



gaia-x

# Track 6 – Deployment / Minimal Viable Gaia-X Track Onboarding Presentation

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Matej Feder, Kai Meinke



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# 01

Bootstrapping a Minimal  
Viable Gaia-X ecosystem  
(Ocean Protocol)

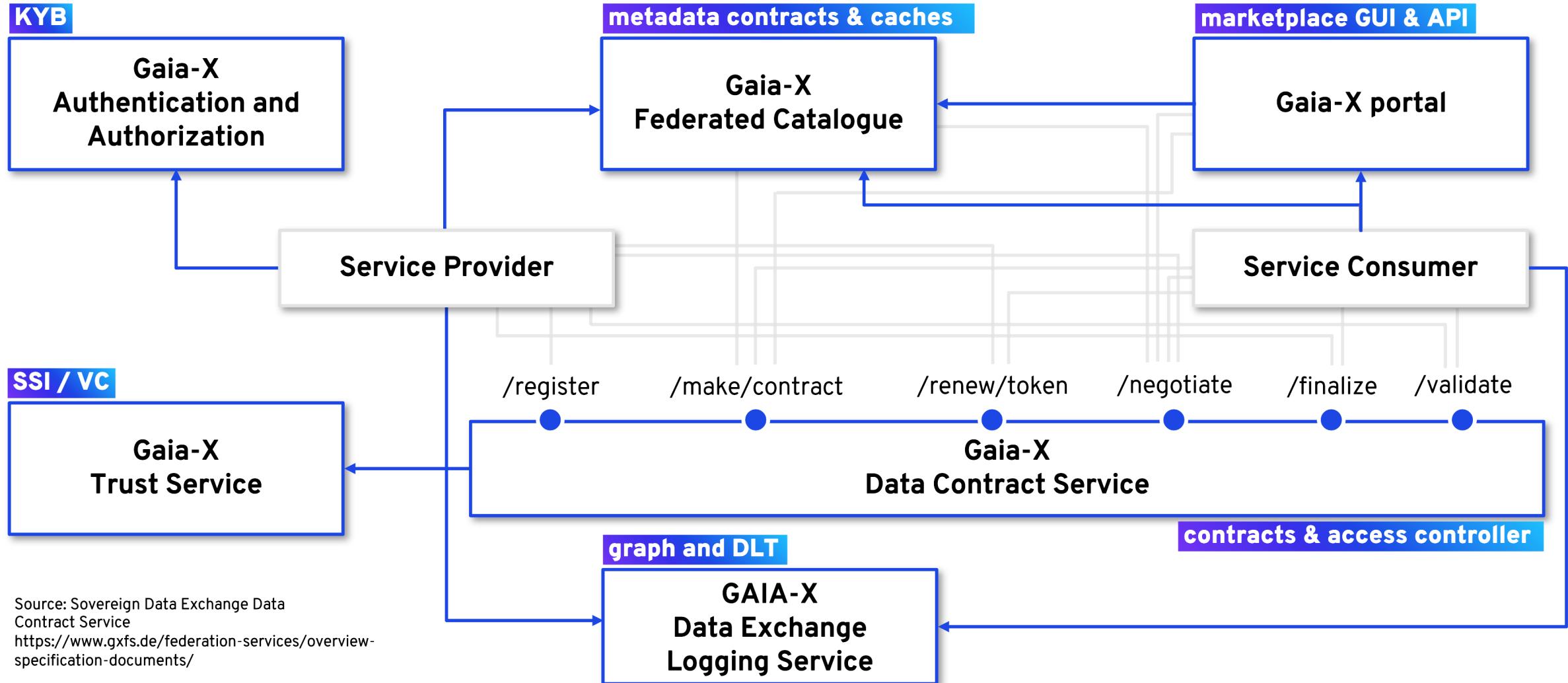
Kai Meinke

# 01 – Bootstrapping a Minimal Viable Gaia-X ecosystem



- **Session:** Introduction - How to bootstrap a decentralized ecosystem enabling technical data sovereignty and how to build towards Gaia-X Trust and Compliance
- **Goals:**
  - understand how a decentralized Web3.0 ecosystem is composed
  - understand how a decentralized Web3.0 ecosystem enables technical data sovereignty and aligns with the Gaia-X vision and mission
  - understand how we build towards Gaia-X Trust and Compliance

# 01 – Bootstrapping a Minimal Viable Gaia-X ecosystem



# 01 – Bootstrapping a Minimal Viable Gaia-X ecosystem



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Publish Profile Connect Wallet ⚙️

## MVG Portal Demonstrator

A platform to find, publish and consume Data Services in the Gaia-X Test Network.

