gaia-x

market-x

Market Conference & Expo

Darmstadt Germany

12 MARCH 2024

near Frankfurt

In partnership with gaia-x Hub Germany

Part of

Data Spaces Symposium (DSS)

12 -14 March 2024

Discover Gaia-X,

for trustworthy data exchange

market-x

Welcome Address

09:00 –09:30

Ulrich Ahle, CEO, Gaia-X

Jan Fischer, Hub Coordinator, Gaia-X Hub Germany

Part of

Data Spaces Symposium (DSS)

12 - 14 March 2024

Gaia-X Welcome Address

Ulrich Ahle
- CEO Gaia-X

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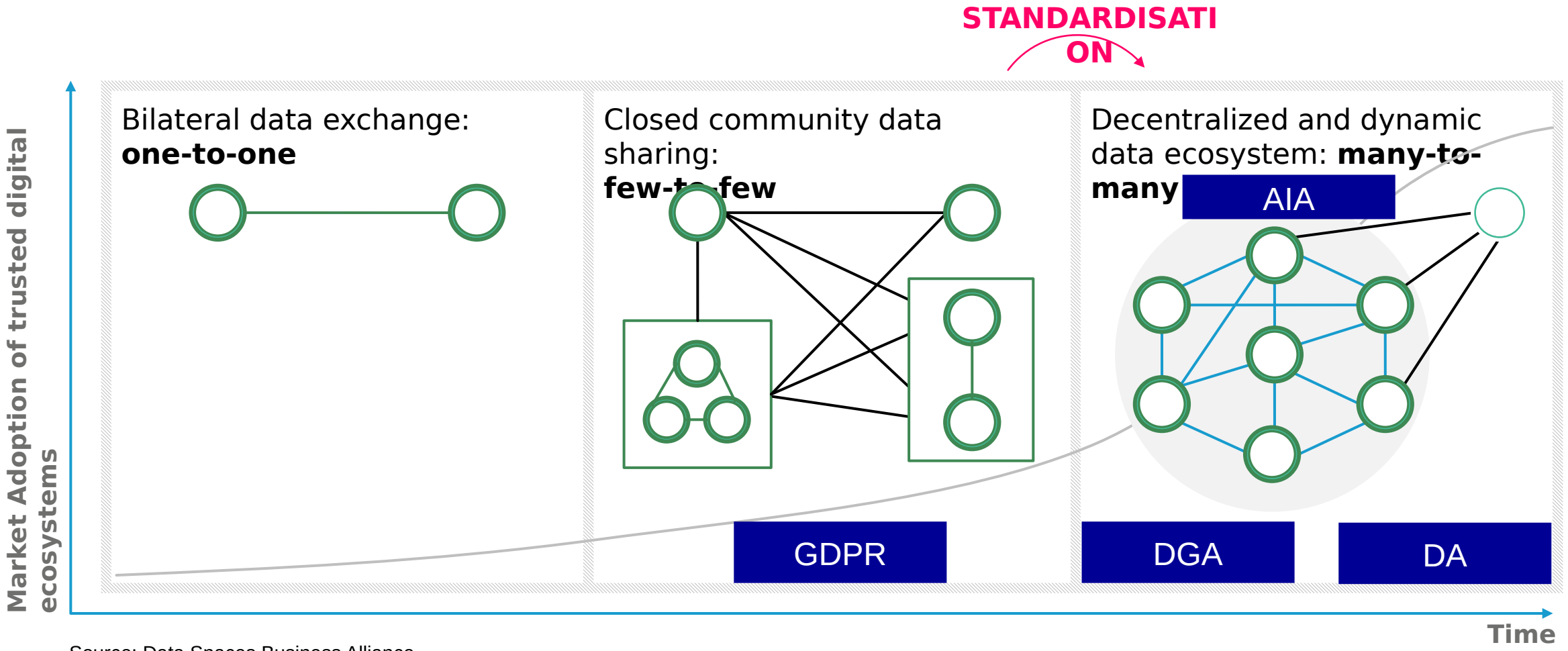
The demand for Data Spaces

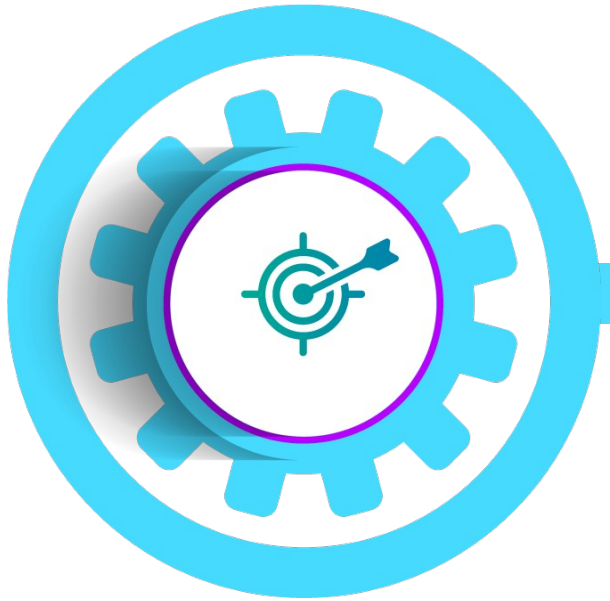


Source: Data Spaces Business Alliance

Gaia-X Visio

market-x

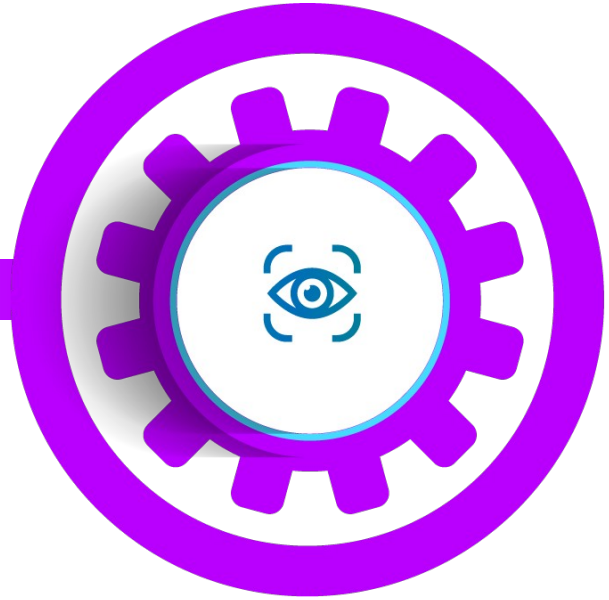
VISION



Enable trusted decentralised digital ecosystems

Gaia-X Missio

market-x



MISSIO
N

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

The Gaia-X Strategic Plan in a nutshell

market-x

1 End-user adoption strategy

- Increase the number of reference stories to enable the community in reference selling
- Policymakers supporting and advocating for the Gaia-X initiative in Europe
- Work with Cloud Service Providers, including Hyperscalers, while maintaining sovereignty through Gaia-X rules
- Establish Hubs in European countries which are not active yet

2 Market readiness of the technology

- Intensify collaboration with DSBA and FOSS communities
- Strengthen partnership with funded projects on EU and member state level, including lighthouse projects to enhance the functionality
- Provide regular deep dive sessions using Gaia-X de-facto standards to demonstrate how Data Spaces based on a federated Cloud infrastructure can be realised
- Validate 'Powered by Gaia-X'

3 Globalisation strategy

- Partner with international members for global regions and align with regulations outside of Europe
- Utilize Gaia-X Hubs as multiplier for Gaia-X in their home regions
- Include other regions to participate in the definition of labels for their territory
- Join global events to increase awareness about Gaia-X
- Foster analyst relations to increase global awareness

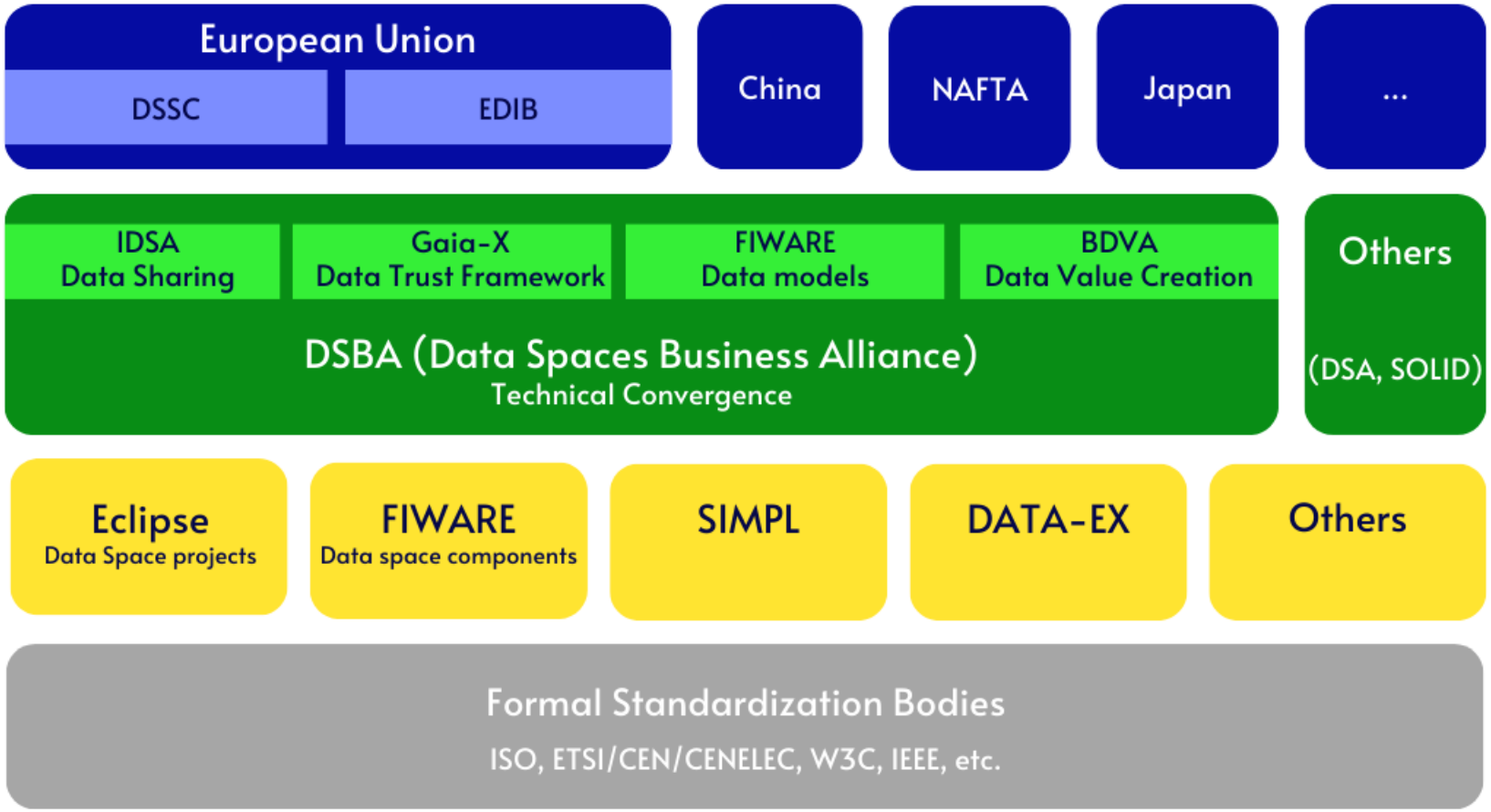
4 Growth of the Gaia-X ecosystem

- Demonstrate benefits for existing members
- Provide added values for organisations to join Gaia-X
  - Large corporates for global reach
  - Start-ups and SME for innovative solutions
  - Developers and Universities for technology excellence
- Maximize the efficiency of the Committees and agile sprints
- Grow the number of members

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

Regulatory, business and technical foundation for Data Spaces within the Edge-Cloud-Continuum

Data Spaces Business Alliance



Data regulations in economic regions

Data strategies implementation

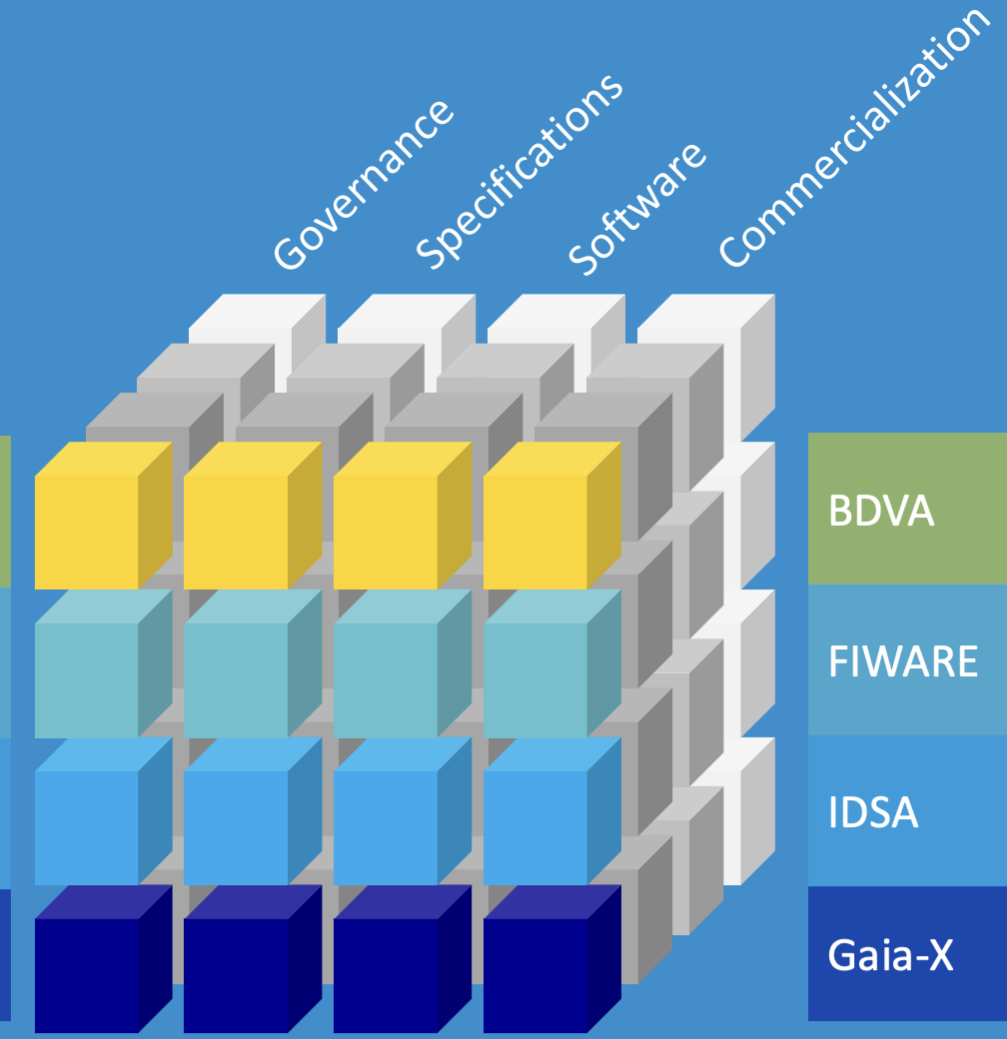
User requirements, Voice of the communities, coordinate technical specs and business requirements, support to "business design"

Alignment in technical specifications and standards to adopt

Technical implementation driven by OSS, place for the developer communities

Long-term investment security, adoption support etc. through norms and standards

DSBA Convergence…



	Specification	OSS & Services
BDVA	Data Value	<Methodologies, Models>
FIWARE	Linked Data (NSGI-LD)	Generic Enablers Marketplace
IDSA	Data Space Protocol	<Communities>
Gaia-X	Trust Framework	Gaia-X Compliance, GXDCH <Communities>

Gaia-X Hub France

- 8th March 2024, Ministry of Finance, Paris, France
- 220 Participants
  - Gaia-X Members and Non-Members
  - Representatives from the European Commission
  - Members of the French Ministry
  - Journalists
- Hosted by: Gaia-X Hub France
- Very successfull event
- Lot of testemonials of up and running projects
- Good alignment between
  - European Commission
  - French Ministry
  - Industry
  - Gaia-X Hub France
  - Gaia-X ASIBL

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Thank you!

- Ulrich Ahle
- ulrich.ahle@gaia-x.eu

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gaia-x
Hub Germany

Welcome address

Jan Fischer
- Head of Gaia-X Hub Germany

acatech
DEUTSCHE AKADEMIE DER TECHNIKWISSENSCHAFTEN

Supported by:
Federal Ministry for Economic Affairs and Climate Action
on the basis of a decision by the German Bundestag

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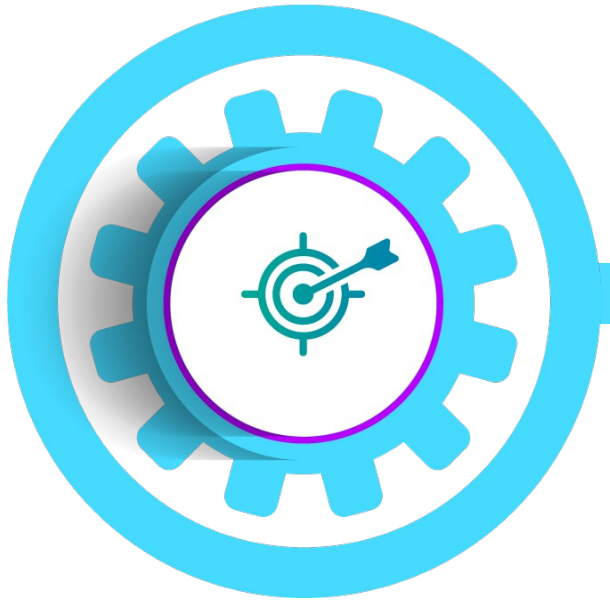
VISION



The Gaia-X Hub Germany is the **national point of contact** for all actors who want to engage in the exchange of data in open data ecosystems. Our goal is to **support the development of an international data economy** that is in line with European values and economic structures.

#GaiaX #MarketX24

gaia-x Hub Germany

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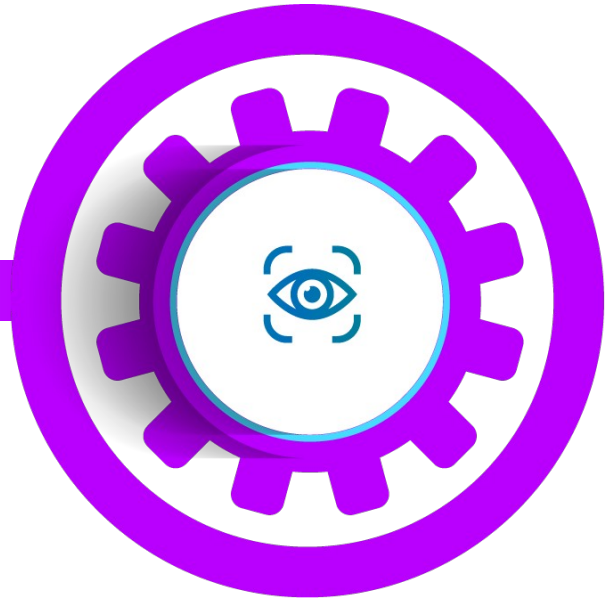

MISSION

The Gaia-X Hub promotes the development and utilisation of Gaia-X in Germany. To this end, we bring together representatives from science, business, politics and civil society to exchange experiences, gain insights and jointly put them into practice.

