INNOQ Technology Day / 20.10.2025

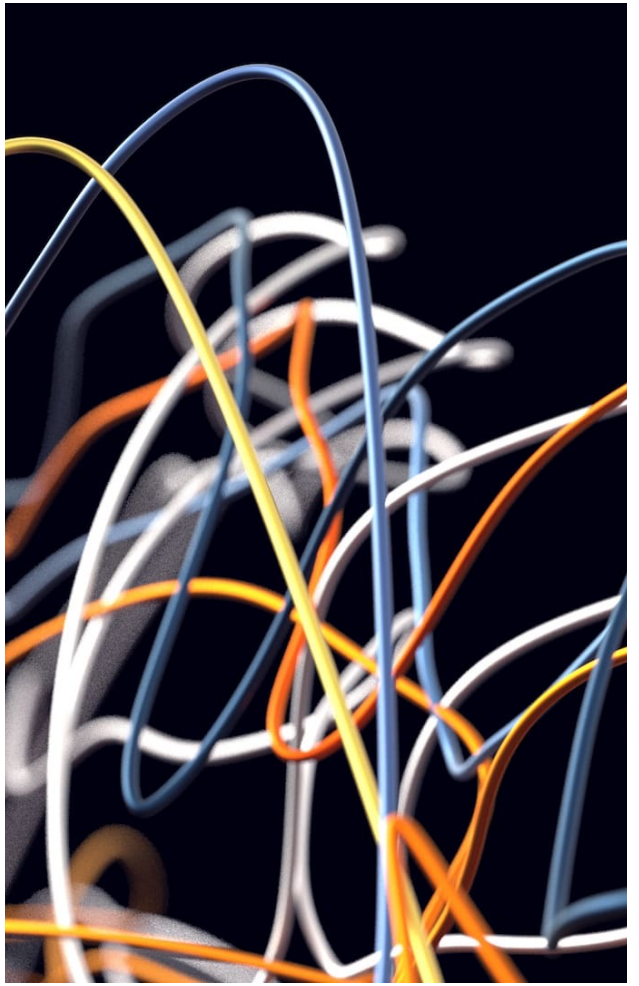
Datenarchitektur für die Applikations-entwicklung

INNOQ

Hristiyan Pehlivanov
Senior Consultant

Agenda

- Lokale Optimierung
  - Data Driven
  - Fachliche Metriken
- Globale Optimierung
  - Data Products
  - Data Contracts
  - Data Governance
  - Data Catalog vs Marketplace
  - ETL vs ELT vs Streaming
  - Moderne Datenplattformen
  - Data & AI

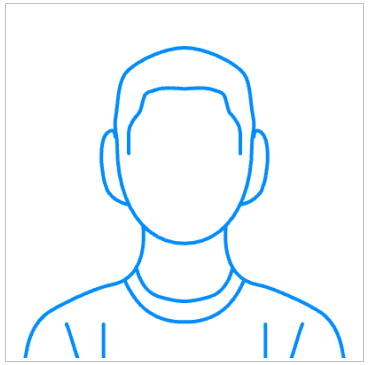


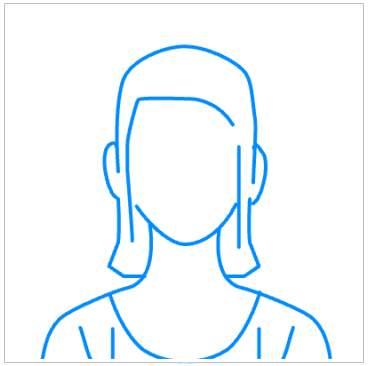
Was ist Architektur?

- “Software architecture is about maximizing the happiness and effectiveness of everyone who interacts with the system.”*