powered by

ocean

**START NOW**

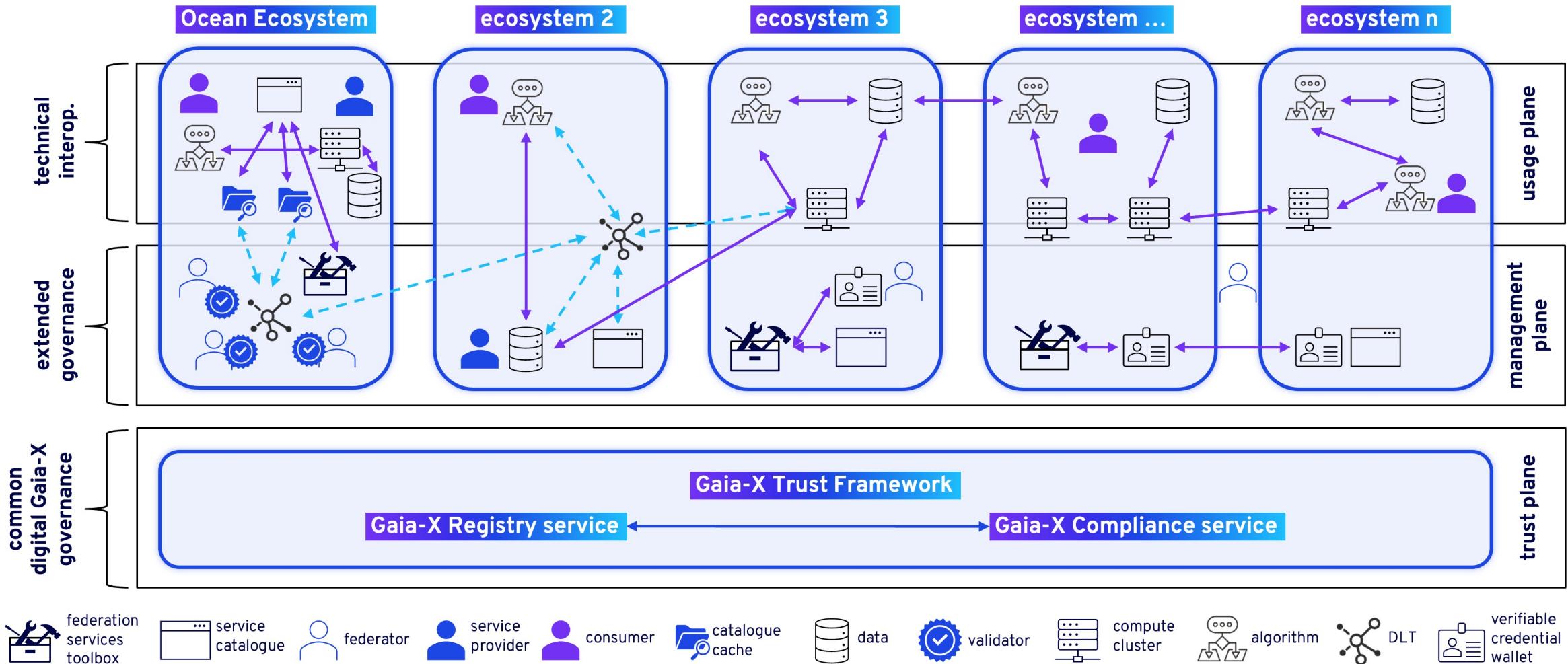
Gaia-X on Ocean Protocol Academy

Gaia-X aims to be a decentralized, secure, transparent digital ecosystem for the European data economy. Understand the core concepts of Gaia-X and Ocean Protocol and learn how a Gaia-X built on Distributed Ledger Technology is operable today.

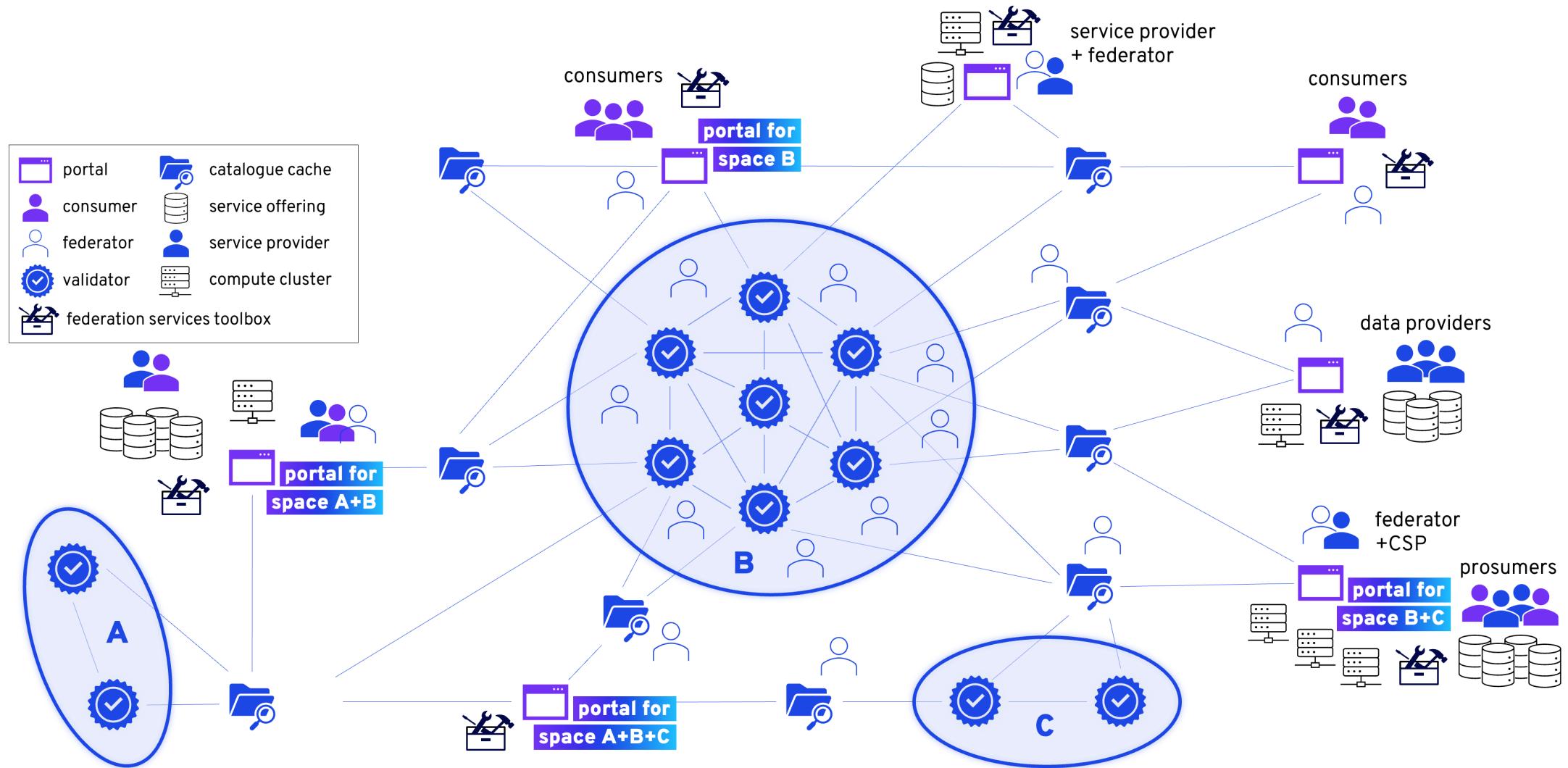
The screenshot shows a grid of 12 data service offerings, each with a thumbnail, name, description, price, and a 'GAIA-X Testnet' link. The offerings are:

- ADALIN-64: Heatmap der Ladestationeninfrastruktur (Algorithm) - No price set, 0x8808...6441, GAIA-X Testnet
- JOCKRI-0: Heatmap der Ladestationeninfrastruktur (Algorithm) - No price set, 0x8808...6441, GAIA-X Testnet
- PLEHAD-84: Privacy Preserving Business Analysis Algorithm (Algorithm) - 5 OCEAN, deltaDAO AG, GAIA-X Testnet
- TENSHA-17: Privacy Preserving Business Analysis Dataset (Data Set) - 5 OCEAN, deltaDAO AG, GAIA-X Testnet
- POWPEL-68: AML Analysis Algorithm (Algorithm) - 2 OCEAN, deltaDAO AG, GAIA-X Testnet
- TASBAR-78: AML Analysis Dataset (Data Set) - 5 OCEAN, deltaDAO AG, GAIA-X Testnet
- UBIPUF-74: CNN Object Detection Algorithm (Algorithm) - 5 OCEAN, deltaDAO AG, GAIA-X Testnet
- INCPOR-19: CNN Object Detection Sample Data (Data Set) - 25 OCEAN, deltaDAO AG, GAIA-X Testnet
- LOQPOR-49: YOLOv5 Object Classification Sample Algorithm (Algorithm) - 4 OCEAN, deltaDAO AG, GAIA-X Testnet
- INSLOB-11: YOLOv5 Image Classification Sample Data (Data Set) - 4 OCEAN, deltaDAO AG, GAIA-X Testnet
- VOLFIS-97: Freesurfer Average Brain Surfaces for Cortical Morphometry (Data Set) - 1 OCEAN, Roberto Garcia, GAIA-X Testnet
- CALSHA-66: Descriptive statistics for tabular data (Algorithm) - Free, Roberto Garcia, GAIA-X Testnet

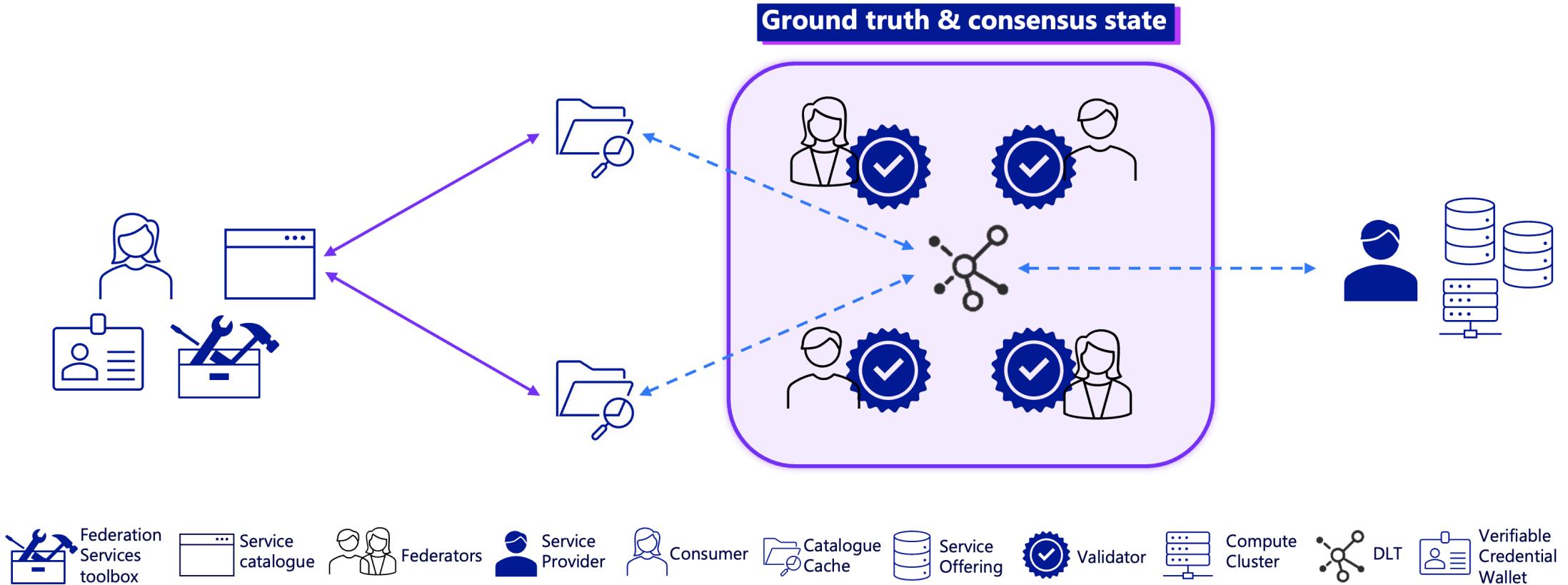
# 01 – Bootstrapping a Minimal Viable Gaia-X ecosystem



