

Gaia-X

General Overview

Ulrich Ahle

Chief Executive Officer - Gaia-X Association

Gaia-X in a nutshell

—

Gaia-X in a nutshell



VISION: Enable trusted decentralised digital ecosystems

MISSION: Creating the de facto standard aligned with EU values by developing a set of policies, rules, specifications and a verification framework

A FEDERATED AND SECURE DATA INFRASTRUCTURE

Gaia-X strives for innovation through digital sovereignty.

- ▶ Our **goal** is to establish an ecosystem, whereby data is shared and made available in a trustworthy environment.
- ▶ Our **intention** is that we give the control back to the users by retaining sovereignty over their data.
- ▶ Our **outcome** will not be a cloud. It is a federated system linking many cloud service providers and users together in a transparent environment that will drive the European data economy of tomorrow.

Gaia-X Is

- > A single point of definition of Gaia-X architecture & rules
- > Making available an open implementation to all
- > A qualification authority for Gaia-X compliance

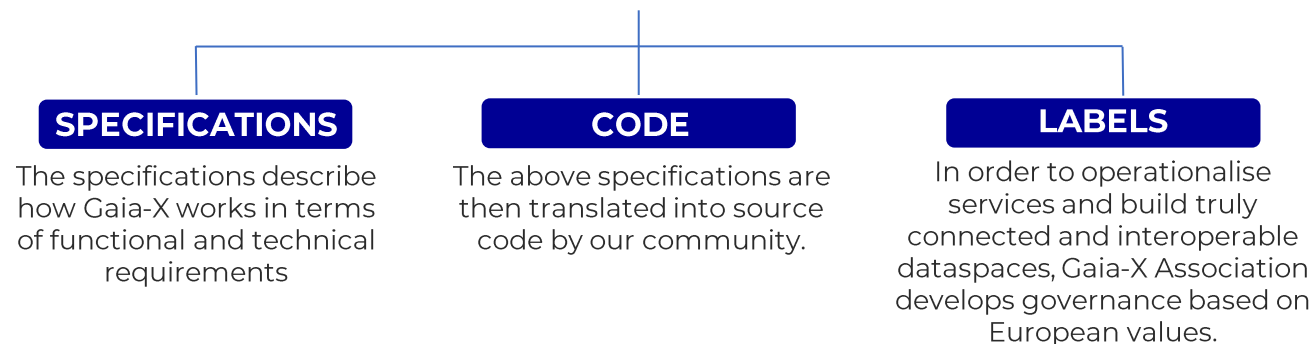
Gaia-X is Not

- > A formal standardization body
- > A SW or HW product or cloud platform
- > A runtime implementation of any Gaia-X service

Gaia-X vs AISBL

- > Gaia-X project is driven by the Association
- > Gaia-X architecture is developed by members
- > Gaia-X services will not be operated by the Association

WHAT DO WE DELIVER?



What is Gaia-X

Established in 2021 as a privately funded not-for-profit Association, Gaia-X brings together an international industrial, academic, and political community with the aim of building a common standard for transparent, controllable, and interoperable technologies in order to enable the creation of common data spaces, and in doing so boost the European data economy.

Open to anyone and aligned to the **European values** of human-centricity, transparency, openness, sovereignty, and trust, Gaia-X's ambition is to deliver unprecedented opportunities for innovative data-driven business models reducing the dependency from non-controllable technologies.

Gaia-X Vision & Mission






VISION: Enable trusted decentralised digital ecosystems



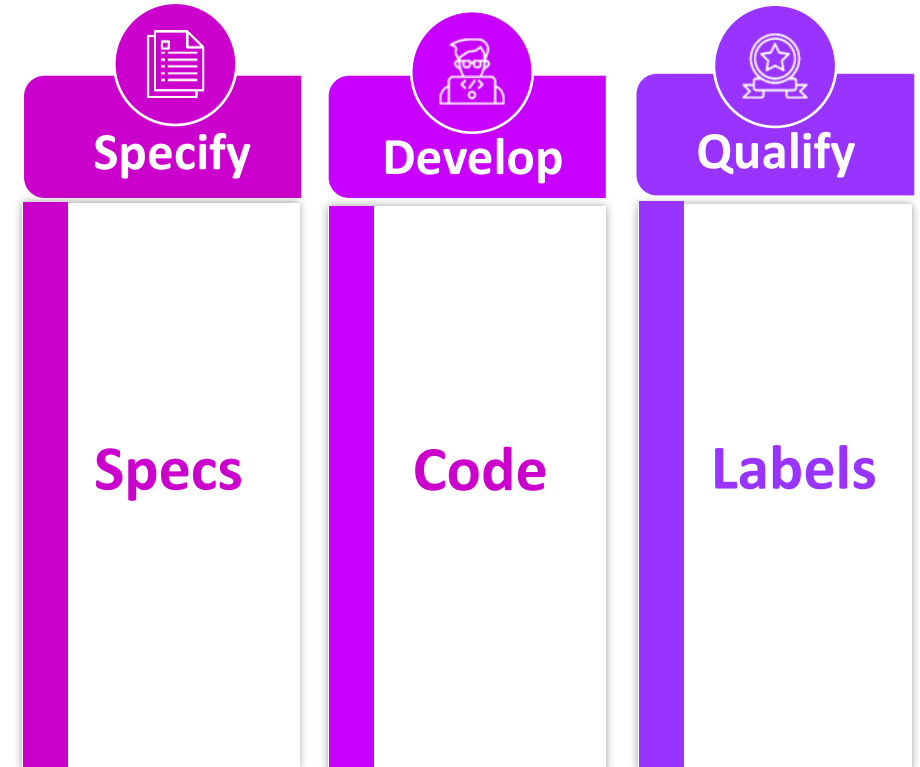
MISSION: Creating the de facto standard aligned with EU values by developing a set of policies, rules, specifications and a verification framework

