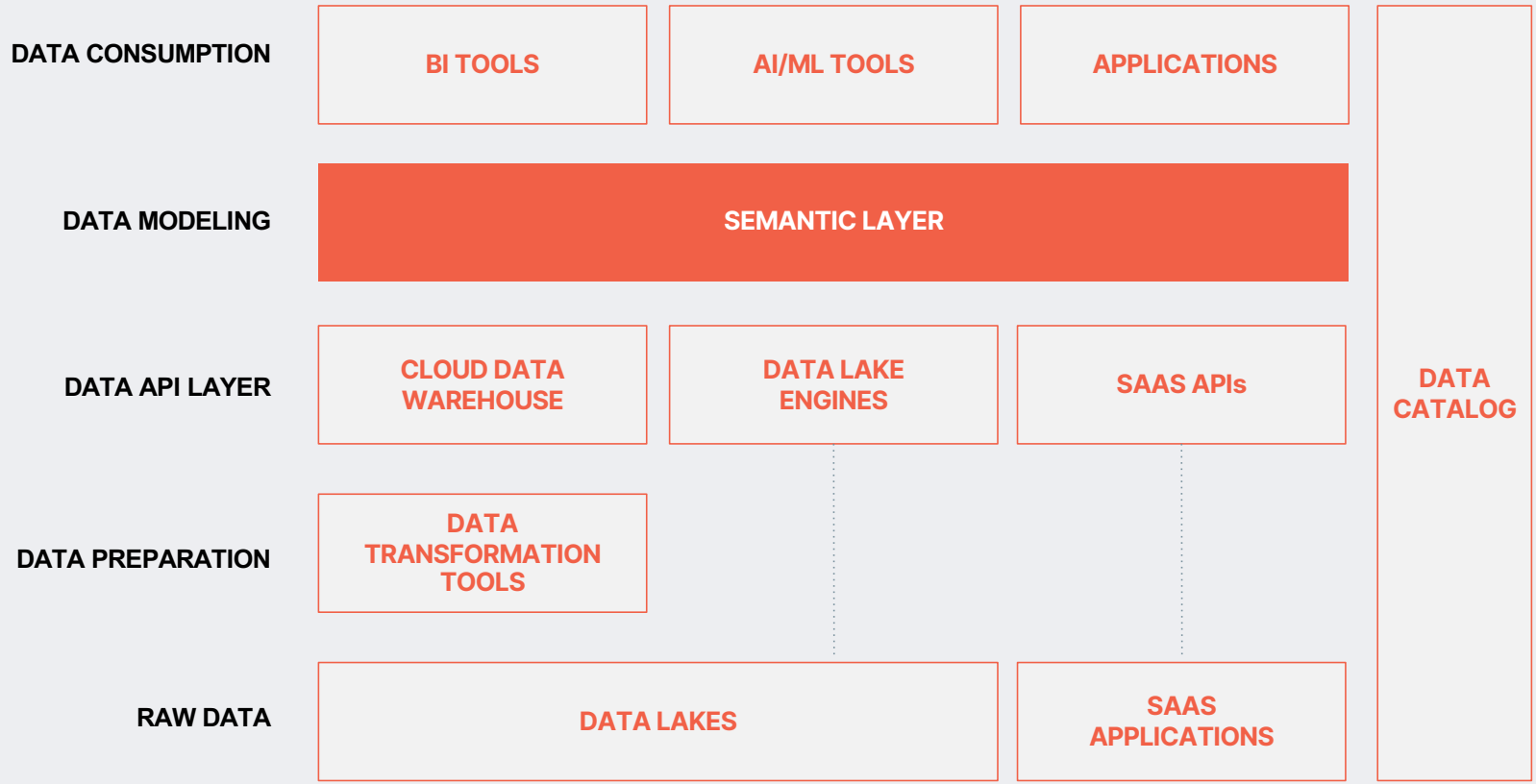
Semantic Layer - Wikipedia
https://en.wikipedia.org/wiki/Semantic_layer

What does a semantic layer do?

A semantic layer provides the **agility**, **consistency**, and **control** needed to scale enterprise BI and AI



Where does a semantic layer fit?



What does a semantic layer do?

