




Data Mesh, Data Fabric

...and the role of MDM in **Modern Data Management**

Ansh Kanwar
SVP of Technology

Chris Detzel
Director of Customer Community and Engagement

A promotional banner for a Reltio Community event. It has a dark blue background with a light blue dotted pattern on the right side. The text is in white and yellow. It includes the Reltio Community logo, the event title, the date and time, and two speakers with their photos and titles.


 **RELTIO**
COMMUNITY


COMMUNITY SHOW

Data Mesh and Data Fabric: What are they and What are the Differences?

Friday, October 14th
8 am PT / 11 am ET

[Register now](#)

 Presented By:
Ansh Kanwar
SVP Technology

 Presented By:
Chris Detzel
Director of Customer Community and Engagement

Rules of the Show

- Please keep yourself on mute
- All questions should be asked in chat or take yourself off of mute and ask
- Community show will be recorded and posted to Reltio Community

Upcoming Reltio Community Shows

Upcoming Events

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14 OCT	Data Mesh and Data Fabric What are they and What are the Differences? 📅 Reltio Webinar Events 🕒 Oct 14, 10:00 - 11:00 (CT)	19 OCT	Reltio Name Cleansers for Matching 📅 Reltio Webinar Events 🕒 Oct 19, 10:00 - 11:00 (CT)	27 OCT	How Google Is Improving their Data Quality 📅 Reltio Webinar Events 🕒 Oct 27, 10:00 - 11:00 (CT)
27 OCT	Reltio CCAB Official meeting - Oct 2022 (Placeholder) 📅 Reltio Webinar Events 🕒 Oct 27, 12:00 - 13:00 (ET)	3 NOV	Manage Your Core Data as a Product 📅 Reltio Webinar Events 🕒 Nov 3, 10:00 - 11:00 (CT)	8 NOV	Qlik Case Study: Driving Qlik's MDM Program Success 📅 Reltio Webinar Events 🕒 Nov 8, 10:00 - 11:00 (CT)
10 NOV	Data Quality Management: Commercial Pharma MDM Landscape 📅 Reltio Webinar Events 🕒 Nov 10, 10:00 - 11:00 (CT)	22 DEC	Reltio CCAB lunch and learn session - FY23 Q4 (Placeholder) 📅 Reltio Webinar Events 🕒 Dec 22, 12:00 - 14:00 (ET)		

Who ?



