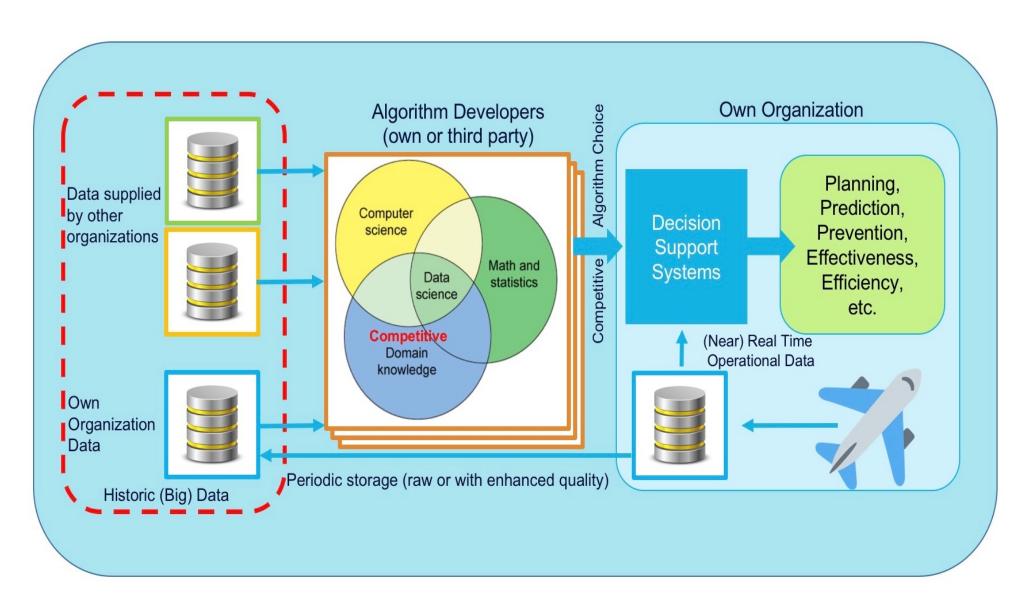
Training AI/ML models using Digital Data Marketplaces

Creating value and competition by enabling access to additional big data owned by multiple organizations in a trusted, fair and economic way

The more data - the better: an aircraft maintenance use-case



- AI/ML algorithm based Decision Support Systems create business value by supporting real-time complex decision taking such as predicting the need for aircraft maintenance.
- Algorithm quality increases with the availability of aircraft data.
- Multiple airlines operate the same type of aircraft.
- Research Question: "How can AI/ML algorithm developers be enabled to access additional data from multiple airlines?"
- Approach: Applying Digital Data Marketplace concepts to facilitate trusted big data sharing for a particular purpose.

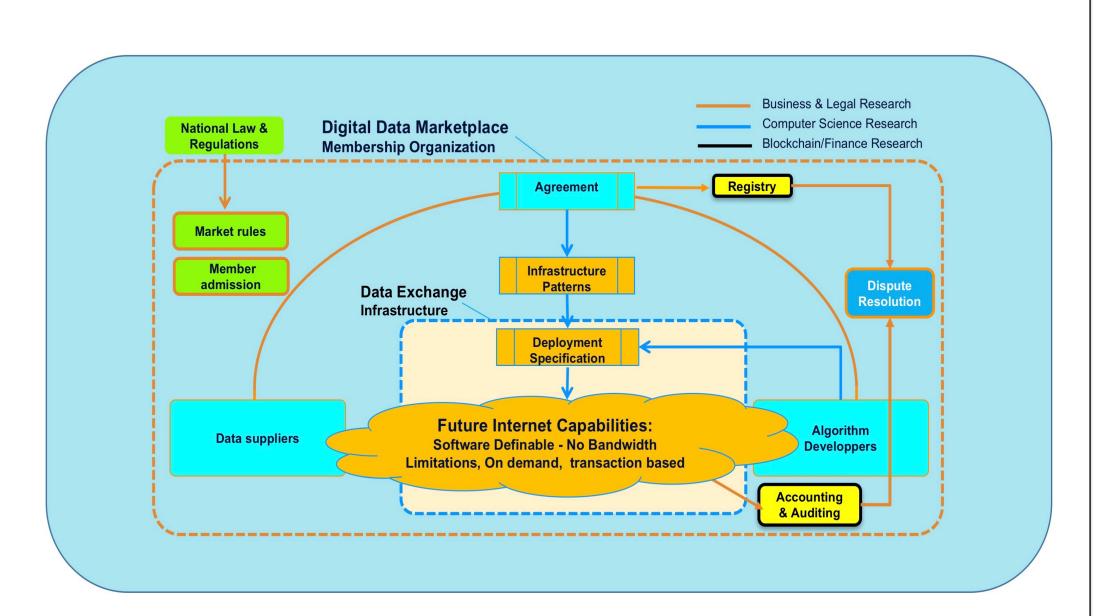
Digital Data Marketplace enabling data sharing and competition

