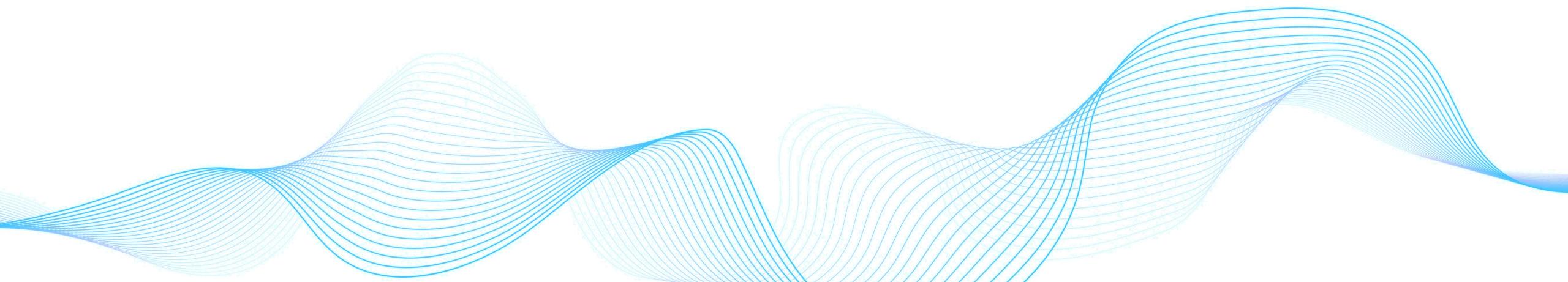




# Federated AI, data and infrastructure ecosystems

Unlock the value of AI and sensitive data for your domain



# deltaDAO mission and vision

---

**We build the foundation for the industrial AI & data economy of the future.  
Based in the EU / Germany.**



**deltaDAO AG** is a data economy software developer, integrator and consultant based in Hamburg founded in April 2021.



## OUR VISION

Enabling a decentralized data economy with technical data sovereignty at its core.



## OUR MISSION

Building scaling and privacy-preserving AI & data monetization solutions.

# IP and Privacy Preserving Solutions



Our self-sovereign technology stack enables **IP and privacy preserving monetization**, consumption of sensitive data, and **secure orchestration across domains**.

## Market opportunity

**375+ Gaia-X members, 30+ countries, open for everybody**



**Linking the largest sectors** of the European industry **with the fastest growing ones.**



**Leading IP- and privacy preserving technology** at the core of Pontus-X.



**Deep knowledge and network:** We are well embedded in the Gaia-X community and across Gaia-X Hubs in Europe.



First to deploy an **open and running ecosystem** of federation services since 2021.