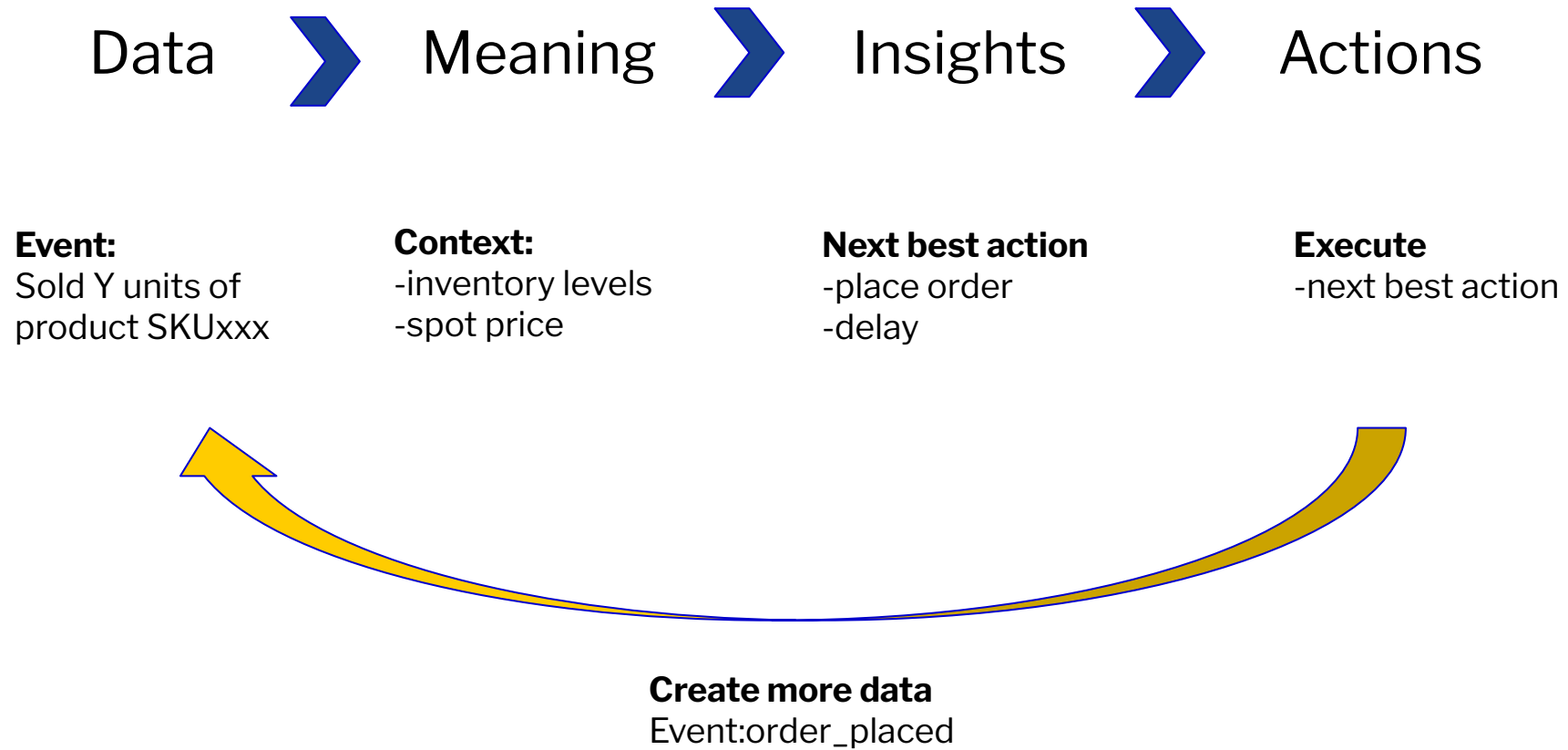
Ansh Kanwar serves as the SVP, Technology for Reltio.

He has previously been at Citrix Systems, Logmein, and multiple startups in various technology and product management roles and brings 22 years of experience from the SaaS, Cloud Infrastructure, and Enterprise Security spaces.