#GaiaX #MarketX24

Organizational Structure

Scope of tasks

gaia-x Hub Germany

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Coordination and support of national ecosystems

Domain & stakeholder management

Scientific support

Supervision of 11 funding projects of the Gaia-X funding competition "Innovative and practical applications and data spaces in the digital ecosystem Gaia-X" of the BMWK

Think Tank "Data Economy in Germany"

Seraching & Discussion of data-driven value-added models

Communication & Marketing

National contact point and guide in the Gaia-X ecosystem for interested companies, administrations, initiatives and organisations

Identification and solidarity with related national initiatives

Scoping & monitoring

Community Outre

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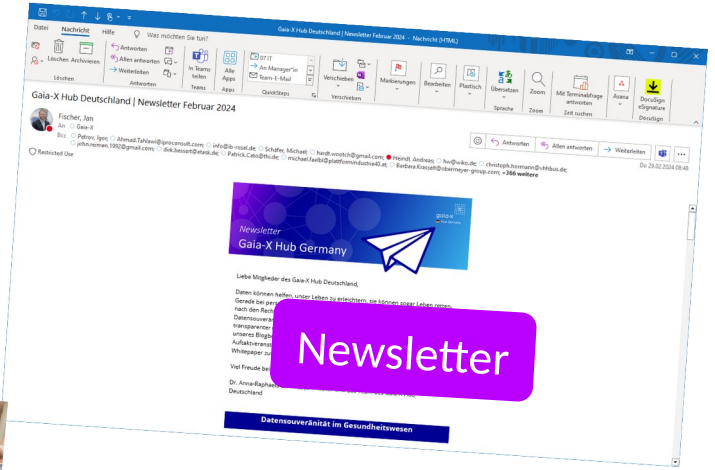

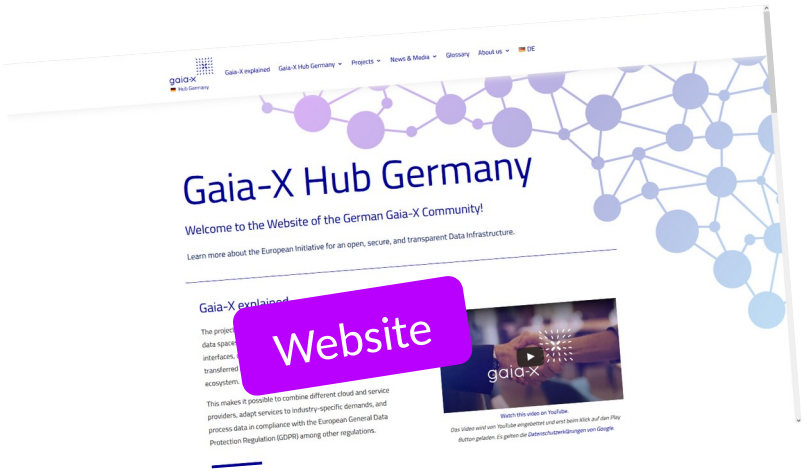

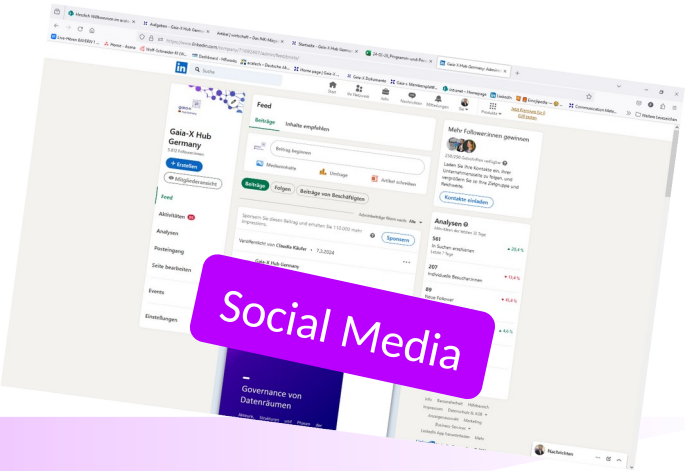

#GaiaX #MarketX24

Support for Gaia-X funding competition

Funding programme of the BMWK

gaia-x Hub Germany

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EuroDaT
The European Data Trustee

eurodat.org

iECO

ieco-gaiax.de

MERLOT

merlot-education.eu

AUTO WERKSTATT 4.0

autowerkstatt40.org

COOPERANTS

cooperants.com

HEALTH-X dataLOFT

health-x.org

openGPT-X

opengpt-x.de

marispace·x

en.marispacex.com

TEAM-X
Trusted Ecosystem of Applied Medical Data eXchange

project-team-x.eu

POSSIBLE

possible-gaia-x.eu

Tellus

tellus-project.com

Roadmap for 2024

gaia-x Hub Germany

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1. Insight and knowledge transfer from the funded projects to the community
2. Communication of Gaia-X added value at a superordinate, sector-specific and project-specific level
3. SME-directed communication

→

- Easing the entry barriers
- Expansion of the community
- Show added value
- Demonstrating Gaia-X market readiness
- Tapping into new sectors

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gaia-x
Hub Germany

Thank you!

gaia-x-hub@acatech.de

gaia-x-hub.de

@GaiaXGermany

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Gaia-X Framework

09:30 –10:00

Roland Fadrany, COO, Gaia-X

Pierre Gronlier, CTO, Gaia-X

Part of

Data Spaces Symposium (DSS)

12 -14 March 2024

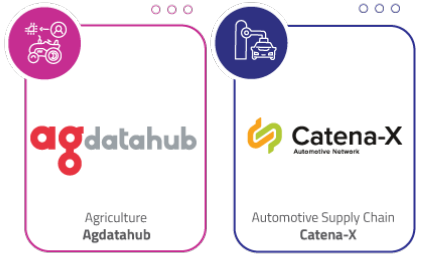
Gaia-X Update

Darmstadt, March 12th 2024

Roland Fadrany | COO Gaia-X European Association for Data and Cloud

Gaia-X endorsement program

Lighthouse Data Spaces



Lighthouse Projects

Gaia-X HUBs

EUROPE 16

- Austria
- Belgium
- Finland
- France
- Germany
- Greece
- Hungary
- Italy
- Luxembourg
- Netherlands
- Poland
- Portugal
- Romania
- Slovakia
- Slovenia
- Spain

INTERNATIONAL 5

- Japan
- Korea
- California
- Texas
- Washington DC

IN PROGRESS 8

- Africa
- Czech Republic
- Denmark
- Estonia
- Ireland
- Sweden
- Switzerland
- United Kingdom

Gaia-X Members

The Most representative alliance of organizations in Europe!

350+ companies and organisations

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

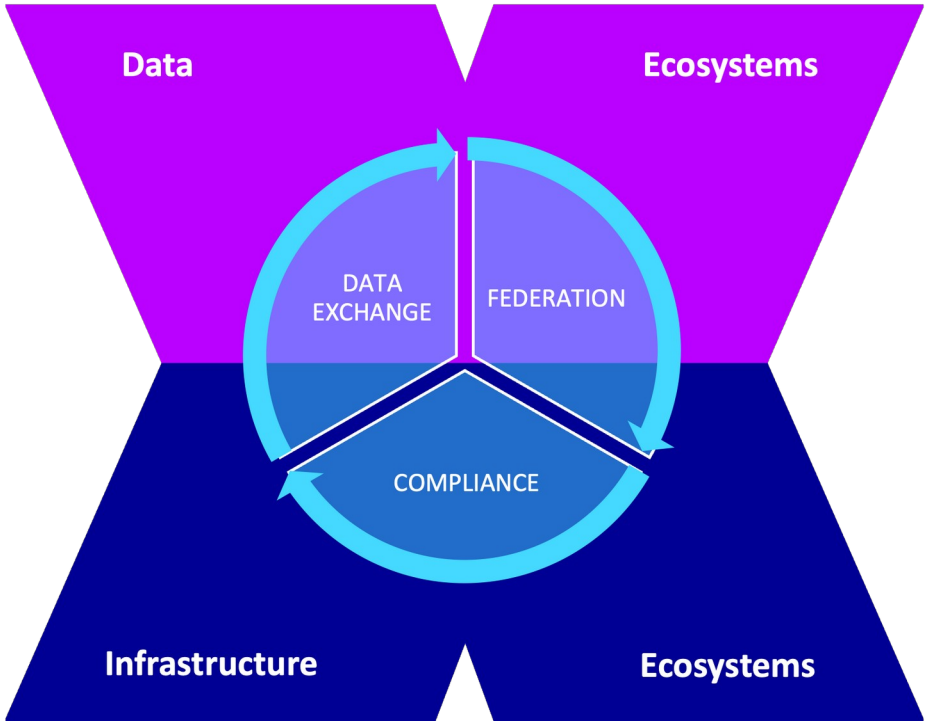
Organisations from different industries, such as Mobility, Energy, Manufacturing, Finance etc.

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

Dataspaces as a balancing instrument

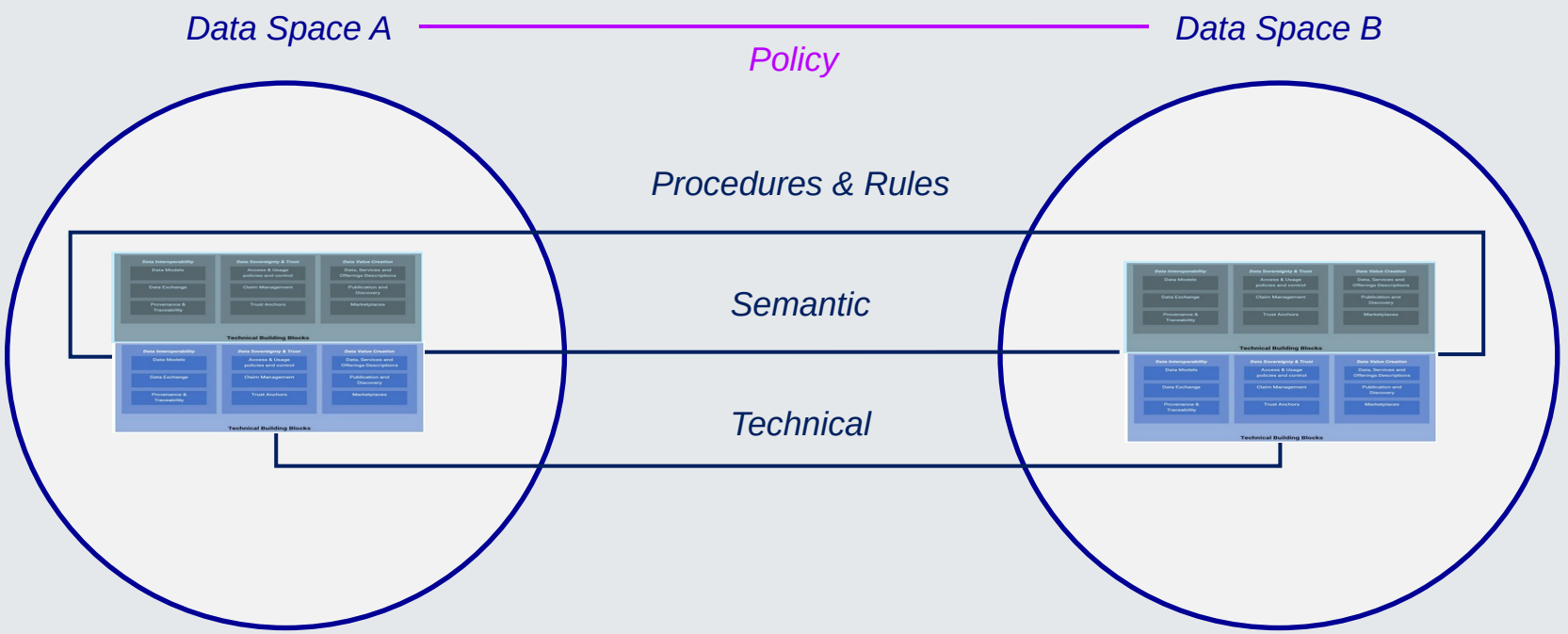
community	⟷	individual
innovation	⟷	regulation
data sharing	⟷	data protection
trust	⟷	control
open systems	⟷	closed systems
applications	⟷	infrastructure
centralized governance	⟷	decentralized governance



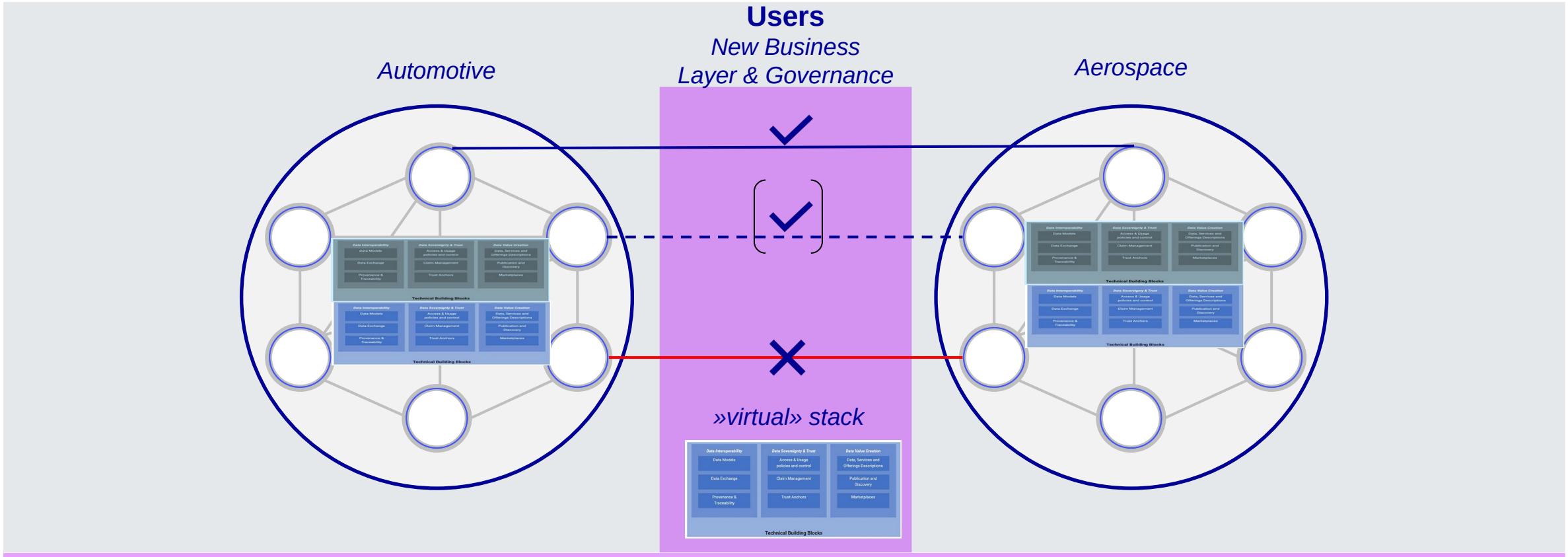
Dataspace Layer Model *“decouple business model from stack”*

Role		Function
Users Participants, Projects, Providers	**Business** **Business Cases** · **Objectives**	**Policy** assessment and alignment
Providers data space operators, cloud and infrastructure providers	**Data Space Stack** **Infrastructure** · **Capabilities**	**Procedures & Rules** **Semantic** **Technical**
(De-facto)-Standard creators (DSBA+)	**Standardization, Certification & Tools**	Gaia-X Digital Clearing House Node

Connecting Dataspace with the Layer Model



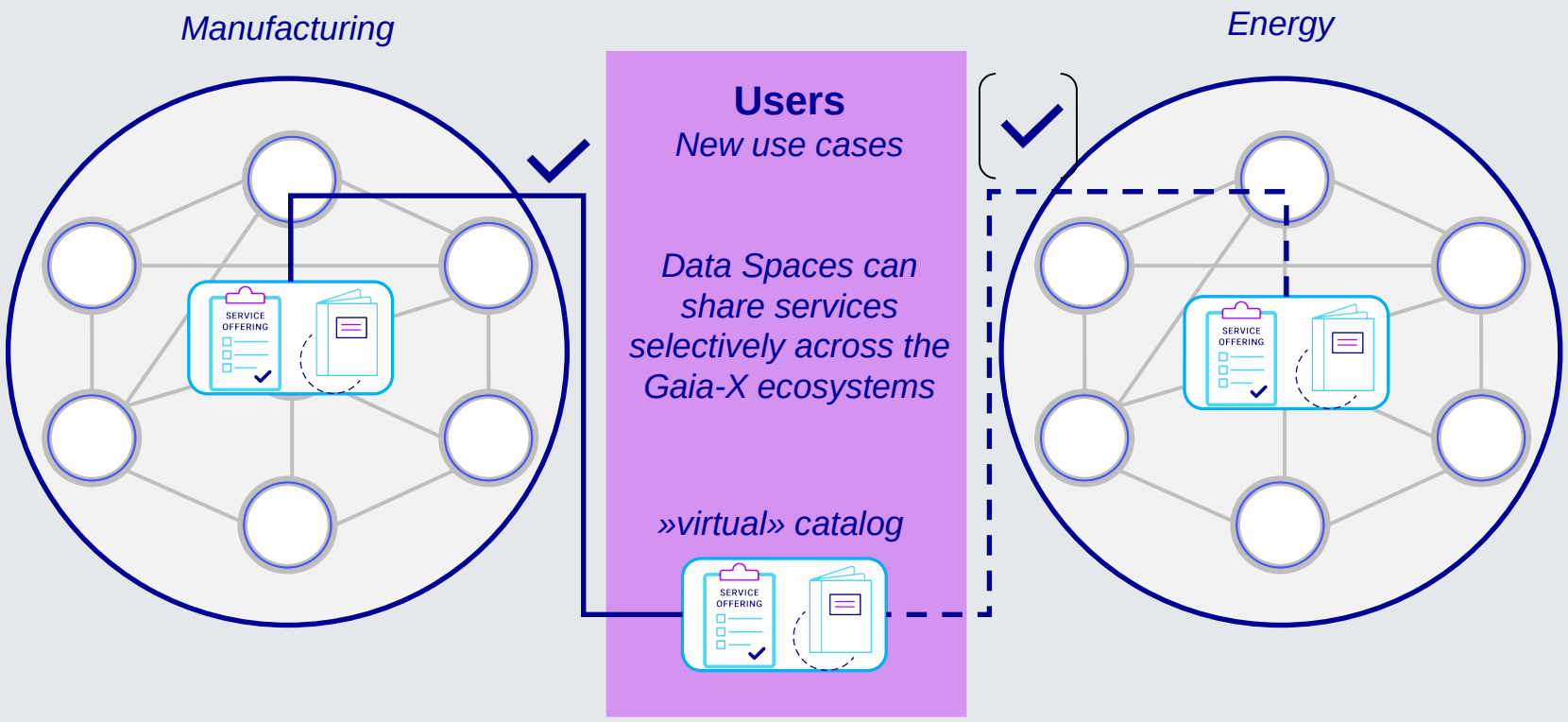
Selective data usage enablement between Dataspaces



Business Benefits

Secure investment, safe cost, accelerate Go2Market, reduce transaction cost, easy integration

Catalogue sharing between Dataspaces



Gaia-X Digital Clearing House

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**)

* 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				✓

Status Gaia-X Digital Clearing Houses

ALL SYSTEMS OPERATIONAL

Overview

- Gaia-X Lab
- Aruba
- Telekom

GXDCH STATUS

This page indicates whether a service is UP and running. It does not attest to the end to end functionality

Gaia-X Lab

Compliance	Registry	Notary
1.8.1	1.7.1	1.6.1
UP	UP	UP

Aruba

Compliance	Registry	Notary
1.8.1	1.7.1	1.6.1
UP	UP	UP

T-Systems

Compliance	Registry	Notary
1.8.1	1.7.1	1.6.0
UP	UP	UP

Aire Networks

Compliance	Registry	Notary
1.10.1	1.9.1	1.6.2
UP	UP	UP

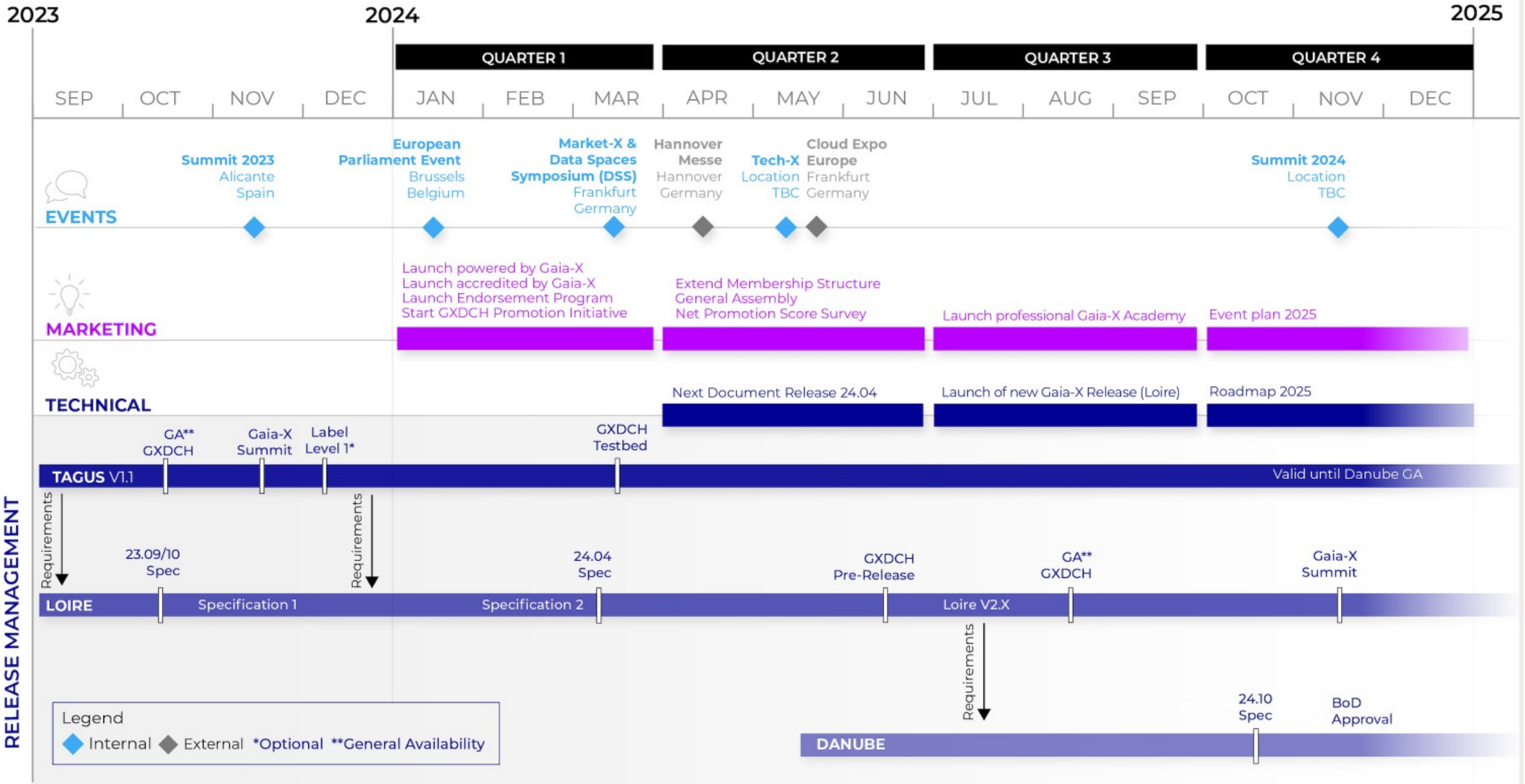
Pipeline Clearinghouse candidates

Orange, OVH Cloud, Proximus, A1 Digital, Arsys Internet S.L.U., Ionos SE, MBR, OSISM, Tieto Evry, K-BusinessCom, Exaion (EDF), Gigas Hosting S.A., LHC – LuxConnect, NRB, Uniserver B.V.

