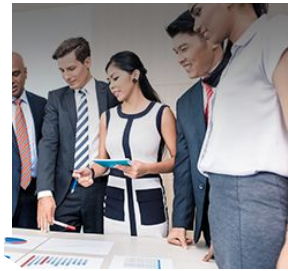










EDM Webinar

Modernizing Analytics Architectures with Data Mesh and Semantic Layer

A conversation with

Elif Tutuk
VP of Product
AtScale

ATSCALE

EDM Council

Moderated by **Mike Meriton**
Co-Founder & COO, EDM Council

- Joined EDM Council full-time 2015 to lead Industry Engagement
- EDM Council Co-Founder & First Chairman (2005-2007)
- EDM Council Finance Board Chair (2007-2015)
- Former CEO GoldenSource (2002-2015)
- Former Executive for D&B Software and Oracle
- FinTech Innovation Lab – Executive Mentor (2011 – Present)

EDMCouncil

Today's speakers

Moderator

Mike Meriton
Co-Founder & COO
EDM Council

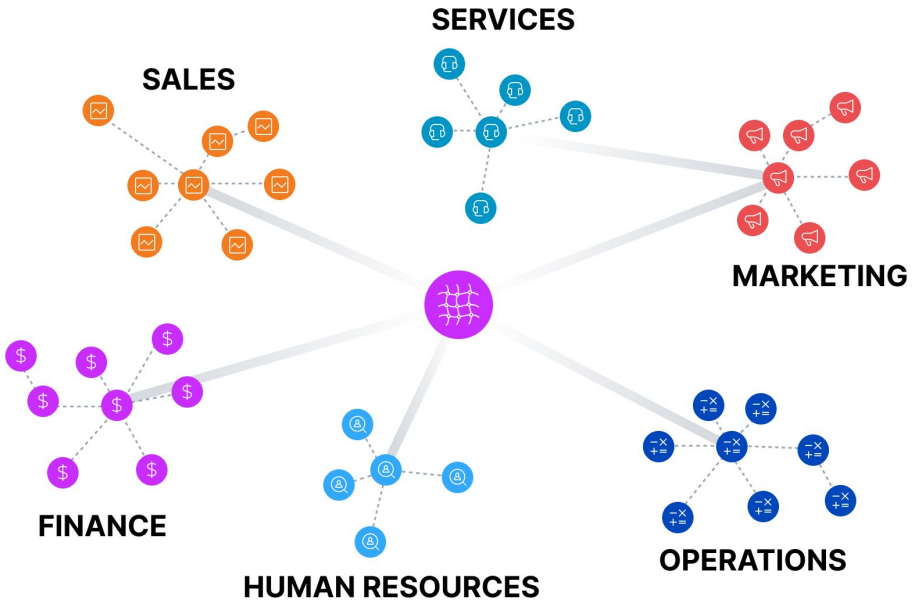
Elif Tutuk
VP of Product
AtScale

Data Mesh

The data mesh is an approach to building a decentralized analytics architecture where **business domains** are responsible for their data – giving ownership to the group that's closest to and best understands the data.

Successful data mesh requires:

- Flexibility and agility
- Governance and single version of truth
- Abstract technical complexity