What we are & what we do

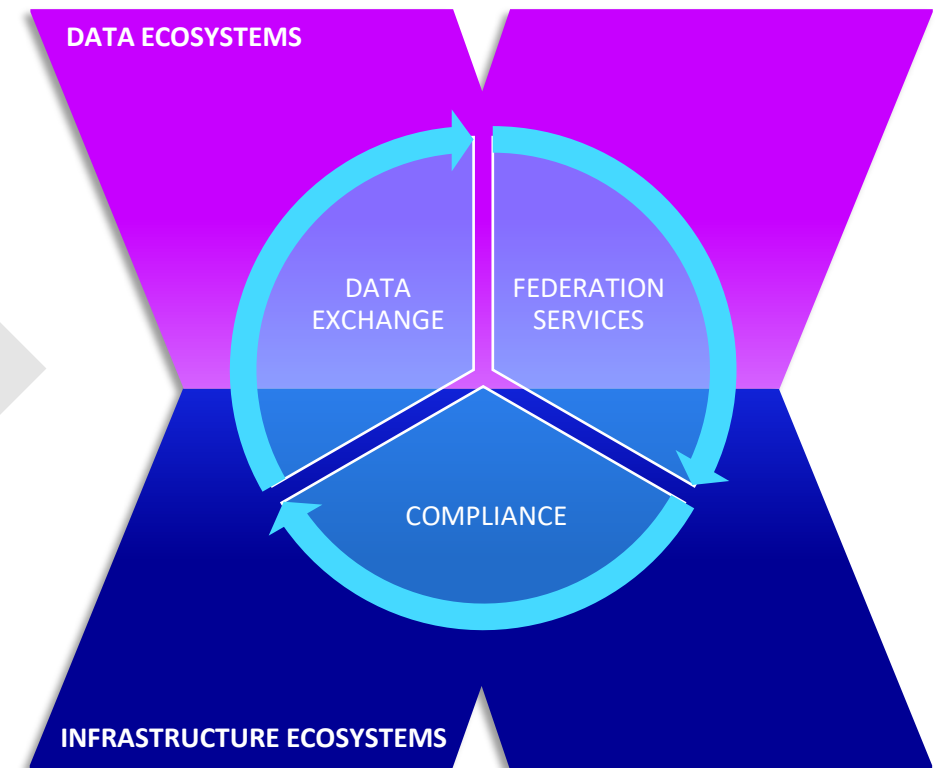
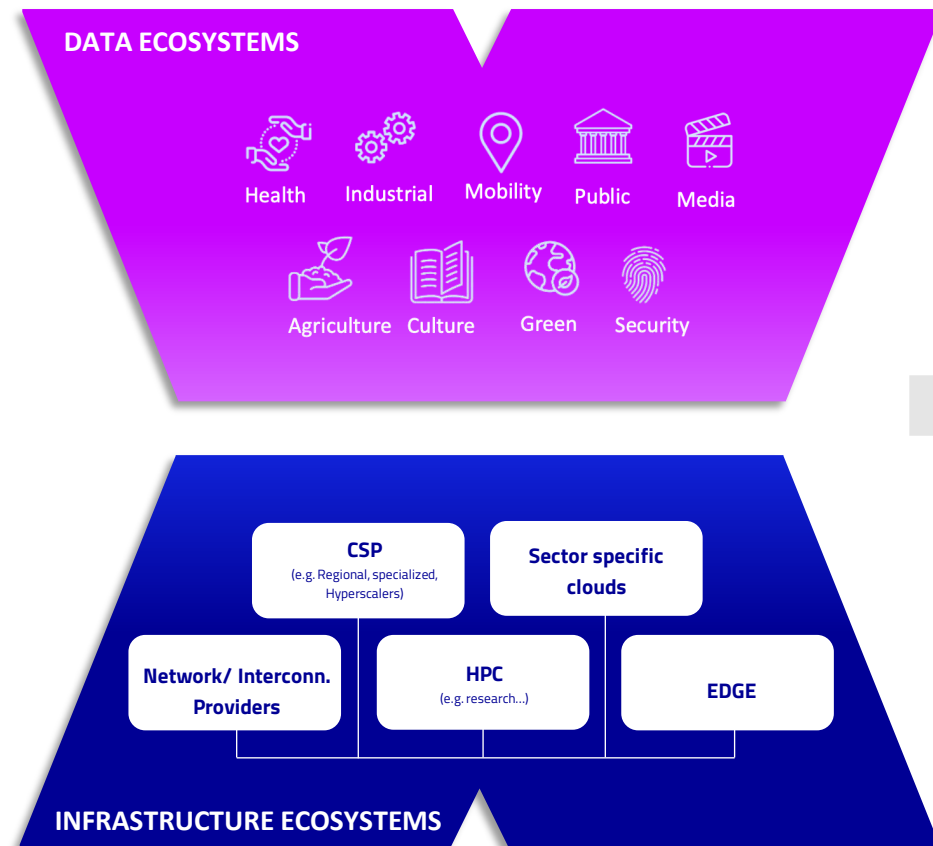
WHAT WE ARE

	Gaia-X is	<ul style="list-style-type: none">> A single point of definition of Gaia-X architecture & rules> Making an open implementation available to all> A qualification authority for Gaia-X compliance
	Gaia-X Is Not	<ul style="list-style-type: none">> A formal standardization body> A SW or HW product or cloud platform> A runtime implementation of any Gaia-X service
	Gaia-X vs AISBL	<ul style="list-style-type: none">> Gaia-X project is driven by the Association> Gaia-X architecture is developed by members> Gaia-X services will not be operated by the Association

WHAT WE DO



The existing Split X Model & Our X Model



The existing Split X Model

Disjoint Data & Infrastructures Ecosystems



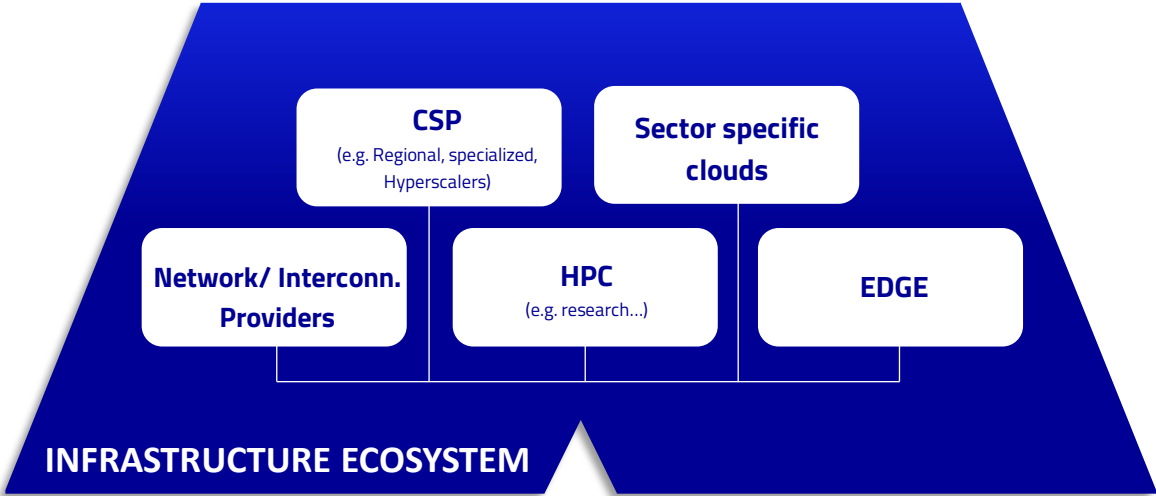
DATA

Untapped, fragmented, disjoint, no secure exchange mechanism



INFRASTRUCTURES

Segregated, non-reversible, non-interoperable, closed architectures, private standards



Our X Model

Connecting Data - Infrastructures Ecosystems



ADVANCED SERVICES

New (Cross-) Sector Innovations / Applications build from service composition.



DATA SPACES / FEDERATIONS

Interoperable & portable (Cross-) Sector data-sets and services.



DATA EXCHANGE

Anchored contract rules for access and data usage.



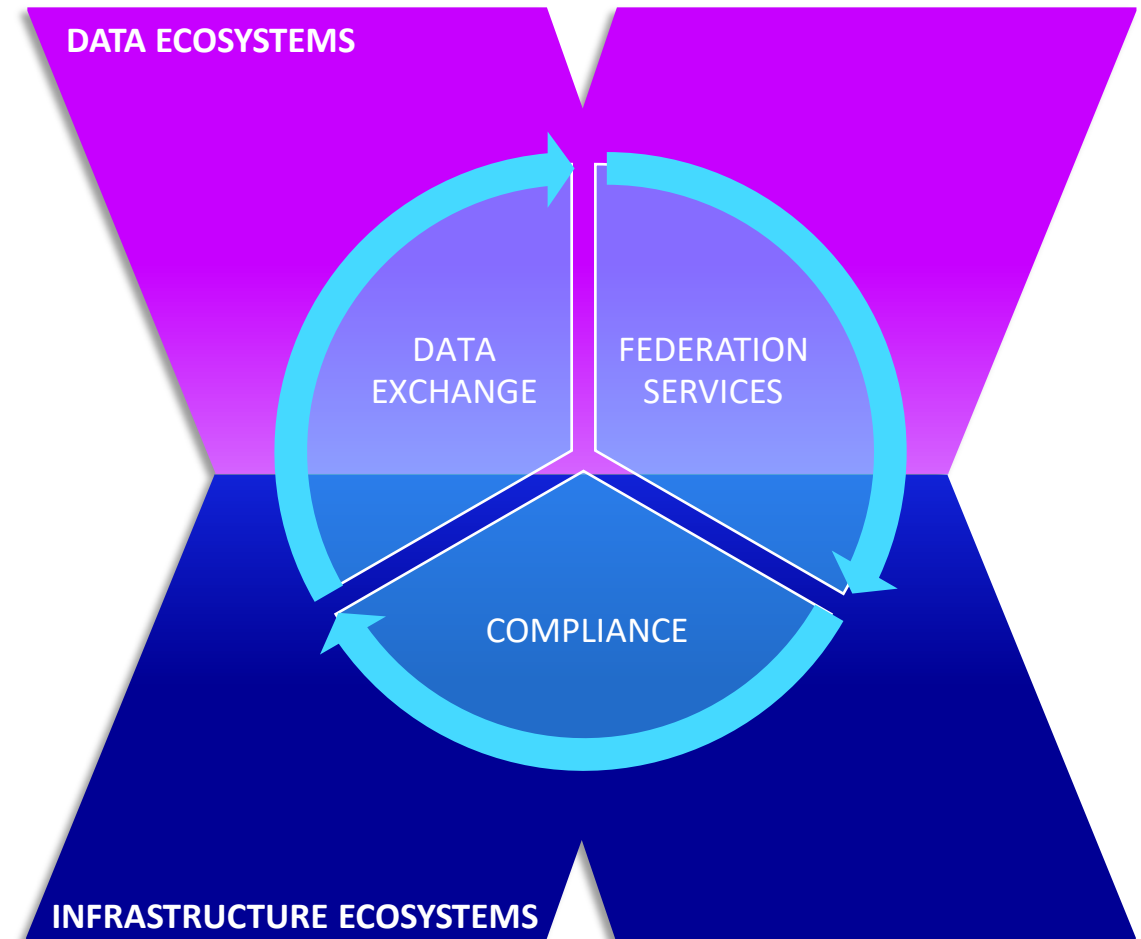
Gaia-X COMPLIANCE

Decentralized services to enable objective and measurable trust.