Gaia-X Digital Clearing House Node

https://docs.gaia-x.eu/framework/?tab=clearing-house

Gaia-X Strategic Roadmap 2024



Gaia-X next Release „Loire“ content

PRC Backlog view with key development areas / sprints

Issue	+ Create issue	Fields		
#		Status	Assignee	Releases
1	PRC-1 Conformity Assessments Bodies Programme	IN PROGRESS	Martine Gour...	24.03 Release
2	PRC-6 Label Operationalization	IN PROGRESS	Martine Gour...	24.03 Release
3	PRC-7 Roadmap - User Stories	IN PROGRESS	Catherine Si...	24.03 Release
4	PRC-3 Data Exchange criteria and rules update	IN PROGRESS	Frédéric Bella...	24.03 Release
5	PRC-8 Data Act alignment (portability / interoperability among others)	TO DO	Unassigned	24.09 Release
6	PRC-9 Criteria for ethics and responsibility, integrity	TO DO	Unassigned	24.09 Release
7	PRC-10 Extension by domains	TO DO	Unassigned	24.09 Release
8	PRC-11 Data exchnage - follow-up based on the first data exchnage sprint series	TO DO	Unassigned	24.09 Release
9	PRC-15 Review and cluster hyperscalers' sovereignty controls	TO DO	Unassigned	24.09 Release

24.03 Release

24.09 Release

Let‘s make data sovereignty real!

Roland Fadrany, MSc
COO | Gaia-X Association

roland.fadrany@gaia-x.eu

Gaia-X Association

market-x

Gaia-X Framework

Pierre Gronlier, CTO, Gaia-X

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Interoperability layers

Legal interoperability

Organisational interoperability

Semantic interoperability

Technical interoperability

Ecosystem A

Ecosystem B

Those are the 4 layers described in the European Interoperability Framework.

interoperable europe

Technical interoperability:

What is the difference between those X.509 certificates ?


```
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-----END CERTIFICATE-----
```
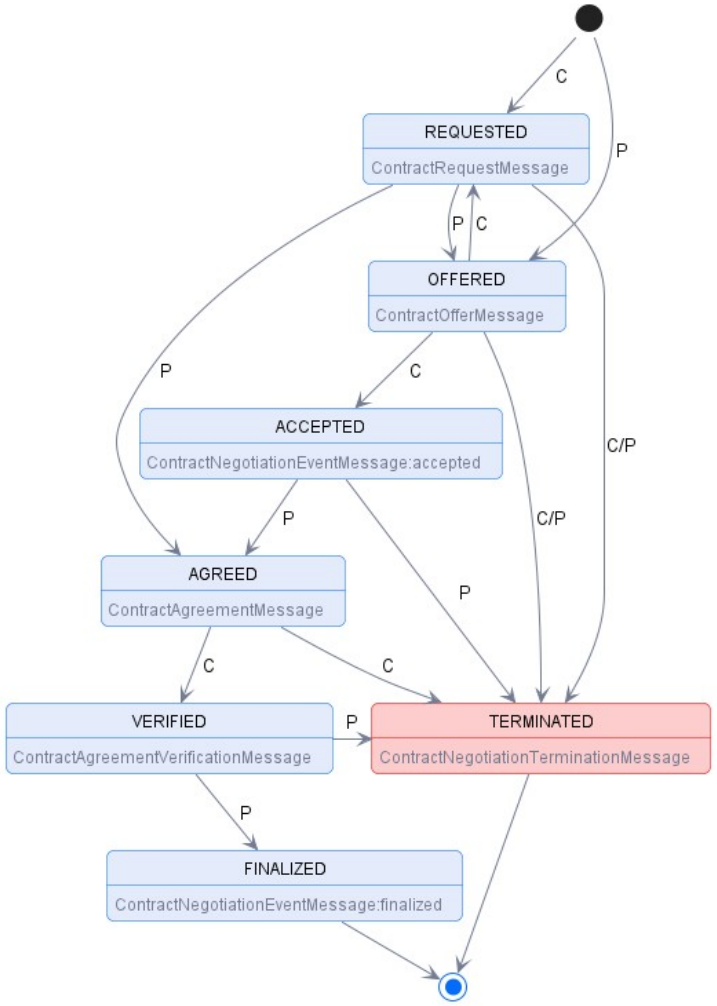

eIDAS

```
openssl req -x509 -newkey rsa:4096 -keyout key.pem -out cert.pem -days 365
```

Organisational & Semantic interoperability



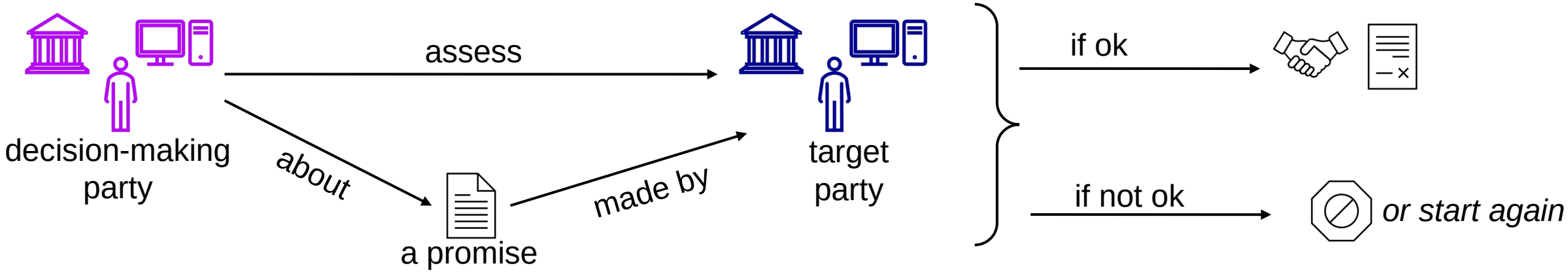
IDSA Dataspace protocol: Contract negotiation

- Gaia-X Registry
  - Schemas
    - Ex: A country code is expressed in ISO3166-2 format.
    - Ex: legal registration numbers are [VAT, EORI, EUID, local TAX, LEI].
  - Shapes
    - *Ex: A service declaration must identify the party providing the service.*
    - *Ex: A legal party is identified by its legal registration number.*
    - *Ex: The provider of a data product containing natural person(s) information must be able to prove consent for define purpose.*
  - Trust Anchors
    - *Valid issuers for legal registration number are […, …, …]*
    - *Service and data product declarations must be signed by legally relevant certificates [eIDAS, KTNET, GlobalSign, …]*

Gaia-X Trust Framework: Conformity & Label

Trust

- Trust: *the "**favourable response** of a **decision-making party** who assesses the **risk** concerning the **target party**'s ability to fulfil a **promise**"*
  - **decision-making party** -> a party making an assessment
  - **target party** -> the party being assessed
  - **promise** -> a statement about a party doing, not doing or giving something
  - **risk** -> there is no free-lunch
  - **favourable response** -> sometimes, there is no trust



Accelerate your business with automated policies negotiation

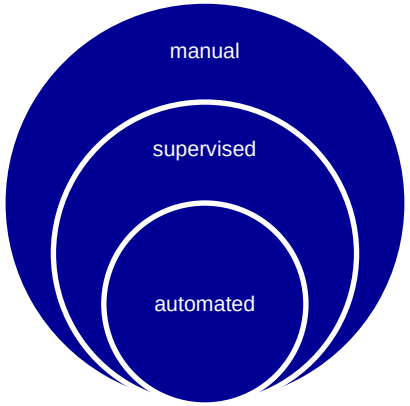
Business ⟷ Business

Customer ⟷ Business

Employer ⟷ Employee

Natural person ⟷ Process

Process ⟷ Process



Policy negotiation everywhere

- Contract / legally binding agreement
  - Buying a house in a notarial's office
  - Buying a soda in a vending machine
- Access control / Usage control
  - Standard Read/Write/Execute access
  - Data processing purpose negotiation and enforcement
  - Consent management
- Rights delegation
  - To a legal representative
  - To an employee
  - To a workload / service

Cloud Services Federations with ABAC/RBAC (IPCEI-CIS)

GDPR / Data Act / …

AI Act

eIDAS v2

Supervised / Automated

- The procedures to establish an agreement.
- The policy rules reasoning to reach an agreement.

General workflow

- A user looks for a **service** or **data product** offering in the network of federated catalogues.
  - When searching for an offering, the user might filter:
    - By **Gaia-X Compliance** credentials.
    - And/or by specific vertical/domain criteria.
- The user finds an **offering** and requests access for detailed information (pricing, T&C, …).
  - When requesting for information, the policies set on the offering by the offering producer and enforced by the offering provider might require to:
    - Onboard in a specific ecosystem/dataspace/federation and present membership or domain/regulation specific credentials.
    - And/or present **Gaia-X Compliance** credentials.
- The user with the information can decides to consume the offering(s) .
- The user **negotiates** and concludes a binding **agreement** with the offering provider.
- Both the user and the provider can **monitor** the execution of the **agreement**.

Gaia-X Federated Catalogues demoed during summit 2023

Enables various level of public/private service and data product offerings.

The provider might have to comply with the ecosystem terms & condition set by the ecosystem authority

The user can also combine several offerings together -> service composition

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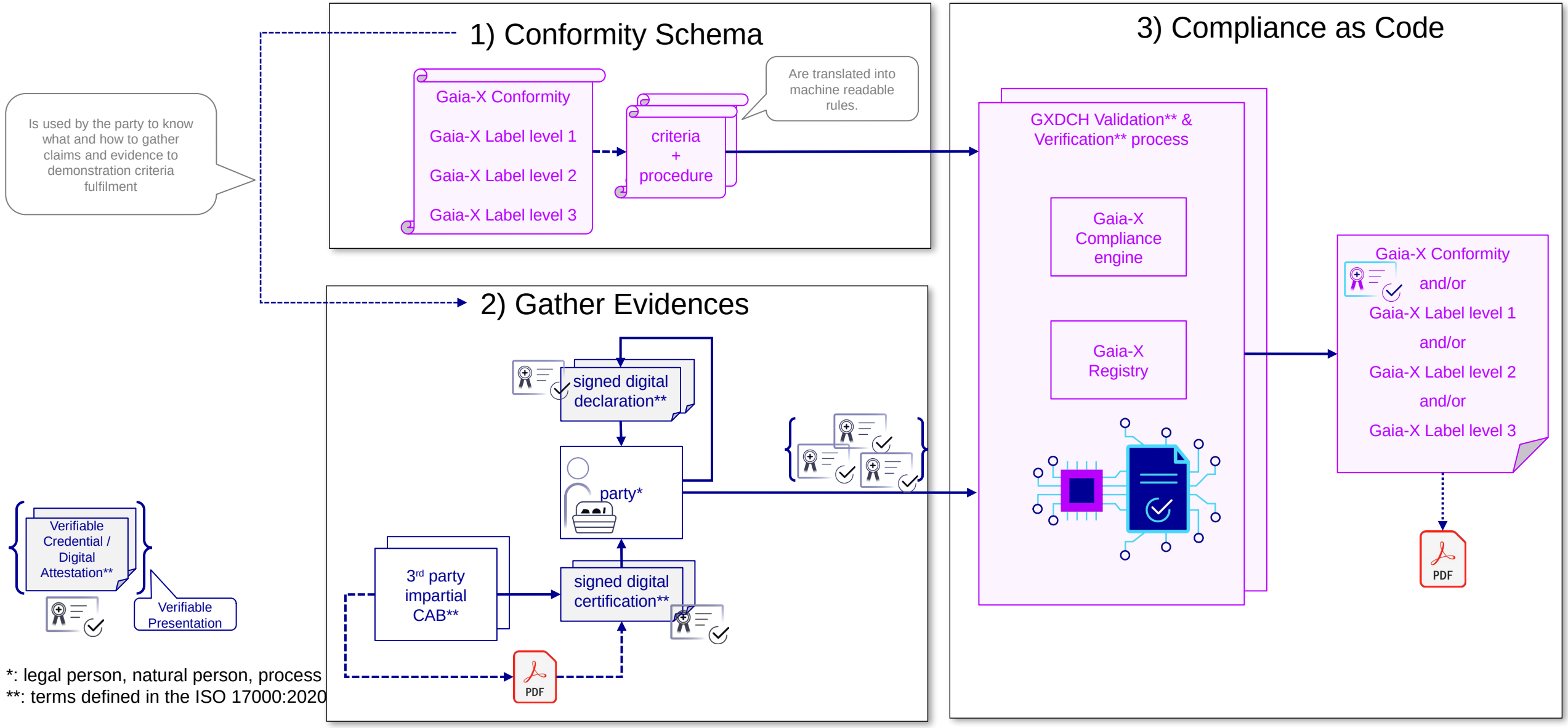
GXDCH v1 live and ready.

In progress

Global diagram



*: legal person, natural person, process
**: terms defined in the ISO 17000:2020

Gaia-X: a twofold story

- A technical stack to operationalise the trust model.
  - ISO 17000:2020 (CASCO) principles
  - W3C JSON-LD / W3C VC
  - W3C SHACL / W3C SPARQL
  - W3C DID / X509 / ETSI TS 119 312
  - OIDC4VCi / OIDC4VP / EBSI

- And a reference implementation for the GXDCH
  - DNSSEC
  - IPFS
  - TEE
  - …

- A set of rules to have reproducible and comparable risk assessment.
  - **4x compliance scheme: Gaia-X Conformity, Gaia-X Label level 1, Gaia-X Label level 2, Gaia-X Label level 3**
  - Contractual governance
  - General material & transparency
  - Data Protection
    - GDPR (L1 and above)
  - Cybersecurity
  - Portability
  - Sustainability
  - European Control (L2 and above)
  - …

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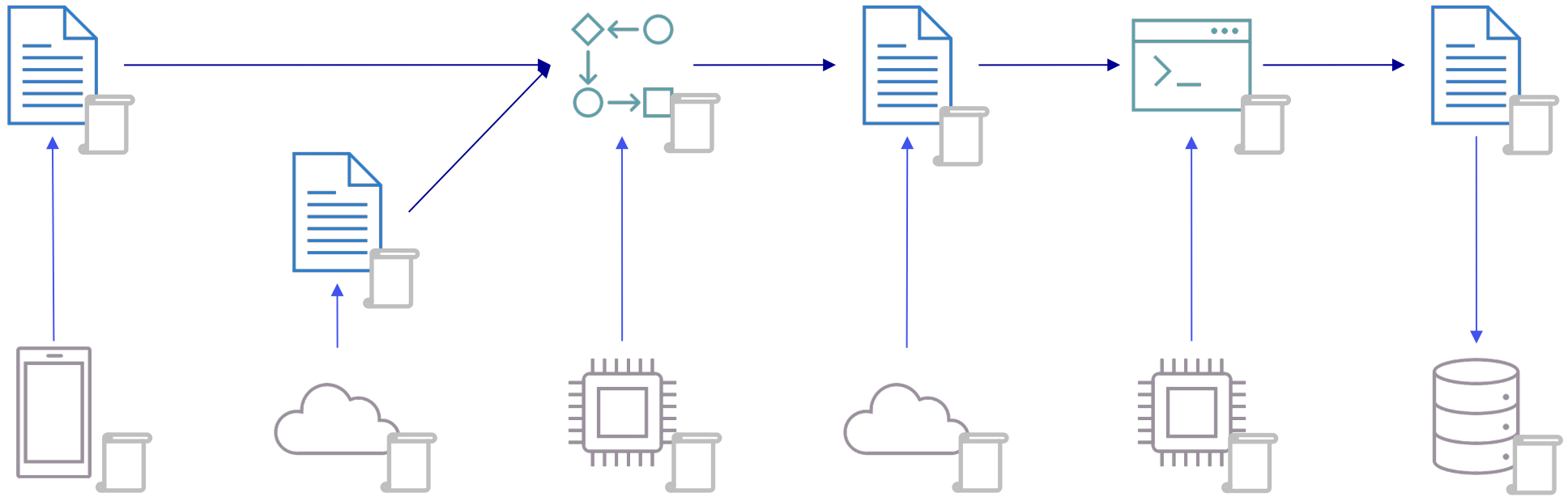
Any question now or later ?
-> Gaia-X staff

12 March 2024, Darmstadt

Part of
Data Spaces Symposium (DSS)
12 -14 March 2024

Data + Infra Ecosystem



machine readable file describing the entity

Gaia-X Digital Clearing House: Operationalize Trust, Compliance and Labels

10:00 –10:45

Moderator – Roland Fadrany, COO, Gaia-X

Sven Löffler, Head of Dataspaces & Data Products, T-Systems International

Enrico La Vela, Cloud Product Manager, Aruba S.p.A.

François Bourquin, Chief Digital Officer, Orange

Falk Weinreich, General Manager Central Europe, OVHcloud Germany

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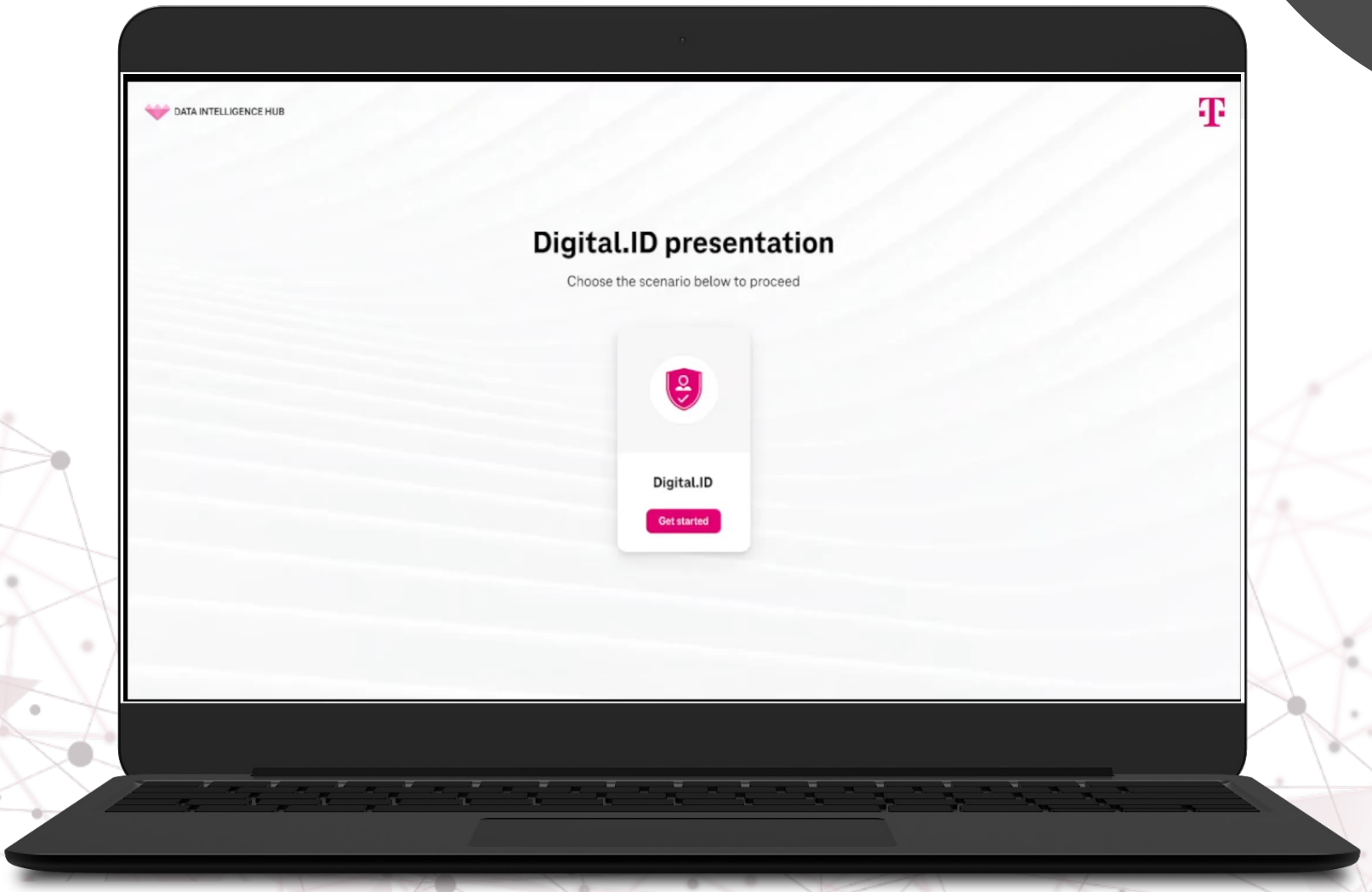
Part of
Data Spaces Symposium (DSS)
12 -14 March 2024