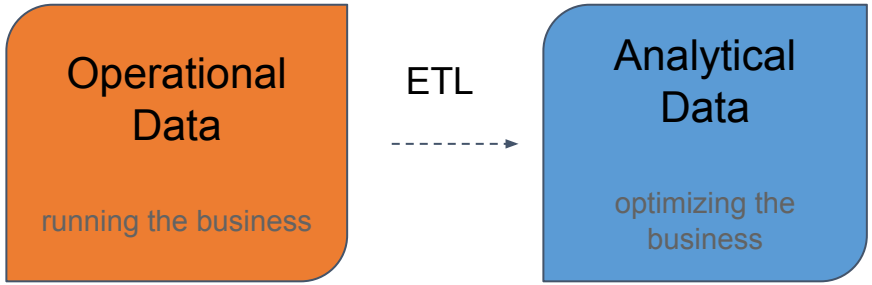


Data Types

Captures current state of applications

Transactional

Optimized for application logic

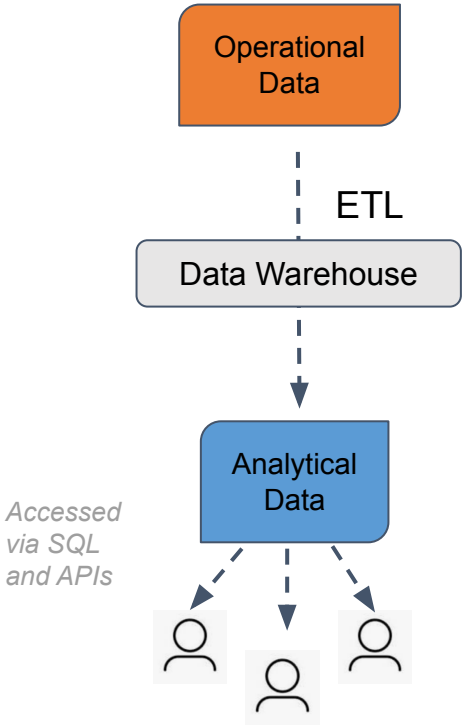


Optimized for analytics

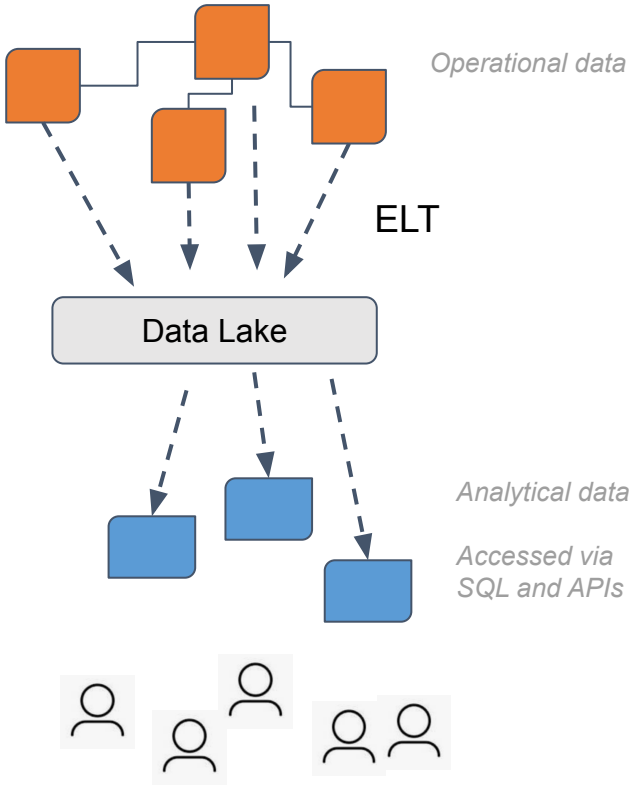
Multi dimensional analysis, breakdown, KPIs, ML training

Historical

The data journey…



Data Warehouse

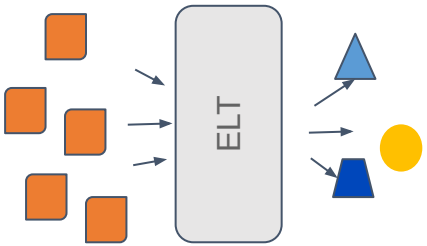


Data Lake

Low analytics adoption and fractionated data driven decisions

1

Centralized and Monolithic



Raw → Analytics

2

Hyper-specialized Silo

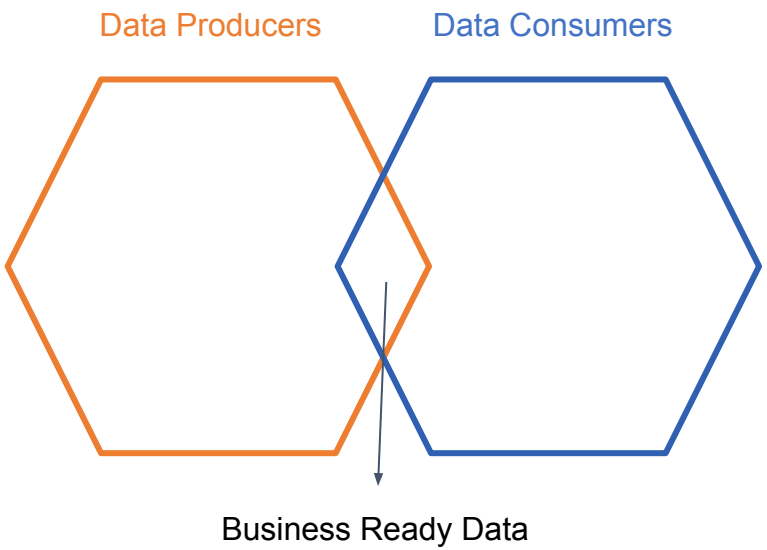
Data engineers | Data stewards | Business users

3

Flexibility and Agility

Business moment

The gap between analytics data and business ready data



Business ready data is the final transformed version of the data that has timely business logic and business context applied, that provides the right insights to the right user at the right time.