gaia-x



**Catena-X**  
Automotive Network



MANUFACTURING-X

**AIRBUS**



**Microsoft**



**Continental**

**DENSO**

**SAP**

**SIEMENS**



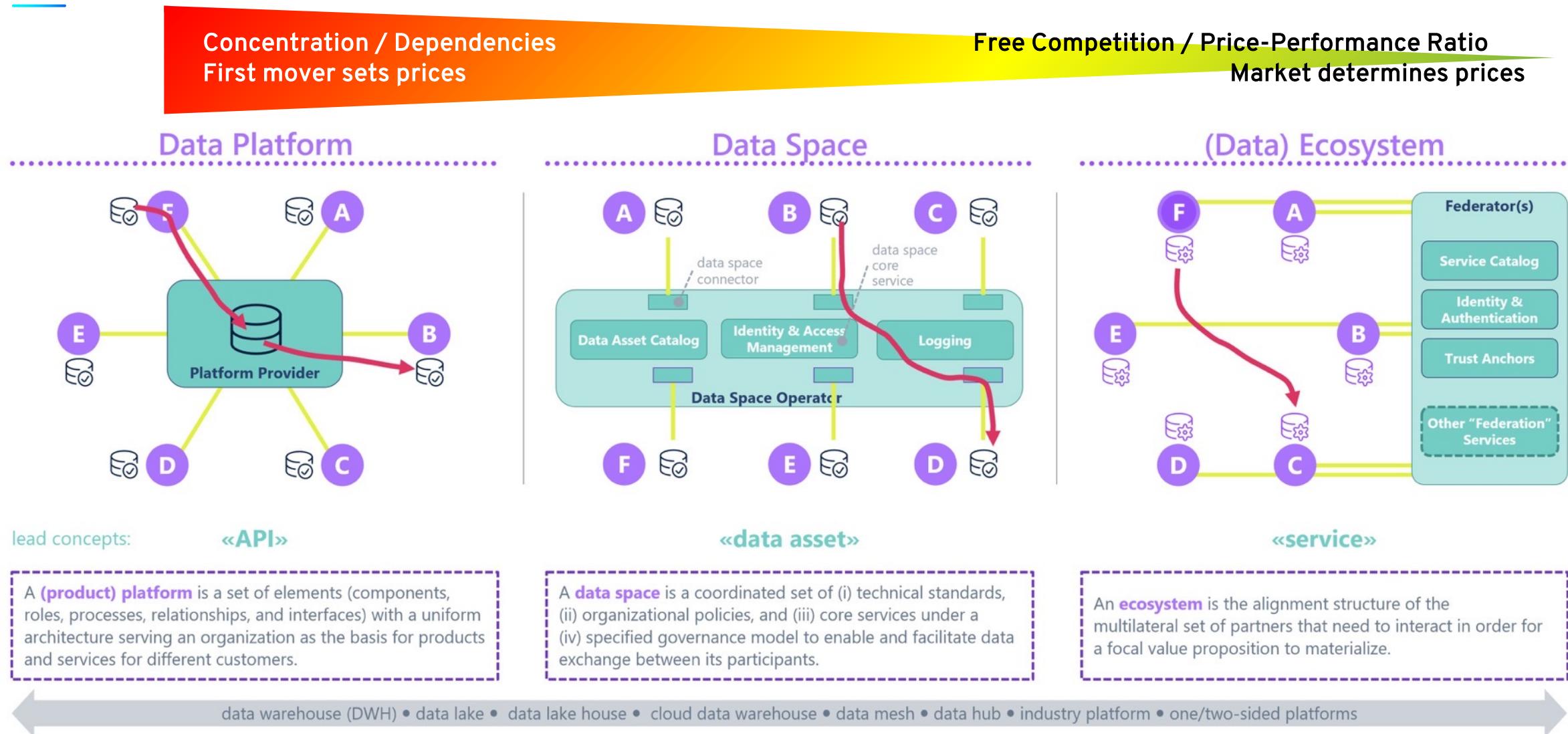
**BOSCH**



gaia-x **future mobility**  
Gaia-X Lighthouse Project



# Emerging Operating Models – Spectrum of (De-Centralization)



## Our solution

# Enabling Business Models for AI and data



**Sell & combine** the limitless possibilities of software, AI, incl. **Federated Learning**.



**Monetize ANY data source & service.**  
Edge, on-prem, cloud, data streams, AI.

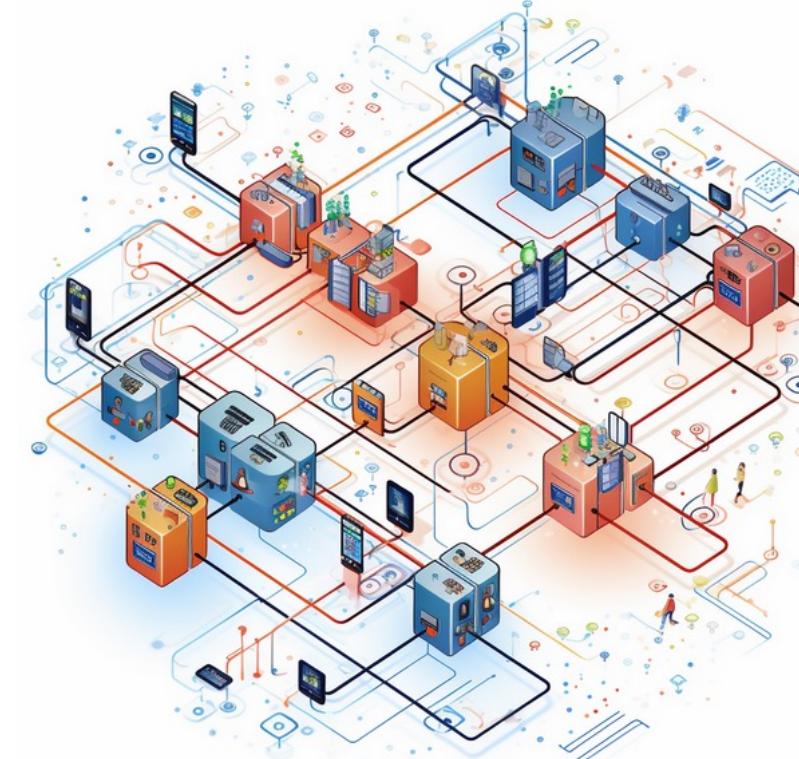


**Instant Payment** with EU-regulated digital **EURO**



Preserving IP and GDPR-compliance with **Compute-to-Data**

Next: **Automated CO2 offset** for computation resources



# Pontus-X Ecosystem for Gaia-X



Payment  
Service  
Providers



EUROe



Auditing &  
Identity  
Providers



Compliance  
Service  
Providers



Ecosystem  
Service  
Providers



Cloud  
Service  
Providers