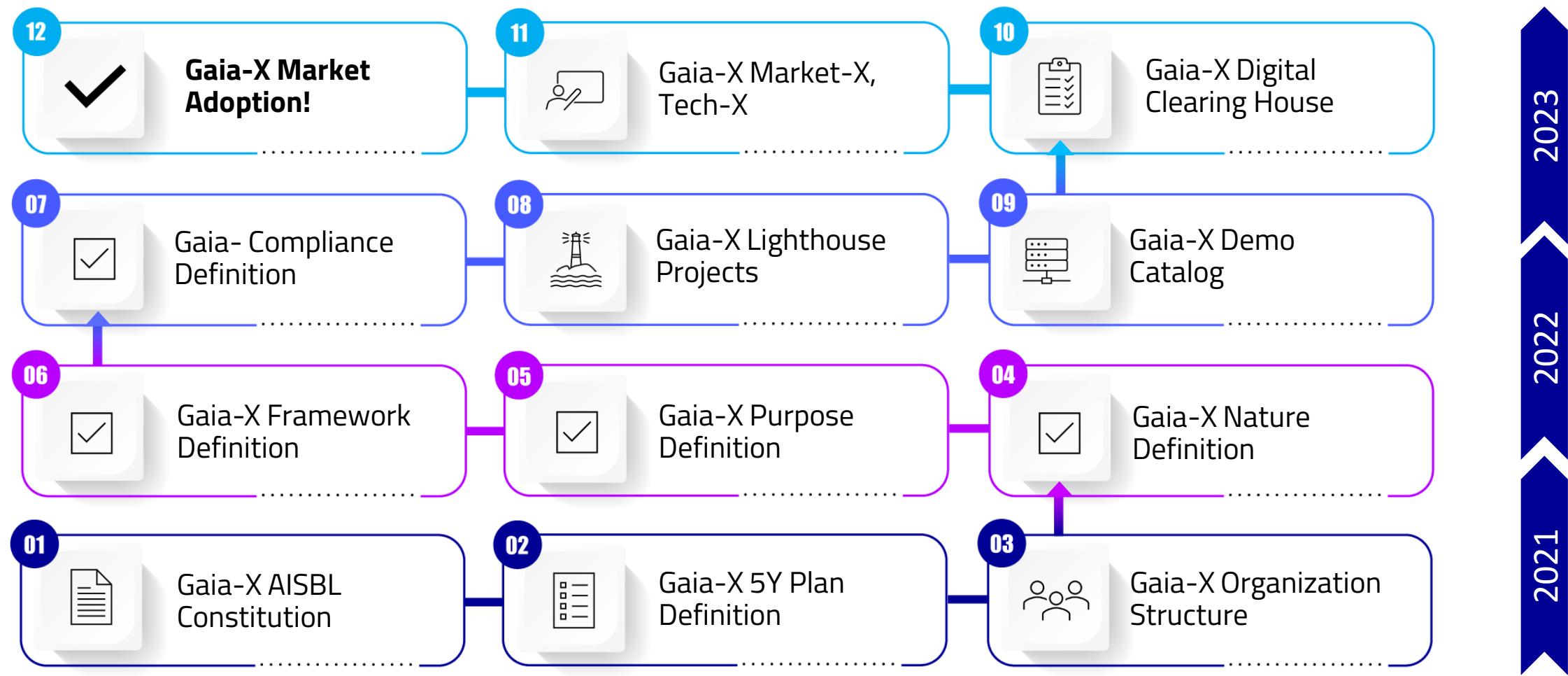


LABEL FRAMEWORK

Gaia-X and ecosystem specific Labels to ease market adoption through autonomy and self-determination.