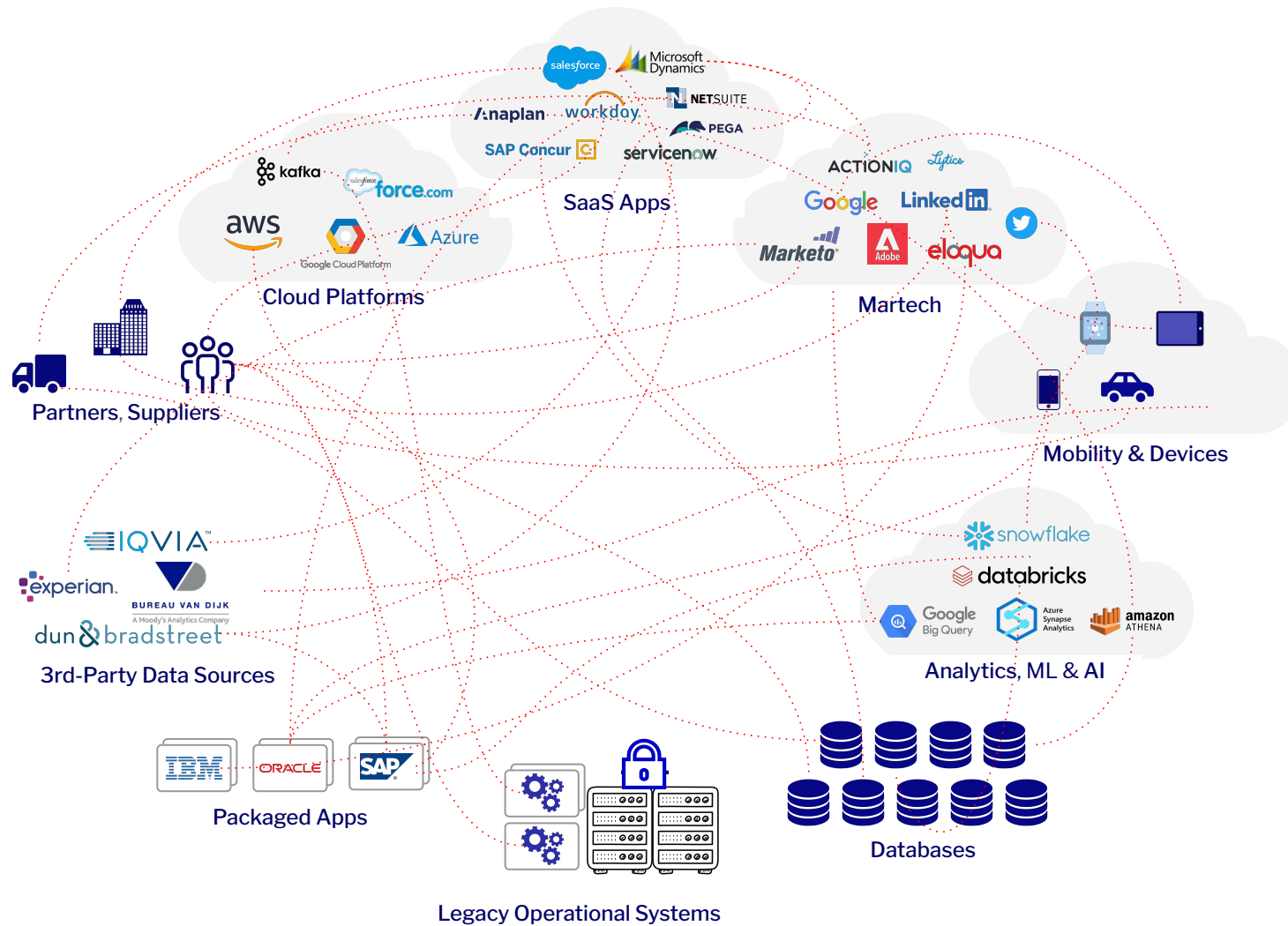
At Reltio, he is responsible for the engineering of the Reltio Connected Data Platform, its performance and delivery from the cloud.

Ansh holds an MS in ECE from UC, Santa Barbara and and MBA from MIT Sloan.

What we want is pretty simple



But there are complications...



- Growing mountains of data.
 - Siloed, following conway's law
 - Always moving and morphing
 - Moving to the cloud
- Need for speed
 - Speed to insight is a competitive advantage
 - Rapid Experimentation critical to innovation
- Buzzwords abound

Everytime I find the meaning of Life, they change it !

- Reinhold Niebuhr

Data ➤ **Meaning** ➤ Insights ➤ Actions

Meaning requires a deep understanding of context.

Distributed Data Architecture/Patterns

Solving for what ?

... *the **data lake architecture have common failure modes** that lead to unfulfilled promises at scale.*

Monolithic, Centralized

DW/DLs take pride in “big” data - the opposite of operational systems which have moved to domain specific boundaries.

Coupled pipeline decomposition

Ingest-process-serve is orthogonal to “meaning”, to change one “domain” means touching all stages of the pipeline

Hyper specialized ownership

Central data teams - not just the data - are siloed from the organizational units. Have to learn the domain before engaging with it.

-Zhamak Dehghani

How to Move Beyond a Monolithic Data Lake to a Distributed Data Mesh
<https://martinfowler.com/articles/data-monolith-to-mesh.html>

Audience Poll

Is your organization today experiencing the issues today that the distributed data architectures solve for ?

- Yes/No

Data Mesh

Context comes from Domain Experts/SMEs

Data mesh is a **decentralized sociotechnical** approach in **managing** and accessing **analytical data at scale**.