Raw → Analytics ready → Business ready

Achieving business ready data with semantic layer

1

Decompose data around domains

Distribute the ownership with governance

2

Serve data as a product

Delight the consumer with ease of data discovery and use

3

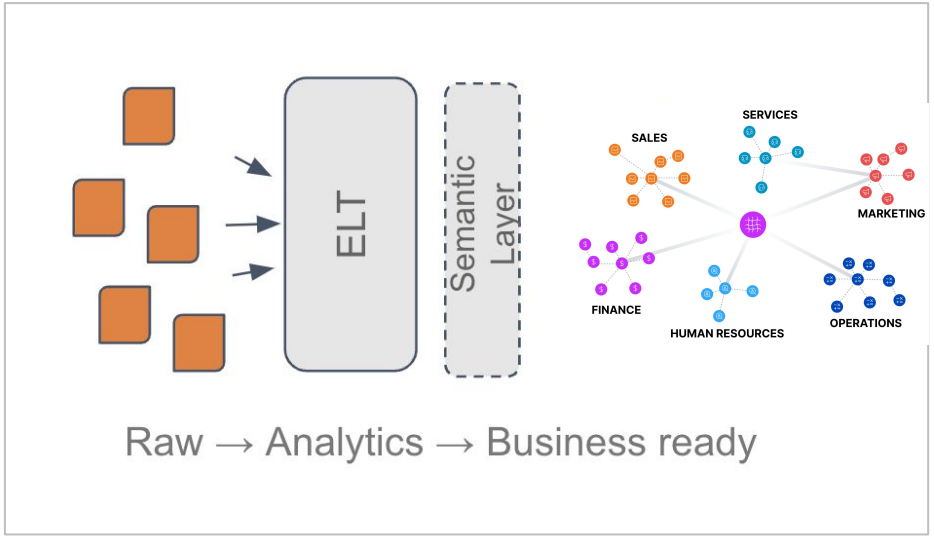
Enable Autonomy

Abstract technical complexity

4

Build an Ecosystem

Federated and global governance



The “dinosaur” in the room

A semantic layer is **a business representation of corporate data that helps end users access data autonomously using common business terms**. A semantic layer maps complex data into familiar business terms such as product, customer, or revenue to offer a unified, consolidated view of data across the organization.

https://en.wikipedia.org › wiki › Semantic_layer

Semantic layer - Wikipedia

Why Semantic Layer for Data Mesh?