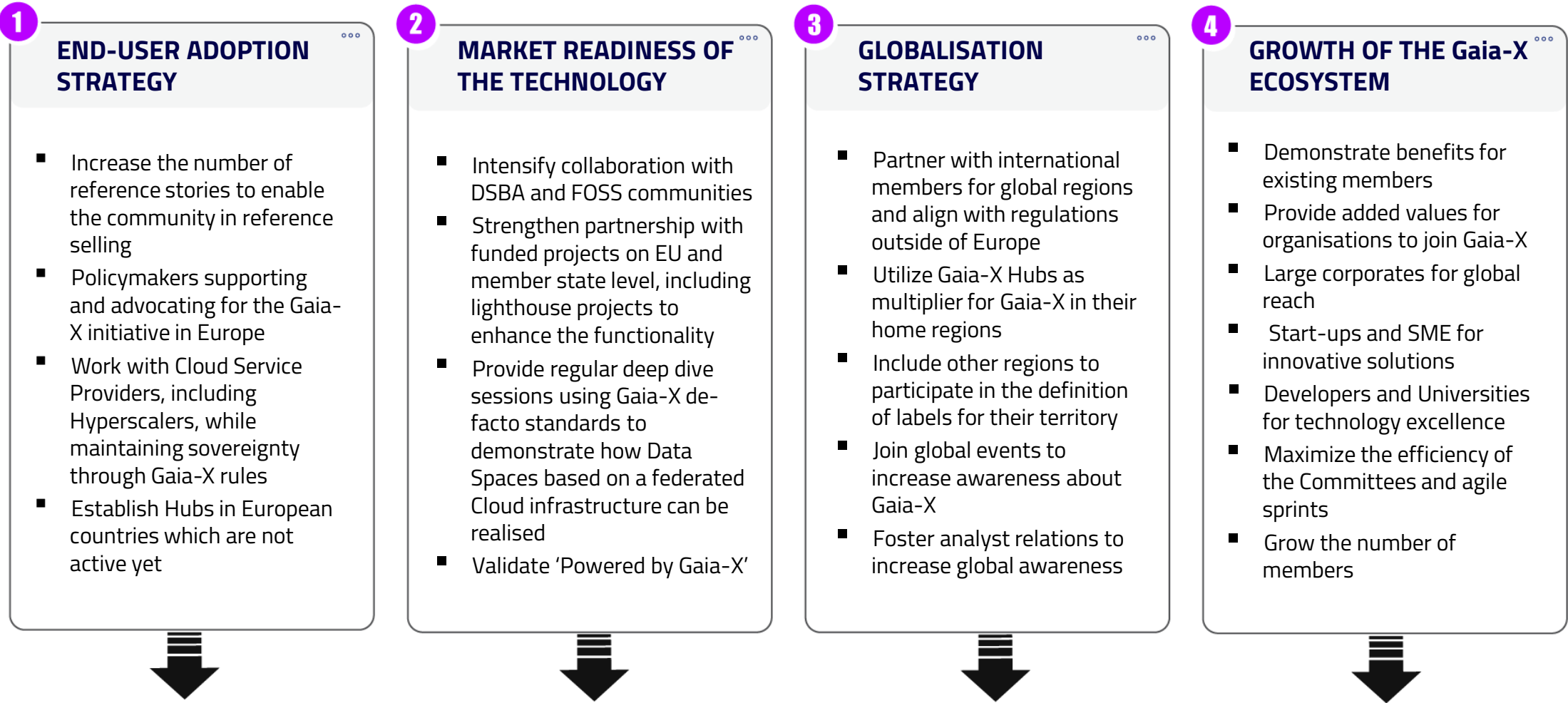


Gaia-X From Inception to Market



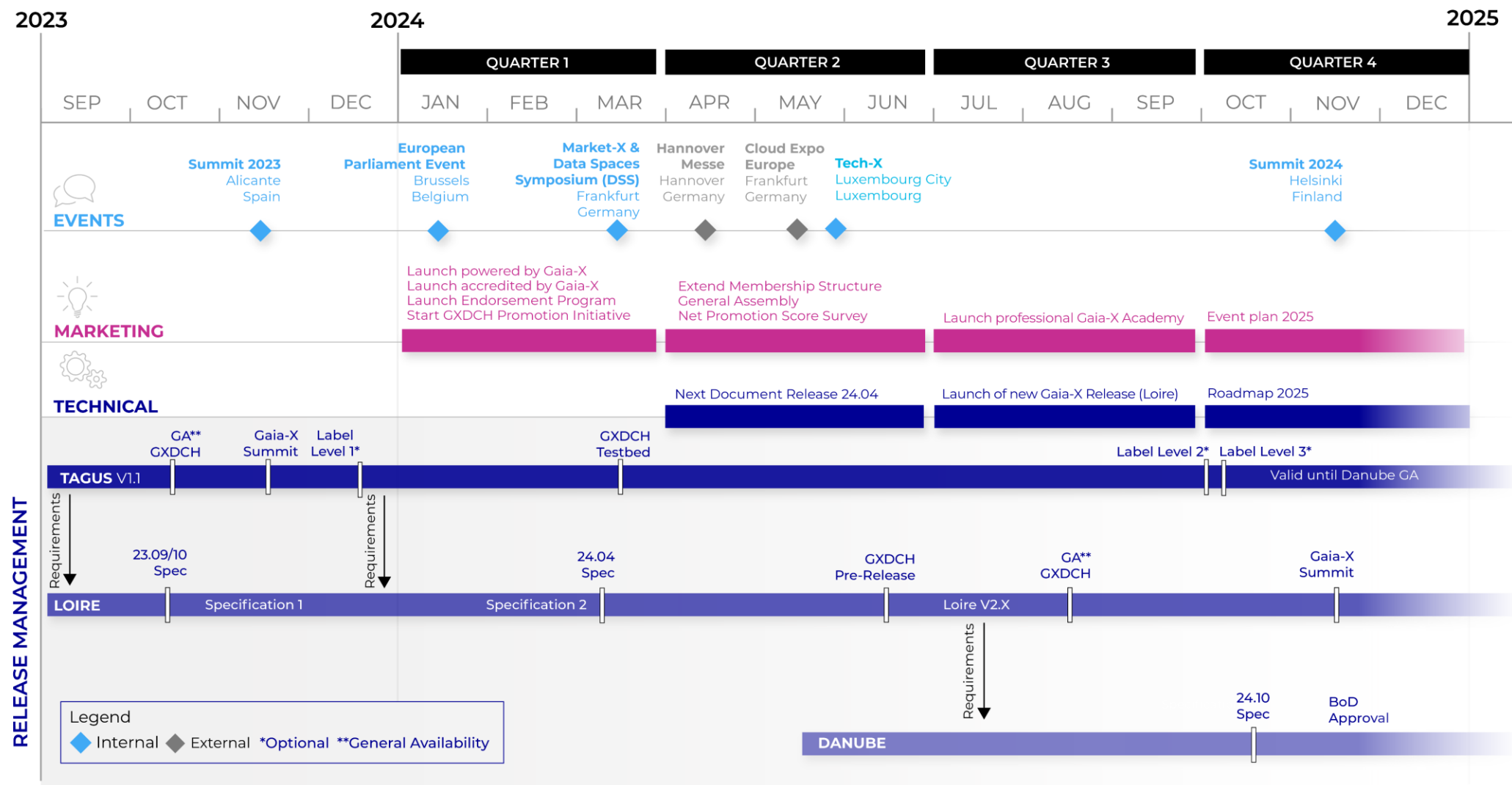
Gaia-X Strategy

The Gaia-X Strategic Plan in a nutshell



Driven by a growth and service oriented team providing thought leadership to the market

Gaia-X Strategic Roadmap 2024



Who we are

Lighthouse Data Spaces



Agriculture
Agdatahub

Automotive Supply Chain
Catena-X

Lighthouse Projects

Manufacturing
Accurate

Infrastructure & Technology
Boot-X

Aeronautics, Space Sector
Cooperants

Manufacturing, Industry 4.0
Data4Industry-X

Urban Data Cooperative
ELINOR-X

Mobility, Transport & Tourism
EONA-X

Energy
Energy data-X

Manufacturing, Industry 4.0
EuProGigant

Finance
EuroDaT

Mobility & Transport
Gaia-X4 Future Mobility

Health
HEALTH-X dataLOFT

Mobility
Mobility Data Space (MDS)

Energy
Omega-X

Education
PROMETHEUS-X

Electronics Supply Chain
SCSN

Cloud Services
Structura-X

Health
TEAM-X

EUROPE 16



Austria



Belgium



Finland



France



Germany



Greece



Hungary



Italy



Luxembourg



Netherlands



Poland



Portugal



Romania



Slovakia

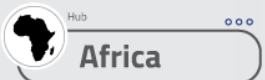


Slovenia



Spain

IN PROGRESS 8



Africa



Czech Republic



Denmark



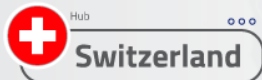
Estonia



Ireland



Sweden



Switzerland



United Kingdom

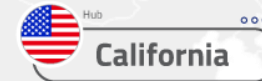
INTERNATIONAL 5



Japan



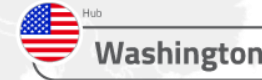
Korea



California



Texas



Washington DC

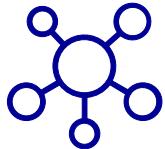
Gaia-X Members



300+ companies and organisations



3 out of 4 organisations are private companies, **about half** of which are SMEs*



Organisations from different industries, such as Mobility, Energy, Manufacturing, Finance etc.



Mentioned explicitly in the **European Data Strategy** and proactively addressing key issues. Exchange between Gaia-X and the **European Commission** to identify synergies between Gaia-X and initiatives and programs such as the **European Cloud Federation, CEF 2** and **Digital Europe**.