Build & Orchestrate | Digital.ID in Action



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12 -14 March 2024

Gaia-X Institute – Investigation of the Economics of Data-sharing

10:45 –11:30

Hubert Tardieu, Independent Board Member, Gaia-X

Lucas Eustache, Researcher in charge of the study on Economics of data sharing, Paris Dauphine University

Frédéric Sutter, Head of Skywise Product & Service Line, Airbus

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12 -14 March 2024

Economics of Data Sharing

- Partnership between Paris Dauphine University and Gaia-X institute + advisory board
- Investigating the economics of data sharing through data-sharing ecosystems
- Data-sharing ecosystems are new objects that lack economic analysis
- Creating an analytical framework for understanding existing ecosystems and developing future ones over time
- Strengthening the analytical framework using quantitative data and qualitative analysis

Motivation: Conference on Data Sharing in Europe: DGA and DA Paris Dauphine, Sept. 19 2023

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- Very high quality pre-recorded presentations (Jean-Noël Barrot, Franziska Brantner).
- Very high quality online live intervention by Yvo Volman (who followed the meeting all morning!) followed by lively discussion with audience.
- Presentation of questionnaire (B. Verdonck, L. Eustache) as well as panels and keynotes very well received and followed by live discussions among participants.
- **Convergence of views: (1) Catena-X,Eona-X,Ag Data Hub,Airbus,EDF: Food Sovereignty, Industrial Sovereignty, Energy Sovereignty require Data Sovereignty, (2) Concentrate on what we want rather than what we do not want: business case , Value Creation, Incentive for stakeholder to join . The subjects are real and will go live very soon 2023 and 2024.**
- International relations – be open but assertive and not naïve
- **Difference in key topics depending upon market structure: No agriculture data space without Neutral Data Intermediary(AgDataHub), Avoid Data Intermediary if Data Sovereignty required (Catena-X)**
- The organization of a second conference at Paris Dauphine University on these topics on September 12, 2024
- **Three focus area:**
  - **Economy of data sharing and technological governance (partners: GXI, Dauphine-PSI)**
  - **Automated Compliance by Design (GXI)**

Advisory Board

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Dauphine | PSL
CHAIRE GOUVERNANCE ET RÉGULATION

gaia-x INSTITUTE

AIRBUS

EONA-X

eDF

Catena-X
Your Automotive Network

agdatahub

Aim of The Study

- Follow up of the study carried out in 2023 and the conference on September 19, 2023.
- Understand the economics of data sharing through data sharing ecosystems
- Provide a framework for analyzing data-sharing ecosystems, including an analysis of the various stages in their life cycle
- Test this same framework to refine it (thanks to board members' commitment to sharing information)
  - Based on quantitative analysis of both participants and ecosystem orchestrators
  - Based on detailed case studies of ecosystems and their use cases

Presentation Outline

- Regulatory framework
- Data sharing ecosystems as a “*club*”
- Typologies of Data ecosystems’ stakeholders
- Cost and benefits for participants
- Ecosystem and Value Chains Characteristics
- Dynamics aspect of Data sharing Ecosystem

Regulatory framework

- Digital Markets Act entered into force 2 May 2023
  - Gatekeeper regulation
- Data Governance Act entered into force 24 September 2023
  - New governance model for data intermediaries
- Data Act entered into force 11 January 2024
  - Facilitator, open data flows (I.o.T.)

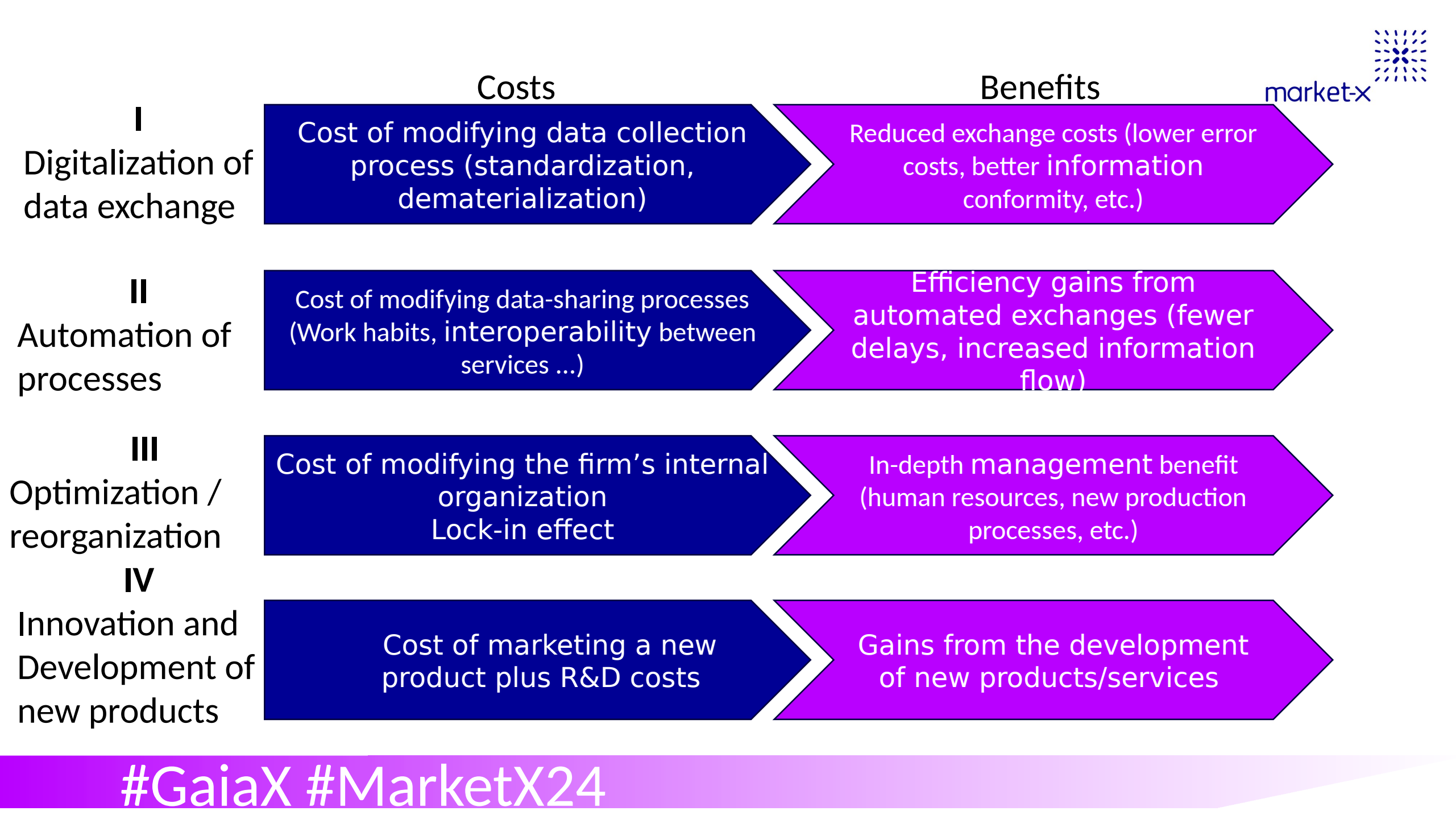
Data Sharing Ecosystem as a Club Good

A club allows to provide goods that are non-rivalrous (i.e. goods the consumption of which by one agent does not prevent use by other agents) but which are excludable (i.e. goods to which access to can be technically and economically efficiently prevented)

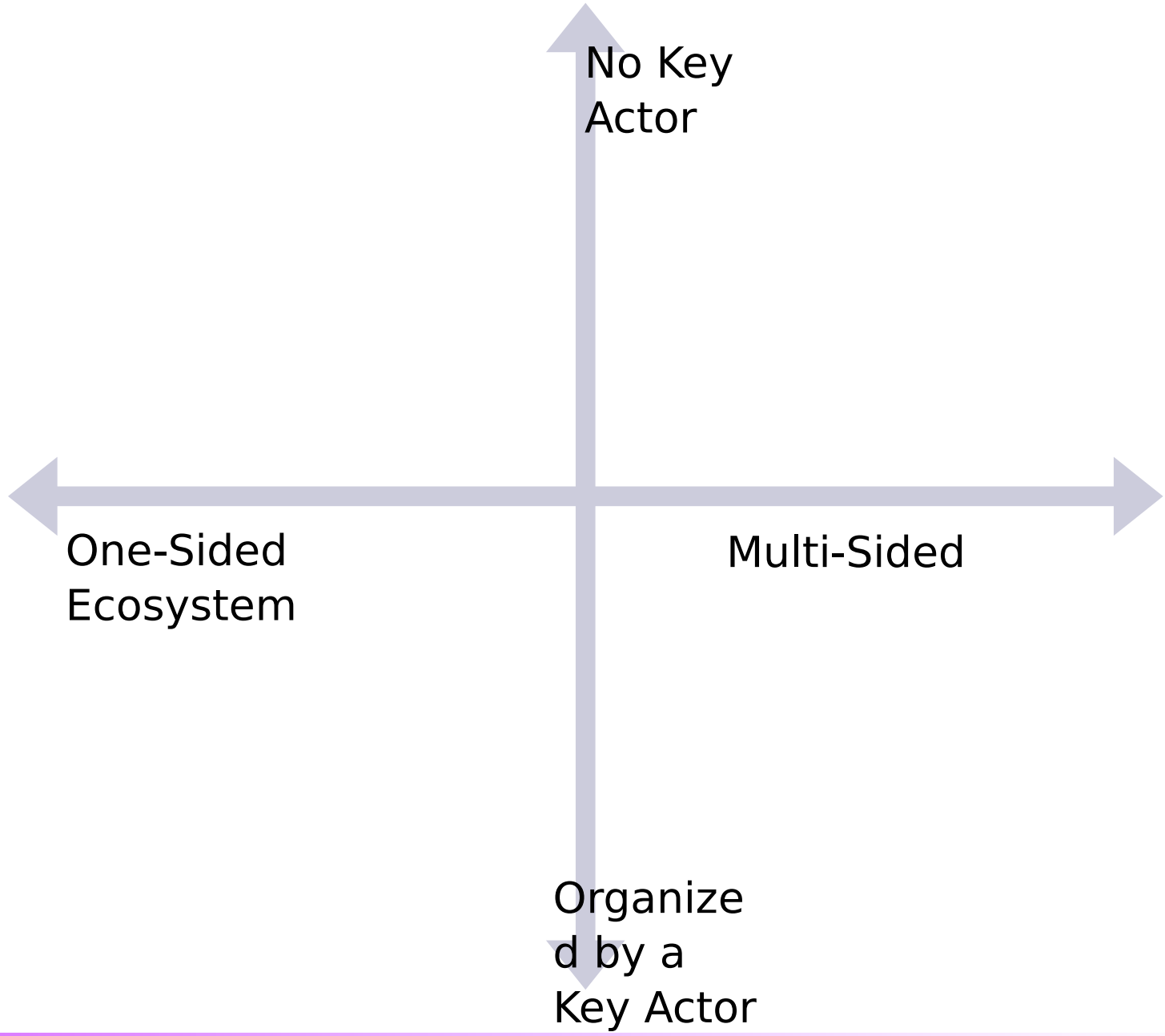
- Example of clubs : Satellite TV , Private garden, VOD service
- The purpose of the club is to finance the production of the good (The financial contribution of club members must be assessed dynamically)
- The club allows to avoid the “*Free rider*” problem
- The services provided by the orchestrator together with the shared data and the service derived from them and benefitting to the ecosystem’s members constitute the “club good”

Data Sharing Ecosystem: a Typology

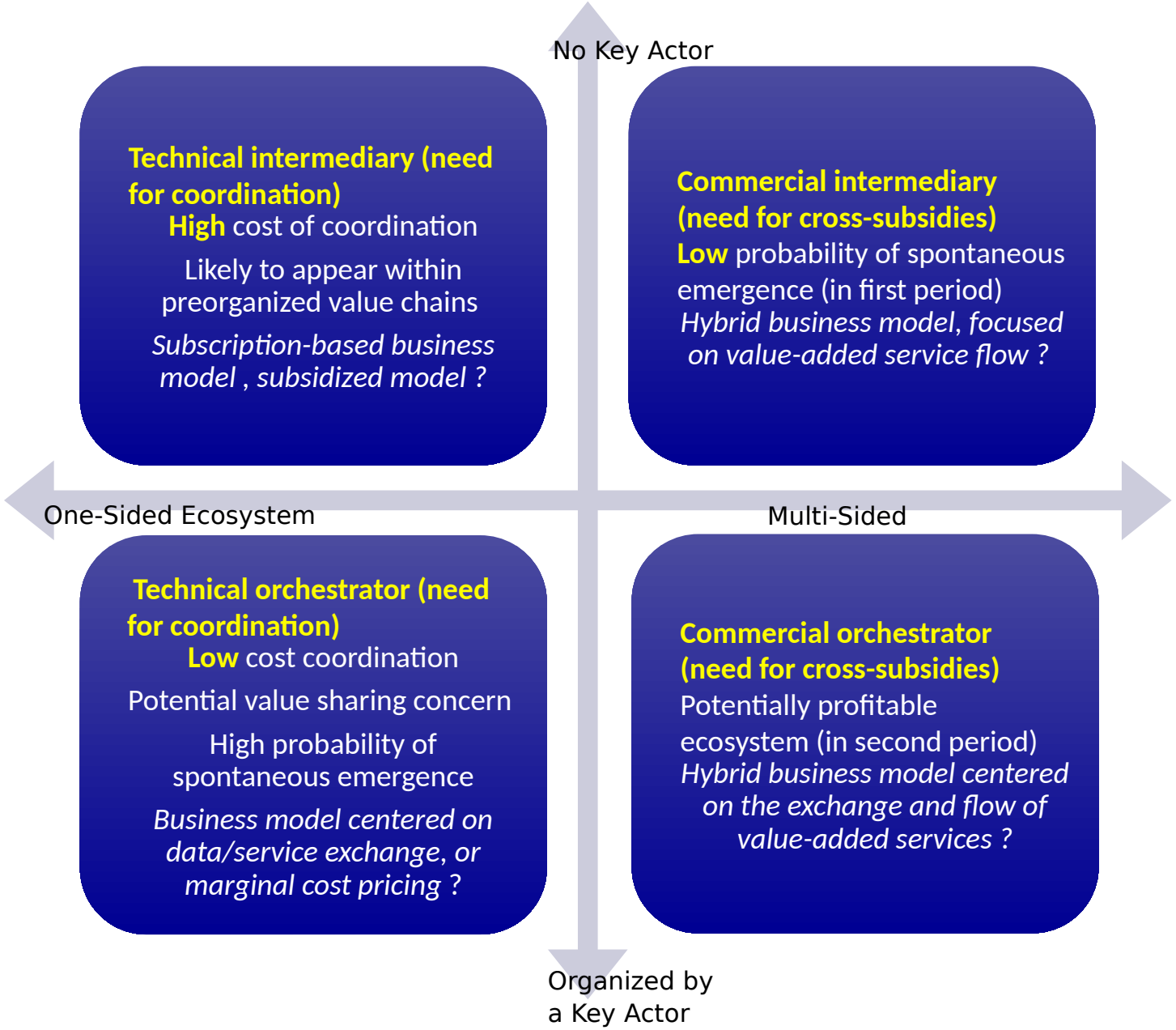
- Two subsets of participants, data-sharing **ecosystem participants** and **orchestrators**
- Ecosystem **participants** are agents coming from one or more value chains. Often **firms**, they are in most cases both **data/service providers** and **data/service users**.
- Data-sharing ecosystem **orchestrators** are agents in charge of **organizing the ecosystem**, and **coordinating participants** They can be either :
  - Key actor, i.e. firms with a dominant position in one or more segments of the value chain
  - Intermediary, i.e. either an agent in the value chain designated by the other participants as an orchestrator, or an agent created ad hoc by the participants to fulfill this task.


Costs
Benefits
I
Digitalization of data exchange
Cost of modifying data collection process (standardization, dematerialization)
Reduced exchange costs (lower error costs, better information conformity, etc.)
II
Automation of processes
Cost of modifying data-sharing processes (Work habits, interoperability between services ...)
Efficiency gains from automated exchanges (fewer delays, increased information flow)
III
Optimization / reorganization
Cost of modifying the firm's internal organization
Lock-in effect
In-depth management benefit (human resources, new production processes, etc.)
IV
Innovation and Development of new products
Cost of marketing a new product plus R&D costs
Gains from the development of new products/services

Ecosystem and Value Chains Characteristics



Ecosystem and Value Chains Characteristics



Dynamics and Data Sharing Ecosystem

- The dynamic aspect makes it possible to analyze key stages in the ecosystem's life cycle, its emergence, the achievement of critical mass, the diversification of its activity…
- These steps are fundamental to understanding the mechanisms of ecosystem viability
- The dynamic approach enables us to analyze the movement from a one-sided ecosystem to a multi-sided one.
  - This transition requires an additional coordination cost for the orchestrator, and an additional integration cost for the participants.
  - This transition can be achieved through the integration of new value chains
  - Diversify the business model and create more use cases

Main Takeaways

- The gains for an ecosystem participant are sequential, from the most direct to the most indirect, and require reorganization costs.
- Data-sharing ecosystems can be seen as clubs that enable the financing of the goods and services inherent in data sharing.
- The organization of a data-sharing ecosystem is based on the value chains it intends to govern
  - Homogeneity and complementarity of the needs of value chain stakeholders
  - Value chain atomicity
- Data-sharing ecosystems need to be analyzed dynamically to capture insights about different stage of their life cycles

→The next six months will be dedicated to testing this framework.

Two examples: BoostAerospace & Skywise

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Aerospace Dataspace: Examples	BOOST AEROSPACE AirSupply	skywise.
Business Process	Procure-to-Pay	Aircraft Maintenance & Fleet operations
Participants	30 BuySide > 3’500 SellSide	> 10’500 aircraft in service connected
Business Value	Process automation cost avoidance	Aircraft Operational availability & fleet performance Industrial Efficiency

Lessons Learnt to set up and orchestrate a Dataspace

1/ Legacy Systems are not natively designed to share data in an extended enterprise context

→Lesson 1: Define commun business challenges and related data needed to be exchanged

2/ Participant's trust in how data are shared, used and protected is critical to scale

→Lesson 2: A clear data governance, policy enforcement and cyber-security framework are required

3/ Massive Investment is required to setup & operate data space infrastructure and data preparation/connection

→Lesson 3: Difficult equation to balance investment/run cost vs business value vs scalability

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Thank you!

