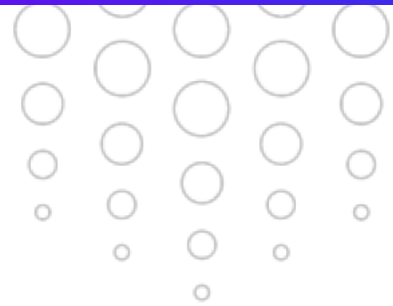


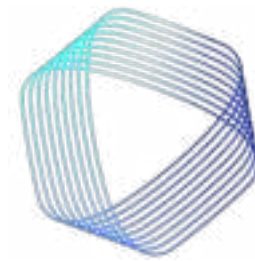
presentation

Gaia-X Web3 Ecosystem

Sovereign Computation from Edge to Cloud



ocean



delta **ΔΔ**

why do we need a data mesh like Gaia-X?

Availability. Most valuable data is **not available in a data mesh** due to the **fear of losing control** over confidential or valuable information.

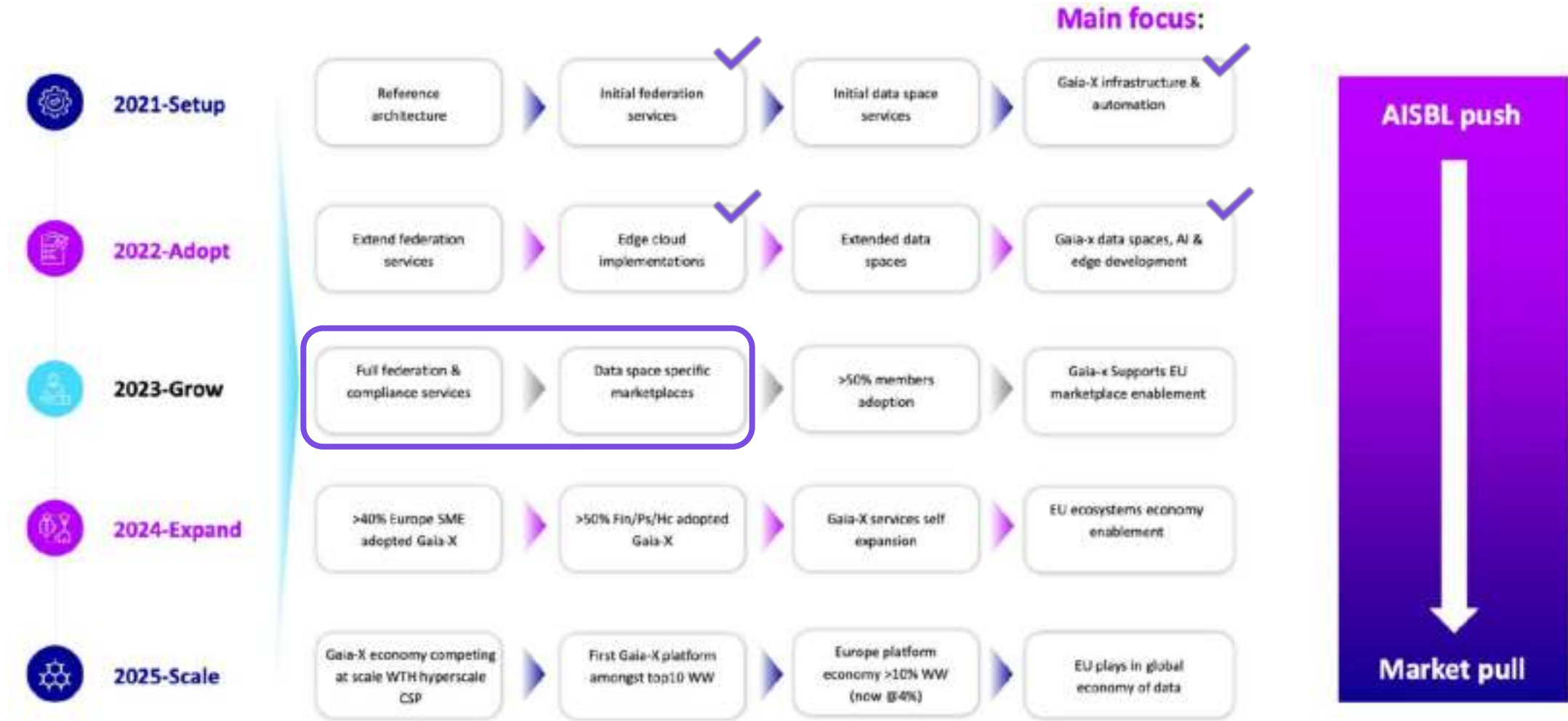
Trust Framework. Today the **management and discovery of valuable data is costly**. We **lack a trustworthy, scalable and secure framework**.

Utility. Most data is **not product or process-based**. It is time-consuming, complex, and costly to create valuable solutions.