Large Companies



SMEs



Start-Ups



Universities



R&D

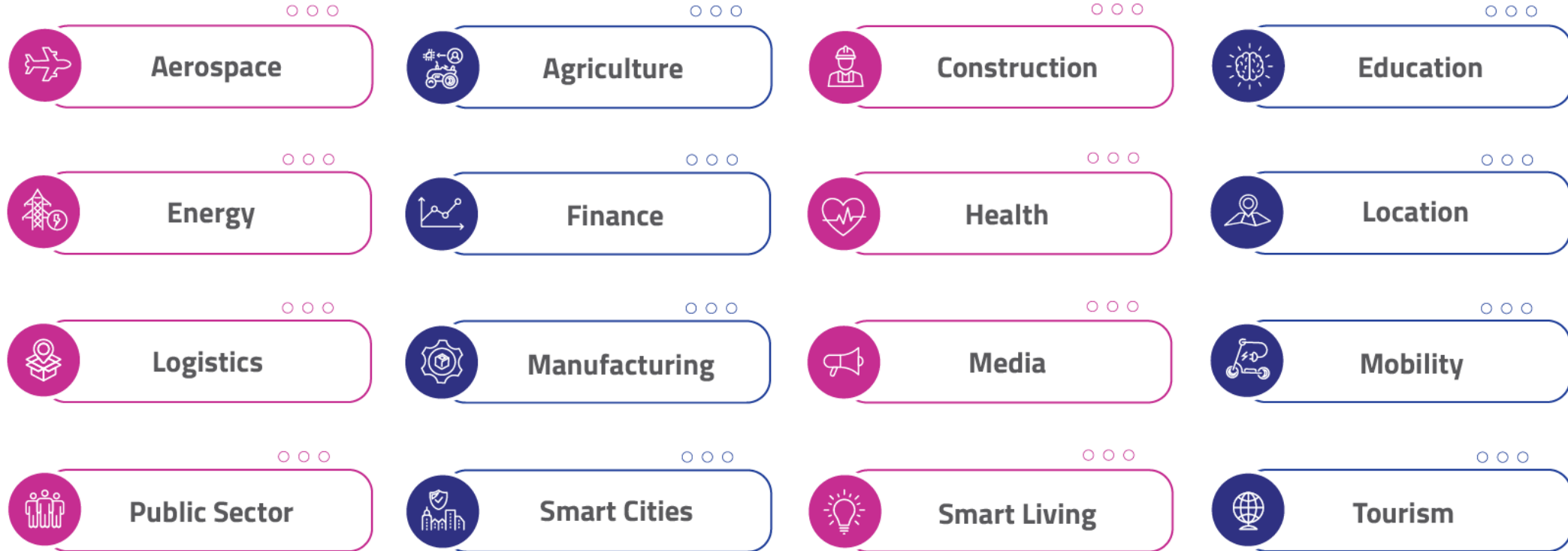


Associations



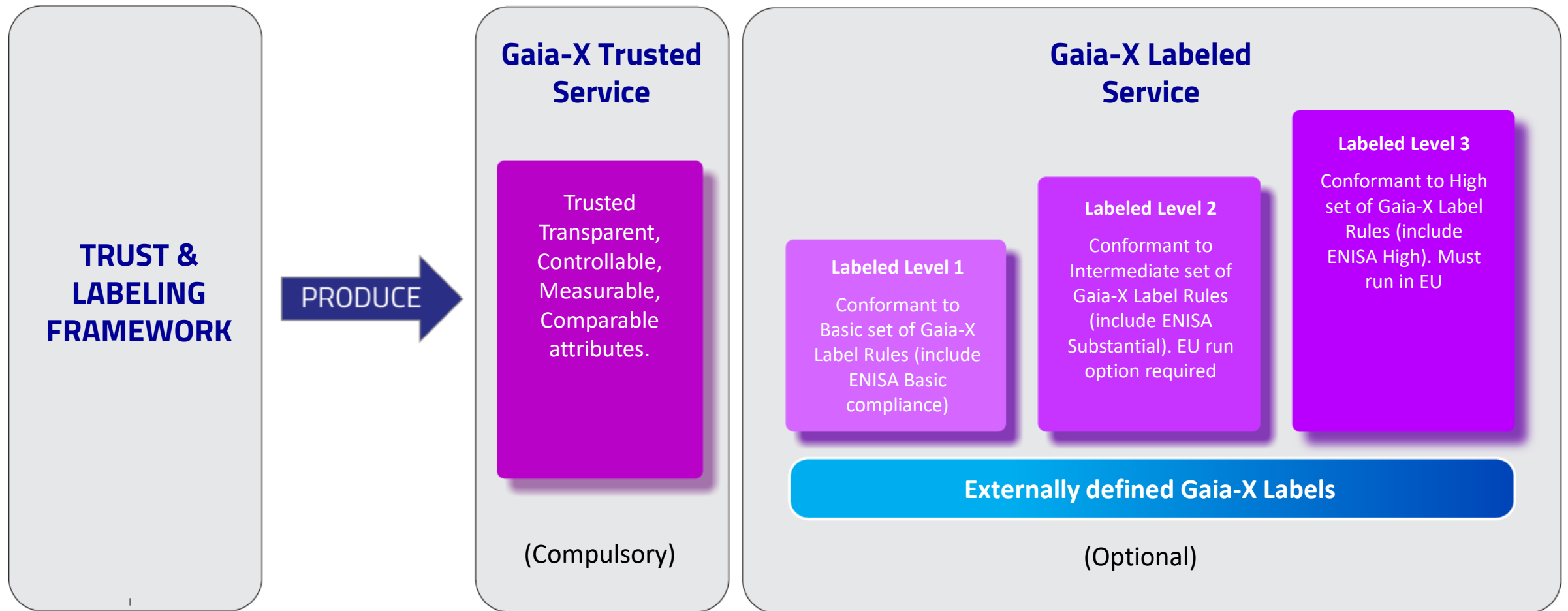
Public Sector

Gaia-X Ecosystems



How does it work? – Tech Insight

Gaia-X Rules: Trust & Labelling Framework



To build a Dataspace, we need:

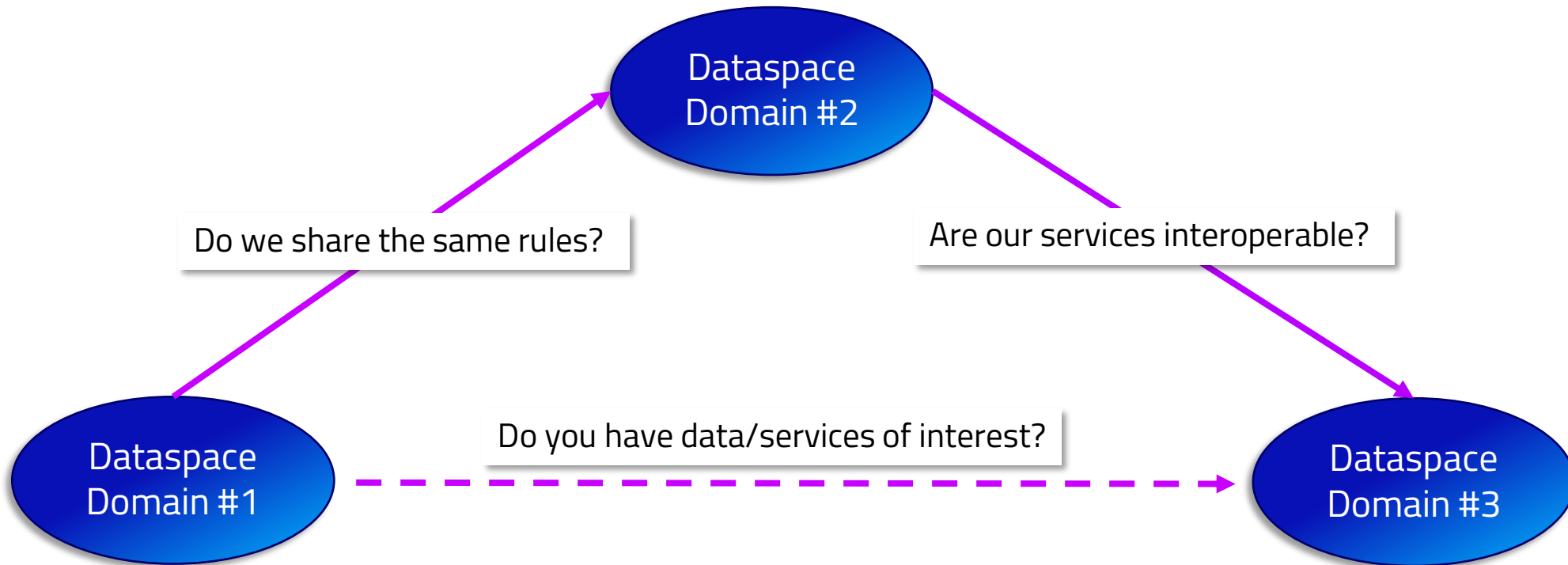
- ✓ A **governance** which can be operationalised.
- ✓ **Infrastructures** adopting the governance.
- ✓ **Parties** adopting the **governance**, using the **infrastructures** *"to access and use data in a fair, transparent, proportionate and/non-discriminatory manner with clear and trustworthy data governance mechanisms."*[1]

Problems/Opportunities:

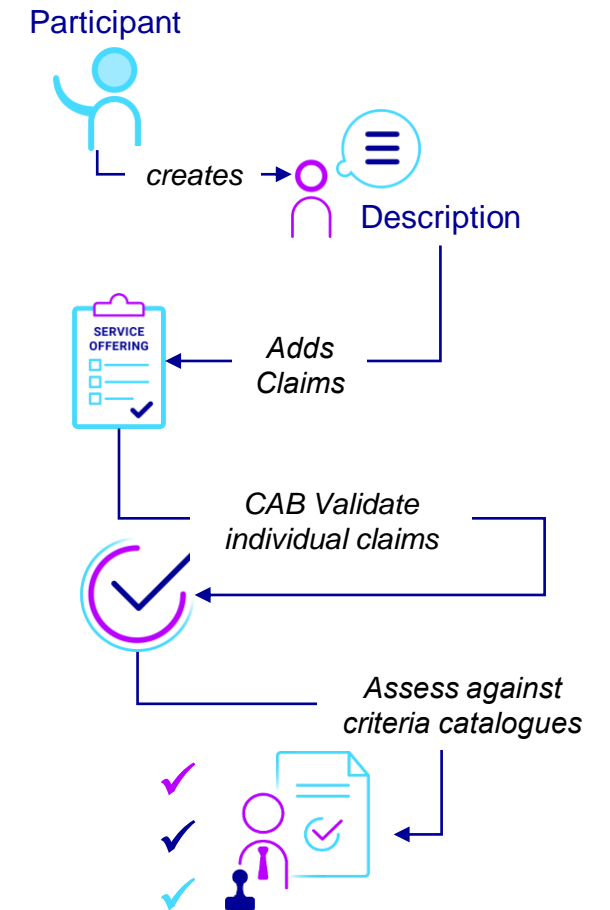
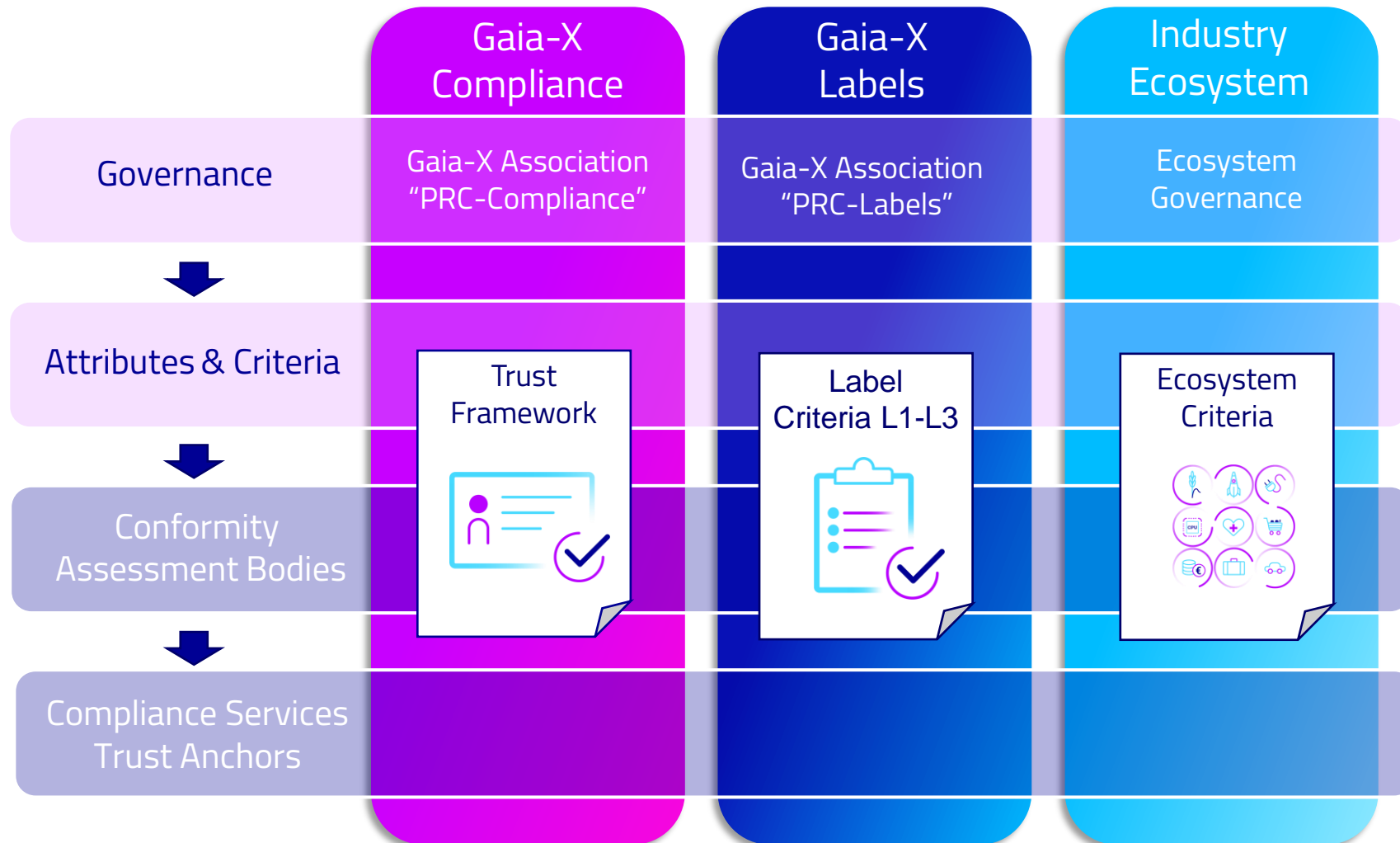
- Sharing data is not new and there are 1000's of existing setups that could qualify as "dataspace"
- They are not discoverable
- Governance and infrastructure interoperabilities are hard - if not impossible - to assess
- Scaling is expensive

Gaia-X proposals

- Federated catalogues 📖 for Services and Products.
- A worldwide-ready 🌐 governance based on European values .
- Easy customisation and extension 🧰 of the governance per domains, verticals, local markets, ...
- Interoperability measurement 📏 **across** dataspace $d = distance(D1, D2)$



Gaia-X Compliance - Enable Trust & Governance




Gaia-X Digital Clearing House



GXDCH Components*




Gaia-X Registry (compulsory)




Gaia-X Compliance (compulsory)




Notary (compulsory)



Wizard (optional)



Catalogue (optional)



Credential Event Service (Optional**)