## Powered by



Membrane  
Finance

## Federators



## Portals



gaia-x



deltaDAO



moveID

gaia-x future mobility



AIRBUS



Future Mobility  
Data Marketplace



Universitat  
de Lleida

EnergySHR



Clinical  
Insights  
Exchange

Acentrik

software AG

AIRBUS

arsys

deltaDAO

IONOS

Membrane  
Finance

EuPro  
Gigant

Staatsbibliothek  
zu Berlin  
Preußischer Kulturbesitz

BIGCHAIN DB

WOBCOM

moveID

TU WIEN

EXOSCALE

AIRBUS

Membrane  
Finance

Membrane  
Finance

Membrane  
Finance

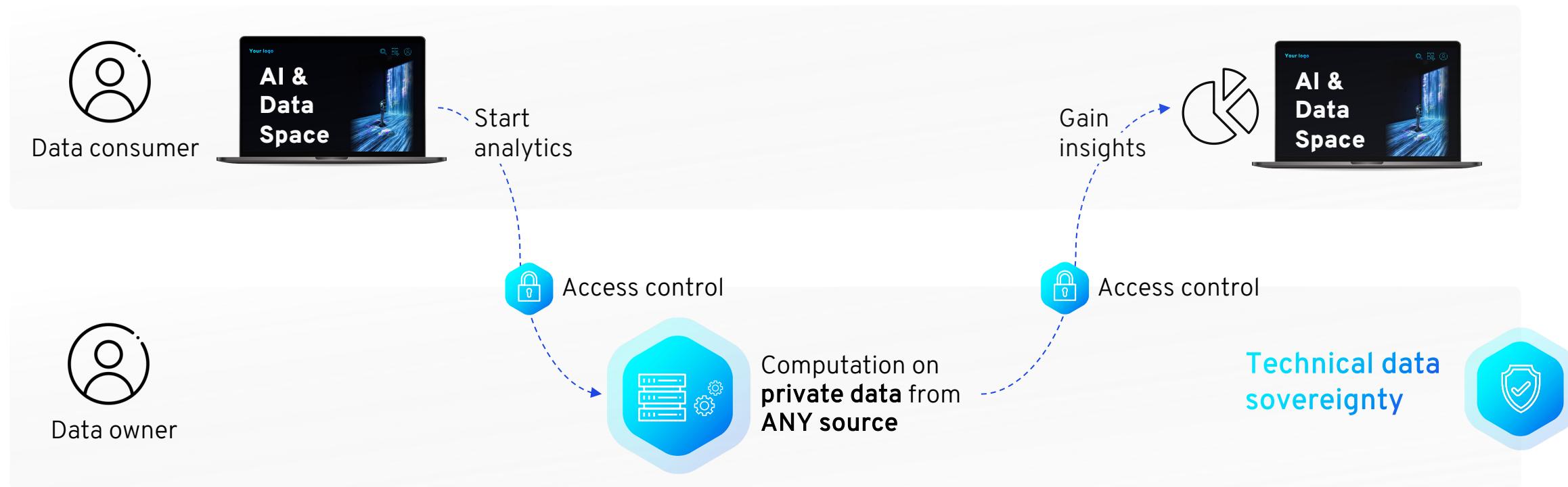
Membrane  
Finance

Membrane  
Finance

# A safe and compliant environment for your AI & data with CtD

Compute-to-Data is a technology that allows computations to be performed directly on data **without moving or exposing the raw data itself**, thereby preserving privacy and data sovereignty. **Only trusted applications are allowed** to perform computation on trust infrastructure.

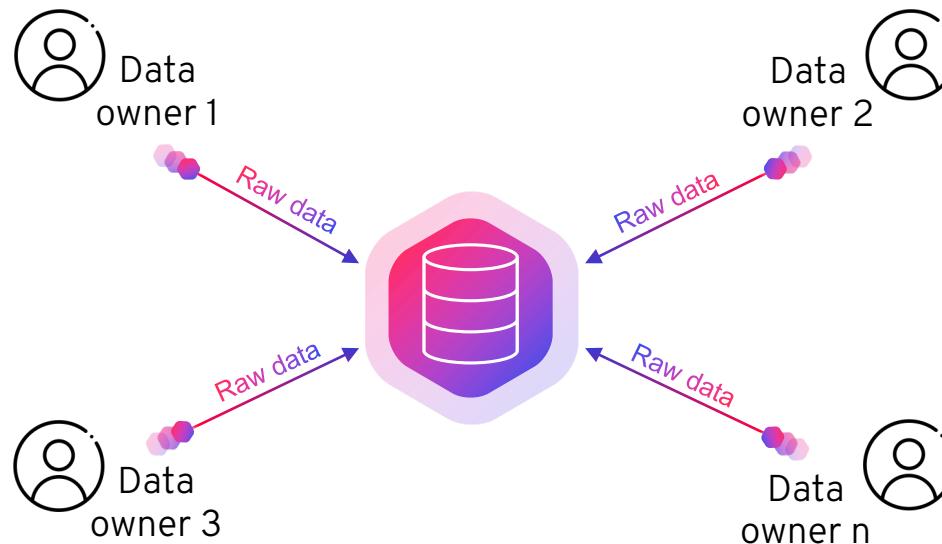
Bring compute...