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# 01 – Bootstrapping a Minimal Viable Gaia-X ecosystem





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02

Bootstrapping a Structura-X ecosystem  
(Threefold)

Geert Machtelinckx, Weynand Kuijpers

## 02 - Bootstrapping a Structura-X ecosystem (Threefold)



- **Session:** Bootstrap a Gaia-X ecosystem of interconnected hardware devices, owned by multiple cloud operators, taking up operationalisation issues (interoperability, security, privacy, commercial model, governance)
- ThreeFold Tech has developed open-source technology that combines the pieces of self-description and components of the trust framework (DID, VC) and brings a model that addresses interoperability, security, privacy-enabling, a commercial model and a governance on the table, in a trajectory to achieve a fully operationally ready Gaia-X cloud provider ecosystem (as pursued by Structura-X initiative). Hackathon will go through the concept, and go through a concrete setup.



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# 03

Self-Description of MVG  
infrastructure and service offerings

Frederic Schwill, Alexander Eger

## 03 - Self-Description of MVG infrastructure and service offerings



- **Session:** Describing the MVG infrastructure (Kubernetes cluster, Federation Services, etc.) and service offerings through self-descriptions, enabling transparency, based on the work of the SD Self-Description and Service Characteristics.
- **Goals:**
  - Understand the MVG Infrastructure and its backend architecture
  - Describe the infrastructure using service composition and Self-Descriptions
  - Describe service offerings using Self-Descriptions



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# 04

Rapid Cloud-Agnostic Deployment of  
Federation Services

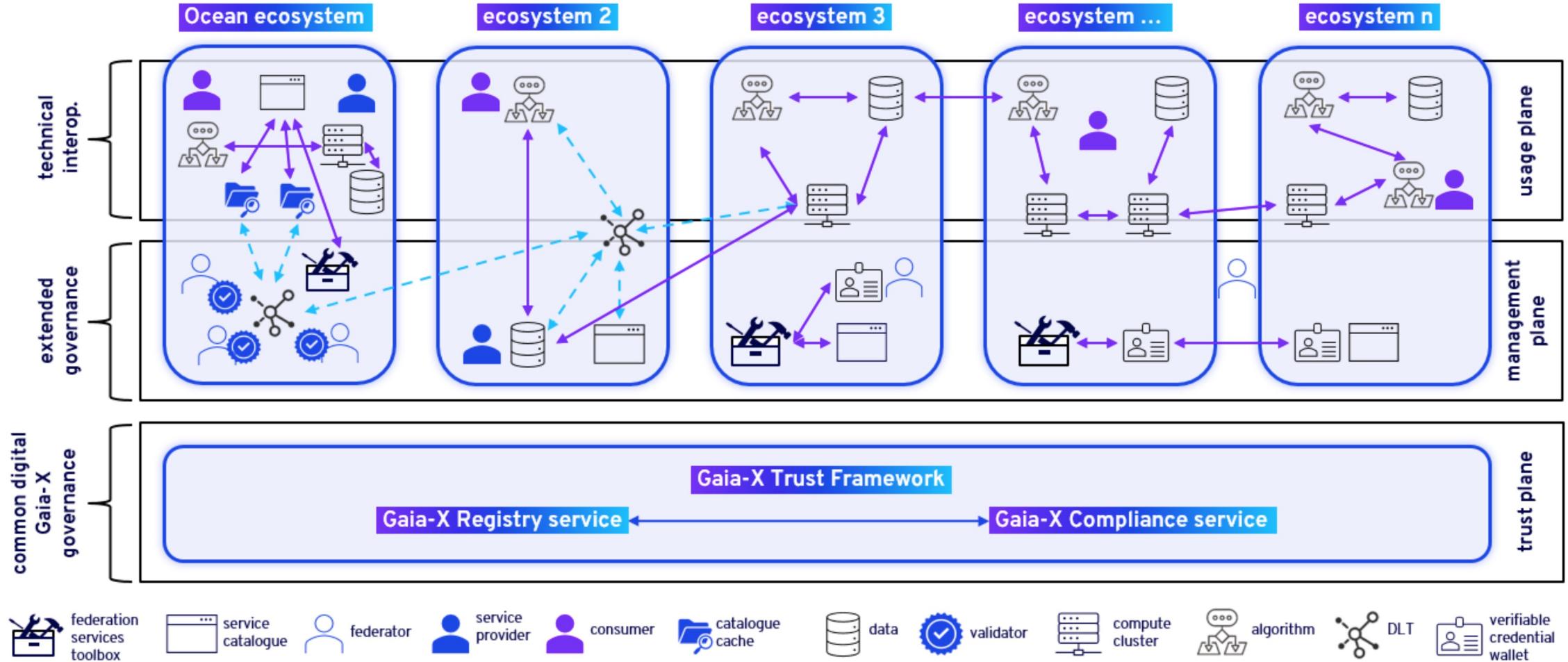
Julian Da Silva, Kai Meinke

## 04 - Rapid Cloud-Agnostic Deployment of Federation Services



- **Session:** Deploy a Federation Service, the Catalogue Cache, in a cloud-agnostic, modular and portable manner leveraging the open-source VMware Tanzu Community Edition. Connect it to the decentralized Core Grid (GX test network) in minutes.
- **Goals:**
  - Deploy a Federation Service on any cloud with VMware Tanzu
  - Establish abstraction layer to free apps from infrastructure
  - Build, run & manage applications on any cloud