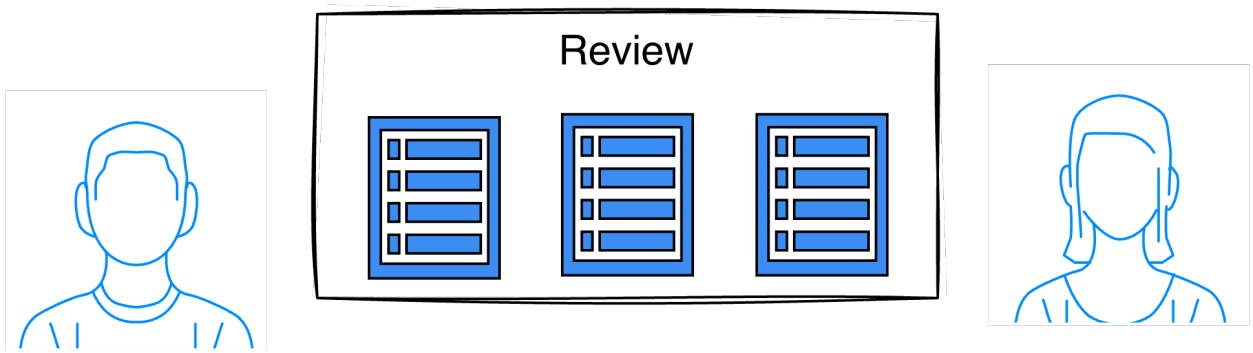
*Citation needed

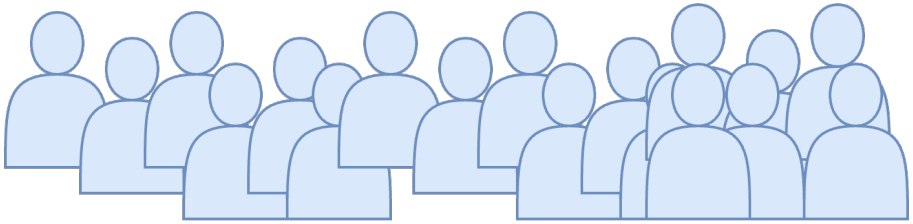
Anna und Max



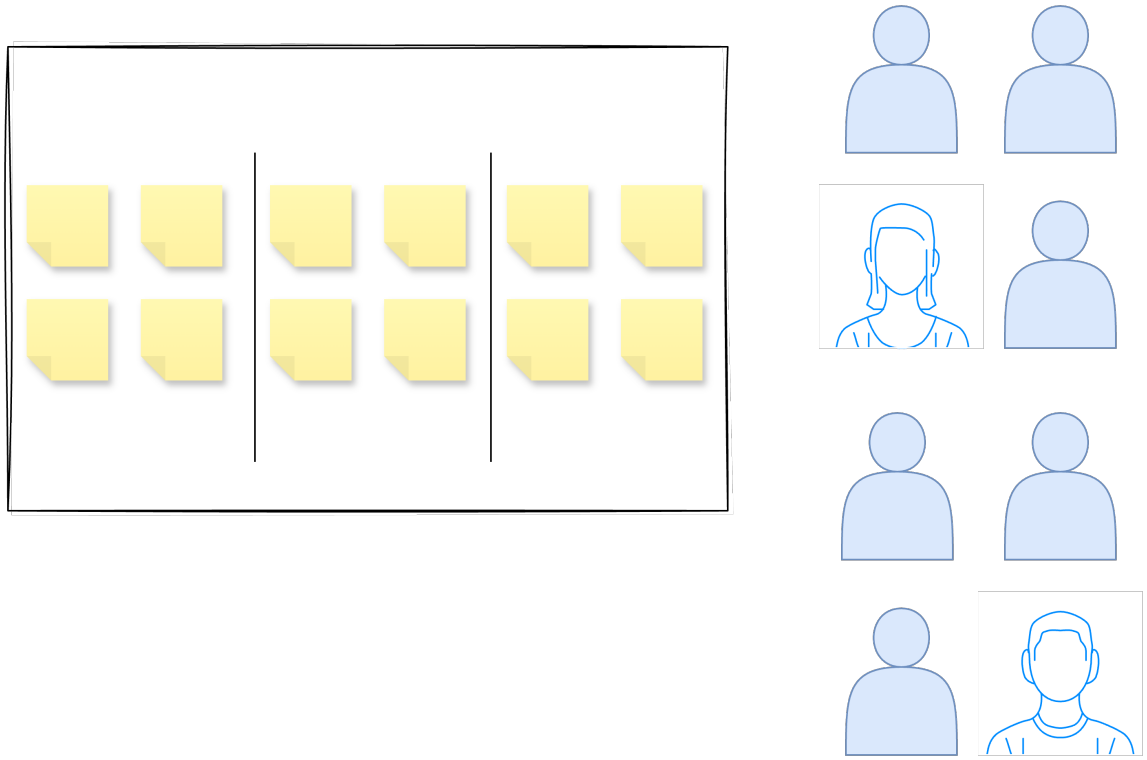


Review





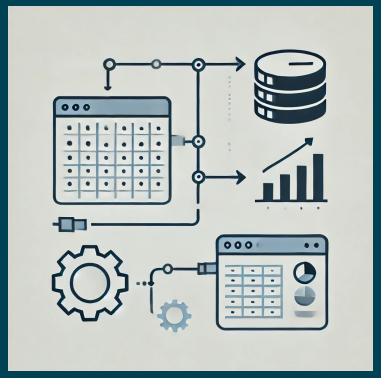
Retro



80/20-Regel

- "A Standish study found that 45% of features were never used and only 20% of features were used often or always."

https://martinfowler.com/articles/xp2002.html

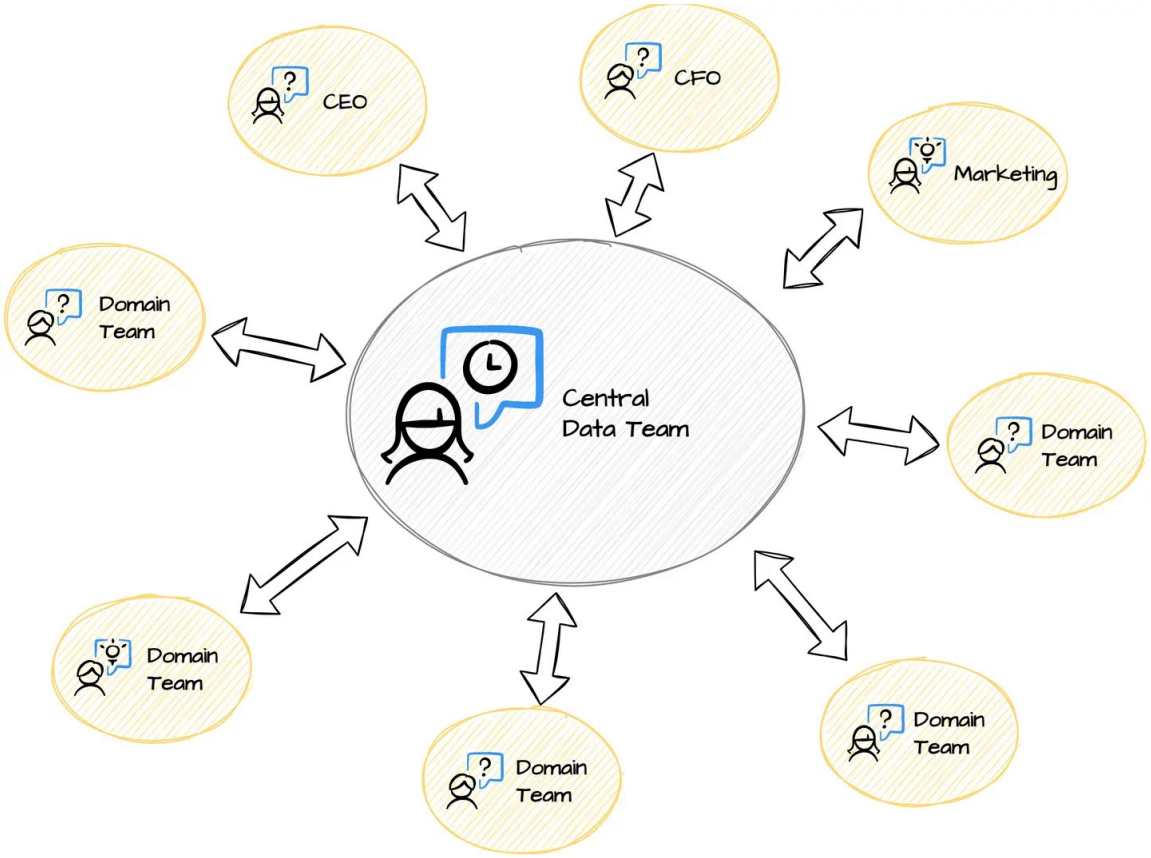


Reporting (past/present)

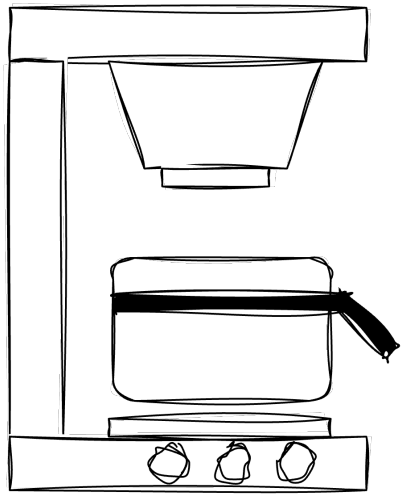
Machine Learning (future)