# Federated Analytics & Learning integrated

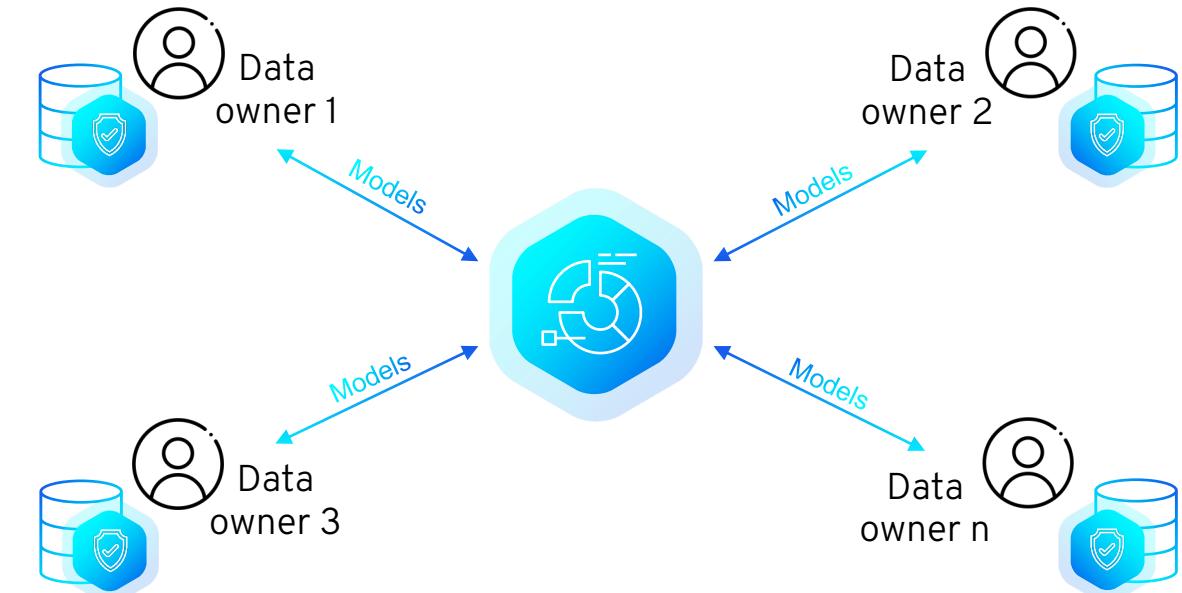
## Traditional analytics & learning

Centralized computation. Transfer of raw data.



## Federated Analytics and Learning

Decentralized computation. No transfer of raw data. Full control.



Enabling business solutions that scale

## Use existing infrastructure right away



Automated data transfer with access controls and SSI



Compute-to-Data preserves IP, privacy and the right of economic exploitation without adding third-party risks



Compute-to-Edge brings privacy-preserving computation to the edge (infrastructure, vehicles, machines)



Federated Analytics and Training across a fleet of devices using CtD and CtE



Leverage data directly from any database or API incl. Compute-to-Data orchestration with GraphQL / Rest APIs



Next!



## Validation

# Our solutions in action



### Industry 4.0 – predictive maintenance

- 1 Collection of manufacturing data for early identification of **maintenance** needs.
- 2 IP-preserving data **analytics & monetization**.
- 3 Manufacturers can proactively address potential equipment failures, resulting in **reduced downtime**, increased operational **efficiency**, **lowered maintenance costs** & **extended asset lifespan**.

#### Industry 4.0 predictive maintenance demo



<https://youtu.be/5439iMCoF10>



### Smart mobility – customer insights

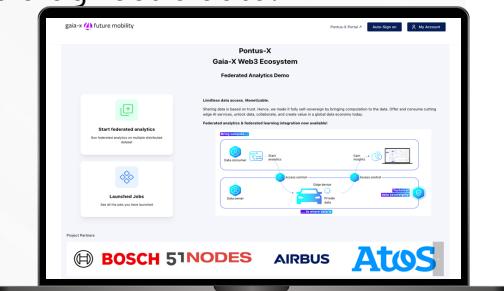
- 1 Collection data on a **fleet of vehicles/ smart & roadside infrastructure**.
- 2 Advanced **federated analytics** to gain insights.
- 3 Insurers can **customize premiums** based on driving habits while protecting data privacy, resulting in **fairer rates** for conscientious drivers and more **accurate risk assessment** for insurers.