CONSUMPTION INTEGRATION

Connect consumption tools to data LIVE

SEMANTIC MODELING

Create new data products

DATA PREP VIRTUALIZATION

Push down data transformations

MULTI-DIMENSIONAL CALCULATION ENGINE

Execute sophisticated cell-based expressions

PERFORMANCE OPTIMIZATION

Optimize performance and cost

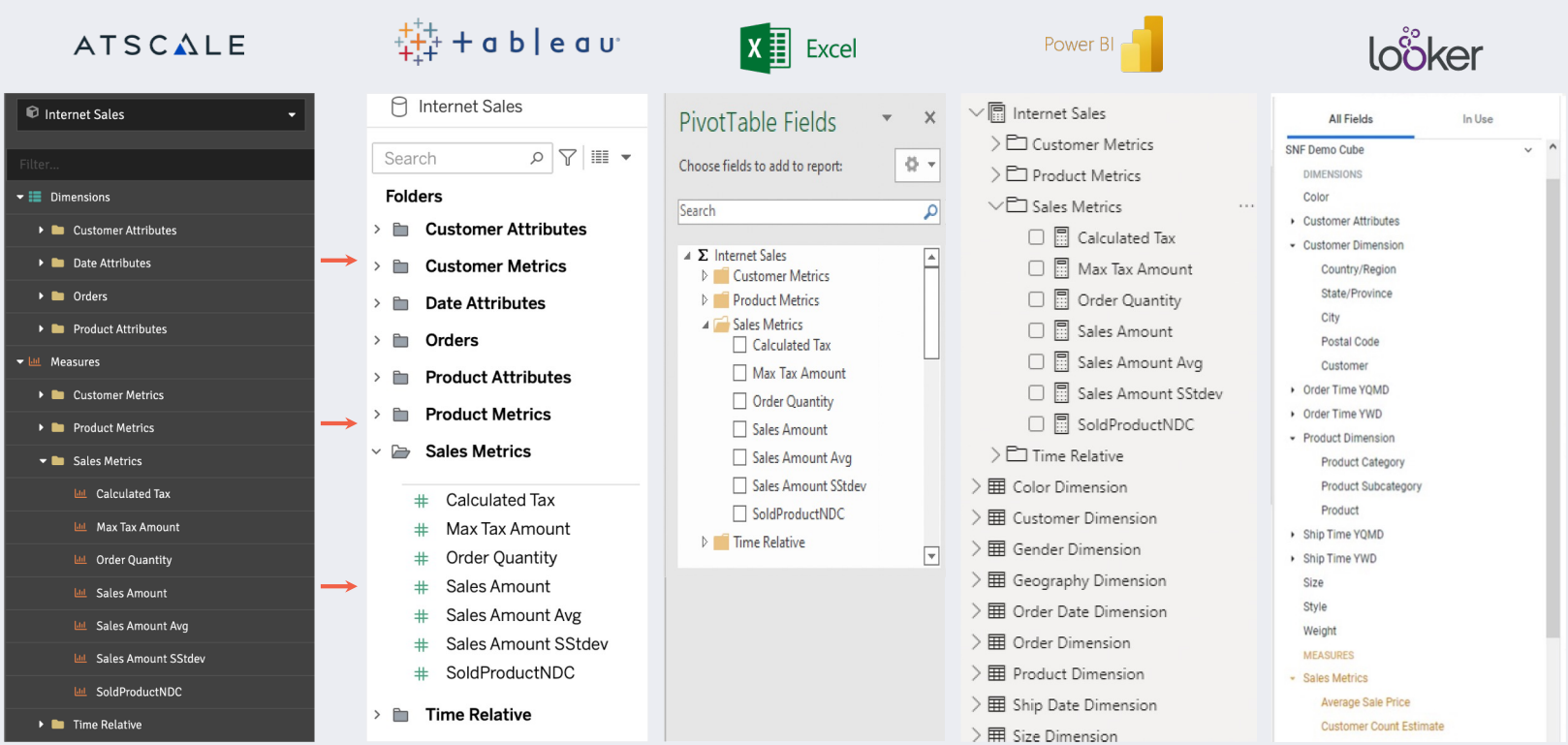
ANALYTICS GOVERNANCE

Enforce access control and data policies

DATA INTEGRATION

Connect to data platforms, abstract location & format of data

What does a semantic layer look like?



How is a semantic layer used?

Use Cases

METRICS STORE

Single source of governed enterprise metrics that can be self-served from any AI/BI tool.