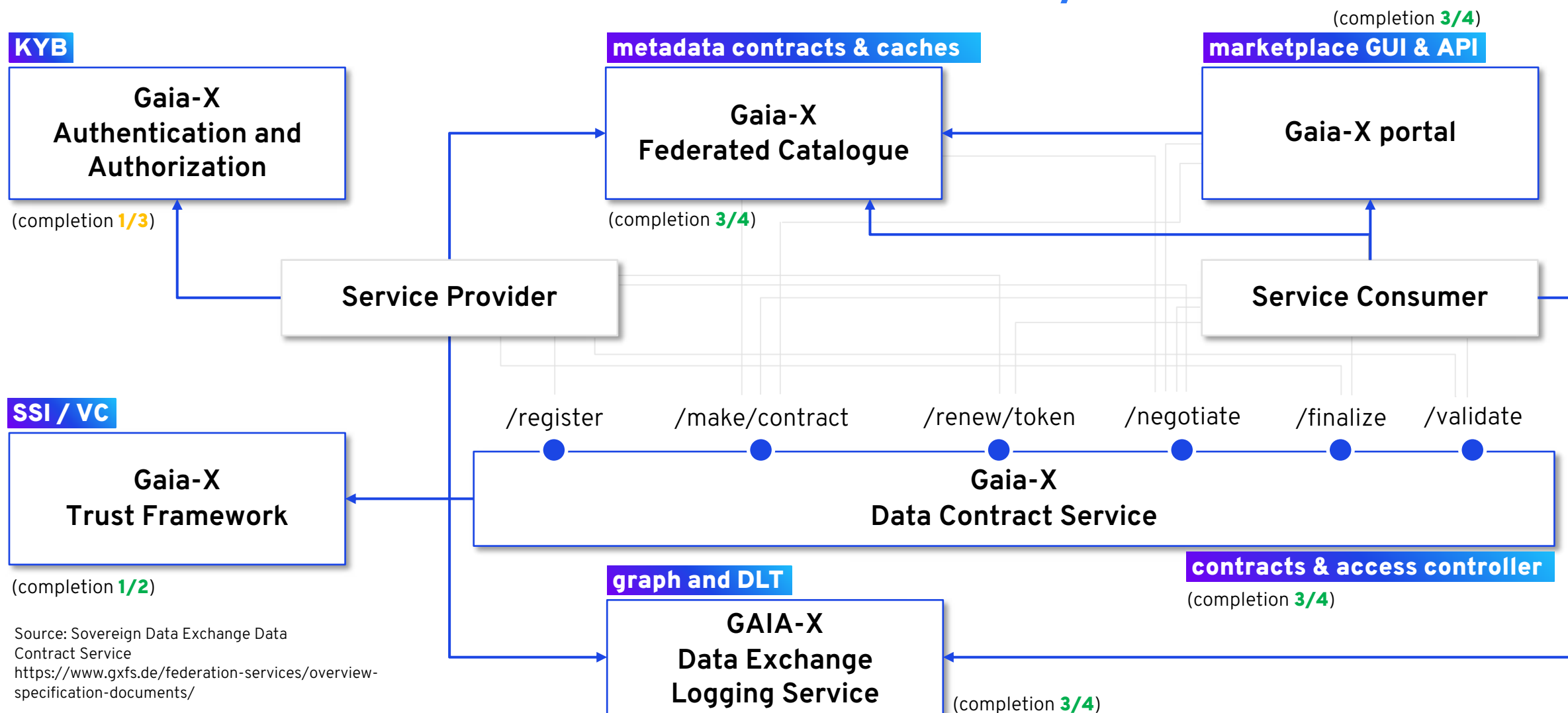
Lock-In. The market is characterized by **strong lock-in effects and high concentration / centralization**.

Potential. We do not make the most out of the **renewable and infinite resource** data is.