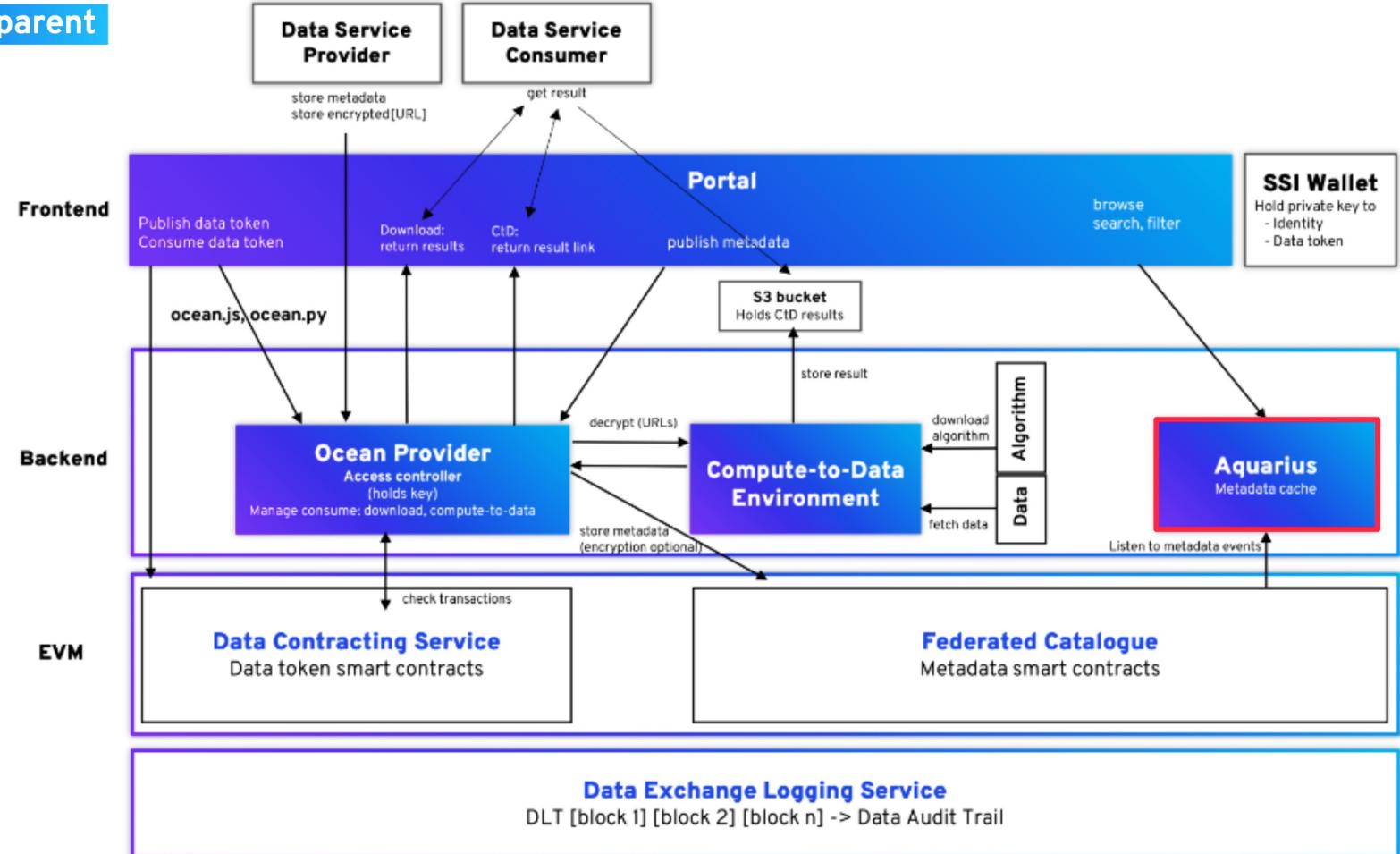
# 04 - Rapid Cloud-Agnostic Deployment of Federation Services



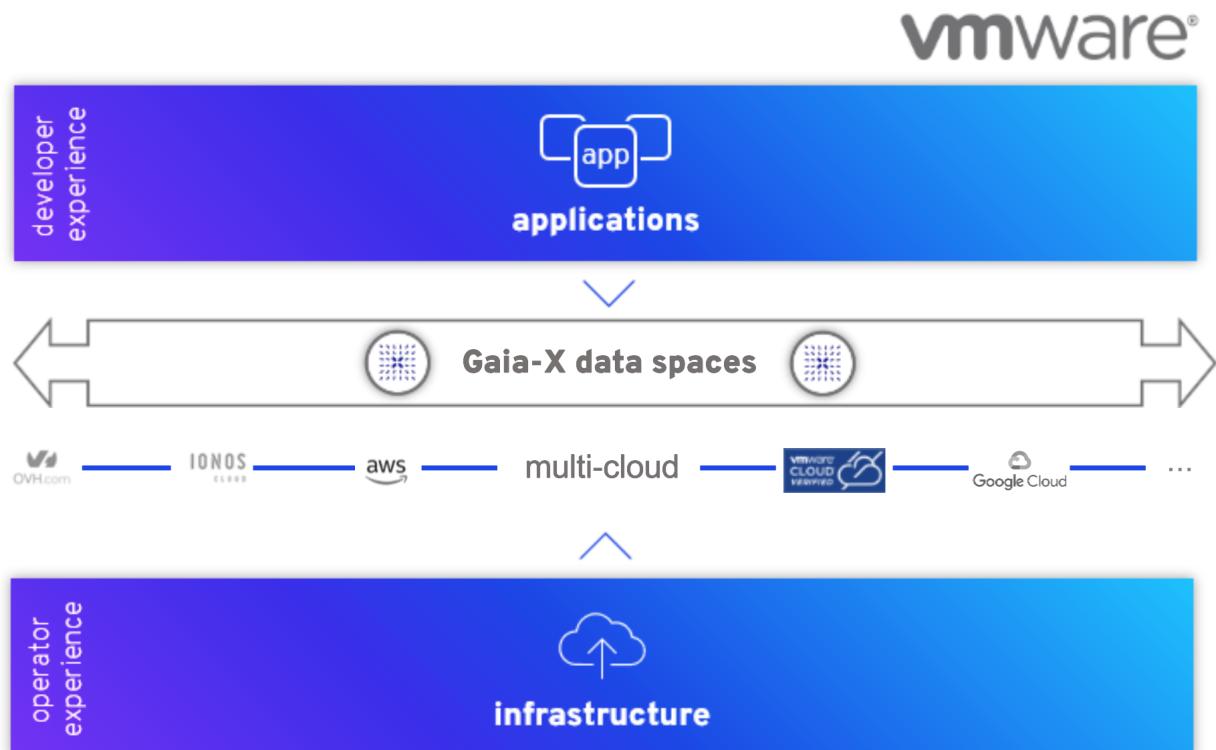
# 04 - Rapid Cloud-Agnostic Deployment of Federation Services