OLAP MODERNIZATION

Migrate legacy OLAP (e.g. SSAS) models to modern cloud-first infrastructure.

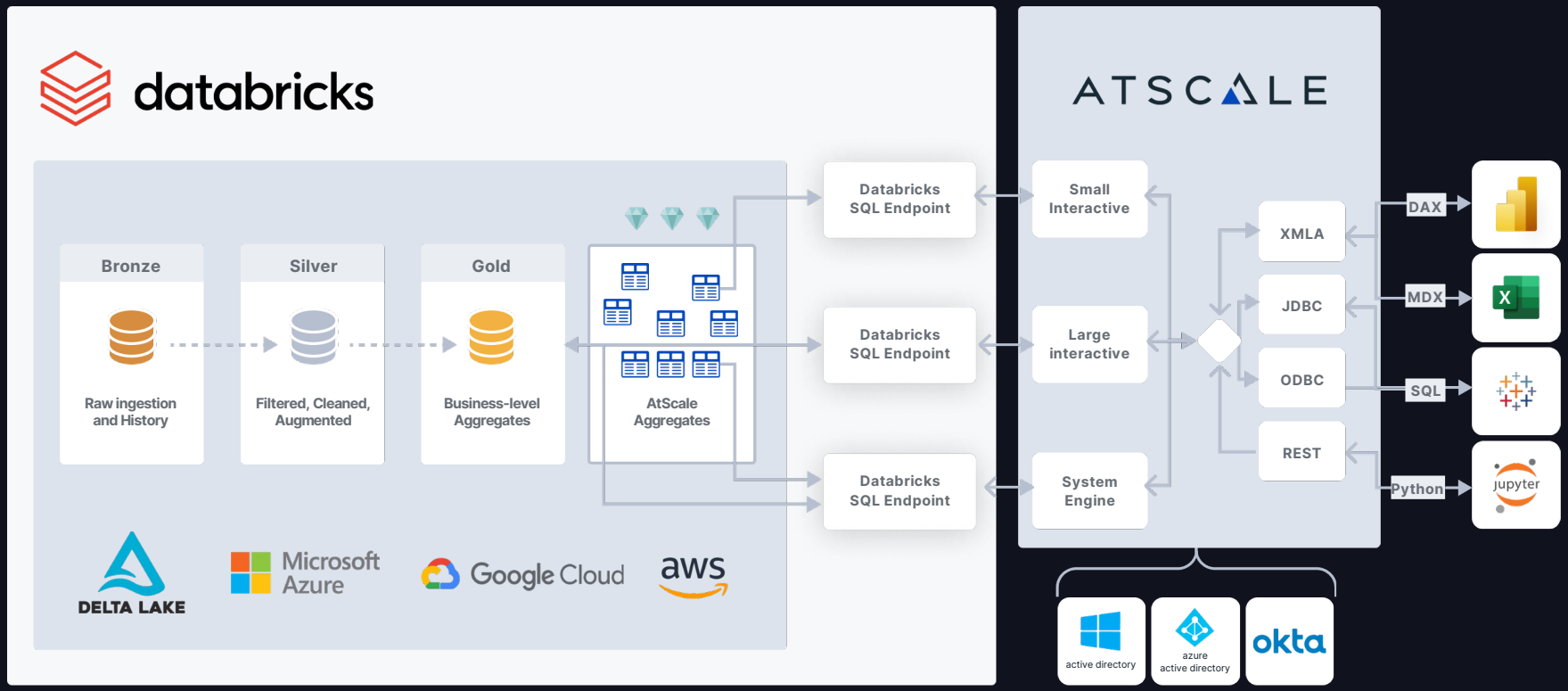
BRIDGING AI AND BI

Common view of data assets and platform for publishing AI-generated insights to decision makers.

CLOUD OPTIMIZATION

Speed of thought analytics on live cloud data, agile data integration with minimal data movement.

How to deploy a semantic layer



Demo

Why Databricks & a Semantic Layer?

The Semantic Lakehouse

1. Intelligently leverage Databricks for Self Service BI use cases, eliminating the need for a BI serving layer
2. Deliver a semantic layer (“Semantic Lakehouse” or “Diamond Layer”) for analysis ready data across popular BI, Data Science, and ML services
3. Migrate & modernize legacy cubing technologies like Cognos, SSAS, BO etc. to a Lakehouse

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Thank you

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