staying on track with the original Gaia-X roadmap



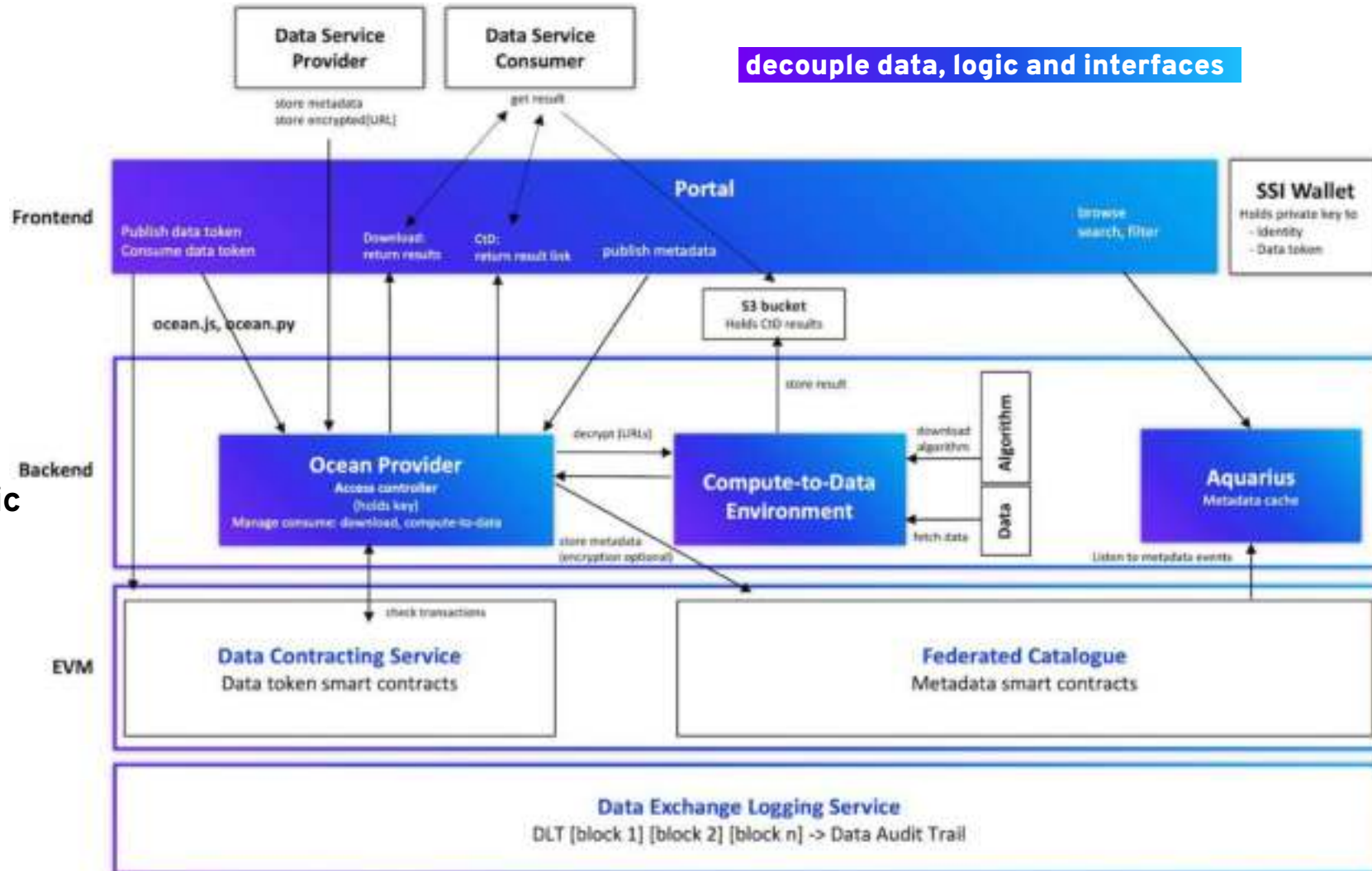
Gaia-X federation services & the web 3.0 ecosystem demonstrator



Source: Sovereign Data Exchange Data Contract Service
<https://www.gxfs.de/federation-services/overview-specification-documents/>