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Data Spaces Symposium (DSS)
12 -14 March 2024

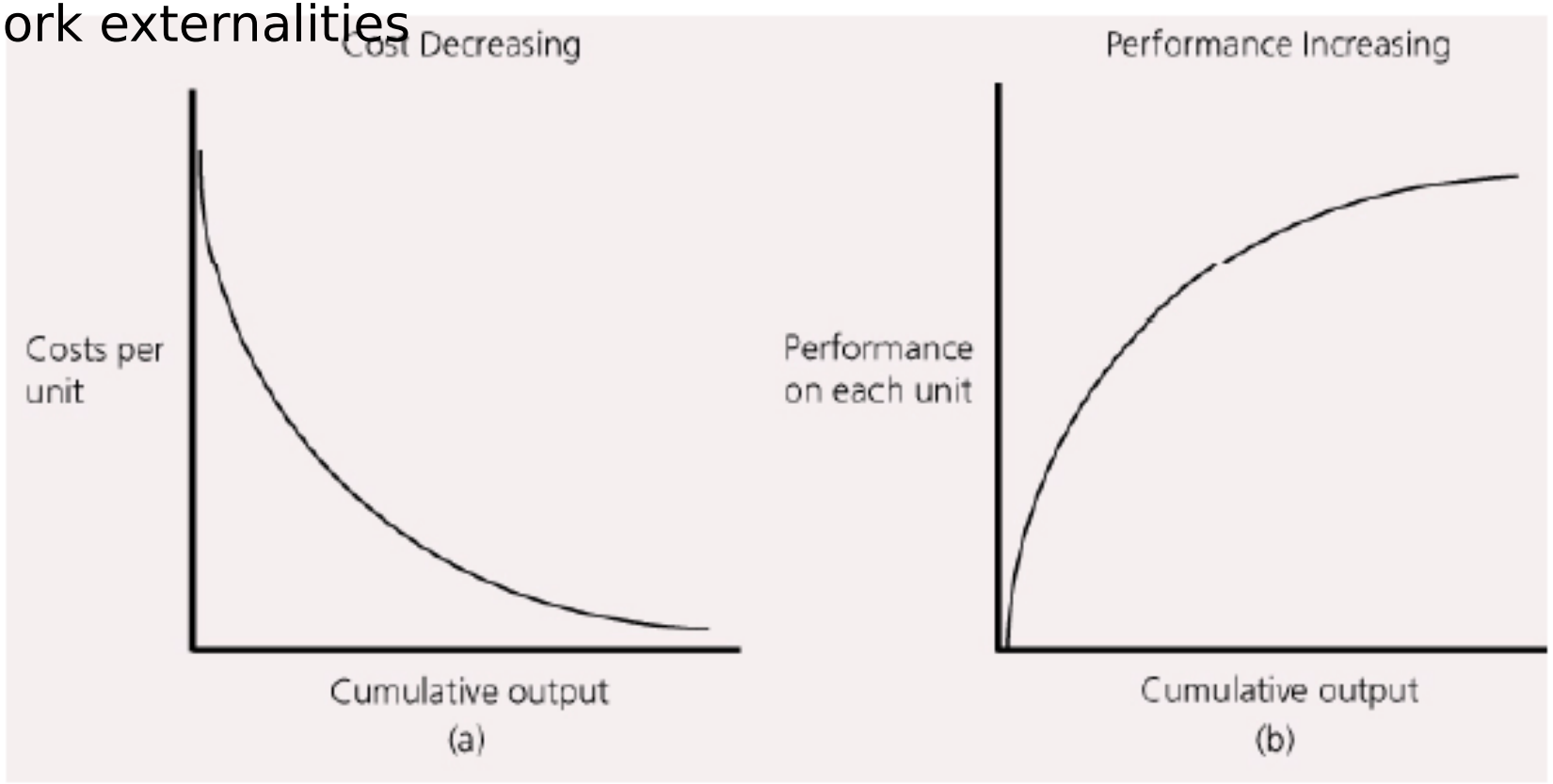
Collective vs. Private Goods

Econ. Characteristics	Exclusion (Low Cost Rationing)	Non-exclusion (Costly rationing)
Rival (Cm>0) Desirable rationing	A Private Good	D Common Pool
Non-rival (Cm=0) Undesirable rationing	C Club Good	B Pure Collective (Public) Good

Technologie adoption

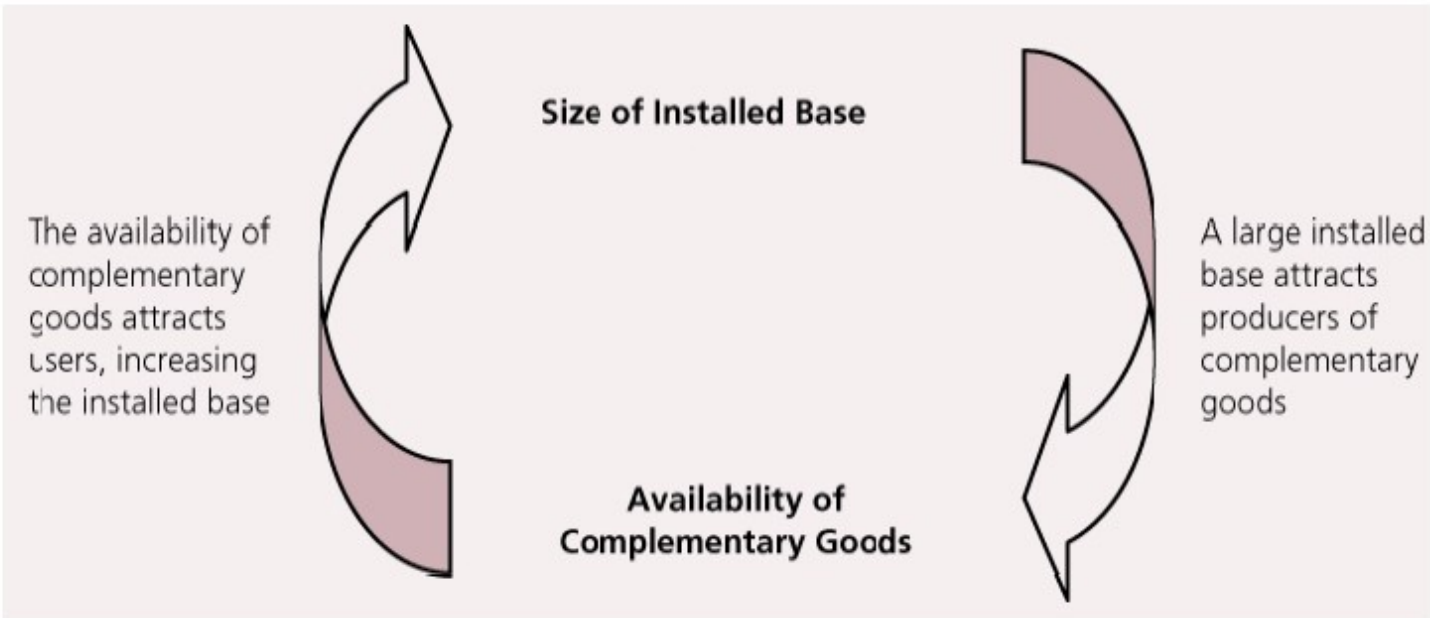
When a technologies become more valuable the more it is adopted. Two primary sources are

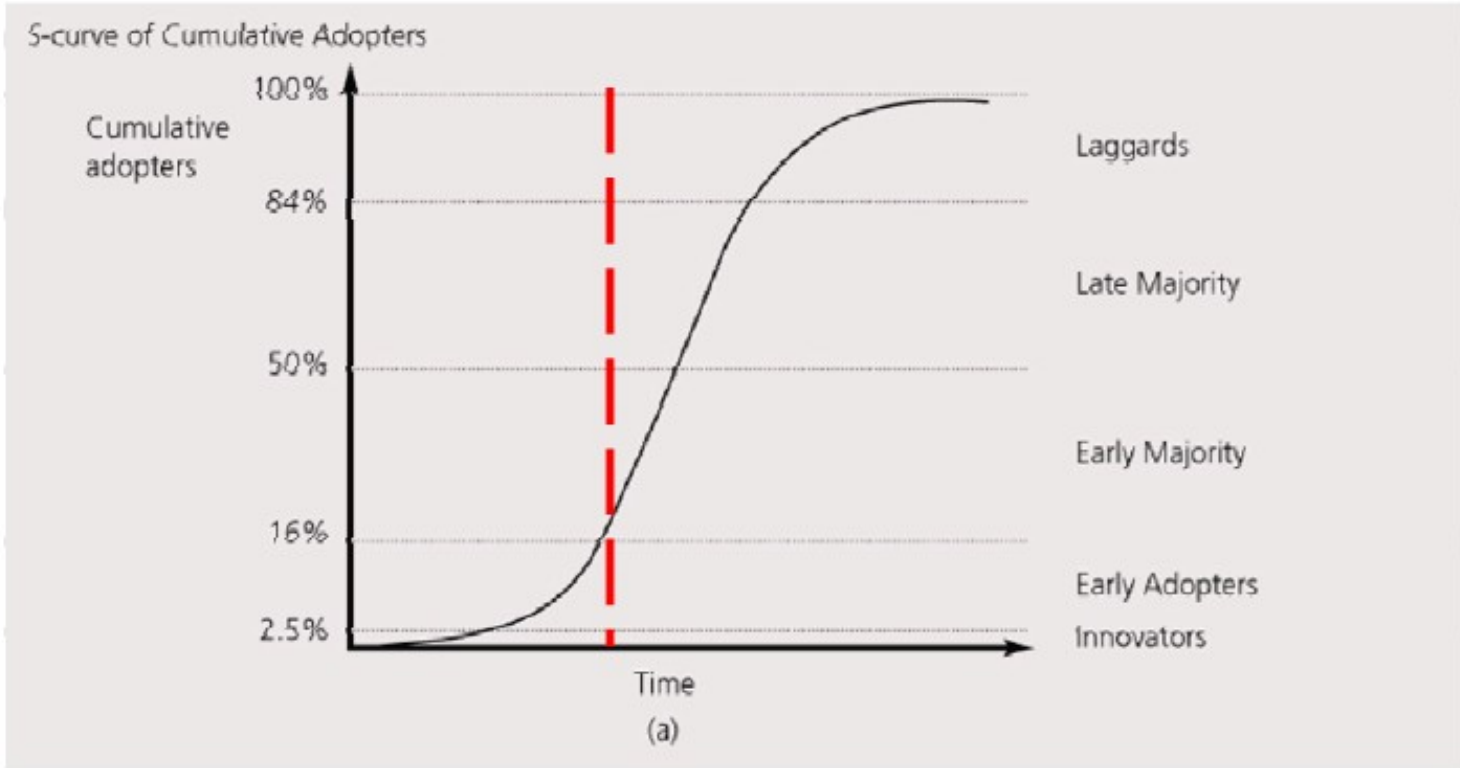
- Learning effect
- Network externalities



Why dominant designs are selected

- A technology with a large installed base attracts developers of complementary goods; a technology with a wide range of complementary goods attracts users, increasing the installed base. A self-reinforcing cycle ensues:




S-curve of Cumulative Adopters
Cumulative adopters
100%
84%
50%
16%
2.5%
Time
(a)
Laggards
Late Majority
Early Majority
Early Adopters
Innovators

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Coffee Break

11:30 – 12:00

Part of
Data Spaces Symposium (DSS)
12 - 14 March 2024

Voices of Success: Use Cases and Building Blocks

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12:00 –13:00

Moderator – Ulrich Ahle, CEO, Gaia-X

Petteri Kivimäki, CTO, Nordic Institute for Interoperability Solutions (NIIS)

Raphaela Butz, Senior Technical Manager, LMIS AG

Part of
Data Spaces Symposium (DSS)
12 -14 March 2024

X-ROAD® 8 "SPACESHIP": TRANSFORMING EXISTING DATA ECOSYSTEMS INTO GAIA-X-COMPATIBLE DATA SPACES

12 March 2024

Nordic Institute for Interoperability Solutions (NIIS)

DIGITAL SOCIETY SOLUTIONS AND CROSS-BORDER COOPERATION

Nordic Institute for Interoperability Solutions

Non-profit association to ensure the development and strategic management of X-Road® and other cross-border solutions for digital government infrastructure.

niis.org

X-ROAD®

Open-source software and ecosystem solution that provides unified and secure data exchange between organisations.

x-road.global

Harmony eDelivery Access

A free and actively maintained open-source component for joining one or more eDelivery policy domains.

edelivery.digital

X-ROAD®
DATA EXCHANGE LAYER

X-Road® is open-source software and ecosystem solution that provides unified and secure data exchange between organisations.

X-Road® is licensed under the MIT open-source license and is a digital public good verified by the Digital Public Good Alliance.

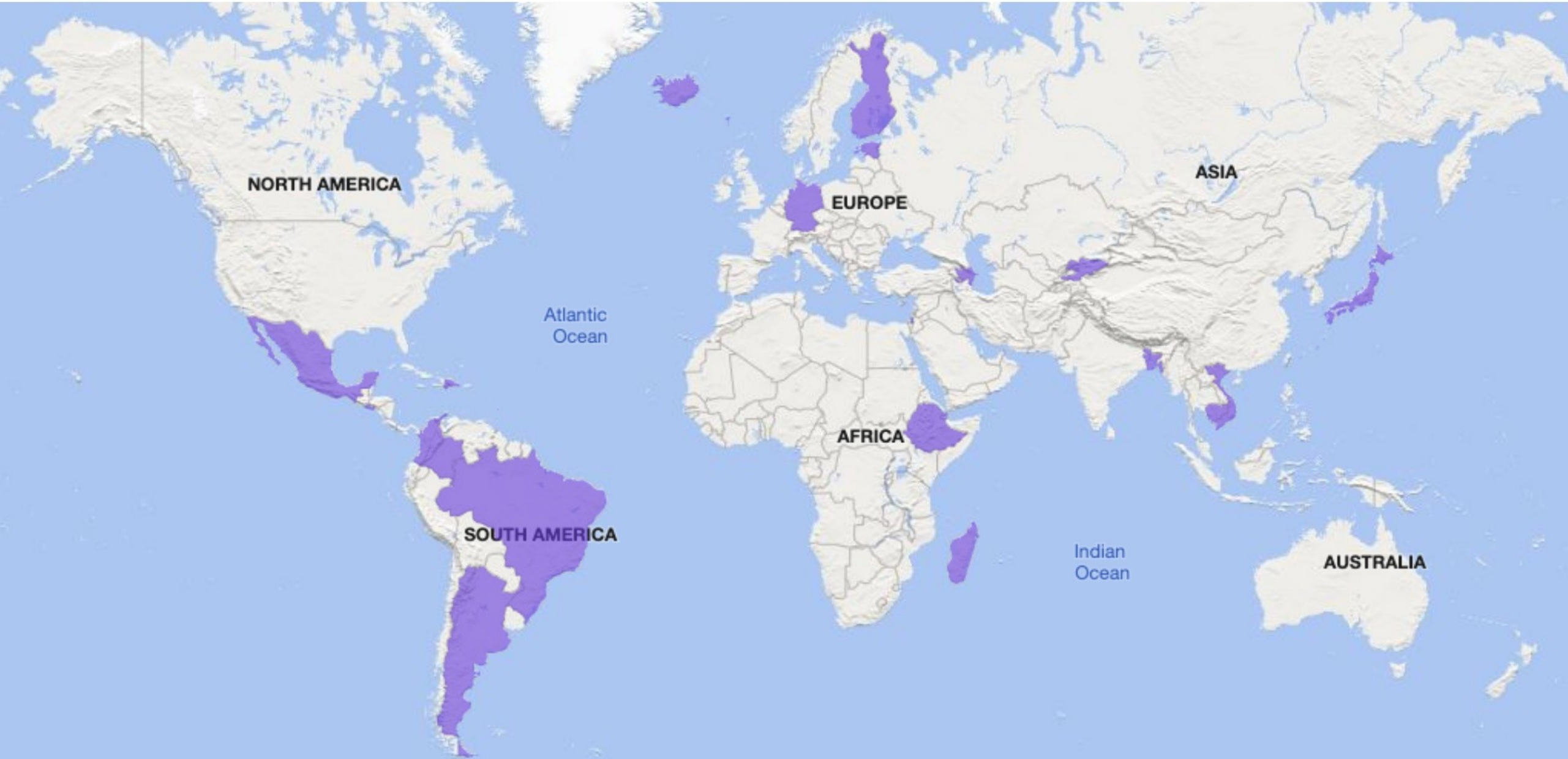
23
ECOSYSTEMS
DEPLOYED BY GOVERNMENTS OR OTHER ORGANISATIONS

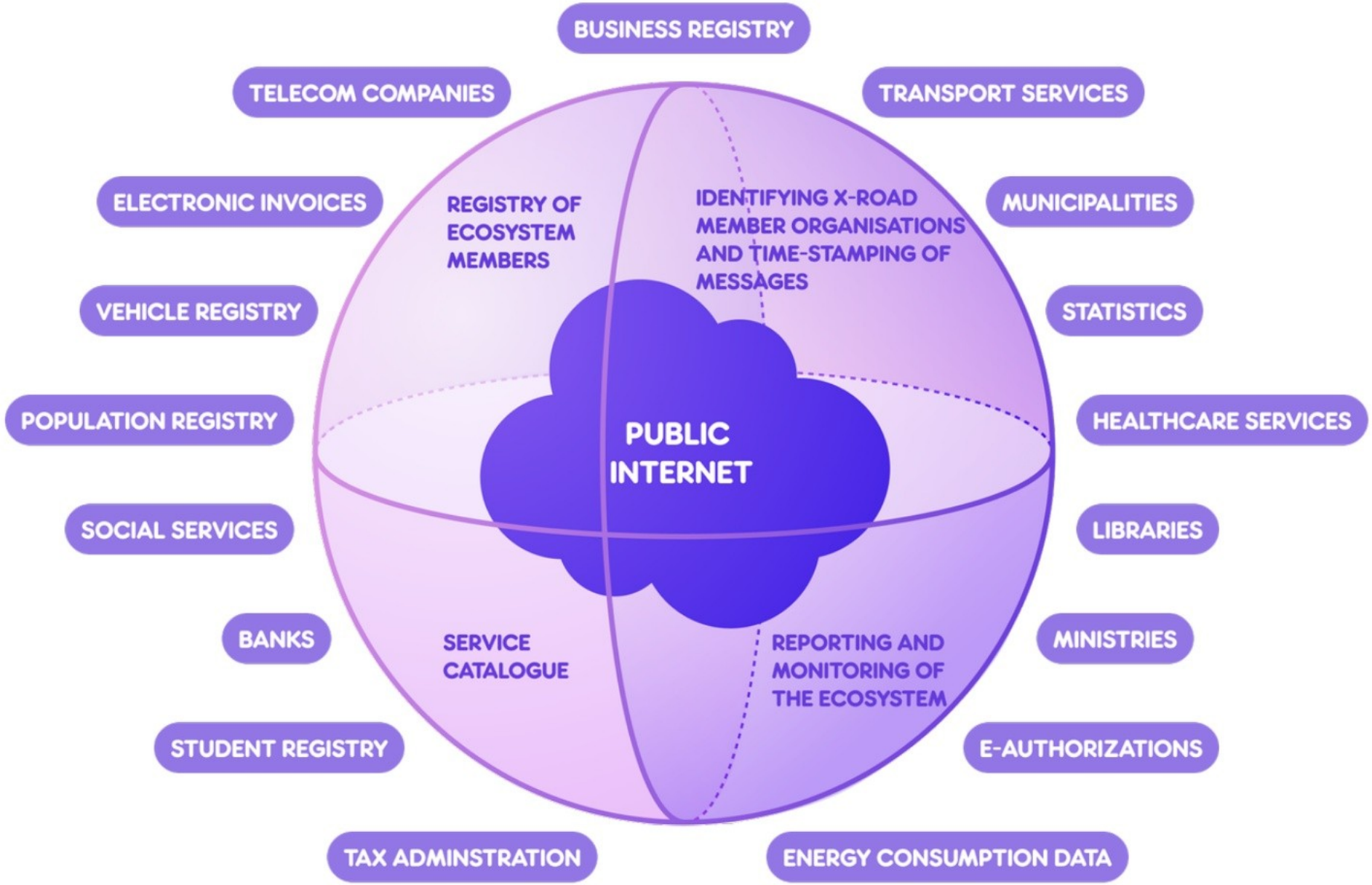
150
COUNTRIES
REPRESENTED IN THE X-ROAD COMMUNITY

3600
MEMBERS
PARTICIPATING IN THE X-ROAD COMMUNITY

542M
END USERS
WORLDWIDE

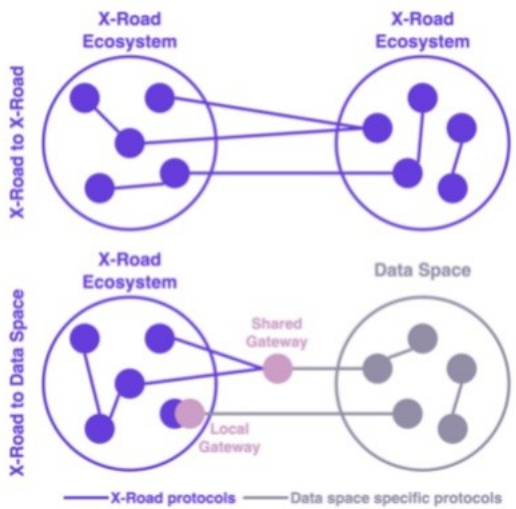
COUNTRIES WITH X-ROAD ECOSYSTEMS

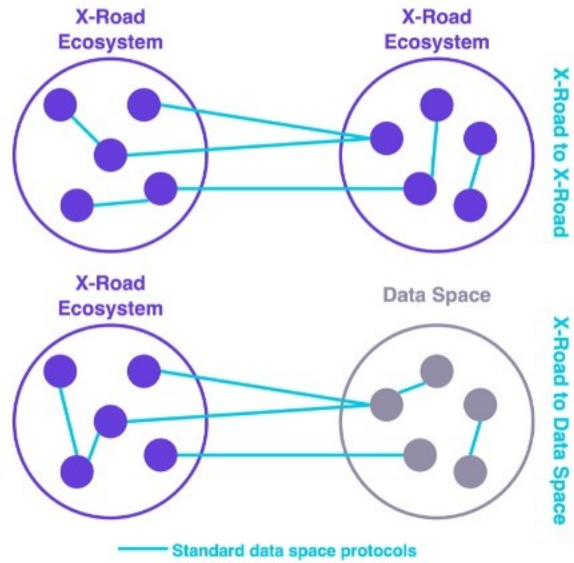



BUSINESS REGISTRY
TELECOM COMPANIES
TRANSPORT SERVICES
ELECTRONIC INVOICES
MUNICIPALITIES
VEHICLE REGISTRY
STATISTICS
POPULATION REGISTRY
HEALTHCARE SERVICES
SOCIAL SERVICES
LIBRARIES
BANKS
MINISTRIES
STUDENT REGISTRY
E-AUTHORIZATIONS
TAX ADMINSTRATION
ENERGY CONSUMPTION DATA
REGISTRY OF ECOSYSTEM MEMBERS
IDENTIFYING X-ROAD MEMBER ORGANISATIONS AND TIME-STAMPING OF MESSAGES
SERVICE CATALOGUE
REPORTING AND MONITORING OF THE ECOSYSTEM
PUBLIC INTERNET