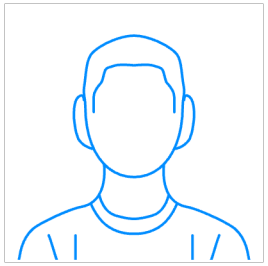
Data Analytics

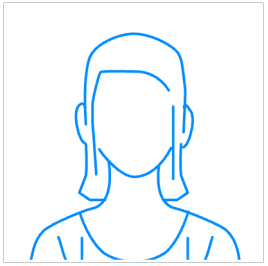
Das Data-Team

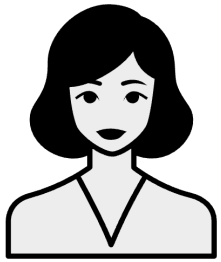


Der Flaschenhals





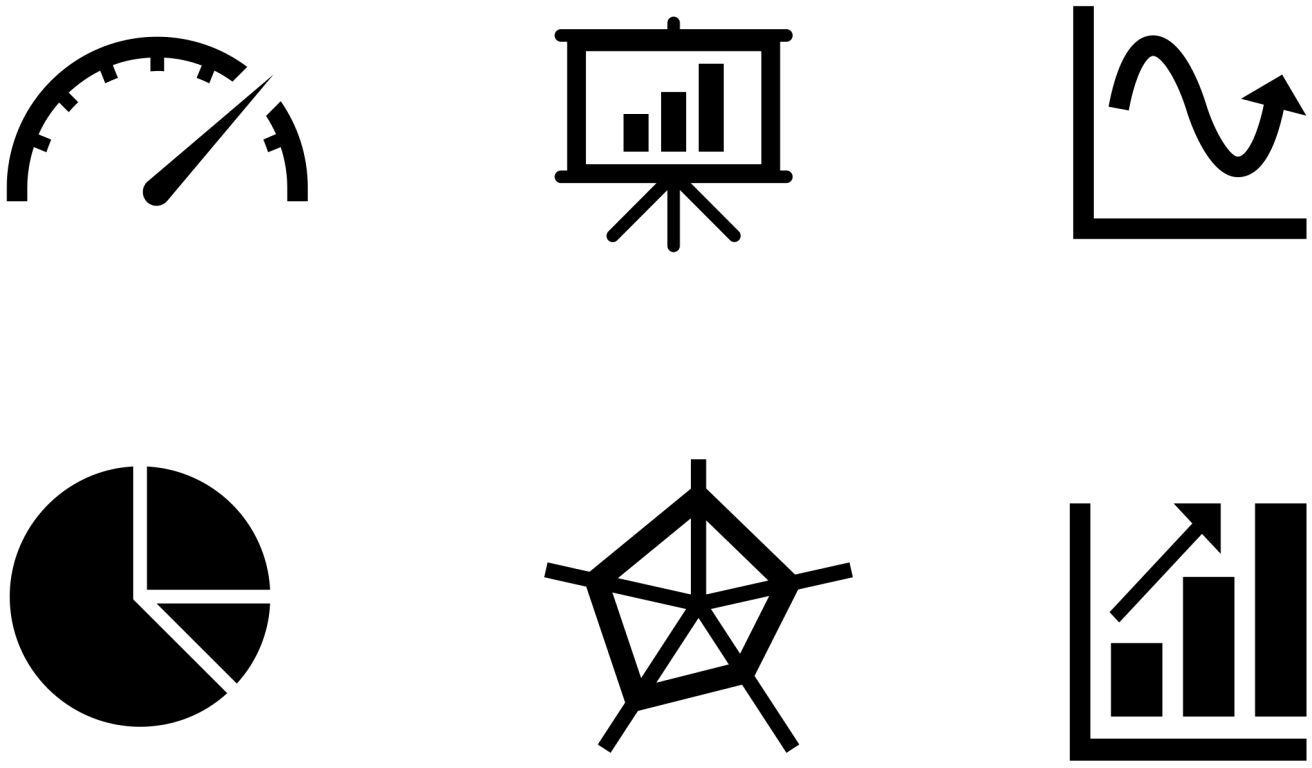




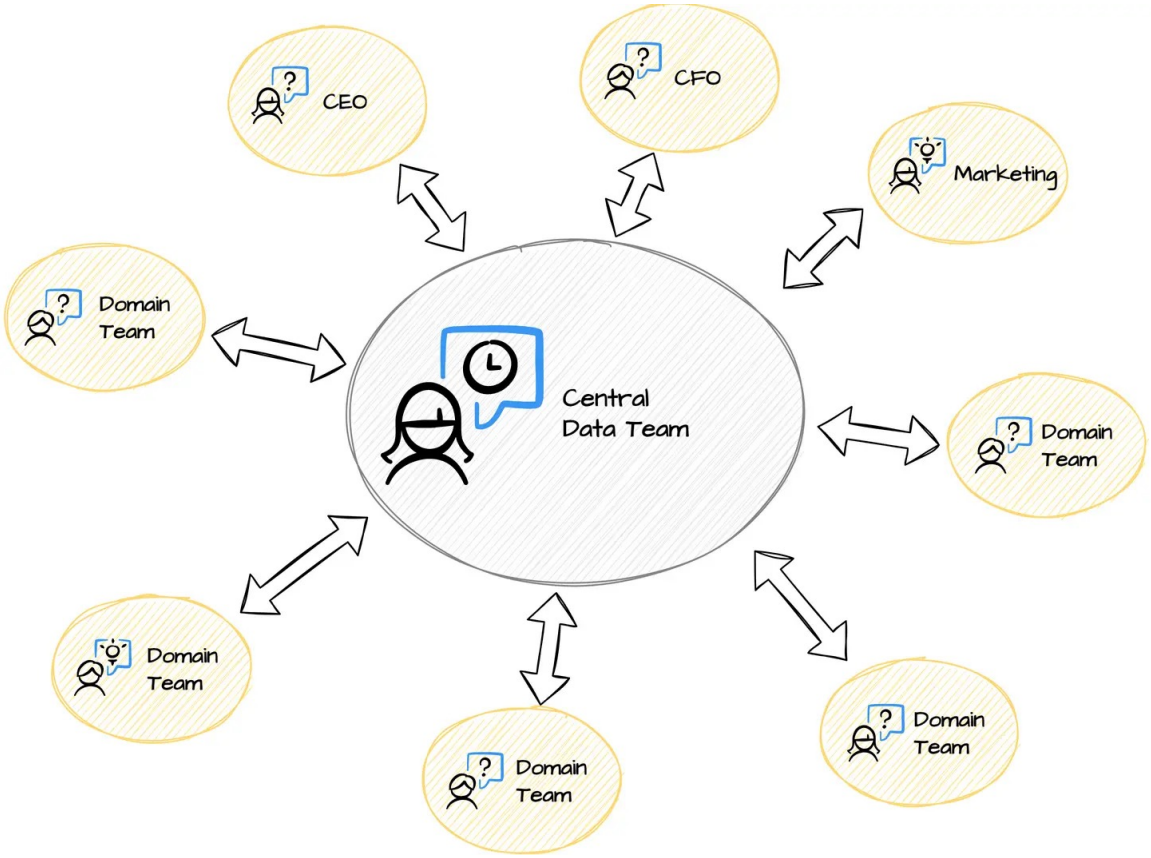
Fachliche Metriken

- Conversion Rate
- Stornoquote
- Aktive Nutzer
- Kontoeröffnungen pro Tag
- Verbundene Geräte
- On-Time Delivery Rate
- Wartezeiten für Kunden