modular components, based on a DLT core grid, without lock-in

edge
on-Prem
cloud-agnostic



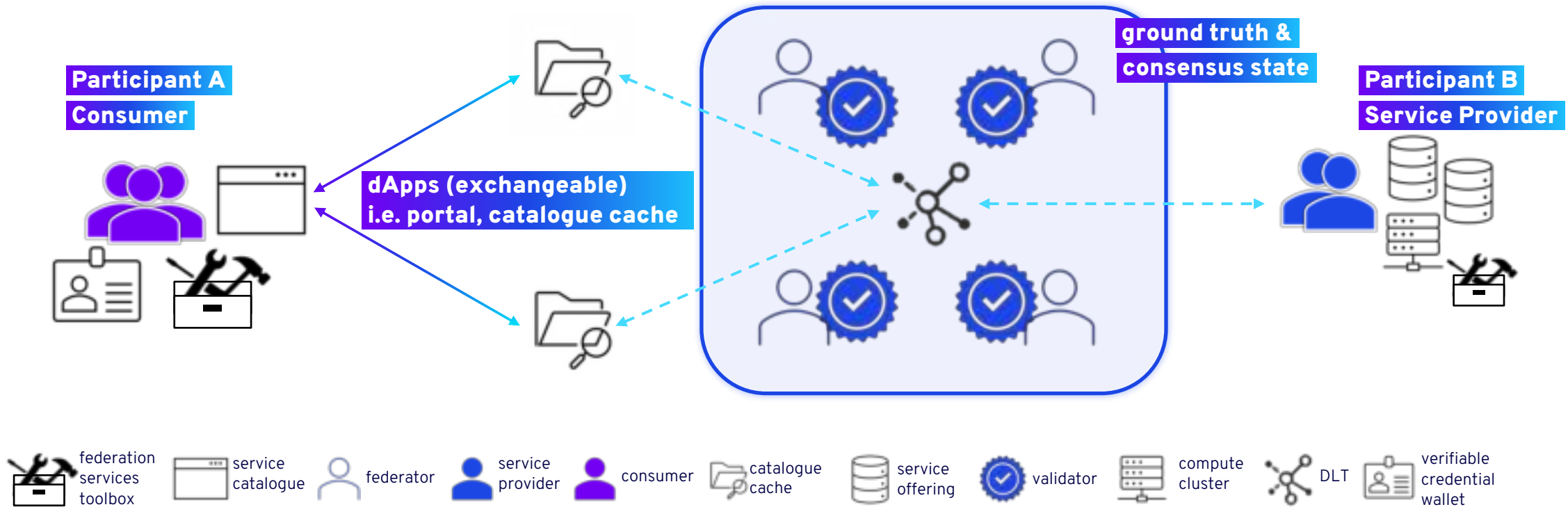
Participants

Portal / API

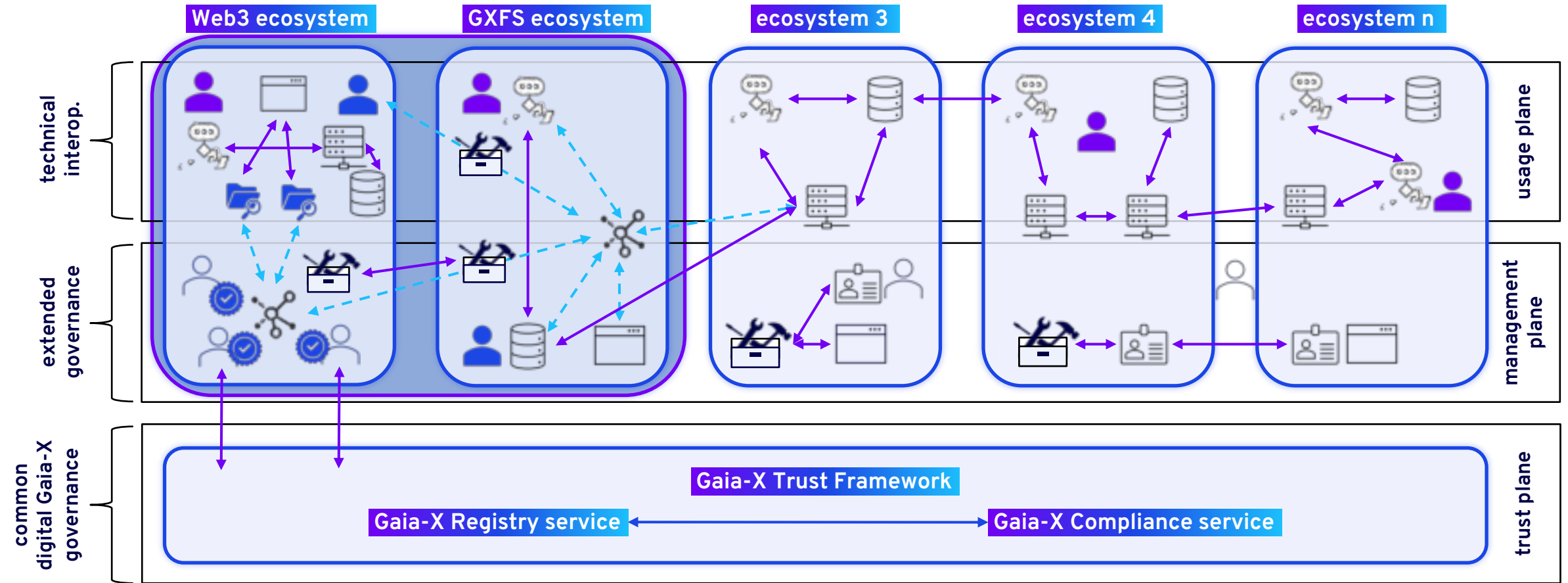
K8s / local or CSP
Catalogue Cache
Access Controller
Compute-Cluster