TOWARDS A DATA SPACE SOLUTION

TRANSITION TO A DATA SPACE TECHNOLOGY





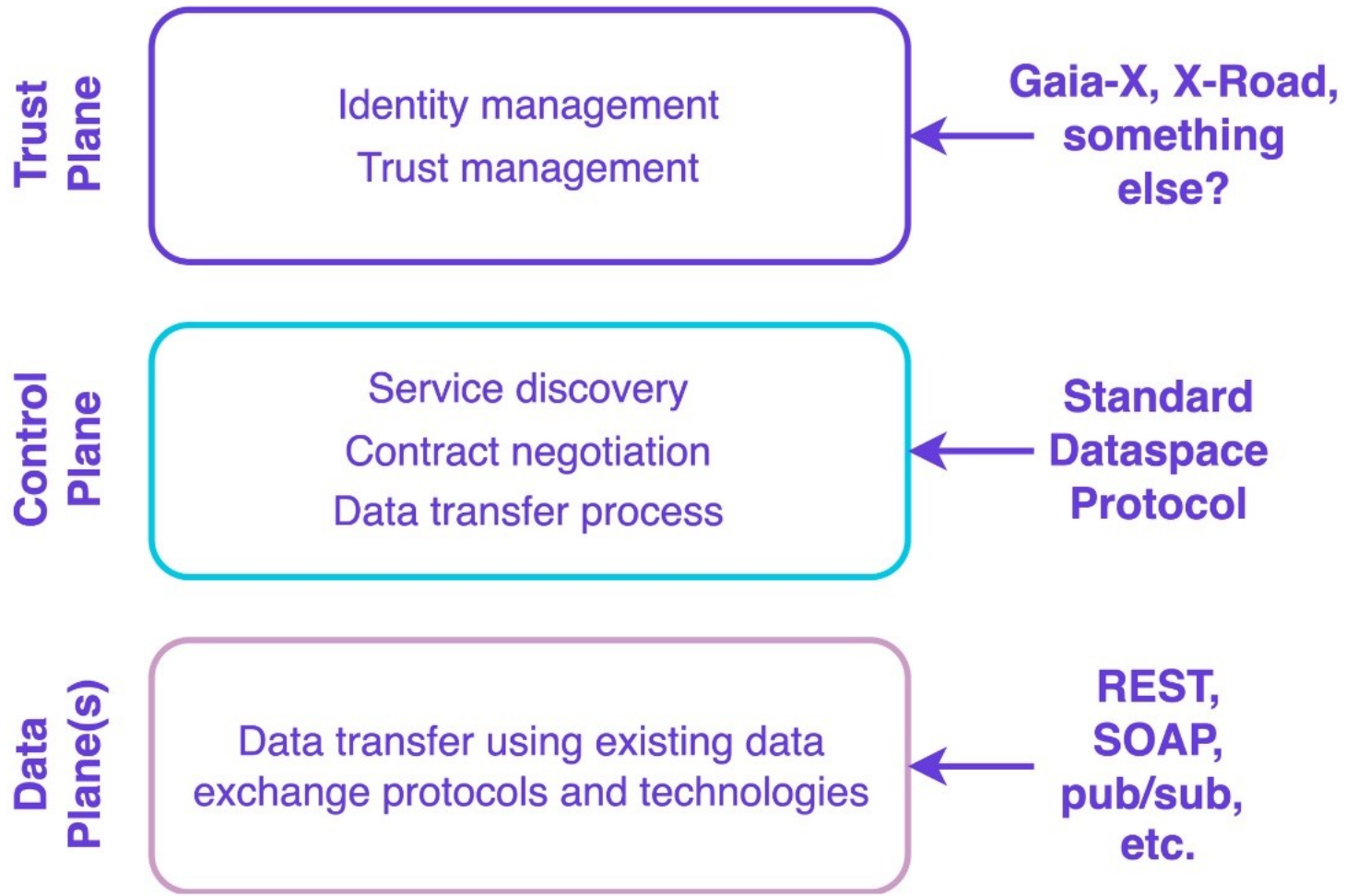
Current state

X-Road has its own custom protocol stack and being interoperable with other data exchange ecosystems requires building and maintaining custom ecosystem-specific gateway solutions. NIIS is alone responsible for maintaining and developing X-Road.

Target state

X-Road uses the standard data space protocols and is interoperable with other data exchange ecosystems following the same standards and specifications. X-Road is based on existing open-source components that are maintained by their international developer communities. NIIS contributes to the maintenance, but the main focus is in developing new business features for the NIIS members.

THE DATA SPACE PROTOCOL STACK



X-ROAD 8 “SPACESHIP”

The Nordic Institute for Interoperability Solutions (NIIS) is thrilled to announce the start of a proof of concept to develop a new major version of the X-Road.

The X-Road 8 “Spaceship” nurtures the proven ecosystem model and security while it takes X-Road to the next level by providing a solid data space infrastructure.

With the proof of concept, NIIS aims to validate the feasibility of replacing X-Road’s custom protocol stack with standard data space protocols and align X-Road’s trust framework with the Gaia-X trust framework.

Close to the current concept of the X-Road ecosystem, data space is a distributed system defined by a governance framework that enables secure and trustworthy data transactions between participants while supporting trust and data sovereignty.

The project also tries to ensure smooth integration with previous X-Road versions for backwards compatibility, estimate the changes required for information systems when transitioning to X-Road 8, and assess potential changes to existing X-Road components.

The proof of concept results are expected for review in May 2024. The second half of the year will witness another project to test the results within Estonia’s X-Road ecosystem.


X-ROAD® 8
Are you ready to explore data spaces?
x-road.global/
spaceship

AUTO WERKSTATT 4.0

Ecosystem for data and **AI-supported vehicle diagnostic services**

Gefördert durch:
Bundesministerium für Wirtschaft und Klimaschutz
BNetzA
aufgrund eines Beschlusses des Deutschen Bundestages

Use Case

AI Assisted Fault Diagnosis

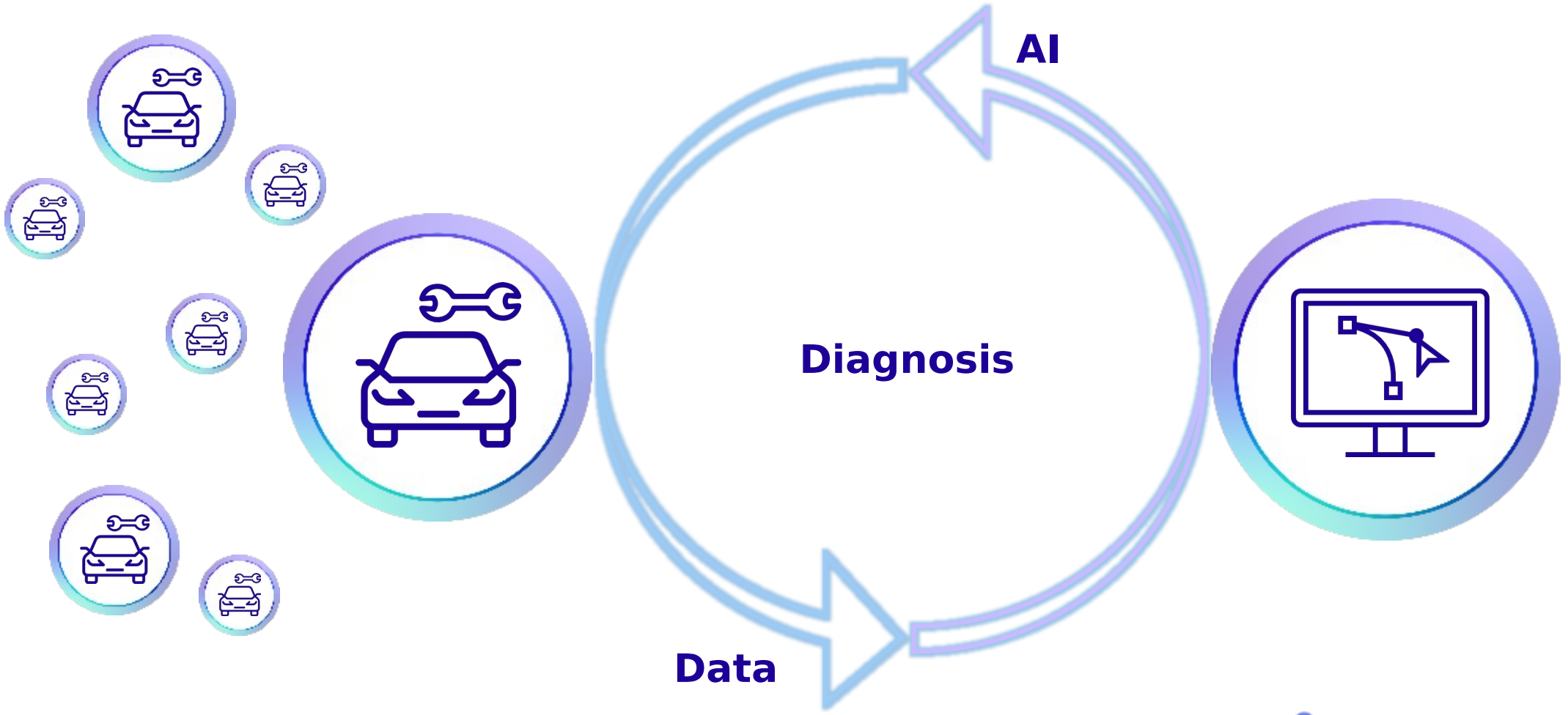
Use Case

Shortage of Skilled Workers

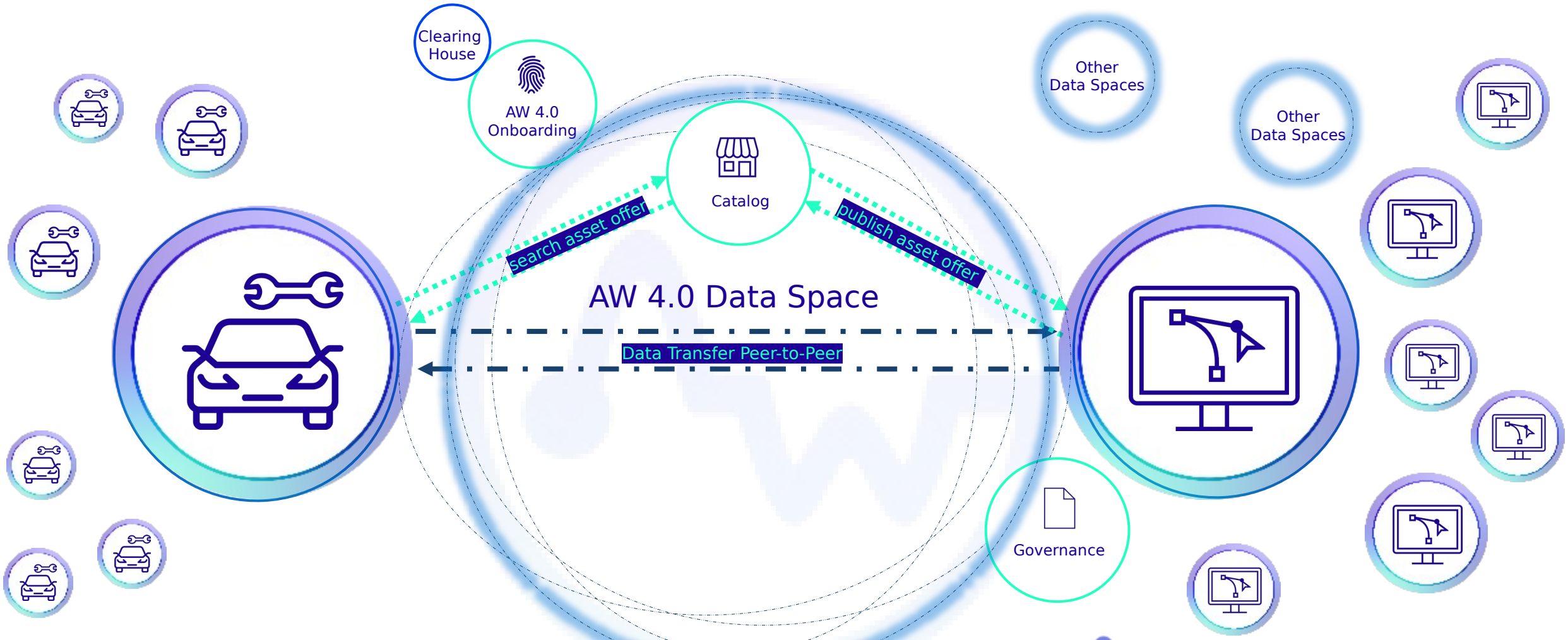
Component Waste

Data Silos

Use Case | Centralized System



Use Case | Data Space



Solution

EDC as a Service

Solution

Device-X

measuring voltage data

Edge device for measuring and visualizing voltage data

Integrated AW 4.0-Hub

AW 4.0-Hub

AI-supported diagnosis

Data exchange

AI-Assisted Fault Diagnosis

Extendable through different modules for (AI- assisted) fault diagnosis

Flexible hosting

AW 4.0-Hub

AI-supported diagnosis

Data exchange

Integrated EDC-as-a-Service

Easy and trustworthy asset exchange within dataspaces

Raphaela Butz

Senior Technical Manager

Raphaela.butz@lmis.de

Simone Steinhorst

Senior Business Development Manager

Simone.steinhorst@lmis.de

MEET US @ Gaia-X Hub №12

13:00 – 14:00 & 15:00 – 16:30

eco

AUTOINTERN
Immer eine zündende Idee.

Vergölst® Reifen + Autoservice

DEKRA

LMIS
LET'S MAKE IT SMARTER

DFKI Deutsches Forschungszentrum für Künstliche Intelligenz GmbH

HOCHSCHULE OSNABRÜCK
UNIVERSITY OF APPLIED SCIENCES

PRO LAB
Produkt + Produktion
Prof. Dr. Kortenbruck - Prof. Dr. Vöth

AUTO WERKSTATT 4.0

SmartMA-X as a pioneer for Factory-X

Market-X
Darmstadt, 12.03.2024

Pascal Rübel

The Association

- SELF-CONCEPT:
- Center of Excellence for the transfer and demonstration of innovative ICT in manufacturing

- KEY DATA:
- Established: 2005
- Legal form: non-profit organization
- Executive Management: Prof. Dr. Martin Ruskowski (CEO), Eric Brabänder (Empolis), Andreas Huhmann (Harting), Dr. Detlev Richter (TÜV SÜD)
- Membership: Companies and research institutes from 8 countries
- Staff: approx. 30 permanent employees & 30 undergrad assistants
- Funding: Membership fees, research projects, industry projects, donations
- Collaboration: Close cooperation with TU Kaiserslautern and

University of Kaiserslautern-Landau (RPTU)	German Research Center for Artificial Intelligence (DFKI)	Technologie-Initiative SmartFactory KL e.V.
		
Department of Mechanical and Process Engineering, Chair for Machine Tools and Control Systems (WSKL)	Kaiserslautern Research Department Innovative Factory Systems (IFS)	Kaiserslautern, DFKI building Non-profit organization („eingetragener Verein“)

Membership of SmartFactory^{KL}

As of: January 1st 2024

Digital Supply Chains enable resilience

Disruptions in supply chains

Customer individual products

shorter time-to-market

Open capacities

Ability to Change

Digital Supply Chains enable resilience

Supply chain

Factory level

Machine level

Agility

Adaptability

Reconfigurability

Dynamic at runtime

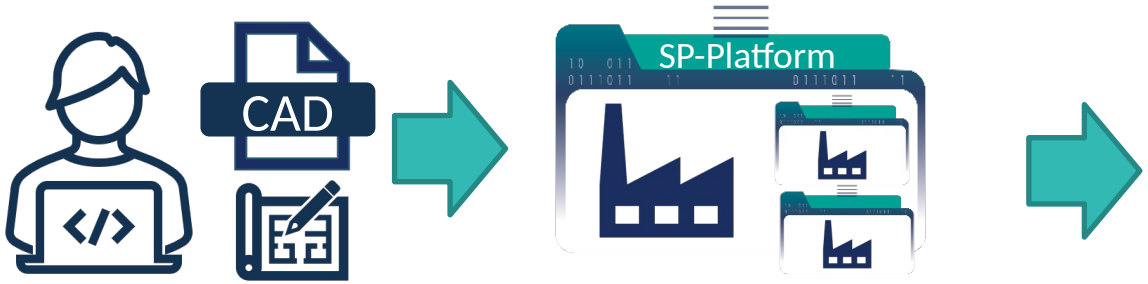
smart MA-X

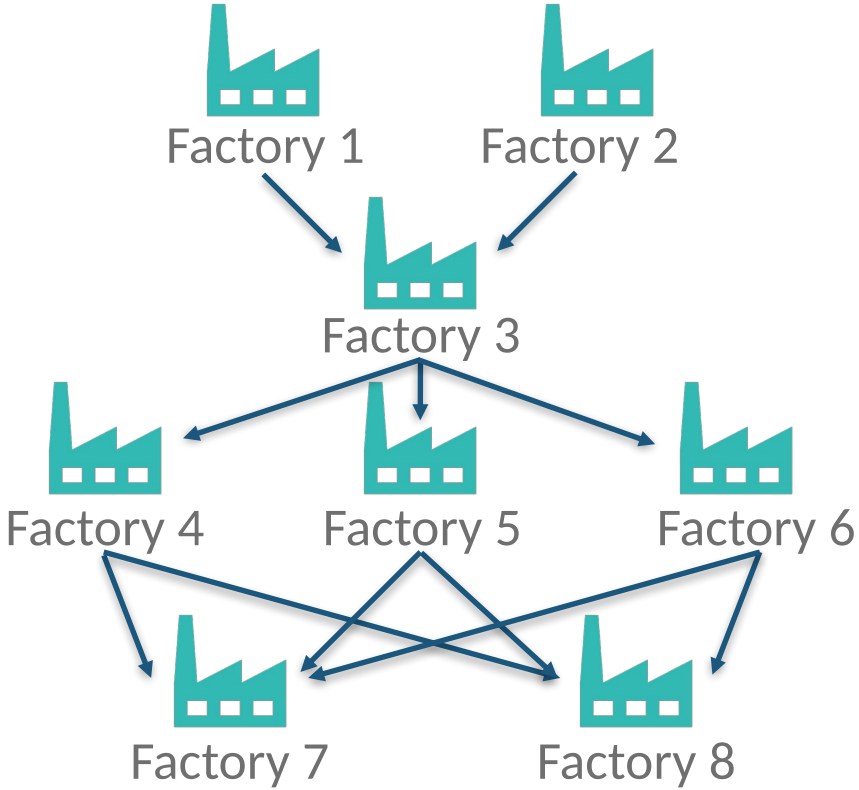
SHARED PRODUCTION Kaiserslautern

Vision smartMA-X:

Establishment of distributed production in Kaiserslautern according to Gaia-X principles in order to be efficiently and sustainably equipped against external influences.

