



Data Mesh Information Architecture:

Modeling Data Products and Domains

**Full day workshop by
Juha Korpela**

///AdeptEvents

- Understand the Data Mesh paradigm and its challenges relating to information architecture and semantics
- Conceptual modeling for defining the business context of domains and data products
- Logical modeling as a part of data product design process
- Solution-level metadata and domain-level context across domain boundaries
- Information Architecture Management for independent domain teams within a Data Mesh setup

LANGUAGE

English

VENUE

Utrecht

TIME

9:00 – 17:00 hours

REGISTRATION

www.adeptevents.nl



Data Mesh Information Architecture:

Modeling Data Products and Domains

Data Mesh has become one of the most influential ideas in modern data management. By organizing data around business domains, giving domain teams ownership of their own data, and sharing everything as data products, organizations can finally scale data work beyond the central team that always becomes the bottleneck. But decentralization comes with a catch that most teams discover too late: when every domain speaks its own language and builds its own products, *understanding* the data across the organization becomes the new bottleneck. What is a “customer” in Sales versus Finance? What does this data product actually contain, and can I trust it? How do I even find it? These are not technology problems: they are problems of meaning, and no technical platform solves them on its own.

This is where information architecture and data modeling earn their place at the center of a Data Mesh. Data modeling is often dismissed as a slow, technical, back-office activity. In reality, it is the most reliable way to capture what the business needs to know about, in language the business actually uses. We can then translate this shared understanding into well-designed, reusable data products. A conceptual model describes the *reality* behind the data: the things a domain

cares about and how they relate. A logical model turns that understanding into a concrete structure fit for a specific use case. Done well, this modeling work becomes the bridge between business reality and technical implementation, and the foundation for semantic interoperability between independent domains.

In this full-day workshop you’ll work through that journey end to end. We start with the essentials of Data Mesh — its four principles, domains, and data products — and the interoperability challenge they create. You’ll then learn the fundamentals of conceptual modeling and put them to work in a hands-on exercise, modeling a real domain for a fictional online retailer and building its glossary. From there we move into logical modeling as part of data product design, and into the metadata, data contracts, and glossaries that expose a domain’s meaning across its boundaries. Finally, we step back to the operating model: the roles, feedback loops, and enterprise-level structures that let federated teams stay autonomous while still pulling in the same direction. Throughout, the emphasis is practical and accessible: you don’t need to be a modeling specialist to follow along, and you’ll leave able to apply these ideas in your own organization.





LEARNING OBJECTIVES

- Understand Data Mesh and its core challenge: Grasp the Data Mesh paradigm, its four principles, and why federated domain ownership creates a semantic interoperability problem at the domain boundary.
- Capture meaning with conceptual modeling: Learn how to describe a domain in business language using entities, relationships, and attributes - and how to avoid the common pitfalls that derail modeling efforts.
- Build domain definitions and glossaries: Understand how to write clear, business-language definitions that capture a domain's language and make data understandable to others.
- Design data products with logical modeling: Learn how logical models serve as use-case-specific designs derived from the conceptual model of a domain.
- Expose context across domain boundaries: See how Data Product Definitions, data contracts, and metadata standards (ODPS, ODCS) make a domain's meaning discoverable and interoperable enterprise-wide.
- Handle language problems: Learn to deal with synonyms and homonyms (polysemes) using preferred and alternative labels, domain glossaries, and shared enterprise glossaries.

- Operate information architecture at scale: Understand the roles, responsibilities, feedback loops, and the Enterprise Knowledge Plane that keep semantics aligned across autonomous domain teams.

Who is it for?

This workshop is designed for anyone responsible for making data understandable, trustworthy, and reusable in a decentralized or domain-oriented setup. No deep modeling background is required: the concepts are introduced from the ground up.

- Data architects and data modelers
- Chief Data Officers and people in Data Office roles
- Data product owners and domain owners
- Data Management and Data Governance professionals
- Data engineers and platform teams working with domains and data products
- BI and Analytics specialists who depend on well-defined, trustworthy data
- Business analysts who bridge business needs and data
- Data and IT consultants advising on Data Mesh, data products, or information architecture.



JUHA KORPELA

Juha Korpela is an experienced data professional from Helsinki, Finland. For many years, he has been working in high-profile data leadership positions in a variety of industries. He is founder of Datakor Consulting, advising large enterprises on data modeling and data product management at scale. He is also one of the founders of the Helsinki Data Week event and a co-host of the Helsinki Data Mafia podcast. Previously, he was e.g. the Chief Product Officer at Ellie Technologies (a start-up working on a data modeling tool) and the Head of Data Platform at UPM-Kymmene (a forest industry company). His main areas of expertise are data modeling, data product management, and data architecture, and he likes to emphasize understanding real business needs over technological details. Juha can be found participating actively in all kinds of data discussions on LinkedIn and speaking at various events around the world

Detailed Course Outline



1. Introduction and Objectives

- Welcome and introductions
- Overview of the day's goals and structure

2. Data Mesh Basics

- The general idea and background of Data Mesh
- The four principles: domain-driven ownership, data as a product, self-serve platform, and federated computational governance
- Domains and domain teams: what a "domain" is and how to define one
- Data products: definition, anatomy, and types (source-aligned, aggregate, consumer-aligned)
- The interoperability challenge: technical vs. semantic interoperability at the domain boundary

3. Conceptual Models for Cross-Domain Understanding

- Why data needs business context to be useful
- How data models capture context
- The three levels of modeling: conceptual, logical, and physical
- Basics of conceptual modeling: entities, relationships, and attributes
- Identifying the real business objects and common pitfalls to avoid
- Building entity definitions and domain glossaries



4. Hands-On Exercise: Modeling a Domain

- Introducing "Storefront", a fictional online retailer
- Defining domain boundaries: who owns what
- Identifying entities within a domain
- Building a conceptual model and named relationships
- Creating definitions and a Domain Glossary

5. Data Modeling as Part of Data Product Design

- The data product design process
- Understanding product scope within the domain model
- Logical models as product-level design and documentation
- Deriving logical models from the conceptual model
- Connecting the data product to its business context and maintaining links to the domain model

6. Ensuring Semantic Interoperability at the Domain Boundary

- Exposing metadata from domains and data products
- Data Product Definitions as collections of business and technical metadata
- Data Contract basics: promises, machine-readability, schema compliance, and versioning
- Example standards: Open Data Product Standard (ODPS) and Open Data Contract Standard (ODCS)
- Domain glossaries vs. shared enterprise glossaries
- Dealing with polysemes: synonyms, homonyms, and the Enterprise Knowledge Plane

7. Data Mesh Information Architecture Operating Model

- How information architecture creates and scales value
- Roles and teams: data product owner, domain owner, platform team, and domain DevOps team
- Product ownership, backlog management, and the data product lifecycle
- Modeling at the design stage and the importance of feedback loops
- Organizing data modeling on two levels: product and enterprise/domain
- Cross-domain interoperability and the Enterprise Knowledge Plane
- The goal: context-aware data utilization for AI, applications, and people

8. Conclusions and Next Steps

- Key takeaways
- Where to start in your own organization
- How to learn more
- Open Q&A and discussion

Information



DATE AND TIME

The workshop will take place once or twice a year with the exact date and time available on our website. The programme starts at 9:00 am and ends at 17:00 on both days. Registration commences at 8:30 am and we recommend that you arrive early.

VENUE

Adept Events works with several venues in and near Utrecht. We strive to provide you with the location details as soon as possible. The exact venue will be on our website and in the confirmation e-mail that you will receive one week prior to the event. Always check our website prior to your departure to ensure you have the exact location and directions.

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