Gaia-X Digital Clearing House



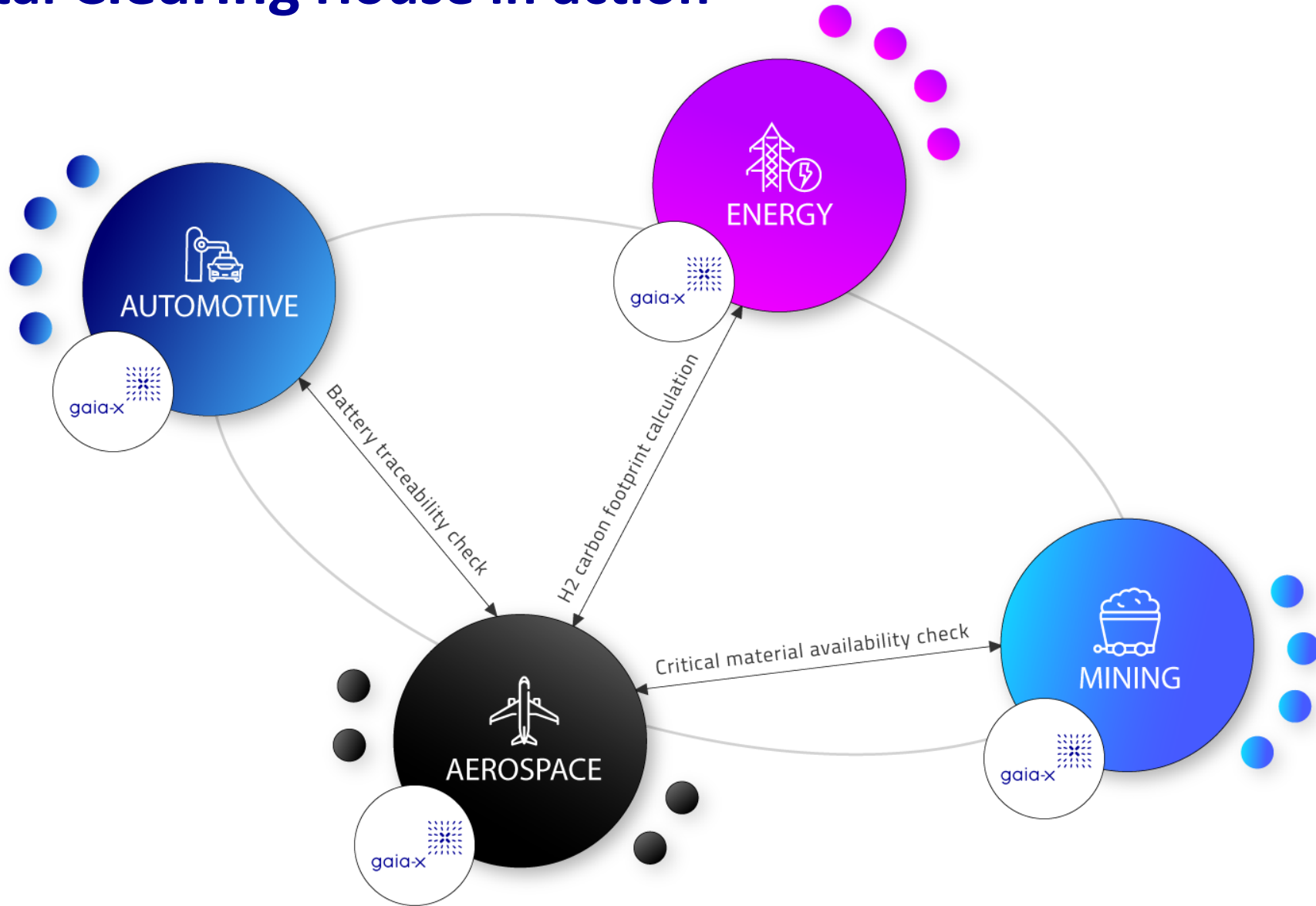
Node

* Current list, may expand in future releases
** CES will become mandatory in Loire (next release)
***not all criteria can be automated, “+” means automated verification if the evidence issuer (Standard & CAB)

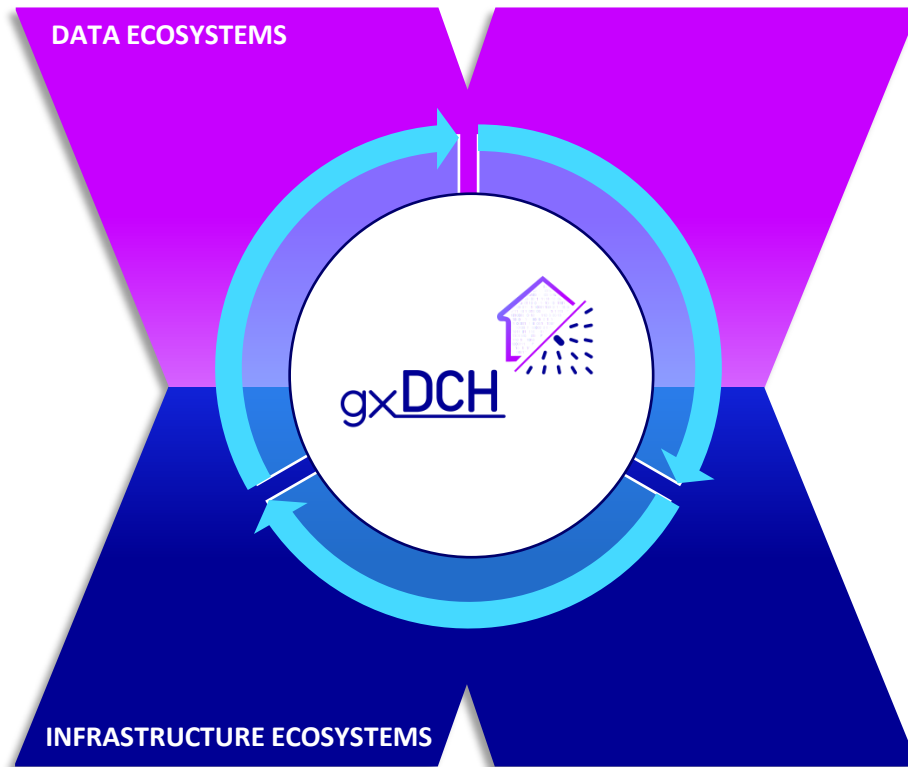
Gaia-X Conformity and Labels

	C	L1	L2	L3
Declaration of Service or Product	✓	✓	✓	✓
Signed with verified method (eg.eIDAS)	✓	✓	✓	✓
Automated validation by GXDCH	✓	✓	✓	✓
Automated verification by GXDCH*	✓	✓	+	+
Data Exchange Policies	✓	✓	✓	✓
Certified Label Logo		✓	✓	✓
Data protection by EU legislation		✓	✓	✓
Manual verification by CAB			✓	✓
Provider Headquarter within EU				✓

Gaia-X Digital Clearing House in action



How to get started!



- Request a Legal Registration Number credential**.
- Create and sign my Legal Participant credential.
- Create and sign the Gaia-X Terms & Conditions credential.
- Create and sign my Service Offering credential.
- Send credentials for validation and request proof of Gaia-X Compliance.
- Publish my Service Offering in the network of catalogues.

*All actions done in the wizard are also available via API.

Each step could be done on a different GXDCH instance.