Shared production identifies supply chains at runtime





Data spaces as enablers of Shared Production

gaia-x

Semantic description of required services

+

Digital representation

Product

Secure data infrastructure

Federated service catalogue

Standardized message structure

Standardized interaction patterns

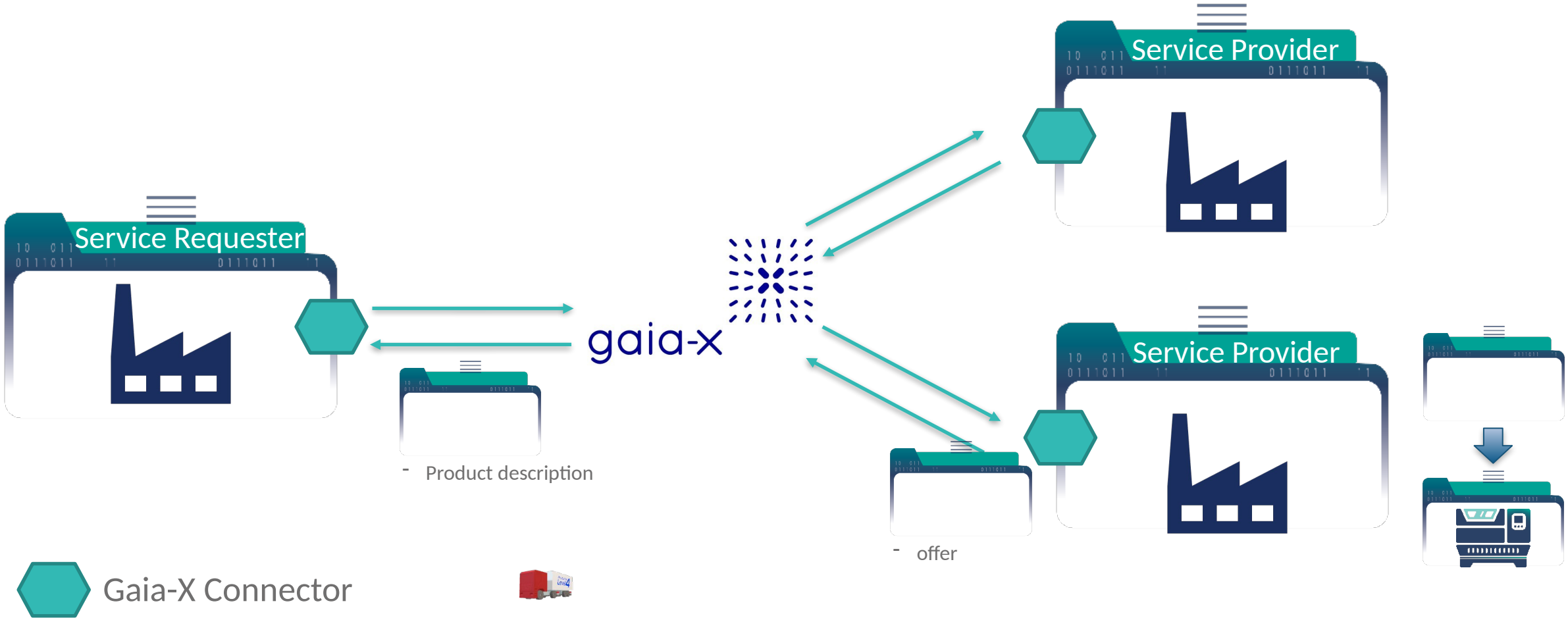
Semantic description of offered services

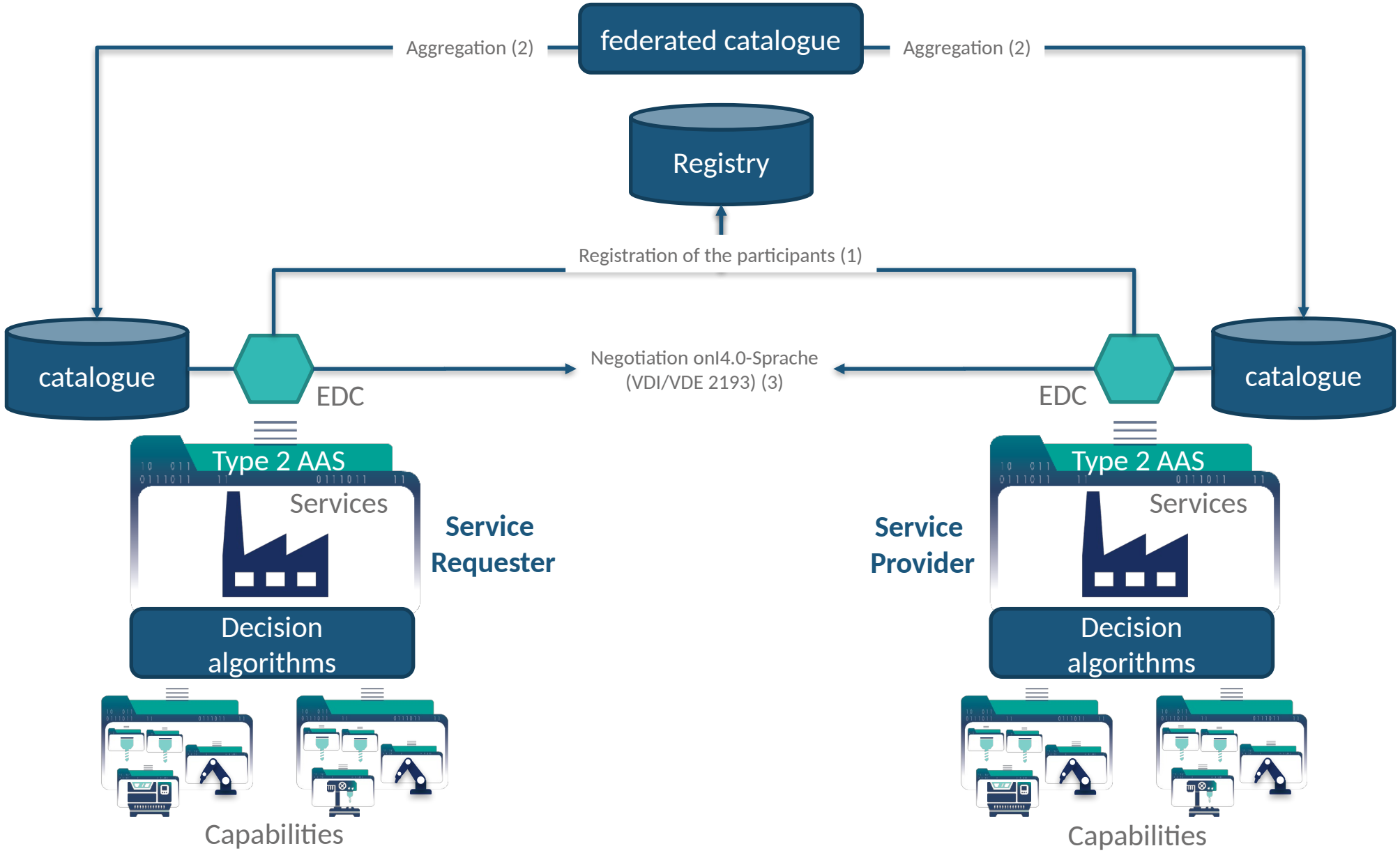
+

Digital representation

Companies

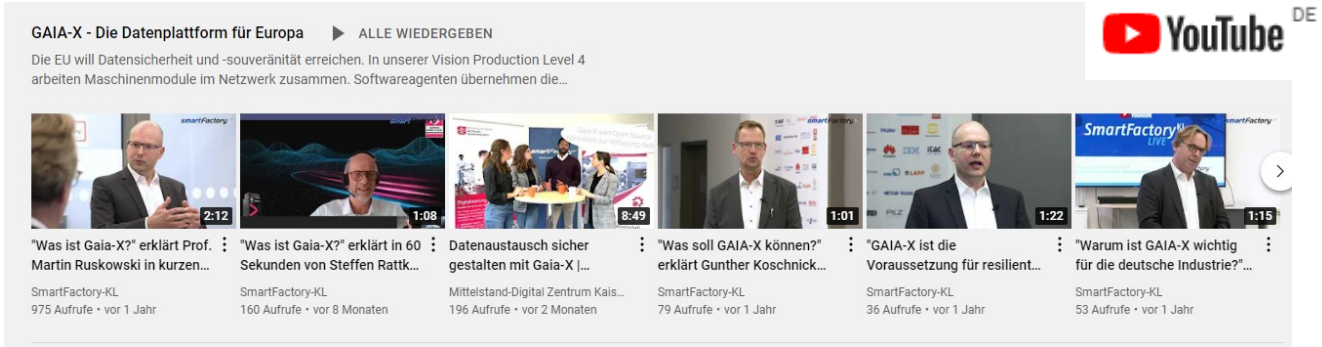
Shared Production in Action – I4.0 Language

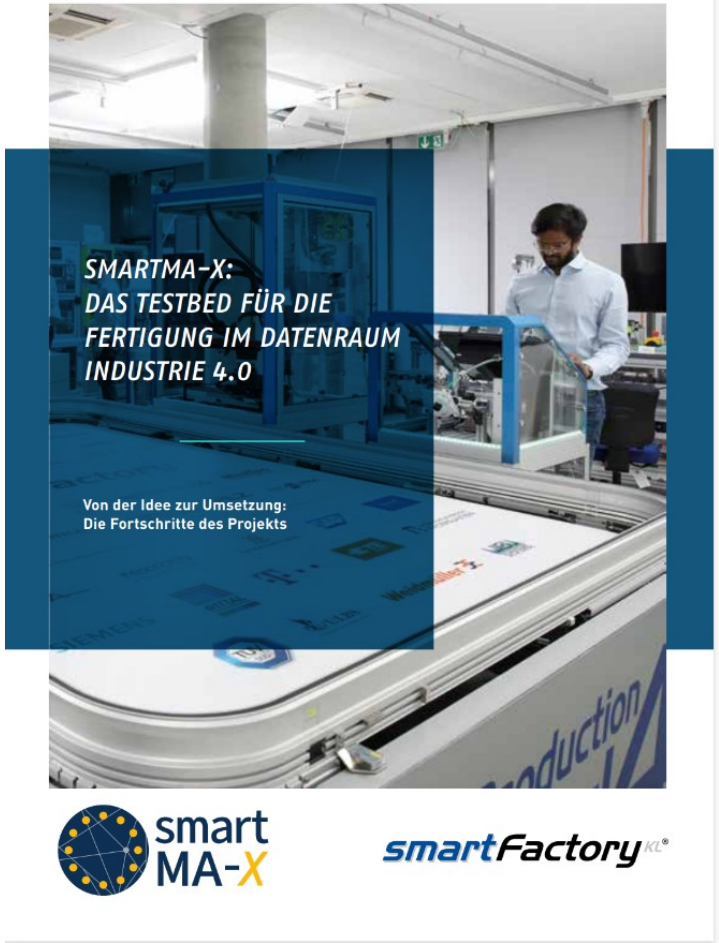




Further Information

www.smartfactory.de





Contact

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Technologie-Initiative SmartFactory KL e. V.
Trippstadter Straße 122
67663 Kaiserslautern

Pascal.ruebel@smartfactory.de

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Networking Lunch

13:00 – 14:00

Part of
Data Spaces Symposium (DSS)
12 - 14 March 2024

Powered by Gaia-X Lighthouse Projects

14:00 –15:00

Moderator: Petra Makovec, Operations Manager, Gaia-X

Prometheus-X: Matthias De Bièvre, Founder and CEO, VISIONS

Mobility Data Space: Michael Schäfer, CTO, Mobility Data Space

EONA-X: Dominique Epardeau, Project Director, EONA-X

Health-X: Ronny Stritzke, Software Architect, Bundesdruckerei-Gruppe

Team-X: Jochen Bauer, Global Director Sales & Product Management, Guntermann & Drunck GmbH

Energy Data-X: Linda Rülicke, Scientific Expert, Fraunhofer

Cooperants: Felix Beckmann, R&T Manager Airbus Operations GmbH

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Prometheus-X

Matthias De Bièvre
- President, Prometheus-X

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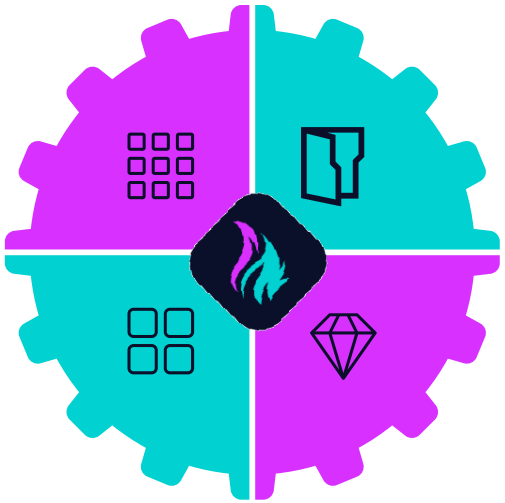
Prometheus-X

Infrastructure providers
(19 partners)

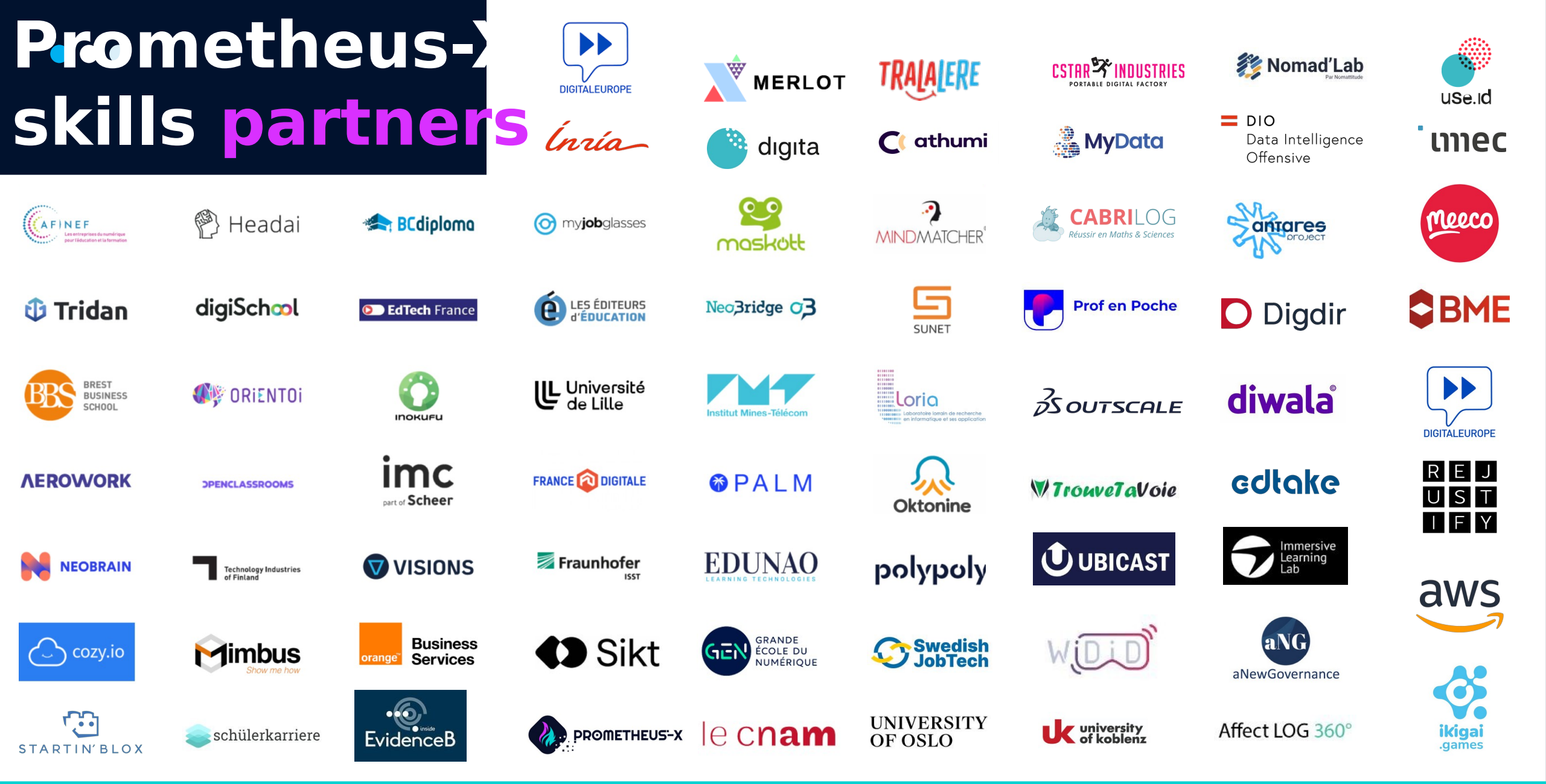
GAIA-X compliant Building Blocks
(20 BBs)



Use cases and participants in 2 sectors (skills, smart cities)
30 use cases registered
200 organisations
10 countries

Under one structure and governance to deploy, commercialise and maintain
\+ 23 m€ to launch

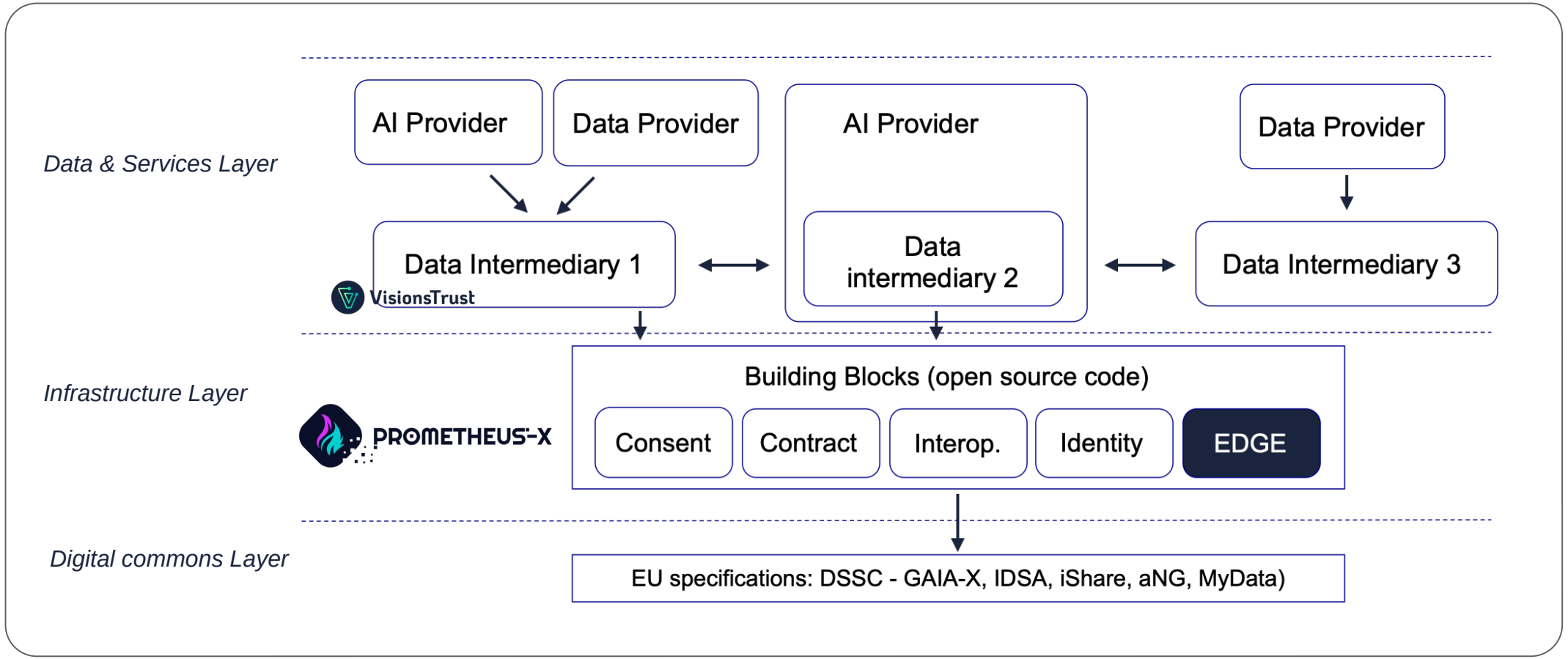
Prometheus-X skills partners



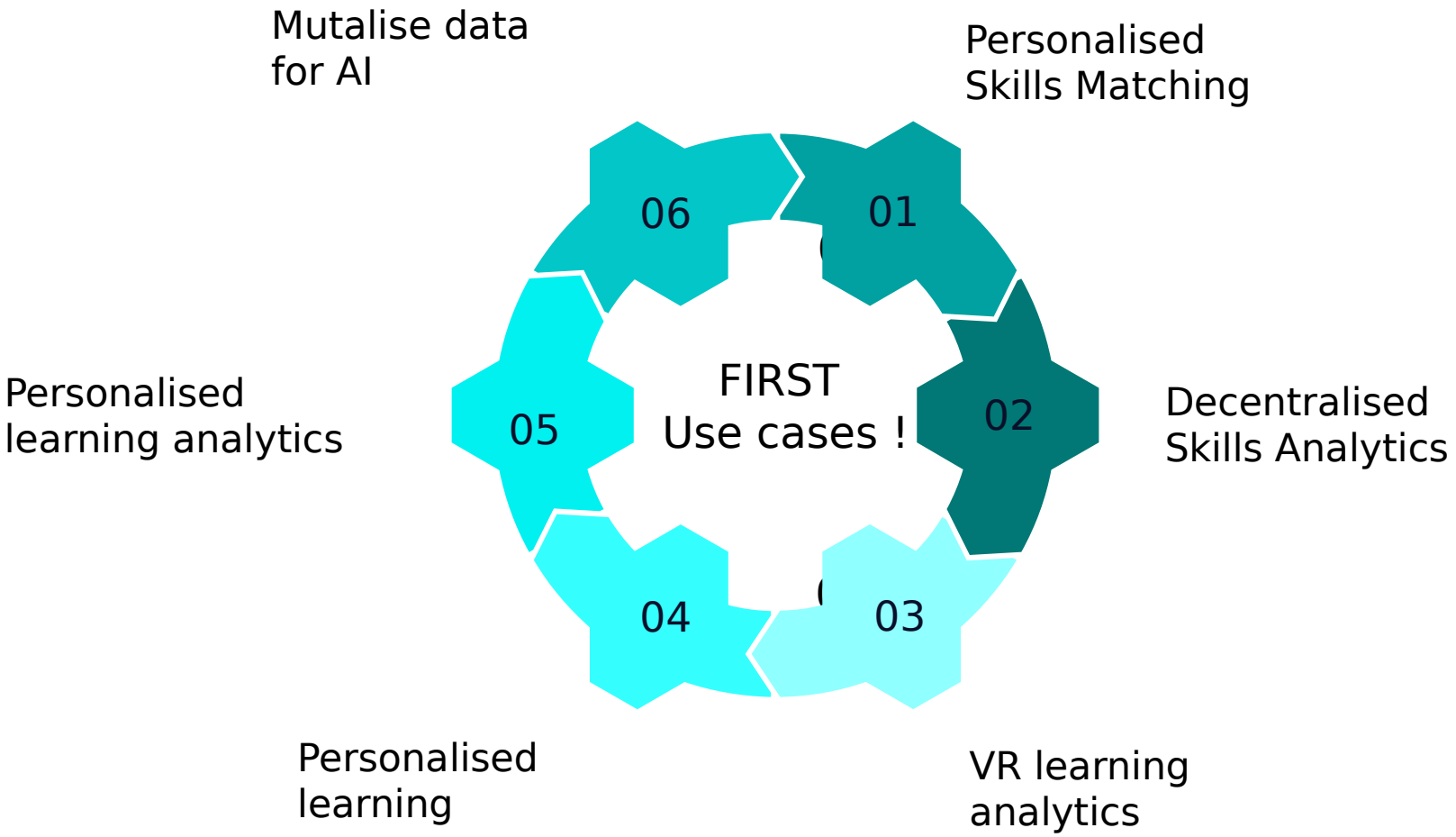
- **GAIA-X Trust Framework**
- **IDSA protocol**
- **Ecosystem contract**
- **Personal data**