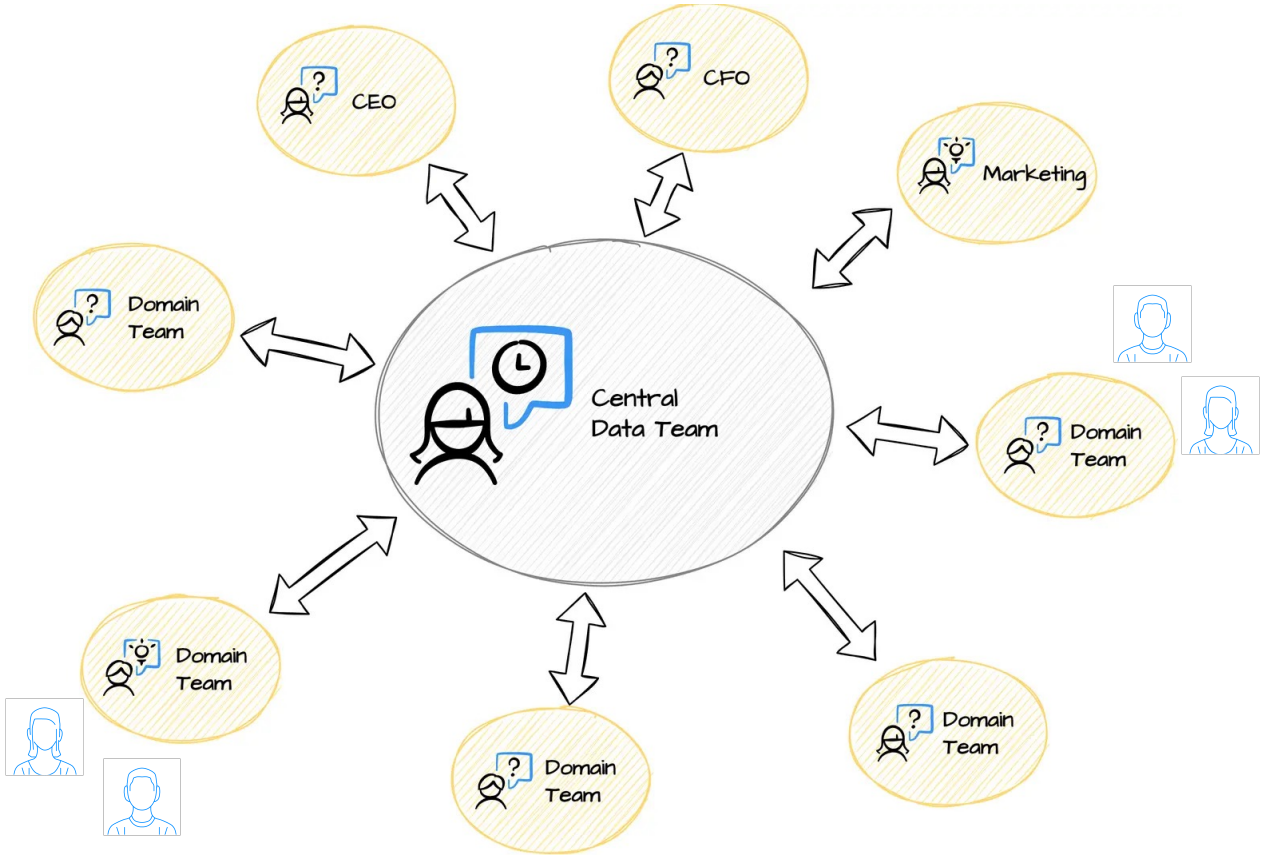
Visualisierung



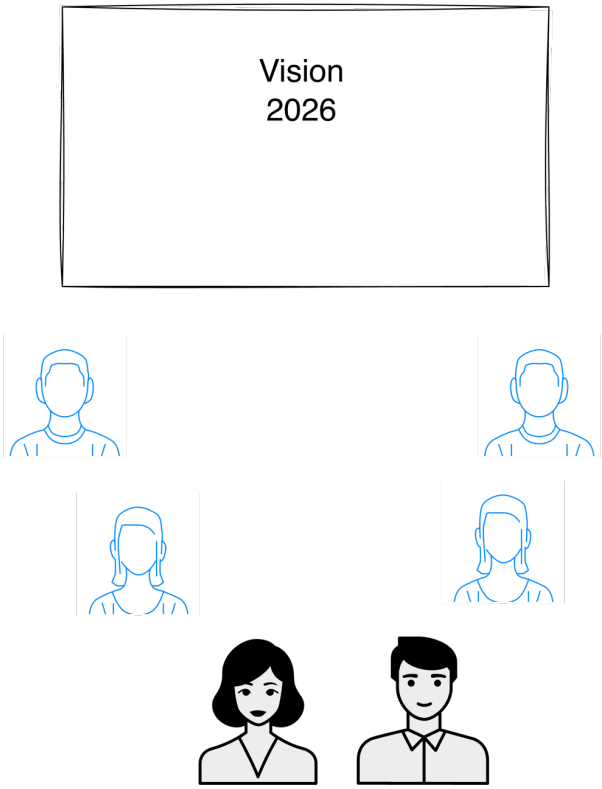
Lokale vs globale Optimierung



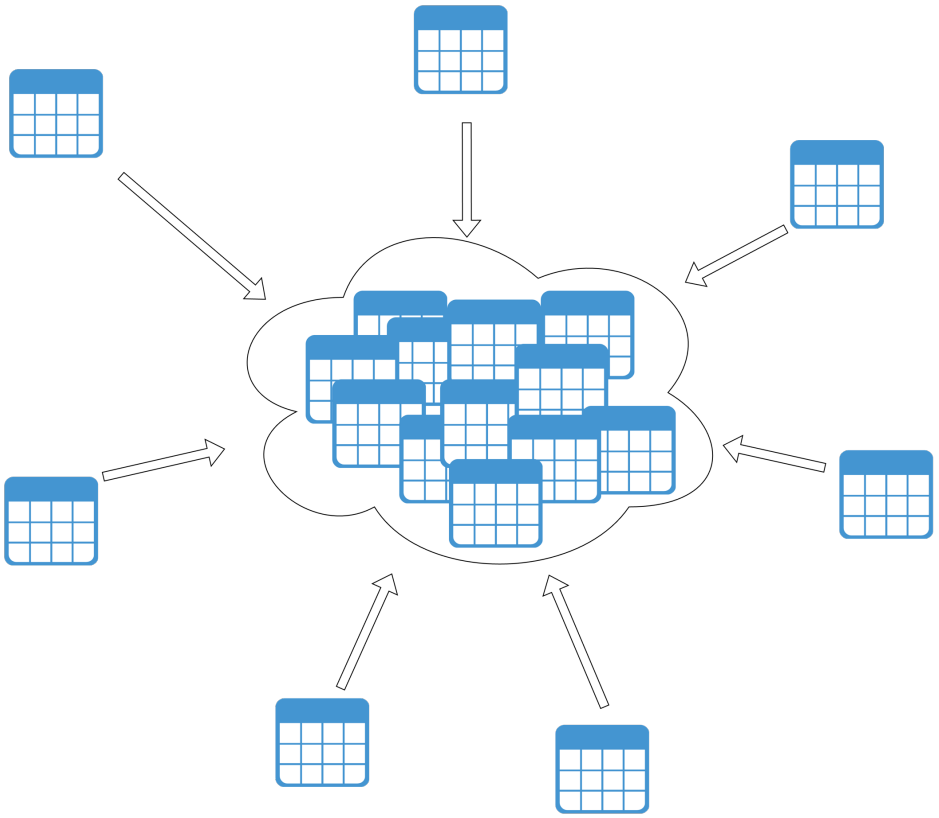