Repair shops can access diagnostic data.

#### Mobility edge integration demo



<https://youtu.be/W8PuM0ISm4s>



Fleet Analytics & Learning

## Our solution

# Sustainable business models for all participants

Settle transactions instantly in Euro. Pay per use and directly earn from what you are providing to the ecosystem.

Data access

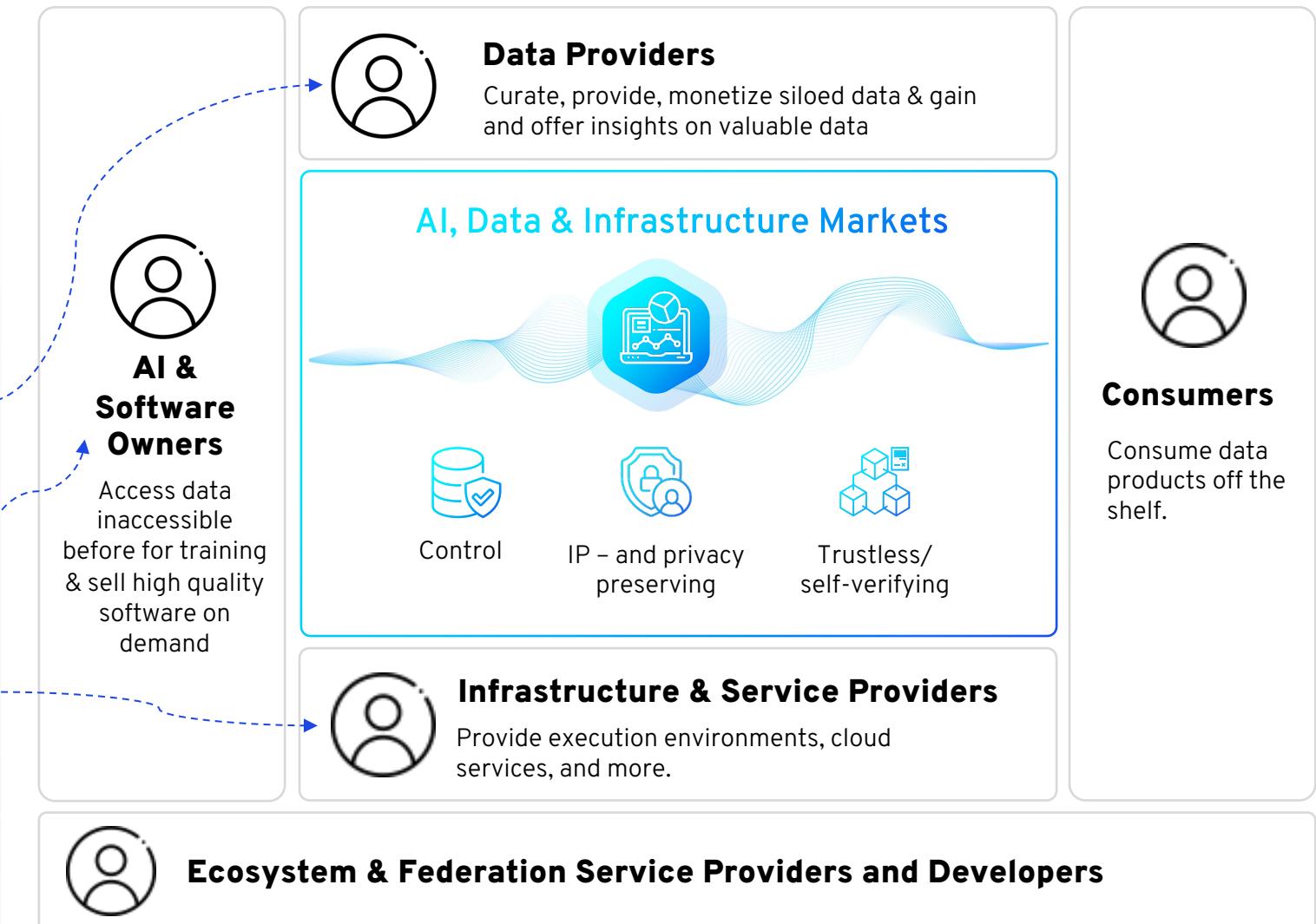
Applications , algorithms & AI models

Infrastructure / Cloud Resources

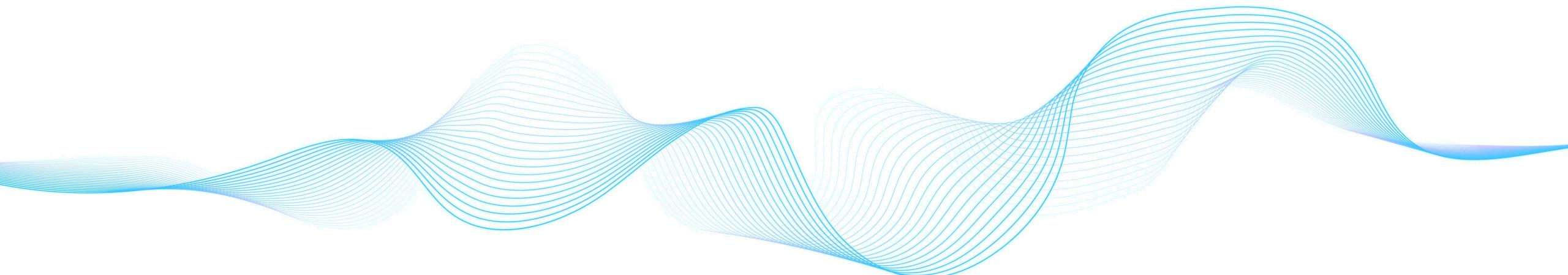
Federation Services, Portals

Compensation + Machine Leasing etc.

DATASET	<b>5 EUROe</b> for 1 hour
+ COMMUNITY FEE	<b>0.01 EUROe</b>
+ ALGORITHM	<b>10 EUROe</b> for 1 day
+ COMMUNITY FEE	<b>0.02 EUROe</b>
+ INFRASTRUCTURE RESOURCES	<b>0.998 EUROe</b> for 600 seconds
=	<b>16.028 EUROe</b>
& CO2 COMPENSATION	<b>0.25 EUROe</b>

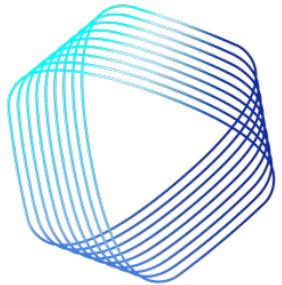


# Quick Demo & Questions



# Pontus-X Ecosystem for Gaia-X

- Pontus-X Ecosystem Portal  
<https://pontus-x.eu/>
- Pontus-X Logging Service / GEN-X Explorer  
<https://explorer.pontus-x.eu/>
- Pontus-X (GEN-X) Network Documentation  
<https://docs.pontus-x.eu/>
- EuProGigant Demonstrator  
<https://portal.euprogigant.io/>  
<https://partmatching.euprogigant.io/>  
<https://youtu.be/5439iMCof10>
- Gaia-X 4 Future Mobility moveID Demonstrator  
<https://portal.moveid.eu/>  
<https://fa.mobility.demo.delta-dao.com/>  
<https://youtu.be/W8PuM0lSm4s>
- COOPERANTS Demonstrator  
<https://cooperants.pontus-x.eu/>  
<https://airbus.pontus-x.eu/>