DLT Layer
Catalogue
Contracting
Exchange Log

removing all single points of failure and control through federation

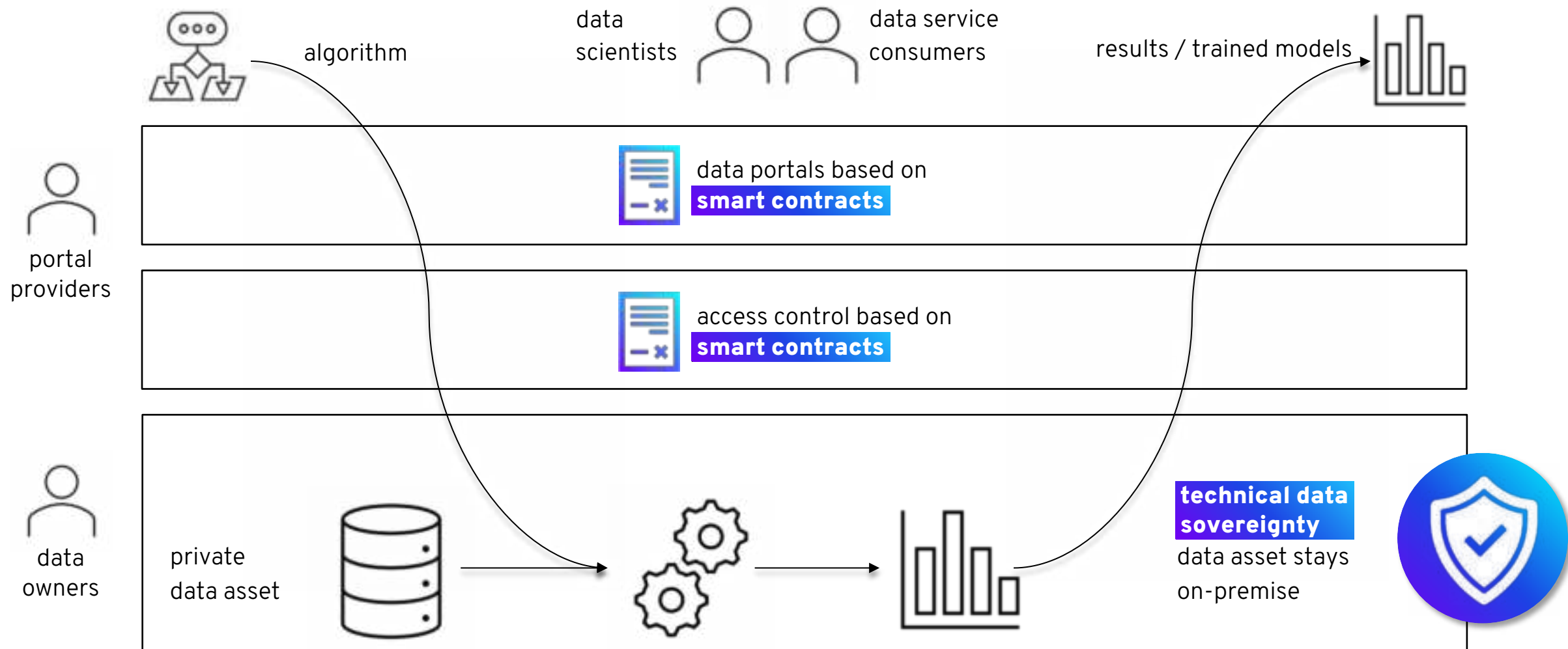


web 3.0 ecosystem & GXFS, interoperability is key



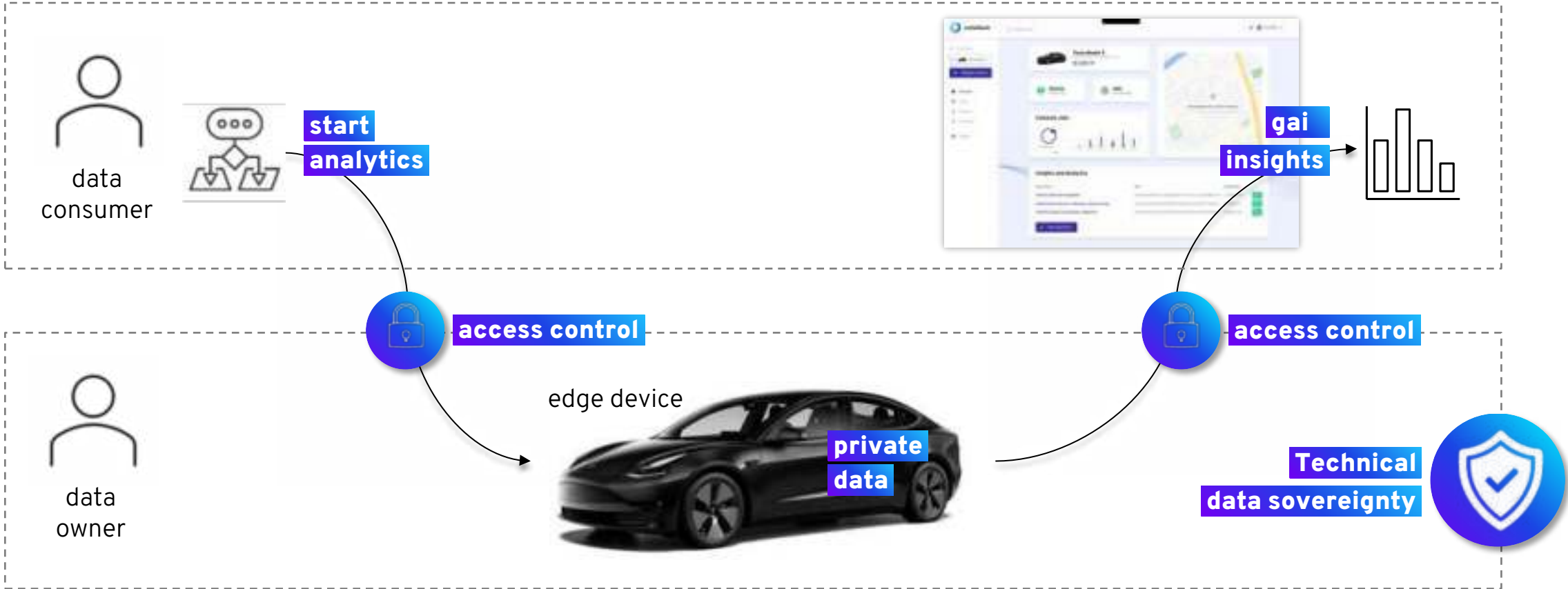
- federation services toolbox
- service catalogue
- federator
- service provider
- consumer
- catalogue cache
- data
- validator
- compute cluster
- algorithm
- DLT
- verifiable credential wallet

compute-to-data enables true technical data sovereignty



compute-to-edge enables technical data sovereignty for IoT & EoT

Bring compute ...