Lokale vs globale Optimierung



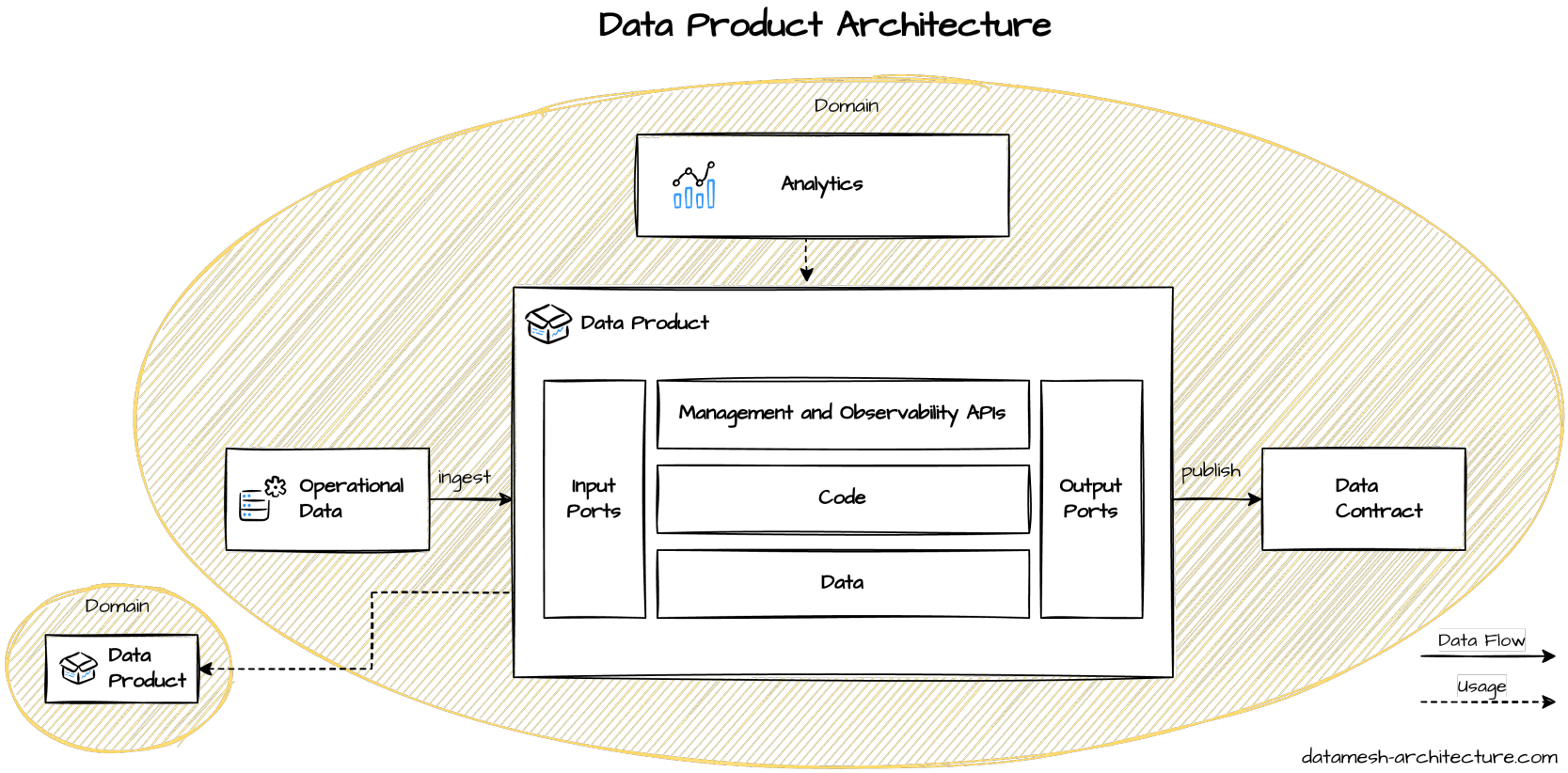
Dezentralisierung

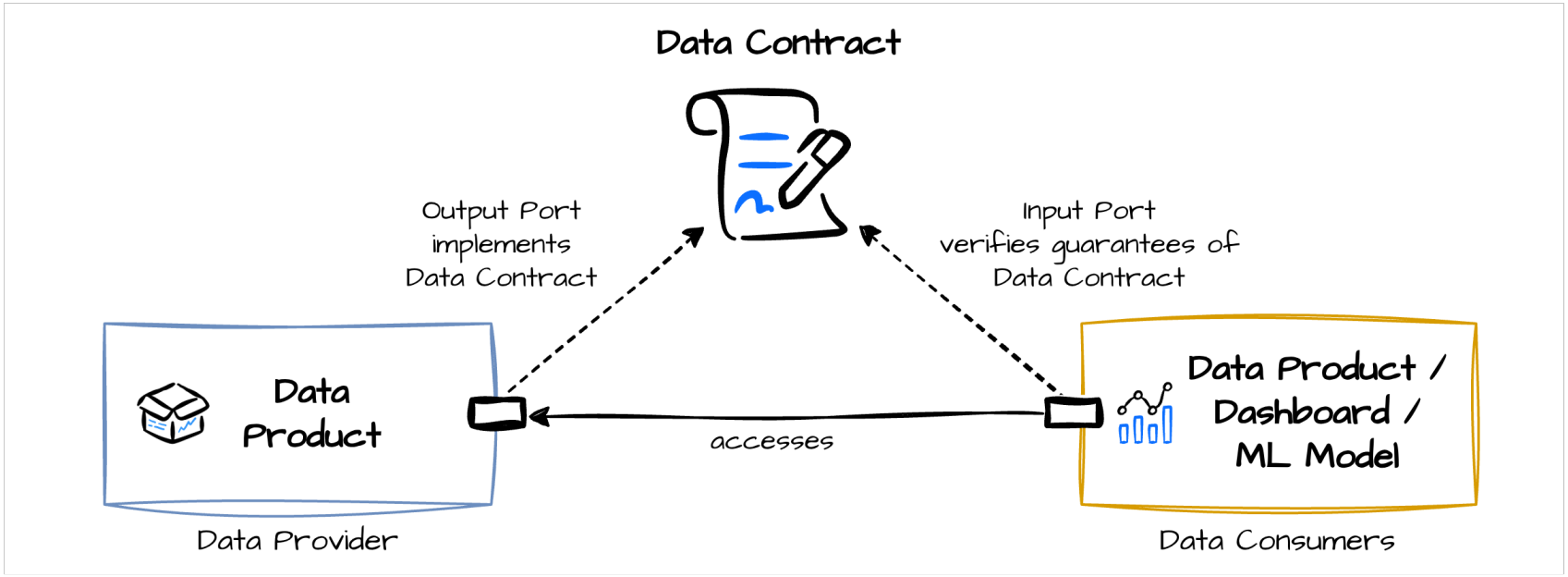


Data Lake