- Pontus-X and deltaDAO Repositories  
<https://github.com/deltaDAO>
- Ocean Protocol Documentation  
<https://docs.oceanprotocol.com/>
- Polygon Supernets Documentation  
<https://wiki.polygon.technology/>
- Polygon Repositories  
<https://github.com/maticnetwork>
- Gaia-X Trust Framework  
<https://gaia-x.gitlab.io/policy-rules-committee/trust-framework/>
- Gaia-X Credential Wizard: <https://wizard.lab.gaia-x.eu/>
- Gaia-X Compliance Service: [https://compliance.lab.gaia-x.eu/v1/docs/#/credential-offer/CommonController\\_issueVC](https://compliance.lab.gaia-x.eu/v1/docs/#/credential-offer/CommonController_issueVC)
- Gaia-X Registry: <https://registry.lab.gaia-x.eu/v1/docs/>
- Credential Event Service (CES) aka Federated Catalogue Sync  
<https://ces-v1.lab.gaia-x.eu/q/swagger-ui/>



# deltaDAO

data economy solutions – GDPR compliant

## deltaDAO AG

Katharinenstraße 30a (Contor)  
20457 Hamburg  
Germany

Website <https://delta-dao.com>

Mail [contact@delta-dao.com](mailto:contact@delta-dao.com)

Twitter [@deltadao](https://twitter.com/deltadao)

LinkedIn [deltadao](https://www.linkedin.com/company/delta-dao/)

YouTube [deltaDAO](https://www.youtube.com/@deltaDAO)



**Frederic Schwill**

Co-Founder and Security Lead  
[frederic@delta-dao.com](mailto:frederic@delta-dao.com)



**Albert Peci**

Co-Founder and Web3 Lead  
[albert@delta-dao.com](mailto:albert@delta-dao.com)



**Meike Molitor**

Co-Founder and Compliance Lead  
[meike@delta-dao.com](mailto:meike@delta-dao.com)