built on a permissionless and transparent  
decentralized core grid



# 04 - Rapid Cloud-Agnostic Deployment of Federation Services



OBSERVABILITY	VISUALIZATION	Grafana
	MONITORING & ALERTING	Prometheus
	LOG FORWARDING	fluentbit
BUILD AND DEPLOY	SERVERLESS	Knative
	REGISTRY	HARBOR
	APP CATALOG*	Kubeapps
	BUILD SERVICE*	kpack
SERVICES	DATA PROTECTION	VELERO
	AUTHENTICATION	PINNIPED
	CONFORMANCE	SONOBUOY
	CERTIFICATES	CERT-MANAGER
	POLICY	Open Policy Agent
CONNECTIVITY	INGRESS & LOAD BALANCING	CONTOUR
	CONTAINER NETWORKING	MULTUS
	EXTERNAL DNS	ANTREA
		CALICO
COMPUTE RUNTIME	kubernetes	
	LIFECYCLE MANAGEMENT	CLUSTER API
	PACKAGE MANAGEMENT	CARVEL
PROVIDERS	LOCAL DEVELOPMENT	docker
	ON PREMISES	vmware vSphere
	PUBLIC CLOUD	aws

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Remixed by deltaDAO AG for illustration purposes.



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# 05

## Pilot-005 Deployment

Matej Feder, Roman Hros

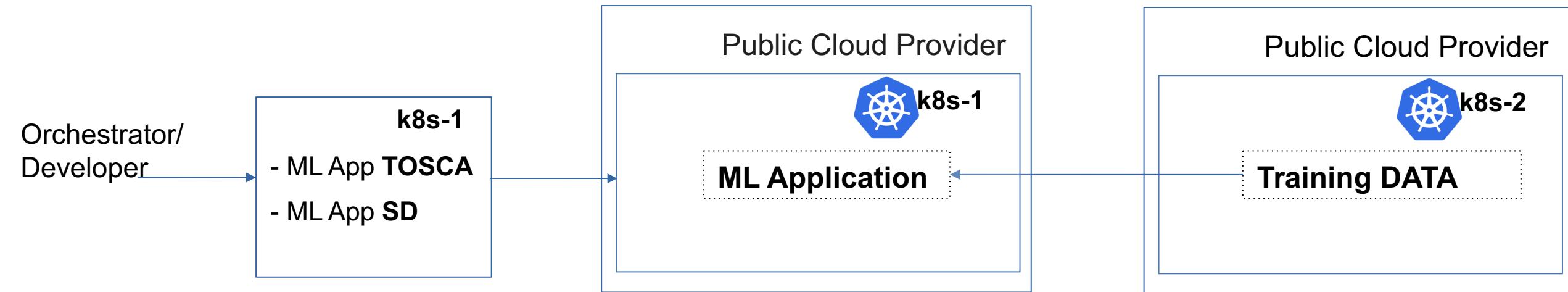
## 05 - Pilot-005 Deployment

- **Session:** Pilot-005 Deployment
- **Goals:**
  - Integrate GAIA-X Catalogue to the MVG Pilot-005 architecture
  - Complete the integration of the Authorization provider to the MVG Pilot-005 architecture