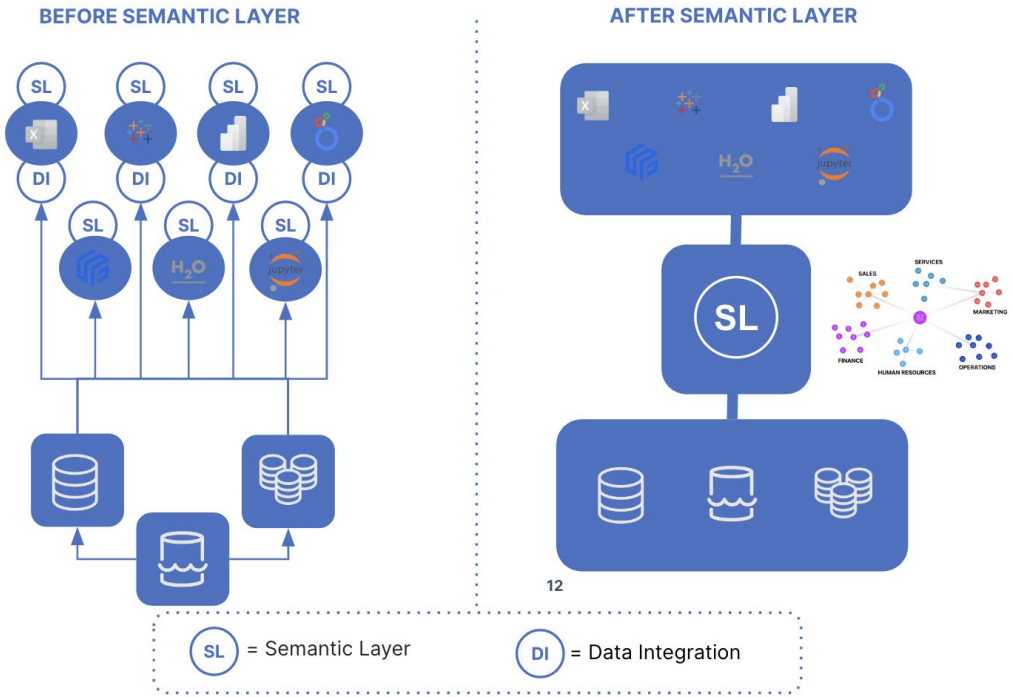
Distributed ownership with governance

Domain data owners achieve:

- centralized place for decentralizing data for their domains.
- Federated governance and ecosystem.

Data consumers benefit:

- Trusted, single version of truth.
- Ease of data discovery and use with their analytics tool of choice.
- Abstraction from technical complexity with business ready context.

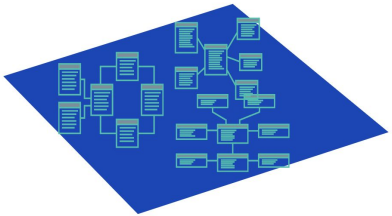


Key capabilities

1

Practical and agile approach to **semantic modeling**

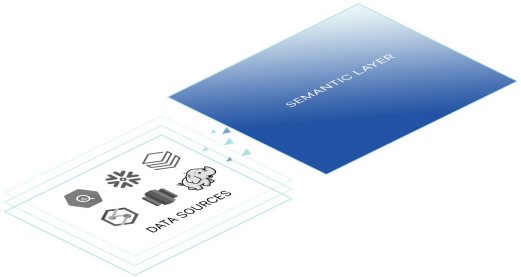
- Dimensional analysis
- Different modeling personas
- Composability with conformed dimensions



2

The power of providing **centralized governance**

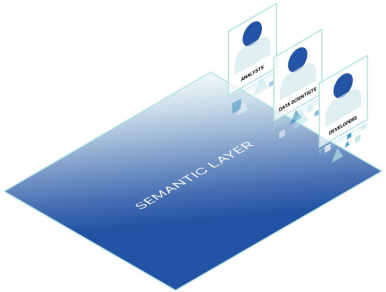
- High performance
- Governed use of compute
- Consistency of metrics, dimensions, models



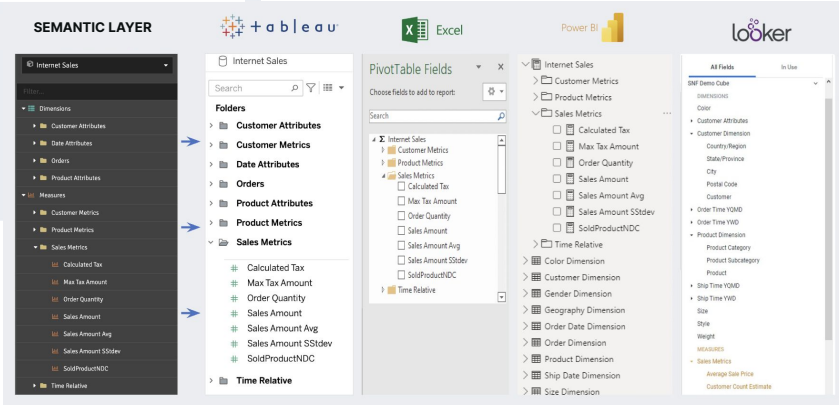
3

The opportunity to create **de-centralized data products**

- Excel for financial analysts and ad-hoc analysis
- PBI/Tableau/Looker for interactive dashboards
- Python for data science