**Moritz Kirstein**

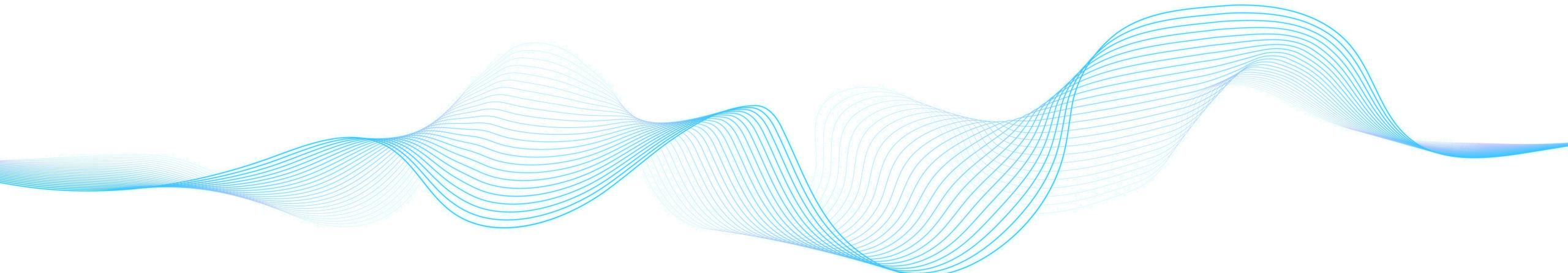
Co-Founder and Dev Lead  
[moritz@delta-dao.com](mailto:moritz@delta-dao.com)



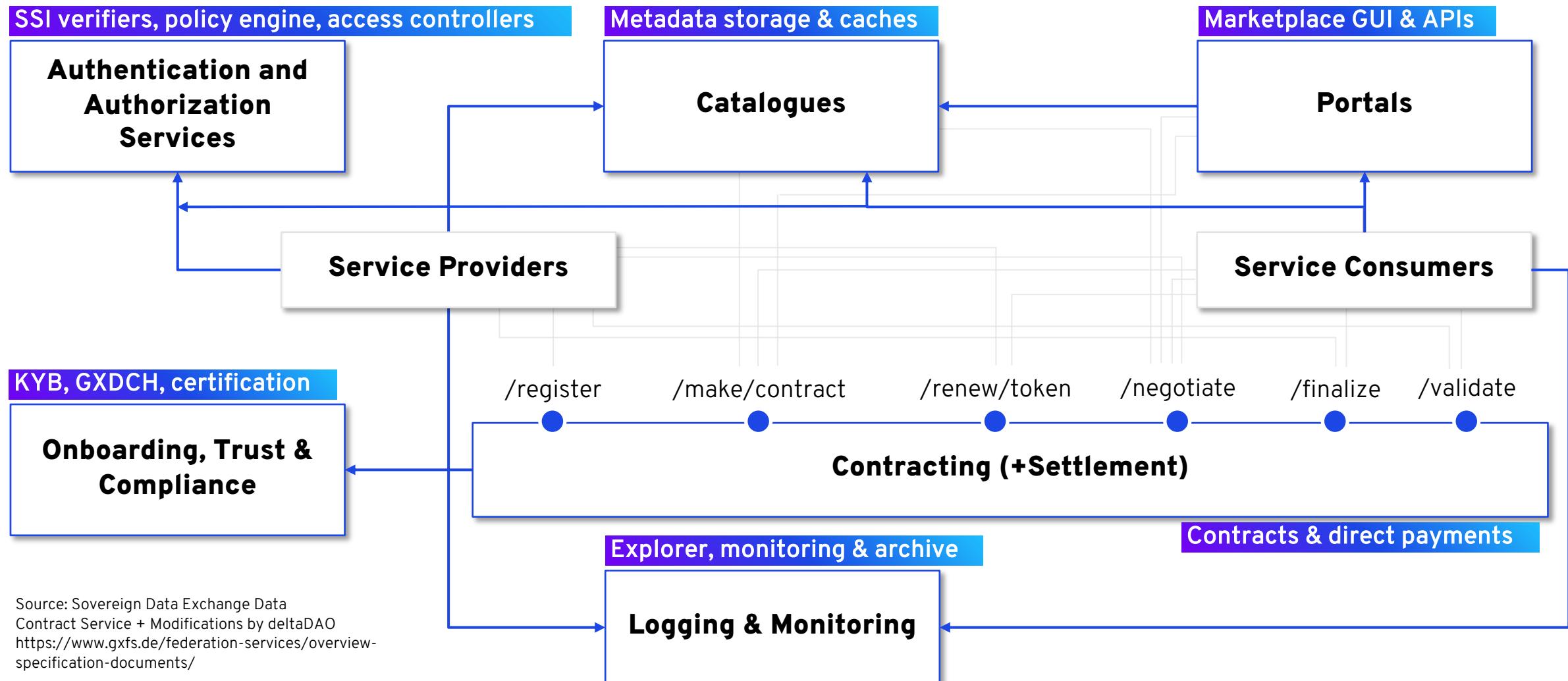
**Kai Meinke**

Co-Founder and Business Lead  
[kai@delta-dao.com](mailto:kai@delta-dao.com)