A Digital Data Marketplace is a membership organization supporting a common goal: e.g. enable data sharing to increase value and competitiveness of AI/ML algorithms.

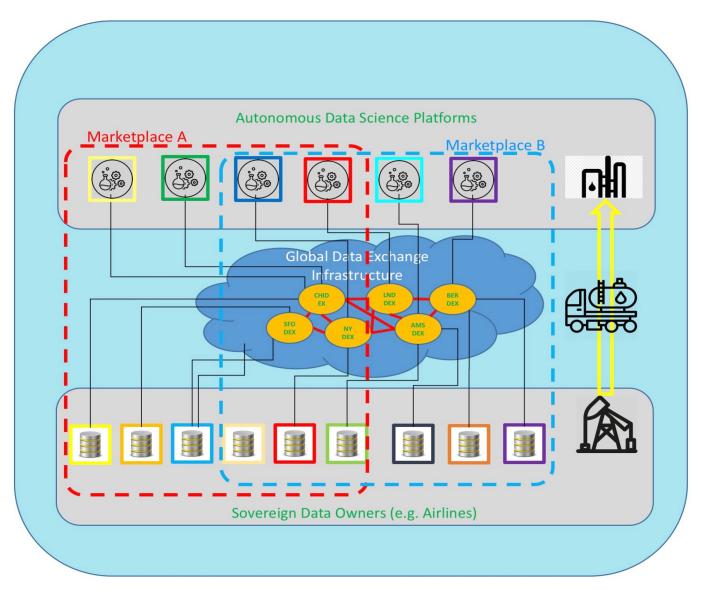
Membership organization is institutionalized to create, implement and enforce membership rules organizing trust.

Market members arrange digital agreements to exchange data for a particular purpose under specific conditions.

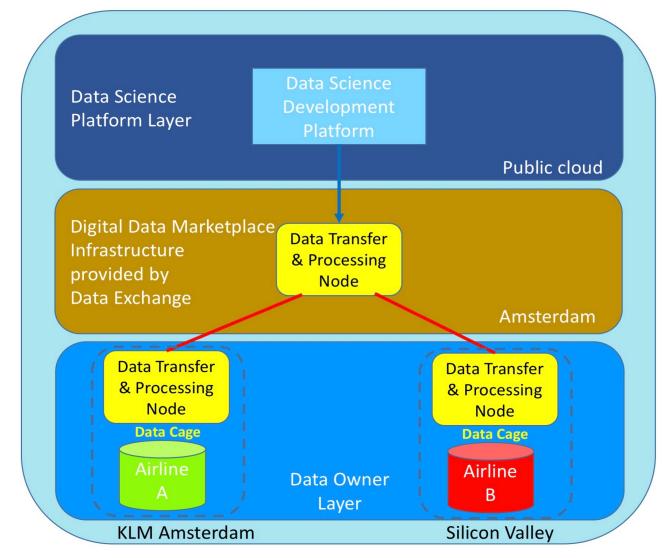
Agreements subsequently drive data science transactions creating processing infrastructures using infrastructure patterns offered by a Data Exchange as Exchange Patterns.



Researching Exchange Patterns to support Digital Data Marketplaces



Data Exchange Model



Research Infrastructure

Trust Modellina: What is the optimal infrastructure archetype, describing storage and processing locations and their relationships, which best suit member requirements when considering risk? **Processing Models:** What are the implications of distributing data processing across membership organization owned infrastructures in terms of achievable model accuracy and processing performance using federated/distributed models vs centralized models **Marketplace Reference Architecture:** What constitutes a marketplace? Researching needed functions, personas, flows, credentials, contracts & rules, conflict resolution, and much more ...

Research Elements