# 05 - Pilot-005 Deployment

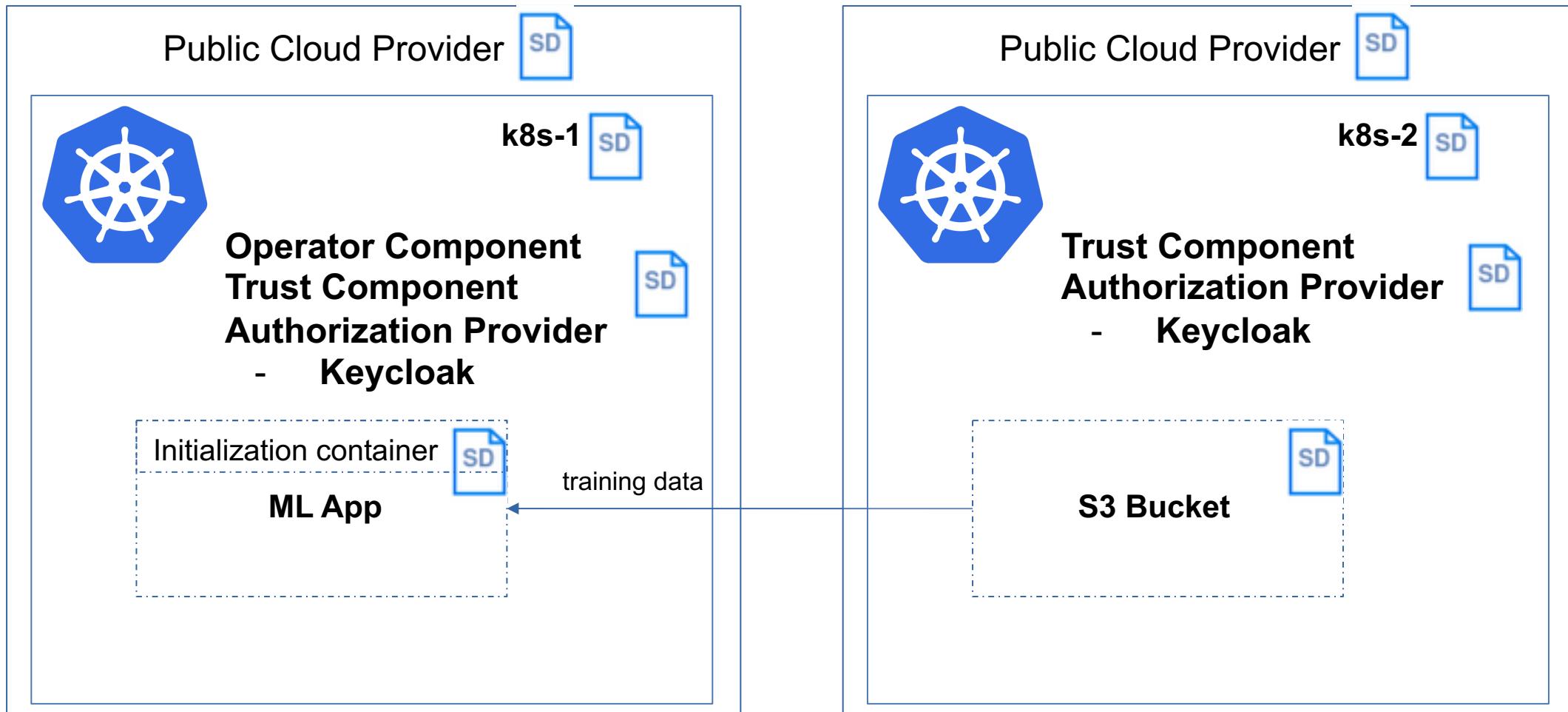
## High Level Overview

- GDPR compliant?