-Zhamak Dehghani

Data Mesh is an **analytical data architecture** and **operating model** where **data is treated as a product** and owned by **teams that most intimately know and consume the data**.

- Thoughtworks

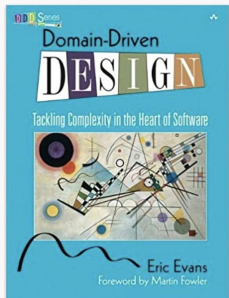
<https://www.thoughtworks.com/en-us/what-we-do/data-and-ai/data-mesh>

Data Mesh

Four Principles

Domain Ownership

- Domains offer bounded context
- A team owns a domain
- host and serve datasets in consumable manner
- from Push to Pull
- responsible for quality



Data as a Product

- Datasets exposed via APIs - read only
- Discoverable (Catalog)
- Addressable
- Trustworthy (SLO, provenance, lineage, quality)
- Self-describing - syntax, semantic, samples
- Global standards, inter-operable
- Secure
- Observability built in !

Self-serve Data Platforms

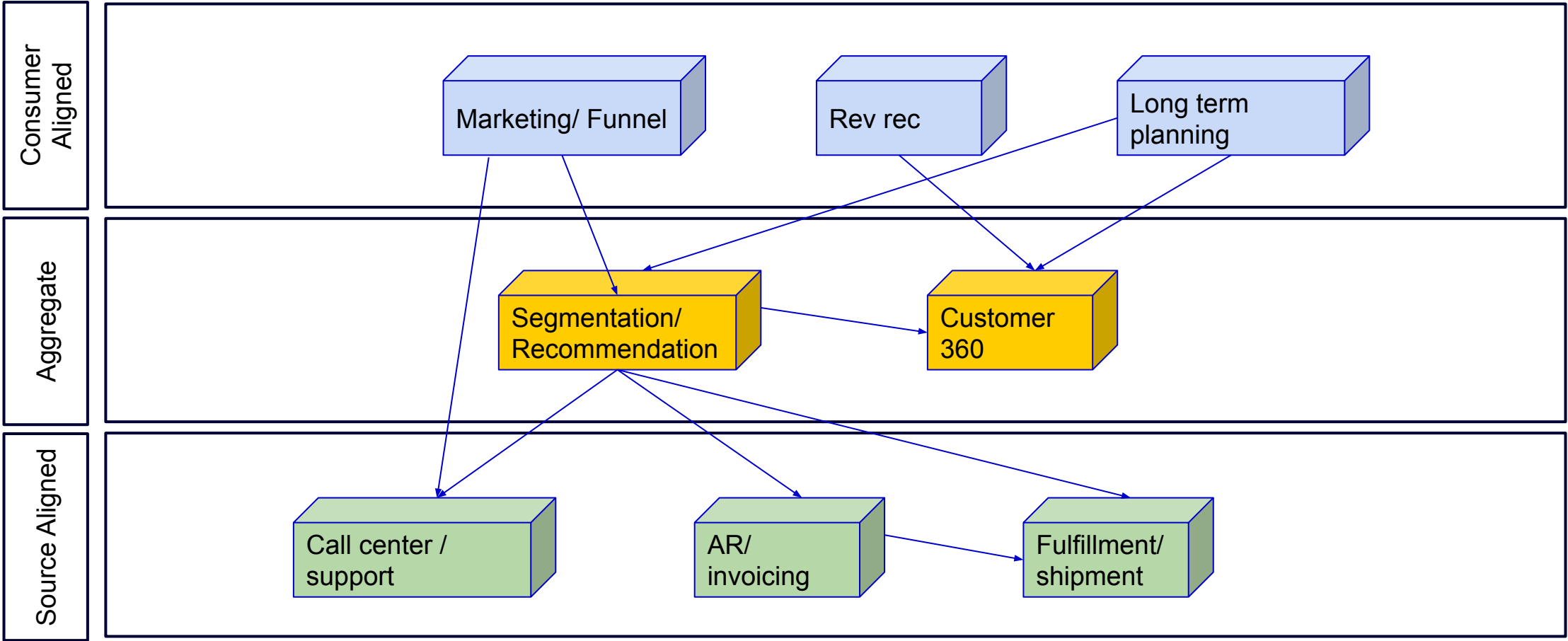
- Data infrastructure plane - storage, access, query engine etc.
- Data Product Developer plane - lifecycle management of DP
- Supervision and Integration plane - browsing, discovery, security policies
- Enforcement of data contracts.