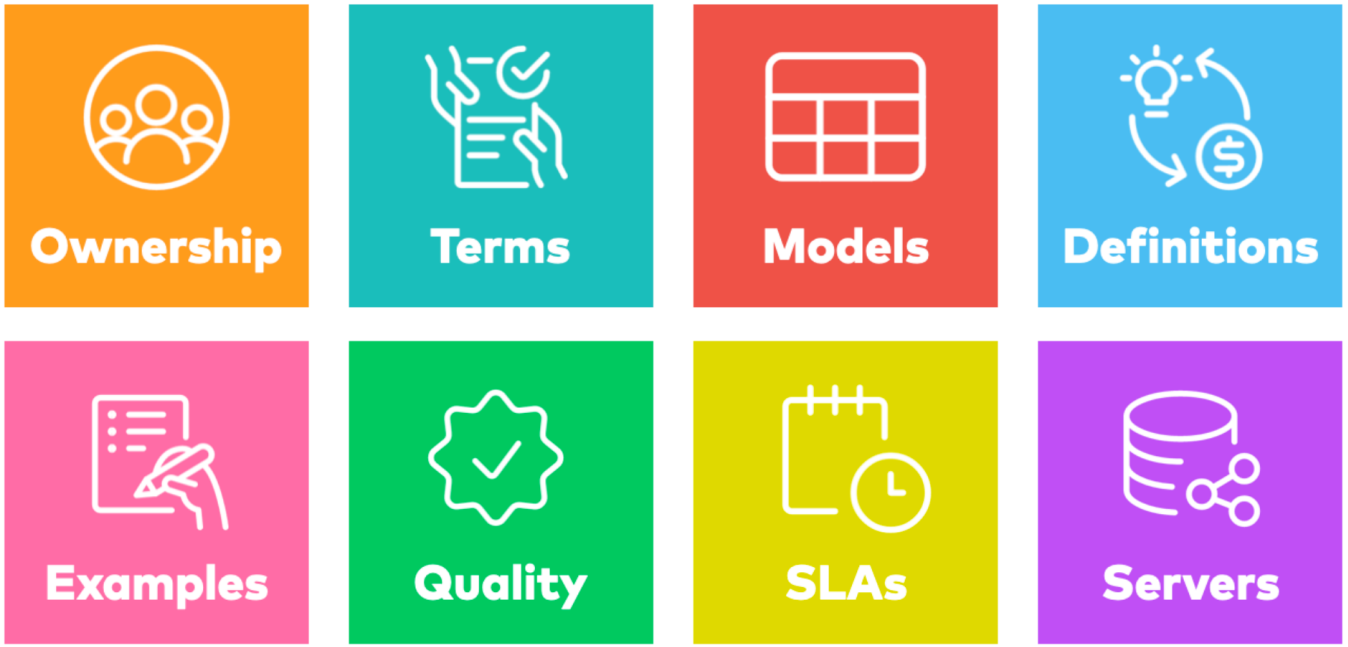
Data Product





- https://github.com/datacontract/datacontract-cli
- Aktuell unter Trial im ThoughtWorks Technology Radar