... to where data is.

data portals overview

safe FBDC



MVG



EuProGigant



Acentrik



University of Lleida



foreverontheblockchain

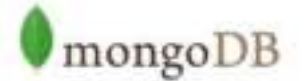


Future Mobility Data Marketplace

CLOUD&HEAT



made with love and open-source software



Demonstration

<https://euproigant.portal.minimal-gaia-x.eu/>

<https://portal.minimal-gaia-x.eu>

useful resources after demonstration

Minimal Viable Gaia-X:

- ▶ MVG Portal: <https://portal.minimal-gaia-x.eu/>
- ▶ Publisher: <https://portal.minimal-gaia-x.eu/publish>
- ▶ DID Resolver: <https://portal.minimal-gaia-x.eu/verify>
- ▶ Exchange Logging: <https://exchangelog.minimal-gaia-x.eu/>
- ▶ Repositories: <https://github.com/deltaDAO>

Gaia-X Trust Framework:

- ▶ Trust Framework: <https://gaia-x.eu/mediatech/publications/>
- ▶ Gaia-X Compliance Service: <https://compliance.gaia-x.eu/docs/>
- ▶ Repositories: <https://gitlab.com/gaia-x/lab/compliance>
- ▶ Gaia-X Registry: <https://registry.gaia-x.eu/docs/>

Gaia-X Architecture Document Repository: <https://gaia-x.gitlab.io/technical-committee/architecture-document/>

Gaia-X Trust Framework Repository: <https://gaia-x.gitlab.io/policy-rules-committee/trust-framework/>

Backup

<https://euproigant.portal.minimal-gaia-x.eu/>

<https://portal.minimal-gaia-x.eu>

Gaia-X Trust Framework & Compliance Service

catalogue incl. Gaia-X credentials and compliance service

Data Part No. 179 2022-05-30T07:46:22 - EuProGigant MesseHannover (cost-coverage) Data - EuProGigant CNC-ProfiTrainer (Minimal Viable Hannover) Verified Self-Description	1 OCEAN + 49.00	19/06/22, 10:33 GMT+2	DATASET
(free) Data - EuProGigant CNC-ProfiTrainer (Minimal Viable Hannover) (cost-coverage) Data - EuProGigant CNC-ProfiTrainer (Minimal Viable Hannover) Verified Self-Description	FREE	19/06/22, 10:32 GMT+2	DATASET
(cost-coverage) Data - EuProGigant CNC-ProfiTrainer (Minimal Viable Hannover) (cost-coverage) Data - EuProGigant CNC-ProfiTrainer (Minimal Viable Hannover) Verified Self-Description	1 OCEAN + 49.00	19/06/22, 10:33 GMT+2	DATASET
Data Part No. 319 2022-06-02T14:15:00 - EuProGigant MesseHannover (cost-coverage) Data - EuProGigant CNC-ProfiTrainer (Minimal Viable Hannover) Verified Self-Description	1 OCEAN + 49.00	19/06/22, 10:24 GMT+2	DATASET
Prediction Algorithm for Iliad - Ocean Twin - Water Temperature Prediction ... Data for Iliad - Ocean Twin - Water Temperature Prediction Model Verified Self-Description	1 OCEAN + 49.00	19/06/22, 08:52 GMT+2	ALGORITHM
Data for Iliad - Ocean Twin - Water Temperature Prediction Model Data for Iliad - Ocean Twin - Water Temperature Prediction Model Verified Self-Description	1 OCEAN + 49.00	19/06/22, 07:55 GMT+2	DATASET
Customer Information Algorithm (Fernvertriebsblockchain Portal) Customer Information Algorithm Verified Self-Description	5 OCEAN + 49.00	19/06/22, 06:14 GMT+2	ALGORITHM
Customer Information Dataset (Fernvertriebsblockchain Portal) Customer Information Dataset Verified Self-Description	5 OCEAN + 49.00	19/06/22, 06:09 GMT+2	DATASET
Wegkenmerk maximum methoden met geometrie op wgvakniveau (RWS) 0x9f84444b4e8701d889c3d431414504642c59316 Invalid Self-Description	FREE	19/06/22, 01:19 GMT+2	DATASET
Text Analysis Dataset - Berlin State Library 0xf2003e46804f94444d2400388166770194ac2d Invalid Self-Description	1 OCEAN + 49.00	06/06/22, 09:32 GMT+2	DATASET



Data Part No. 319 2022-06-02T14:15:00 - EuProGigant MesseHannover
0x4A806a4851472F7cFd579d3FF5465F03c3c2B5d4
Checking compliance

Data Part No. 319 2022-06-02T14:15:00 - EuProGigant MesseHannover
(cost-coverage) Data - EuProGigant CNC-ProfiTrainer (Minimal Viable Hannover)
Verified Self-Description

Data Part No. 318 2022-06-02T14:12:29 - EuProGigant MesseHannover
0x4A806a4851472F7cFd579d3FF5465F03c3c2B5d4
Invalid Self-Description

The MVG Federated Catalogue now checks the service SDs and submits to the compliance service to display the results.