**Credentials are equivalent to digitally signed attestations.

What's in for me– Business Insight

Gaia-X Benefits for Users & Providers



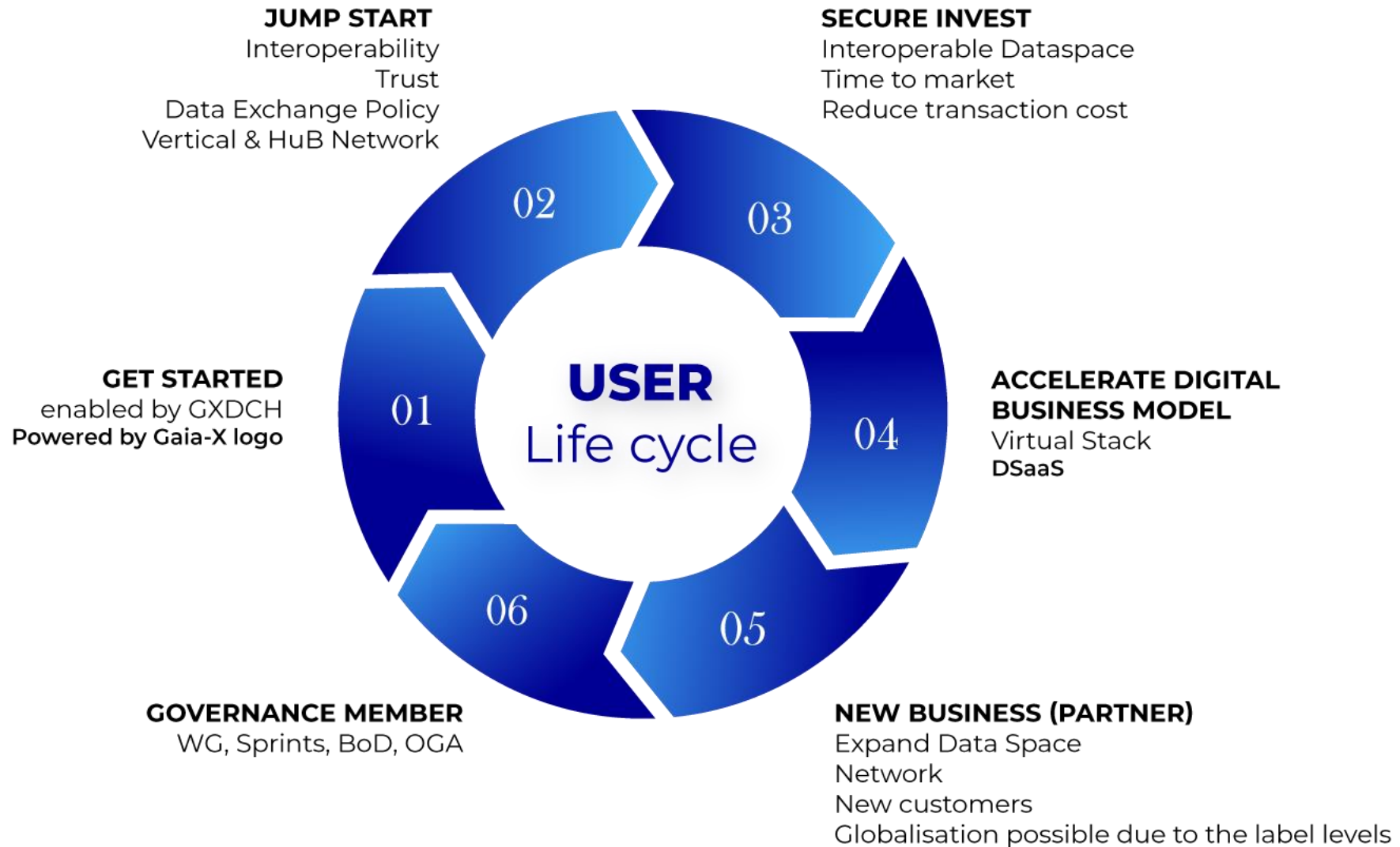
BENEFITS FOR **USERS**

1. Build and implement common rules in order to be able to exchange data in a trusted way.
2. Accelerate sovereign data driven EcoSystems.
3. Enable global data driven value chains through federated trust and interoperability.

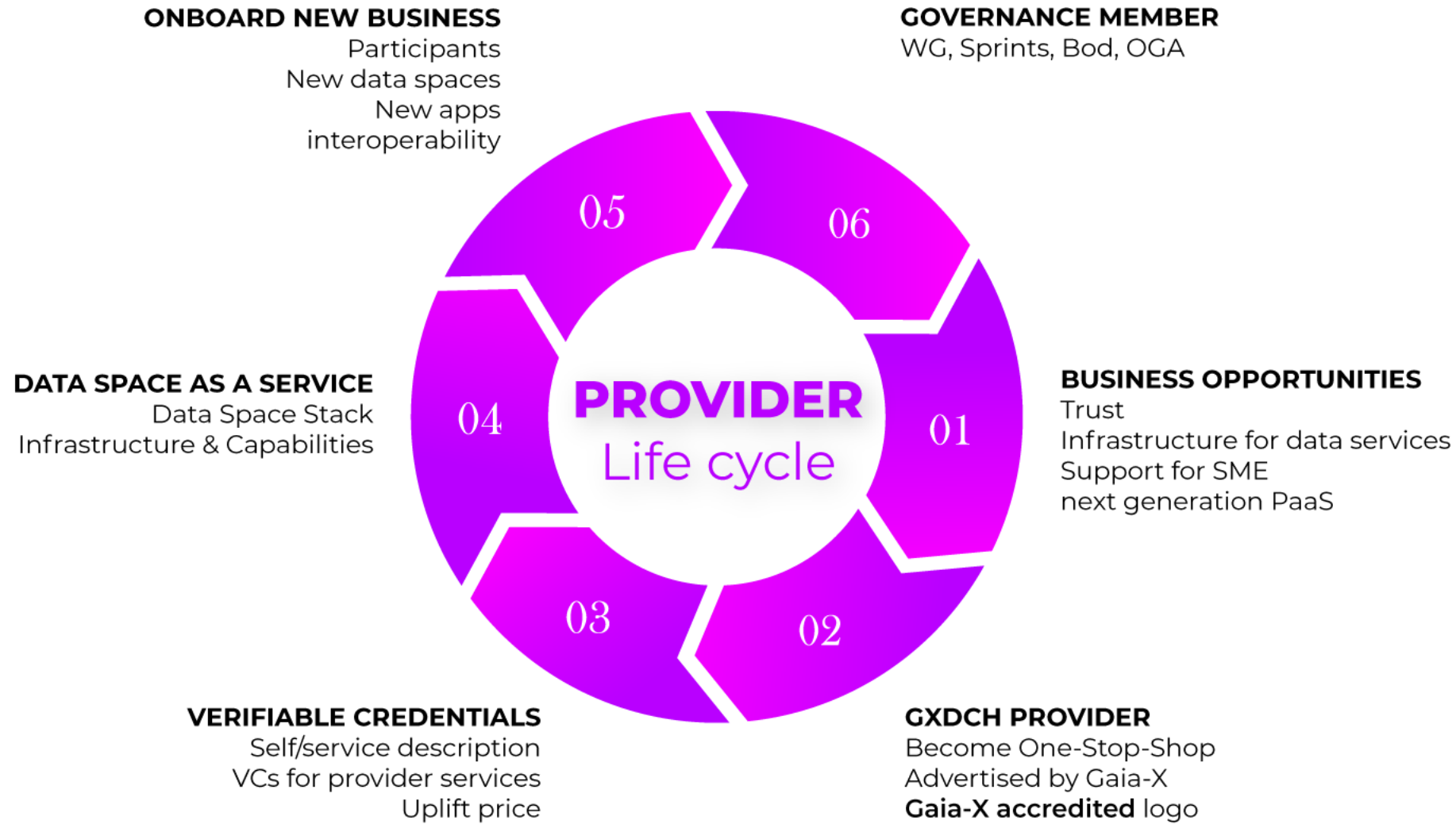
BENEFITS FOR **PROVIDERS**

1. Expand reach, visibility and market share by delivering services which are certified as compliant with Gaia-X.
2. Become one stop shop as a GXDCH Provider, for your existing and new customers utilising the Gaia-X EcoSystem.
3. Deliver DataSpace as a Service (DSaaS) to enable fast, cost efficient, transparent and reliable data driven Business Application.

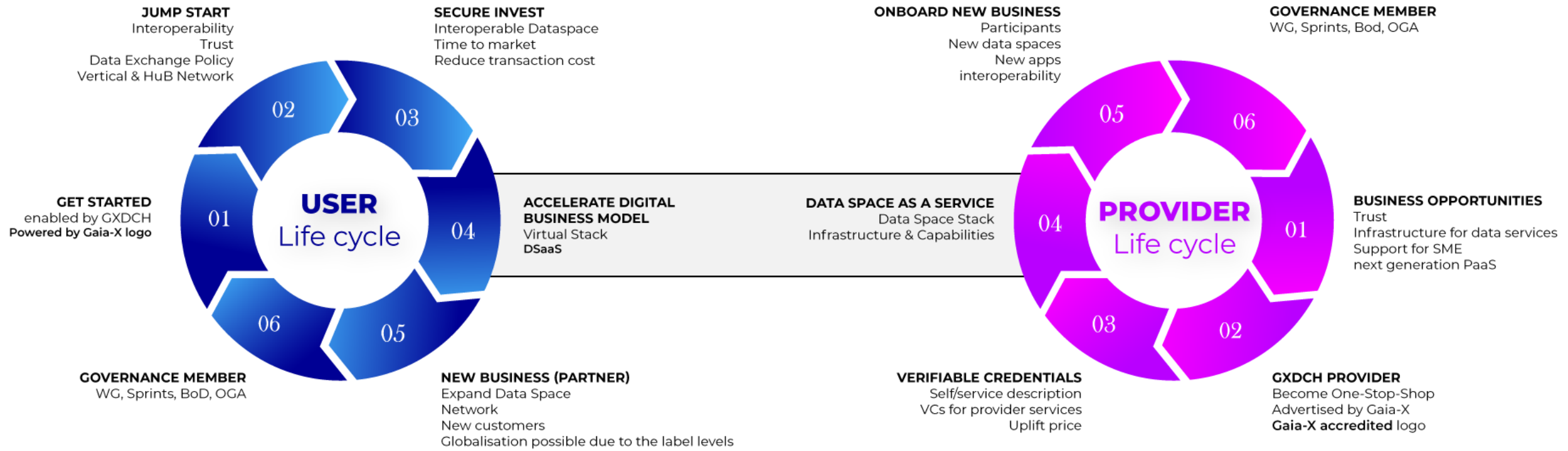
User Life cycle



Provider Life cycle



Where User and Provider Connect



Follow us on:



@gaiax_aisbl



www.linkedin.com/company/gaia-x-aisbl



www.youtube.com/@gaia-x5188

Thank you!