Federated Governance

- Goal - effective mesh operation
- Define global standards such as SLOs or quality standards
- Governance guild is composed of Domain Owners and practitioners
- Privacy and compliance policies

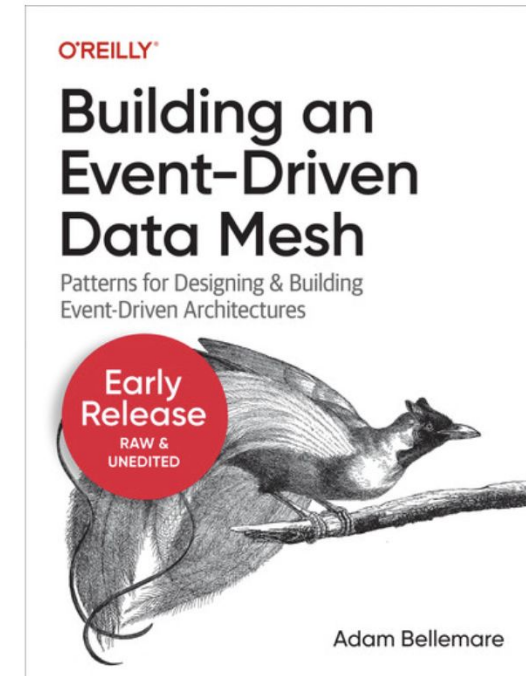
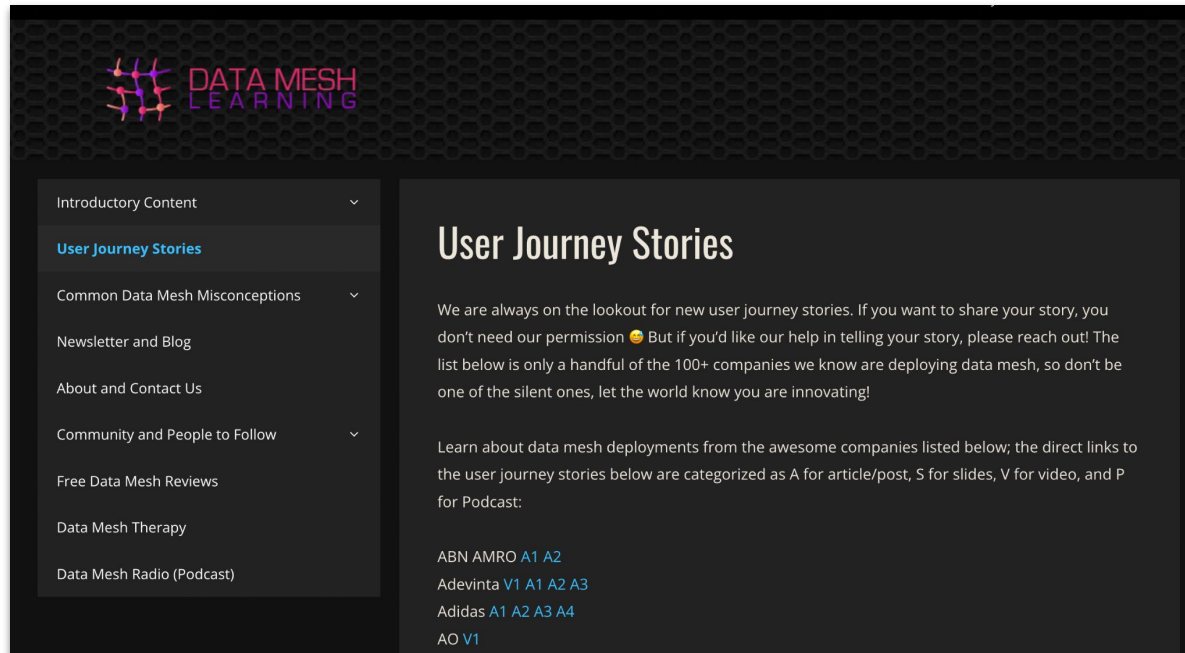
Data Mesh

What is the “Mesh” part ?