Gaia-X Exchange Logging & Contracting Service

access control and exchange logging

basis is **tokenized access control** on DLT that can be extended with policies from self-descriptions

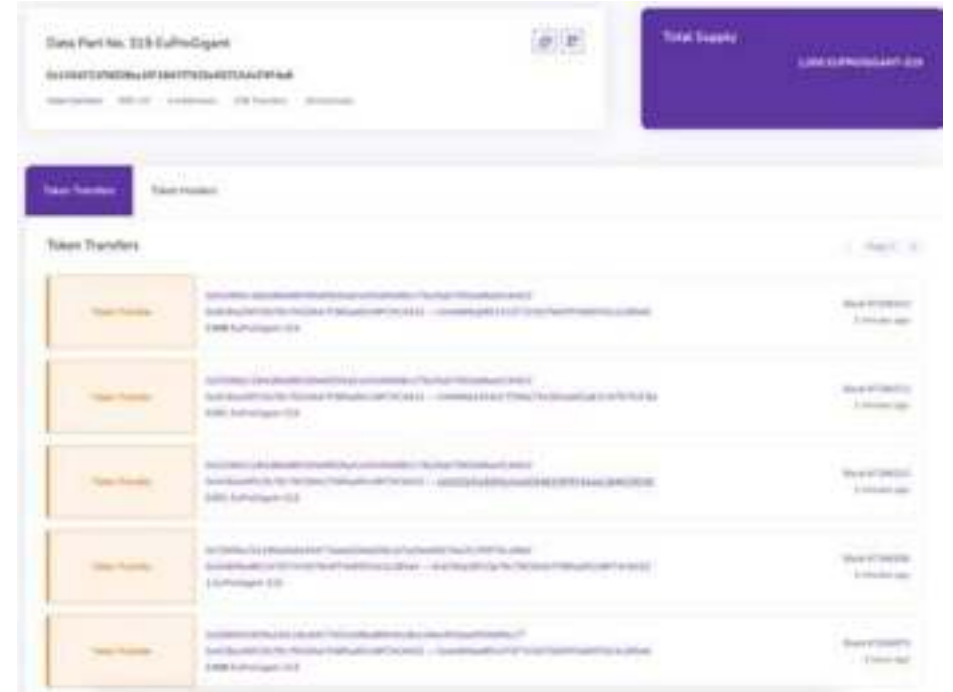
access to services **managed by smart contracts** and **access controller components**

if a consumer spends a **datatoken**, access is granted
additional **conditions** are possible

Enables **transparency, audit-trails** and **on-chain settlement** (optional)

data access rights in the form of datatokens can be transferred on-chain

smart contracts become a tool to pool data and conditionalize data sharing



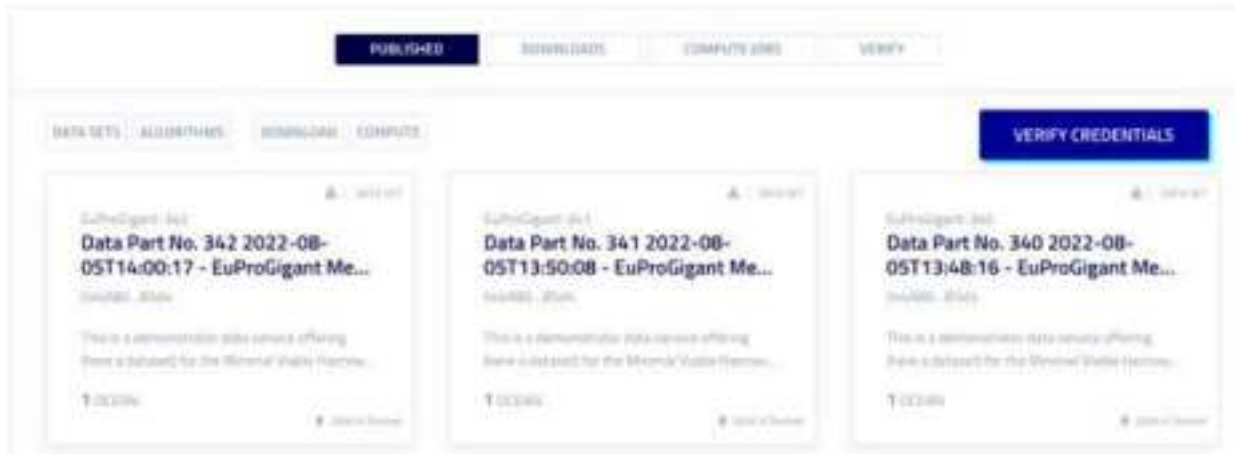
overview for service providers and management