Semantic Platform Deployment



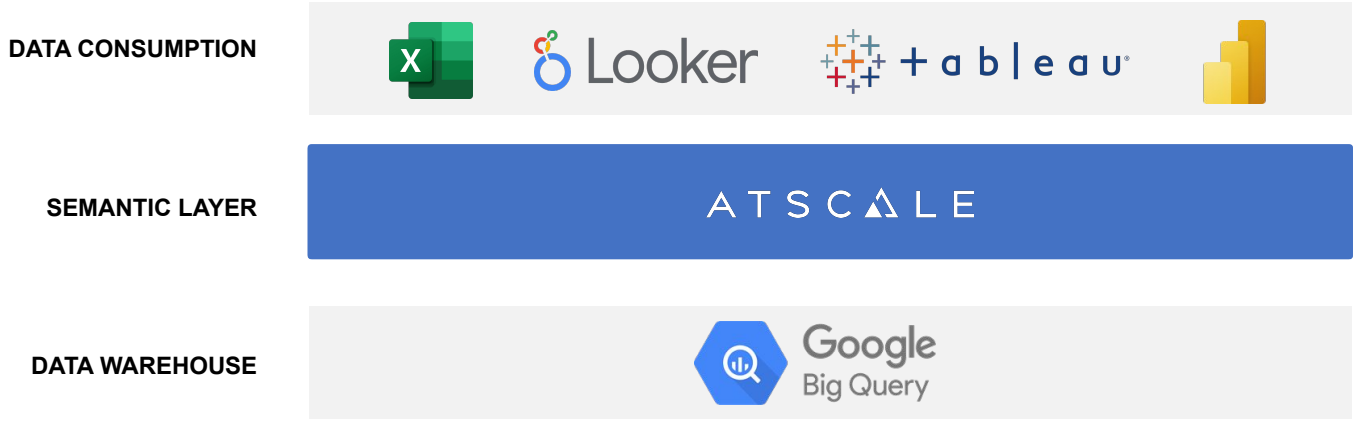
Affinity Federal Credit Union Use Case

Problem: AFCU realized they couldn't remain reliant on an outsourced analytics team and legacy analytics infrastructure tools like ModelMax or Dundas BI to unearth insights from their data.

Solution: With AtScale's semantic layer, AFCU was able to harness the power of dimensional modeling with AtScale, standardizing dimensions, hierarchies, and attributes to present a unified set of data regardless of the analytics toolset being used to access. By shielding users from the complexity of data wrangling and engineering, this organization has given their internal teams a leg up and made self-service BI a reality.

Key Benefits: Enable self-service BI, Create new data platform, Increase business agility

wayfair Use Case



Problem: Wayfair needed to drastically simplify their sprawling analytics infrastructure and had to maintain business continuity through their transition to the cloud necessitated operating a hybrid on-premises/cloud environment for a time.

Solution: With AtScale's semantic layer, they have been able to accelerate their time-to-insight with a live connection to their data at OLAP query speeds. Wayfair provides one unified & governed view of business data for their hundreds of data modelers and business analysts.

Key Benefits: Expedited insights, integrated toolset, lower cost, faster and more consistent analytics

Lessons learned

Supporting organizational change with technology

Path to achieving data mesh and key capabilities

- ❏ Define **data domains** and alignment with business domains
- ❏ Combine data domains with business context to create **data products**
- ❏ Register data products and made available for **re-use** based on business needs
- ❏ Create the **data mesh tissue** by connecting the data domains via **conform dimensions**
- ❏ **Central governance** with a **federated approach** given the responsibility to business domains

What does AtScale do?

The industry's only universal semantic layer platform delivering fast, secure and governed data for BI and AI/ML teams.

- AtScale does not move data and leverages existing BI and cloud data infrastructure.
- AtScale enables domain oriented decentralized data products with governance.
- AtScale integrates with existing data security infrastructure.
- Unique approach to accelerating analytics queries on large cloud data sets, delivering speed of thought performance.

Sampling of AtScale Customers

Actionable Insights for Everyone: An Overview of AtScale

See AtScale in Action

https://www.atscale.com/demo/

ATSCALE

AtScale enables smarter decision-making by accelerating the flow of data-driven insights. The company's semantic layer platform simplifies, accelerates, and extends business intelligence and data science capabilities for enterprise customers across all industries. With AtScale, customers are empowered to democratize data, implement self-service BI and build a more agile analytics infrastructure for better, more impactful decision making. For more information, please visit www.atscale.com and follow us on LinkedIn, Twitter or Facebook.