Data Mesh

Additional Resources



<https://datameshlearning.com/user-stories/>

Data Fabric

Context comes from Metadata

“...automates the ingestion, curation, transformation, governance and integration of data across disparate data in real time and near real time.”

-Noel Yuhanna
Forrester Research

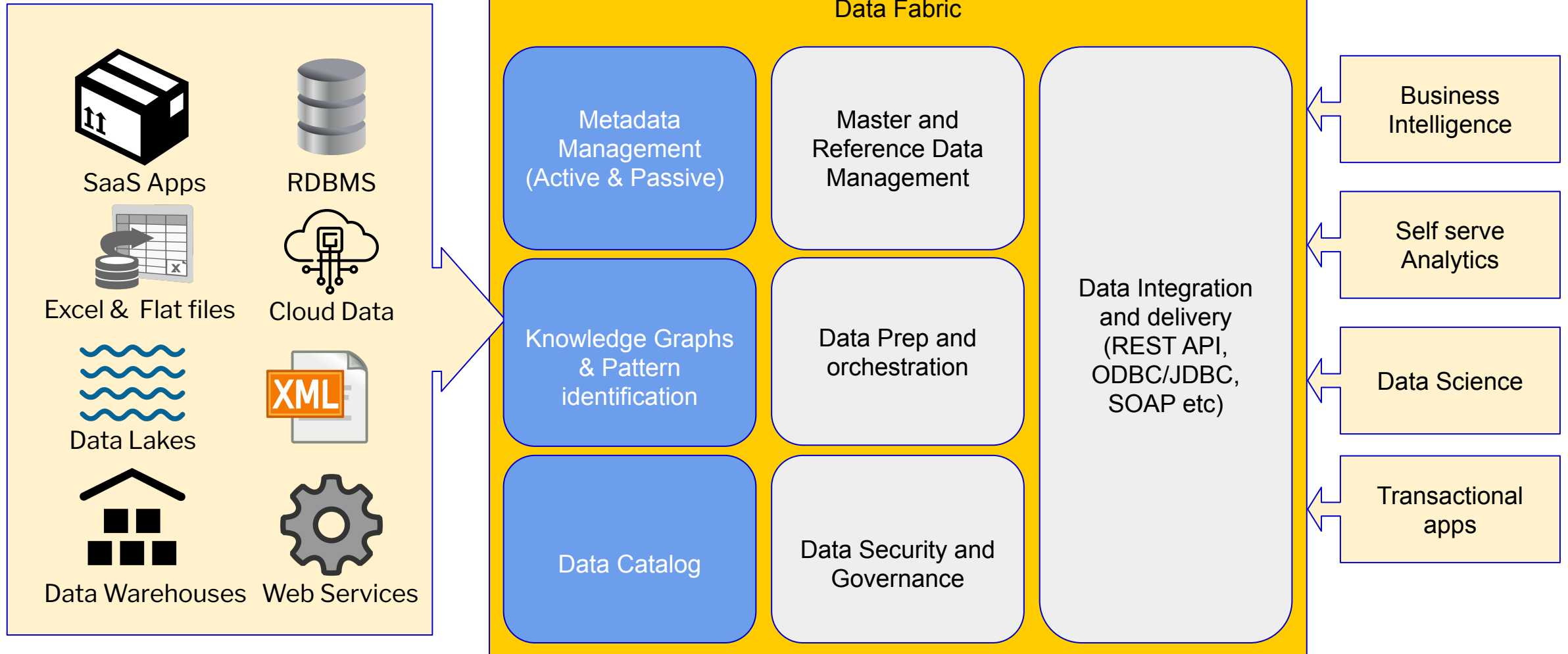
Data fabric can use analytics to learn and actively recommend where data should be used and changed. This can reduce data management efforts by up to 70%.