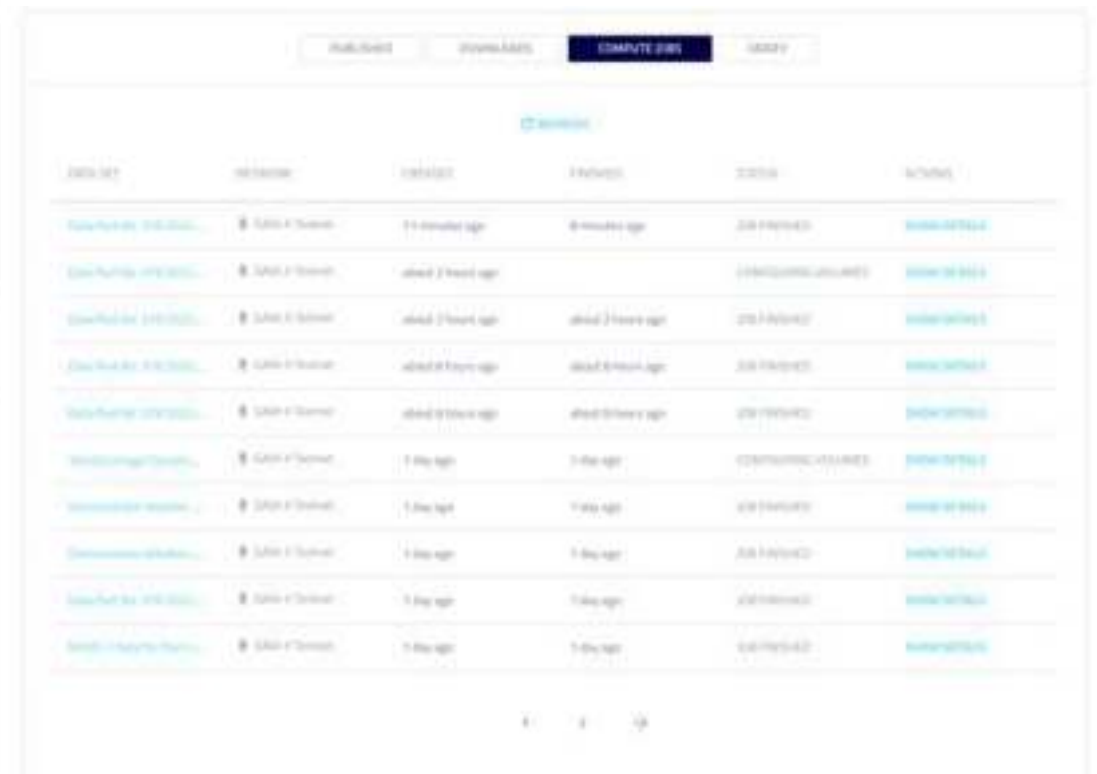
<https://portal.minimal-gaia-x.eu/profile/>



This block shows the user profile overview. It features a circular profile picture, the user ID '0x4a80...b5d4', and a list of identifiers. Below the profile information, there are two statistics: '671 Data' and '163 Published'.



This block displays a list of published data sets. At the top, there are tabs for 'PUBLISHED', 'DOWNLOADS', 'COMPLETE JOBS', and 'VERIFY'. Below the tabs, there are three data set cards. Each card shows the data set name, a description, and a 'VERIFY CREDENTIALS' button.



DATA SET	VERSION	VERSION	VERSION	STATUS	ACTION
Data Part No. 340 2022-08-05T14:00:17 - EuProGigant Me...	0x4a80...b5d4	11 months ago	8 months ago	20 PUBLISHED	VERIFY CREDENTIALS
Data Part No. 341 2022-08-05T13:50:08 - EuProGigant Me...	0x4a80...b5d4	about 2 years ago		20 PUBLISHED (CANCELLED)	VERIFY CREDENTIALS
Data Part No. 342 2022-08-05T13:48:16 - EuProGigant Me...	0x4a80...b5d4	about 2 years ago	about 2 years ago	20 PUBLISHED	VERIFY CREDENTIALS
Data Part No. 343 2022-08-05T13:48:16 - EuProGigant Me...	0x4a80...b5d4	about 2 years ago	about 2 years ago	20 PUBLISHED	VERIFY CREDENTIALS
Data Part No. 344 2022-08-05T13:48:16 - EuProGigant Me...	0x4a80...b5d4	1 day ago	1 day ago	20 PUBLISHED (CANCELLED)	VERIFY CREDENTIALS
Data Part No. 345 2022-08-05T13:48:16 - EuProGigant Me...	0x4a80...b5d4	1 day ago	1 day ago	20 PUBLISHED	VERIFY CREDENTIALS
Data Part No. 346 2022-08-05T13:48:16 - EuProGigant Me...	0x4a80...b5d4	1 day ago	1 day ago	20 PUBLISHED	VERIFY CREDENTIALS
Data Part No. 347 2022-08-05T13:48:16 - EuProGigant Me...	0x4a80...b5d4	1 day ago	1 day ago	20 PUBLISHED	VERIFY CREDENTIALS
Data Part No. 348 2022-08-05T13:48:16 - EuProGigant Me...	0x4a80...b5d4	1 day ago	1 day ago	20 PUBLISHED	VERIFY CREDENTIALS



data economy solutions – GDPR compliant

deltaDAO AG

Geibelstraße 46b
22303 Hamburg
Germany

Website <https://delta-dao.com>
Mail contact@delta-dao.com
Twitter [@deltadao](https://twitter.com/deltadao)
LinkedIn [deltadao](https://www.linkedin.com/company/deltadao)
YouTube [deltaDAO](https://www.youtube.com/channel/UC...)

Presented by

Kai Meinke

Co-Founder and Business Lead
deltaDAO AG
kai@delta-dao.com
+49 151 1257 9443