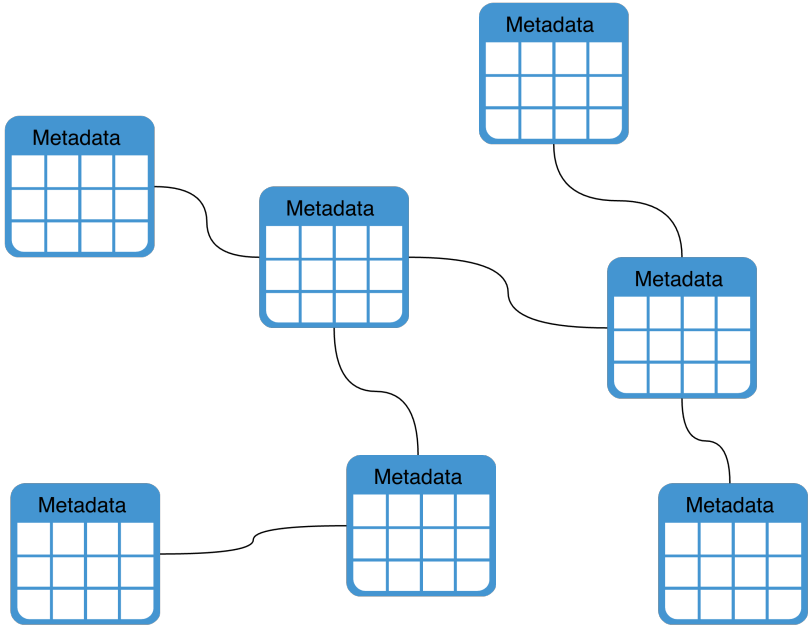
Data Contracts



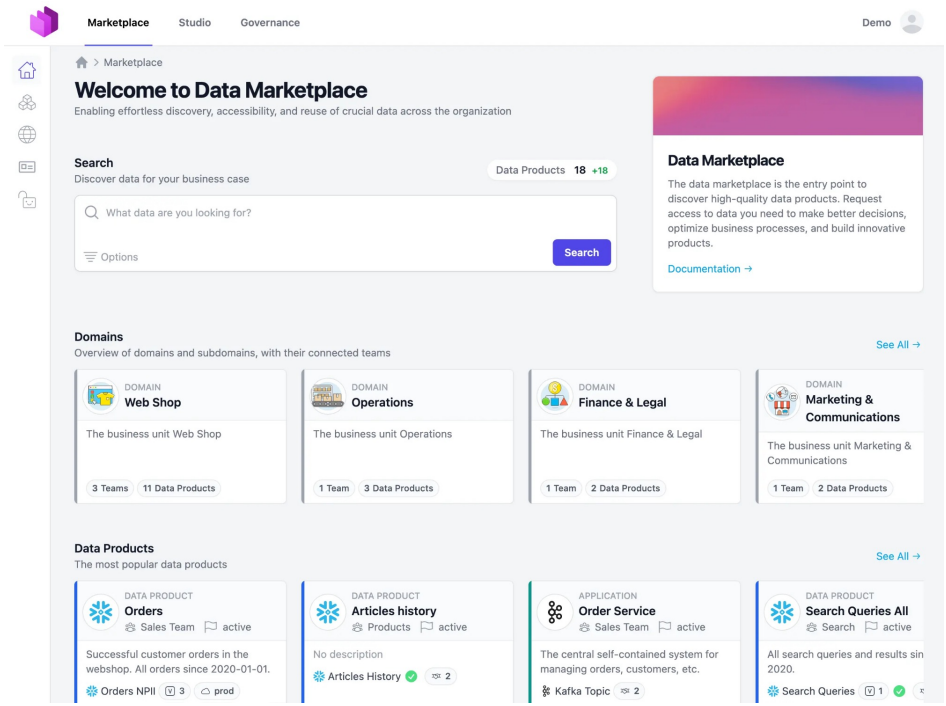
Contracts und Data Governance

- Policy as Code
- Automatisierte Tests
  - Datenqualität als Teil der CI/CD-Pipeline
- Monitoring
  - Compliance und Drift Detection

Data Catalog

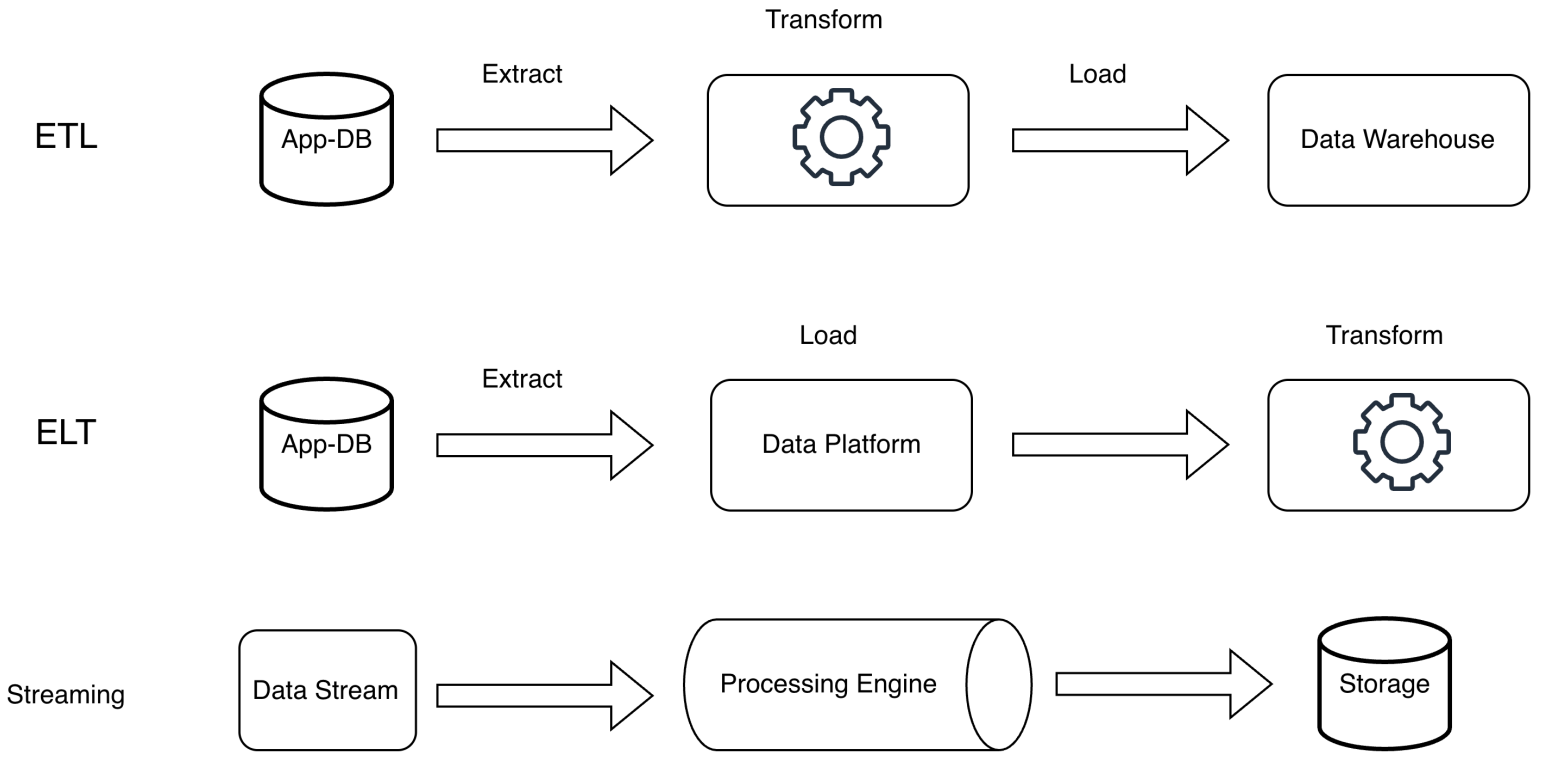


Data Catalog vs Marketplace



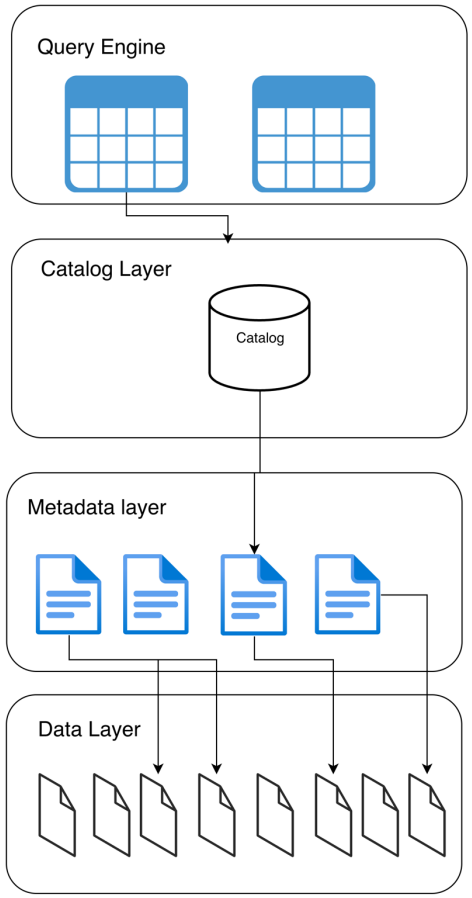
- https://www.entropy-data.com/#marketplace