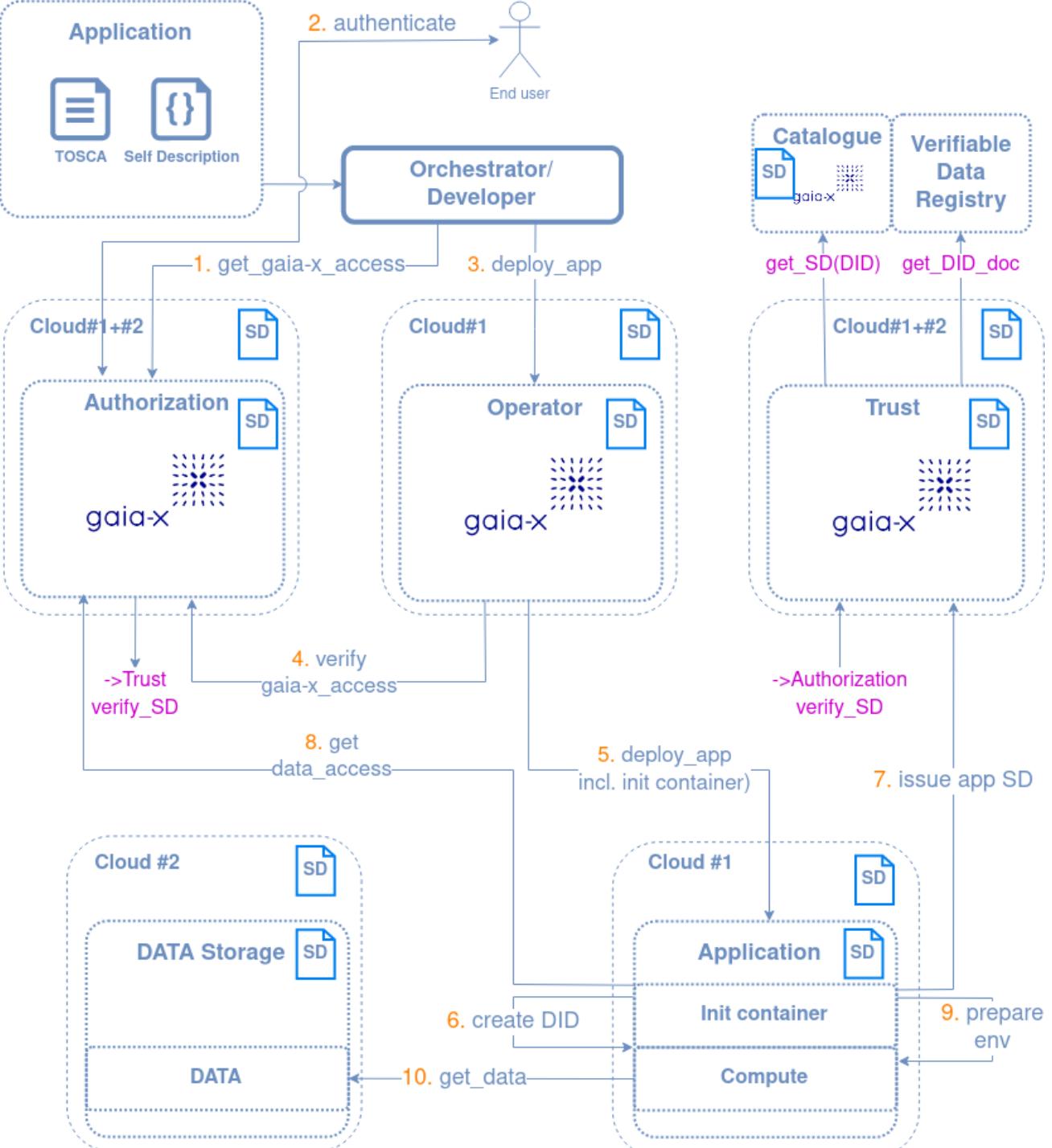
# 05 - Pilot-005 Deployment

## High Level Overview



# 05 - Pilot-005 Deployment

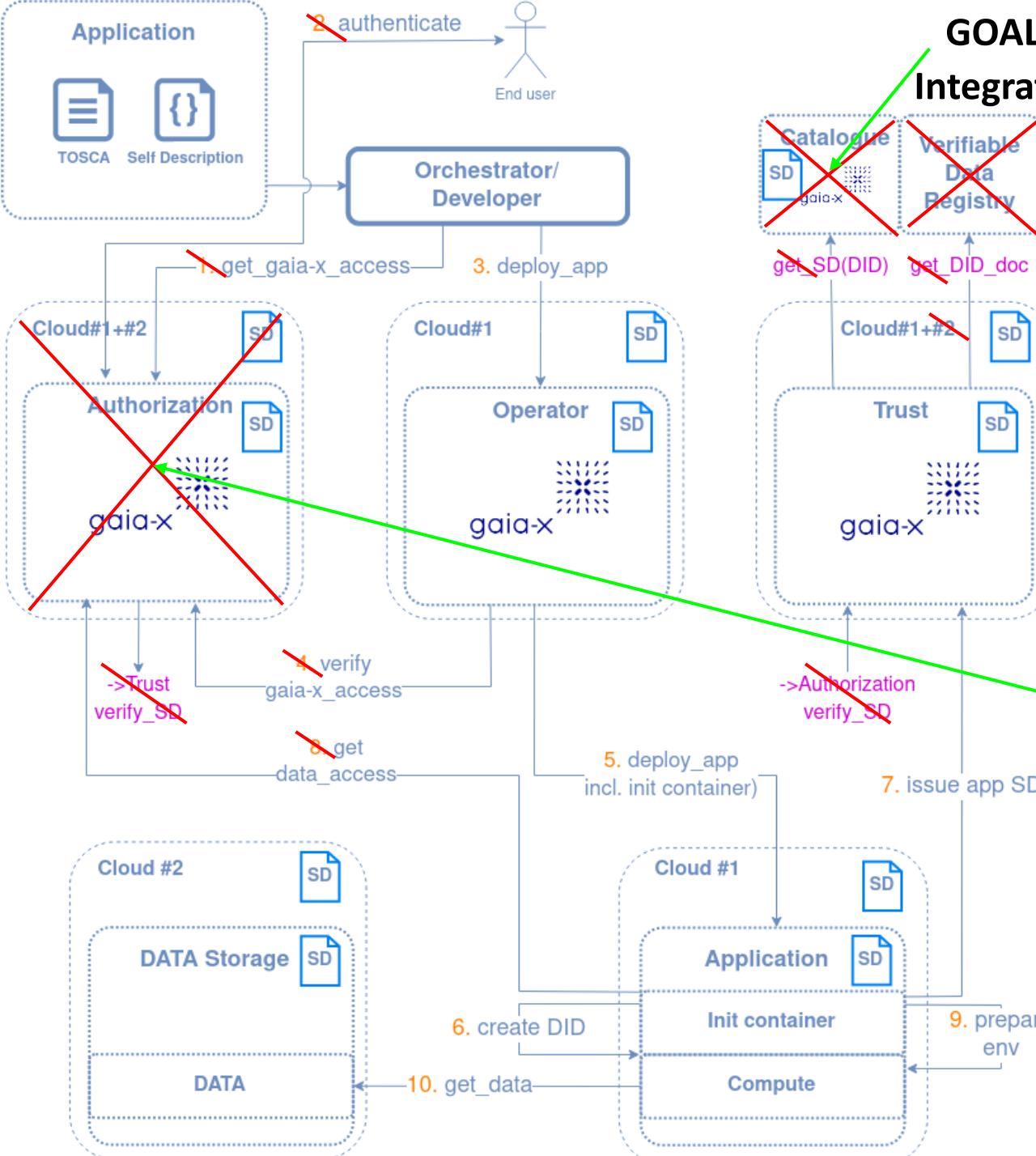
## Desired state



# 05 - Pilot-005

## Deployment

## Current state



# GOAL Hackathon#3

## Integrate GX Catalogue

# GOAL Hackathon#3

## Integrate Authorization component



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# Minimal Viable Gaia-X Onboarding and MVG Academy

Albert Peci



# 06 - Minimal Viable Gaia-X Onboarding and MVG Academy



- How to use the Minimal Viable Gaia-X Demonstrator
- How to connect to the Minimal Viable Gaia-X Test network
- How to obtain test network tokens from the faucets
- ...



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Any questions or remarks?



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# GO

Enjoy the Gaia-X Hackathon #3