# Backup



# Federation Services as part of Operating Models

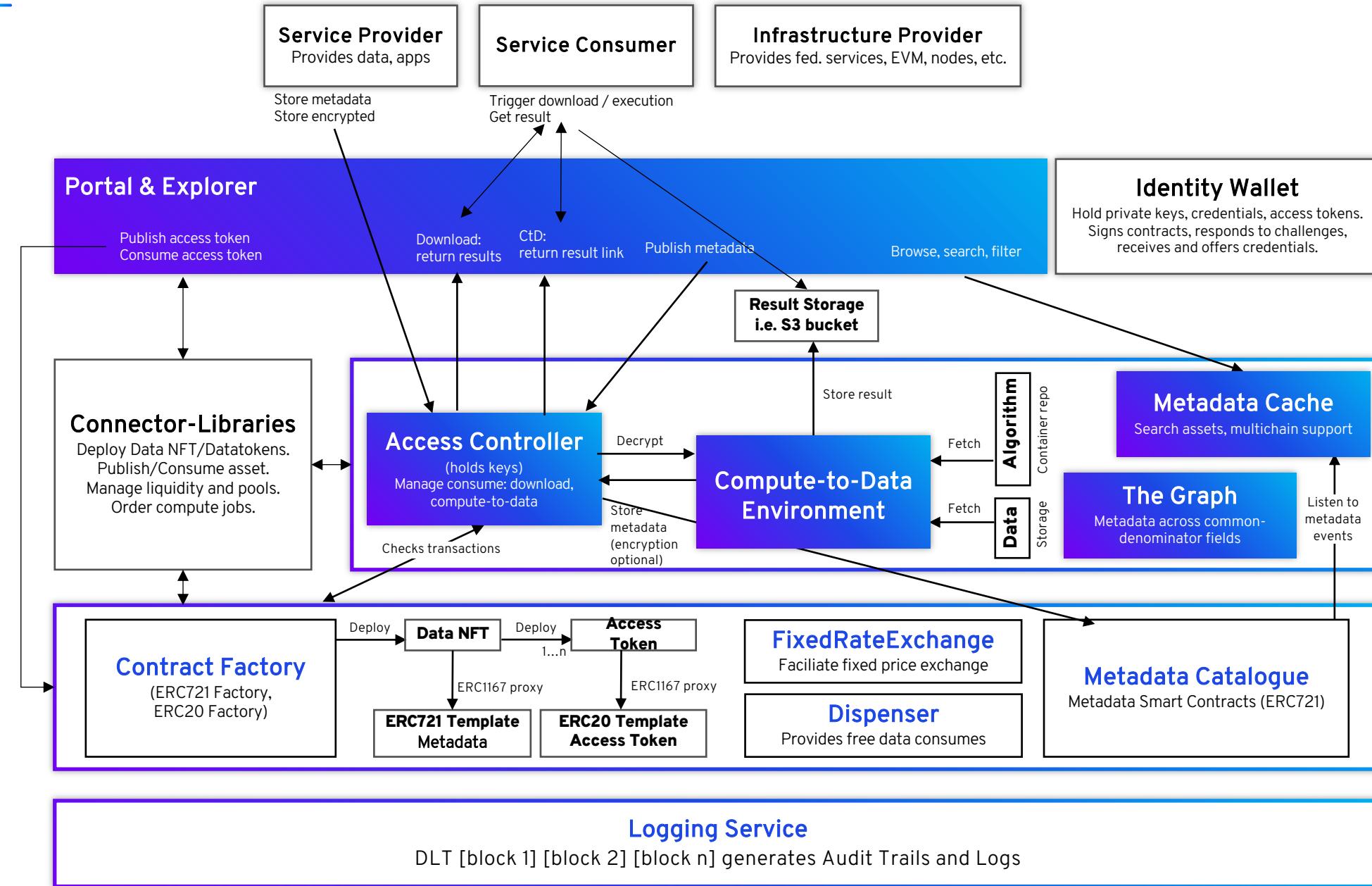


# Architecture



Actors / Operators

Frontend



Portals / APIs



Libraries & K8s

Catalogue Cache  
ES Database  
Access Controller  
Compute-Cluster



EVM/DLT Layer

Catalogue  
Contracting & Settlement  
Exchange Log

## Organizational Operating Models and Governance

# Democratic governance over the core infrastructure