- Gartner Top Strategic Technology Trends for 2022

<https://www.gartner.com/en/information-technology/insights/top-technology-trends>

Data Fabric

Capabilities

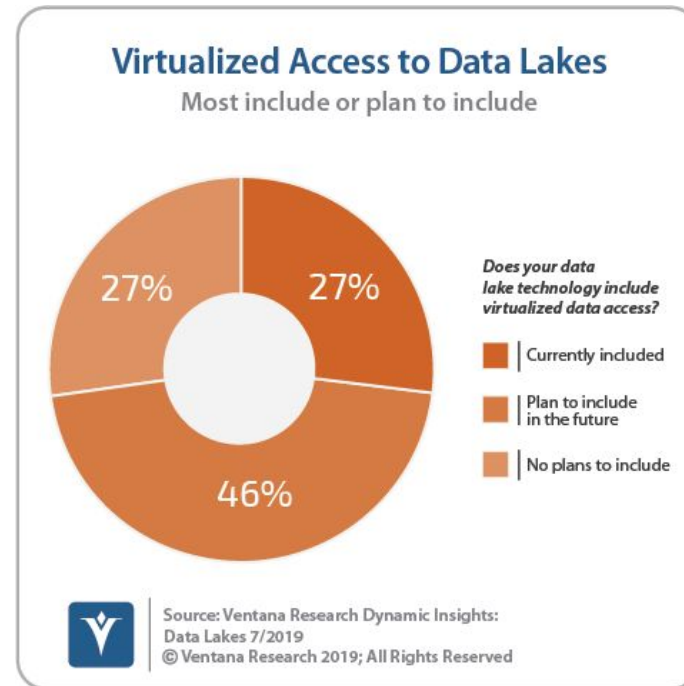


Audience Poll

Where is your organization currently in your journey to a distributed data management pattern/architecture such as a Data Mesh or a Data Fabric?

- Currently in implementation
- Actively evaluating for implementing in the next 12 months
- Not in the market

Industry Data



Credit: David Menninger and Ventana Research

<https://davidmenninger.ventanaresearch.com/data-virtualization-brings-data-together-quickly-and-easily>

Reltio in the age of Data Virtualization

Clean connected data is the foundation

“Core data is information about customers, vendors, locations, assets, and suppliers, among other things i.e. **data that every organization runs on.**”