ETL vs ELT vs Streaming

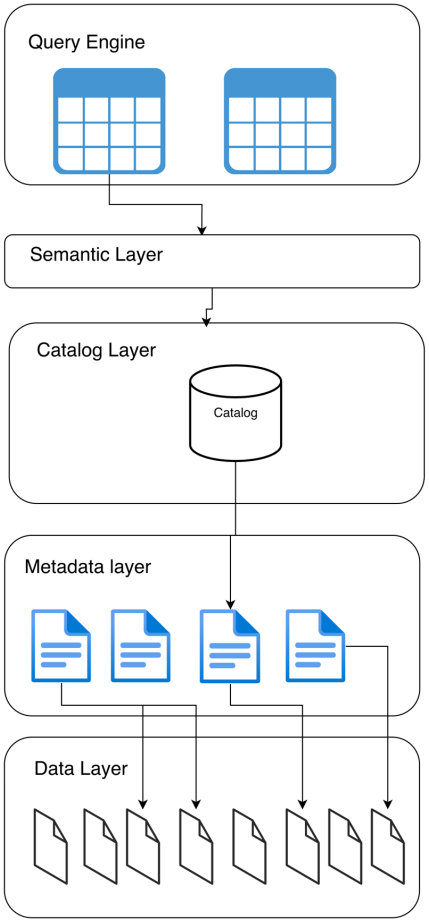


Data Lakehouse

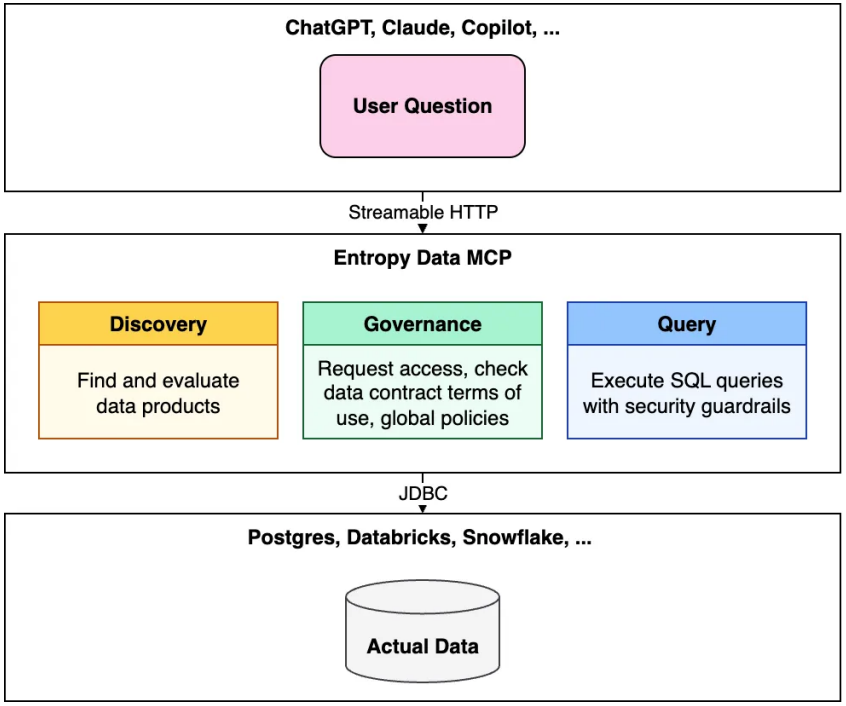
- Apache Iceberg



Data and AI


Query Engine
Semantic Layer
Catalog Layer
Catalog
Metadata layer
Data Layer

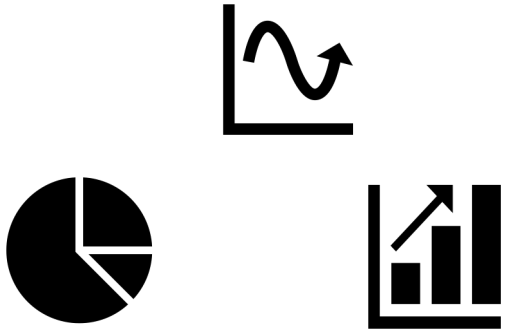
Data and AI



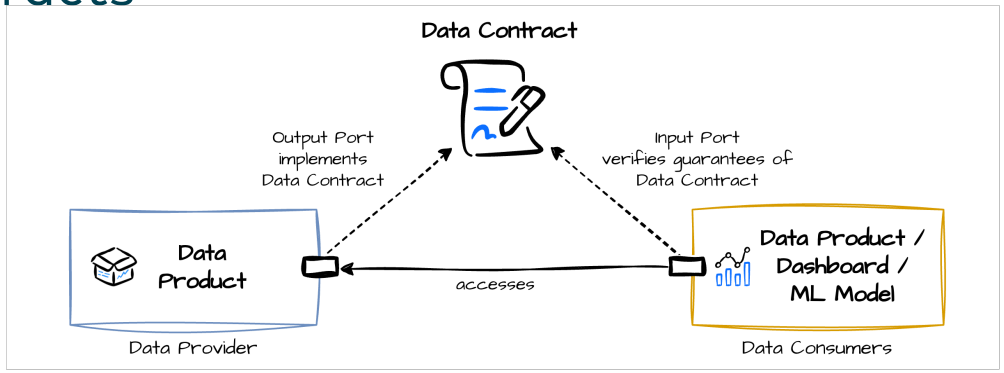
- https://www.entropy-data.com/learn/mcp

Fazit

- Data driven durch fachliche Metriken



- Dezentralisierung
  - Data Products
  - Data Contracts



Danke! Fragen?

INNOQ
www.innoq.com

Hristiyan Pehlivanov
hristiyan.pehlivanov@innoq.com
https://www.linkedin.com/in/hristiyanpehlivanov/

innoQ Deutschland GmbH

Krischerstr. 100
40789 Monheim
+49 2173 3366-0

Ohlauer Str. 43
10999 Berlin

Ludwigstr. 180E
63067 Offenbach

Kreuzstr. 16
80331 München

Wendenstraße 130
20573 Hamburg

Spichernstrasse 44
50672 Köln