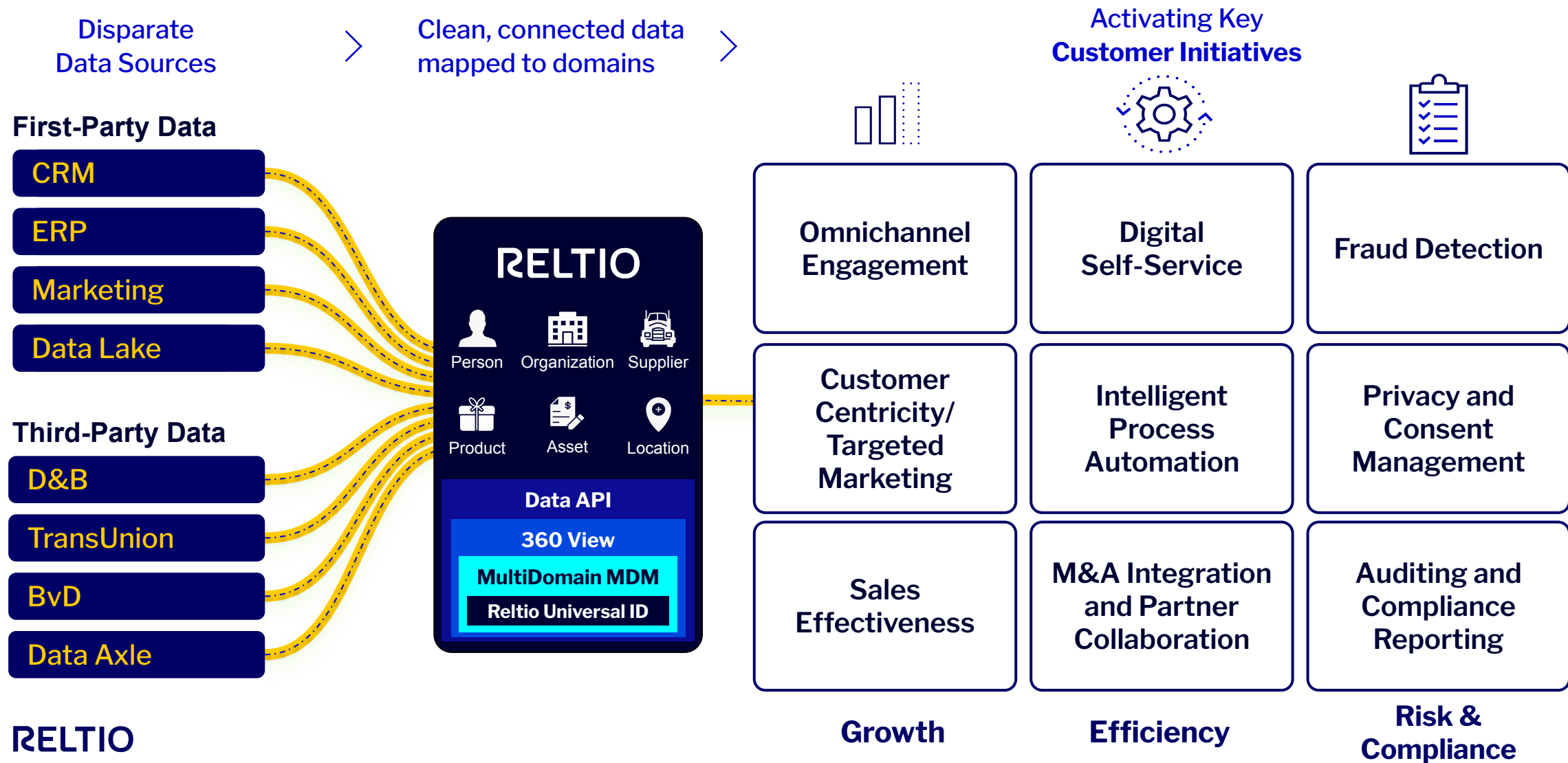
...MDM is evolving from a reluctant to an indispensable spend. That is because every organization is becoming a data-driven organization, which means they need high-quality, actionable information to make sound business decisions, satisfy their customers, and create more enterprise value.

Poor data equals poor decision-making.

We deliver core data as a product to our customers.”

-Manish Sood
CEO & Founder

Reltio: Activating Key Customer Initiatives



Quick Comparison

	Traditional DW/DL	Data Mesh	Data Fabric
Organizational Ownership	Centralized	Decentralized (Domain)	Decentralized (varies)
Architecture	Monolithic	Distributed	Distributed
Context Reliance	-	SME/Domain	Mechanical / Meta-data
Governance	Top-down	Federated	Varies
Principle	Data as an Asset	Data as a Product	Discovery & Scale
Infrastructure	Varies	Integrated self-serve	Federated
Rollout	Invasive	Organizational adaptation	Gradual
Watchout for:	A lot of data movement required, dissociation of SME from the “data”	Organizational pattern & transformation, not off the shelf software. Difficult to mechanize.	Rapidly evolving, vendor centric.

Summary

- Data Virtualization is here to stay.
- Encapsulates - 40+ years of experience in Computational Data Creation.
- Data Mesh and Fabric patterns apply to analytics - though Fabric is more generic and stretches into operational use cases.)
- Mesh and Fabric approaches can be complementary and can be use together to build a mature enterprise-wide data program.
- **Modern MDM is operational and real-time.**
- **Mastered core data is a foundational element for either approach.**



Thank you