Ready to use components

General Architecture



Use cases


Mutalise data for AI
Personalised Skills Matching
06
01
FIRST Use cases !
05
02
Personalised learning analytics
Decentralised Skills Analytics
04
03
Personalised learning
VR learning analytics

PINOT

Pathways for International Networking and Opportunity Transformation

Use case:

- **As a Korean professional, I can digitally share my credentials, streamlining my job applications, and improving my employment prospects**
- **As a Job Matching service, I can match regional jobs to an international pool of qualified applicants**
- **As a EU company, I can quickly verify Korean applicants' educational**

MyAI - 4 - Learning

Truly **private** and **personalized** and **frugal learning assistant**

Learner needs

- **personalized** exercises & answers,
- based on his **personal learning data**
- while preserving his **privacy**

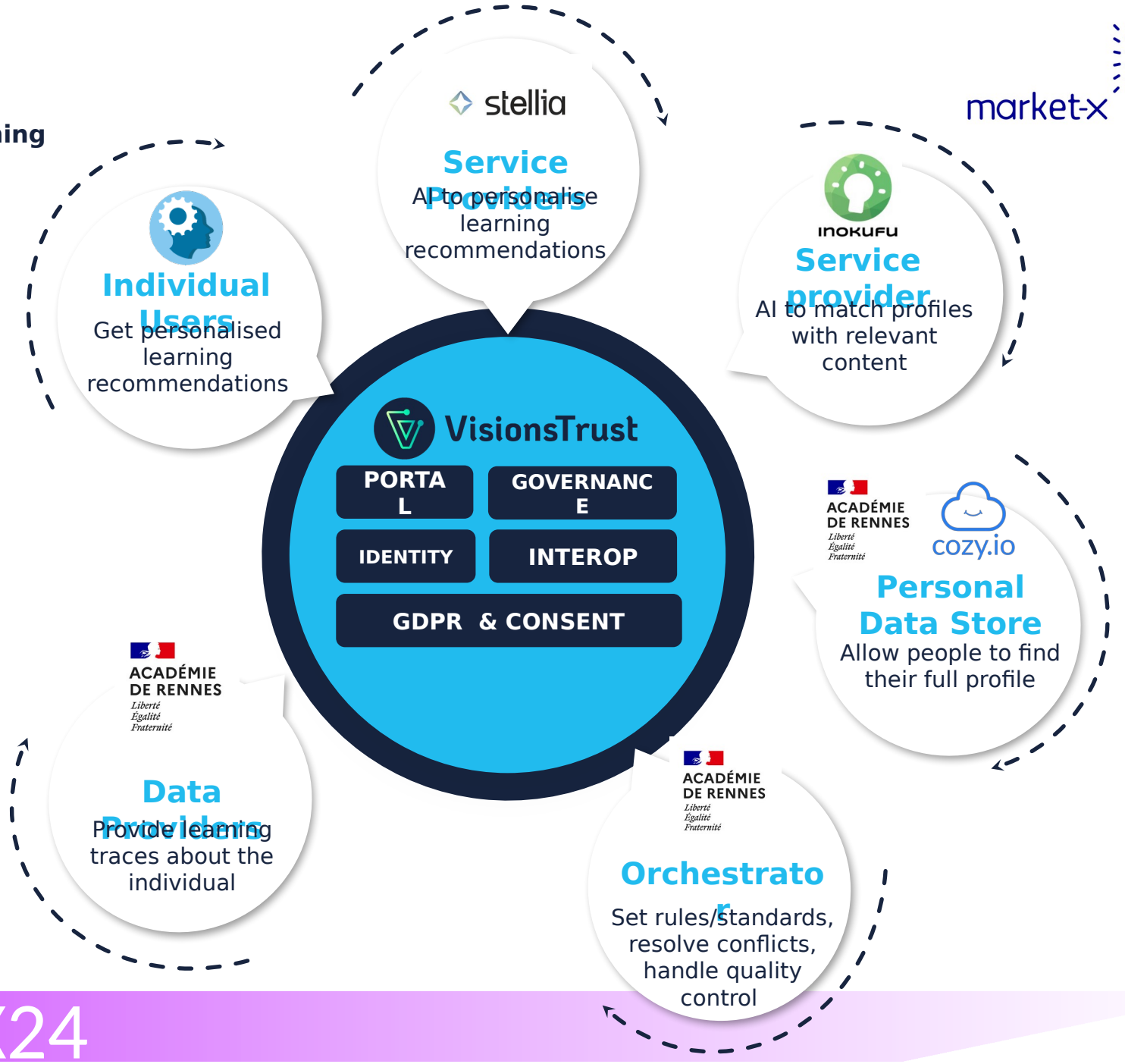
AI service provider wants to :

- **tune its recommendations while preserving privacy and IP**
- with **energy-efficiency**

How to reconcile tl e contradictory requ ents ??

Data interoperability

Private AI in a Personal Data Store



Smart Cities & Personal data

- MIM compliance
- Smart Cities use cases
- MIM4 Personal Data

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Thank you!

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Market-X Lighthouse on stage
Mobility Data Space – The Success Story

Michael Schäfer, Managing Director and CTO
- Mobility Data Space

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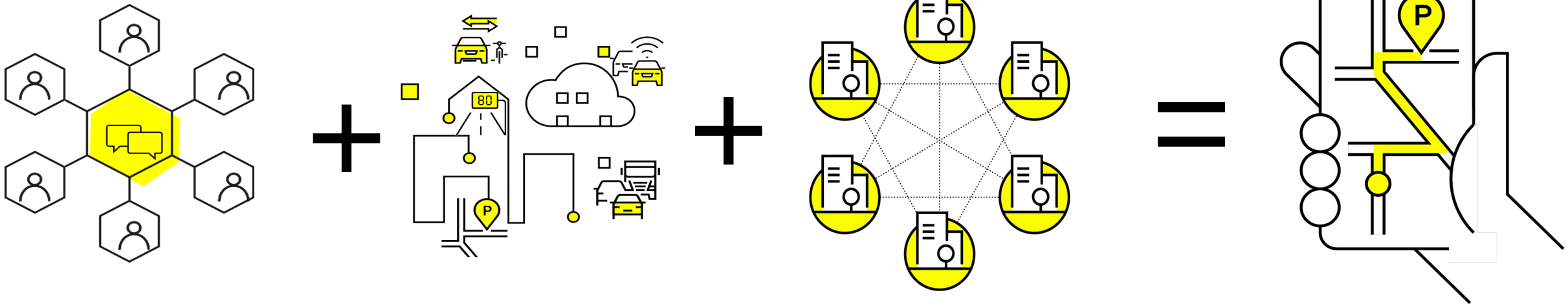
MDS – the formula for sovereign data sharing



Partner & Community

Mobility Data

Trustworthy infrastructure

Innovations, Products, Analysis etc.

MDS – Current status and scaling

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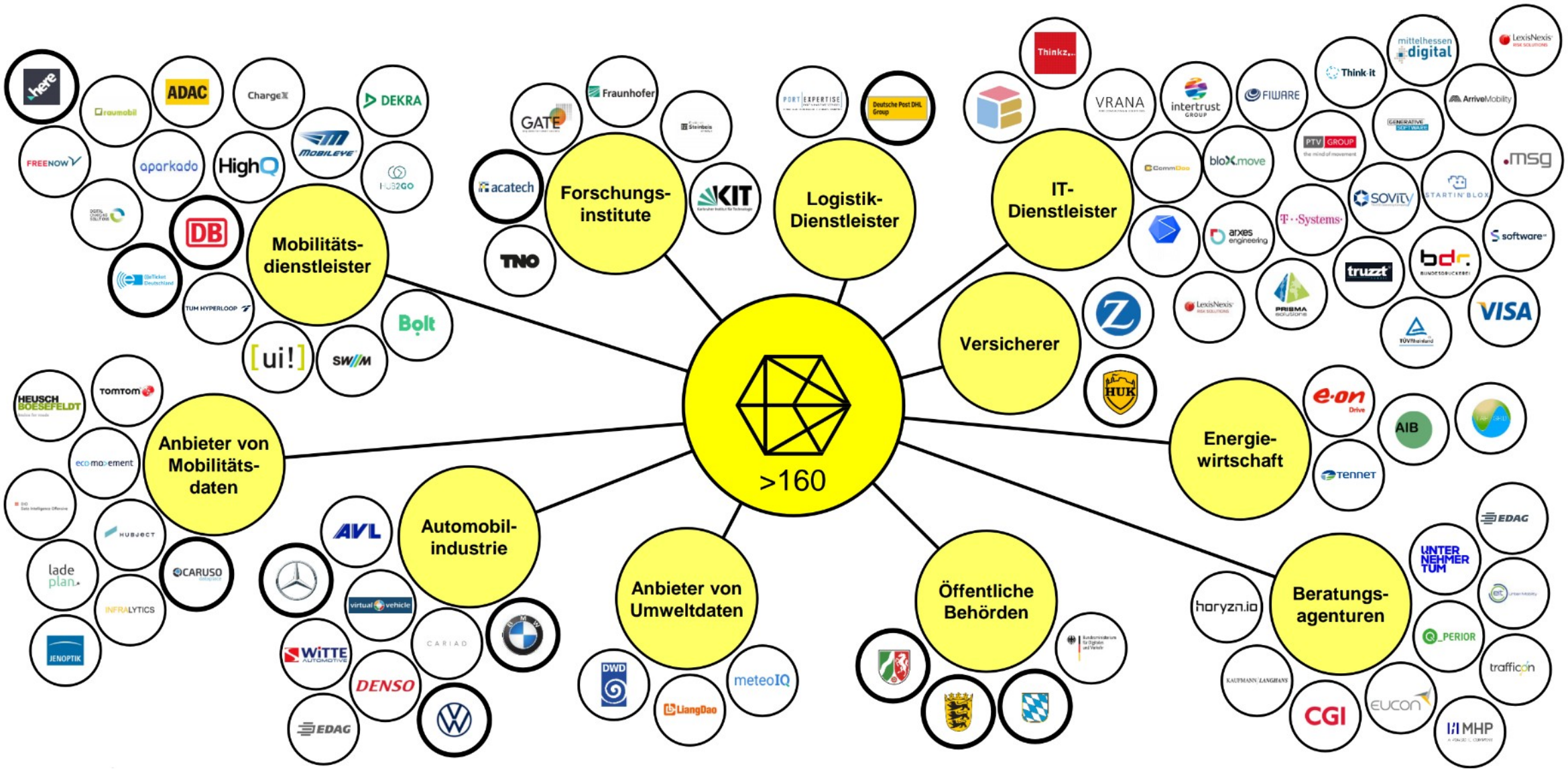

MDS – Use Case examples

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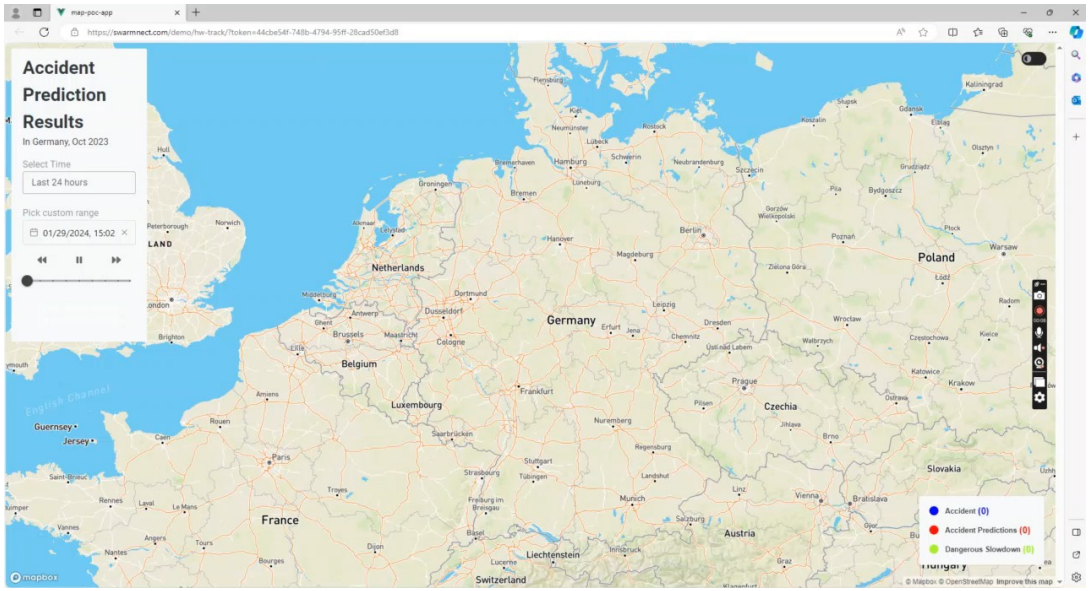
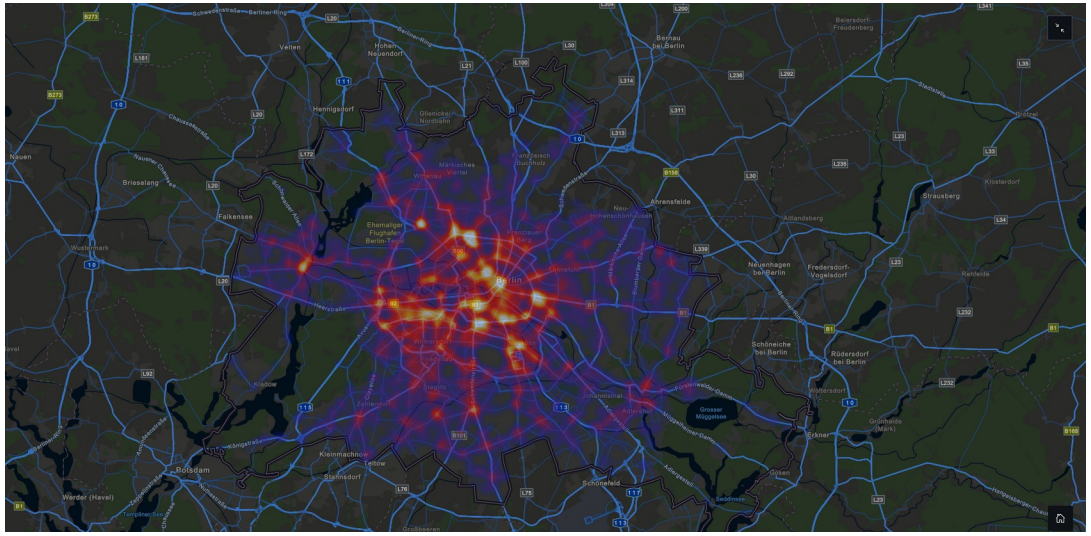
	Description	Focus group	Added value
Road Safety	Use real-time traffic and environmental data to predict hazardous situations	Local and regional administration, infrastructure operators, OEMs	Forecast enables preventive measures such as direct warnings to drivers or reducing the speed limit in real time
Slippery Road	Display of combined data about slippery roads and accident events as a heat map	Local and regional administration, infrastructure operators	Visualization supports the recognition of and reaction to danger spots, for example by increased use of snow removal vehicles





Improve Fleet Management by Data Sharing

Case

- Better schedule for vehicles and drivers
- Predictive maintenance
- Cross-fleet routing
- Accident prevention

Benefits

- Cost savings by higher utilization
- Online Car Diagnostics
- Higher user and customer satisfaction
- Recalls

Stakeholder

- BMW, Mercedes-Benz, Volkswagen, Caruso, Data Floss, Geotab, LexisNexis, Bridgestone, DRIMAES, Fluctuo, Hella Gutmann, Arena, …

MDS

- Neutral actor
- Manage M:N relationships with one interface
- Provisioning and monetization of data
- Networking and additional sales channel
- Consent management

Threats blockers and opportunities for data spaces

Data Spaces must deliver on promises

- The promise to tear down data silos
- The promise to allow brand new Business Models to embark
- The promise to empower safe, secure and sovereign data sharing

The way outs

- Strong scaling – Use case, use cases, use cases, …
- Interoperability – GAIA-X & IDSA
- Ease of use – Low code / no code experience
- Services – Consent Management, Contract templates, Matching, …

Interoperability by common registry

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Now in productive MDS:

- Manual registration and authentication of participants by MDS
- authentication granted by the central MDS certification authority
- Integrity provided by the central MDS DAPS

Coming 2024

- Participants' portal allows self registration
- MDS still authorizes participants
- Improved authentication mechanism for connectors (no central knowledge of private keys possible)

Coming 2025

- Introduction of further trust anchors / registries
- Federal registry and interoperability with other dataspaces
- Objective: 100% Gaia-X compliant and full interoperability w/ other Gaia-X compliant data spaces

MDS focus changes from

productive dataspace → **interoperable dataspace**


Unleash Your Data!
APPRENTICE PROGRAMME
JAGUAR

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EONA-X Mobility, Transport and Tourism Dataspace

Dominique Epardeau
EONA-X Project Director

Co chairing the GAIA-X LightHouse Working Group and the Mobility Working Group

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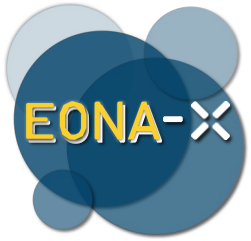
Becoming operational this year

Leveraging synergy in mobility, logistics and tourism domains for more efficiency



EONA-X Members : open to new use cases and new partners !

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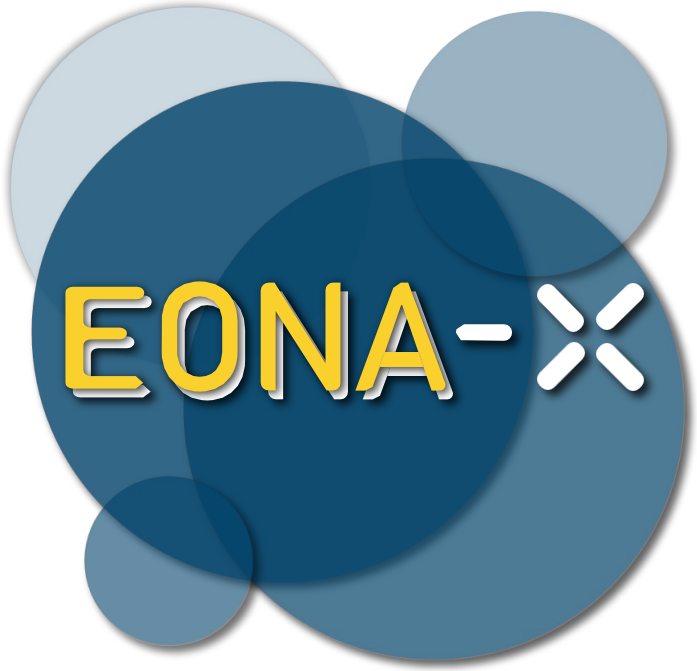


GROUPE ADP · AIR FRANCE KLM · amadeus · RENAULT · SNCF

ACCOR · aéroport marseille provence · apidae · Compagnie des Alpes · Manawa

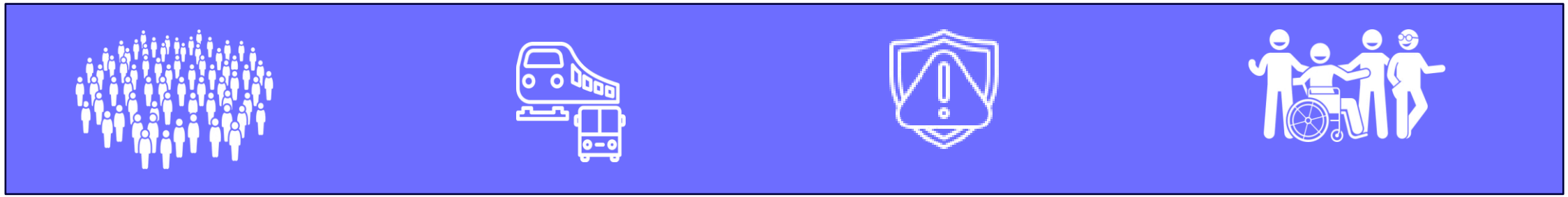
ANYSOLUTION · ECCOCAR · Inria

Actively involved in the GAIA-X ecosystem : in Working groups/ technical contribution

Selected Amadeus Platform in 2023 based on the EDC

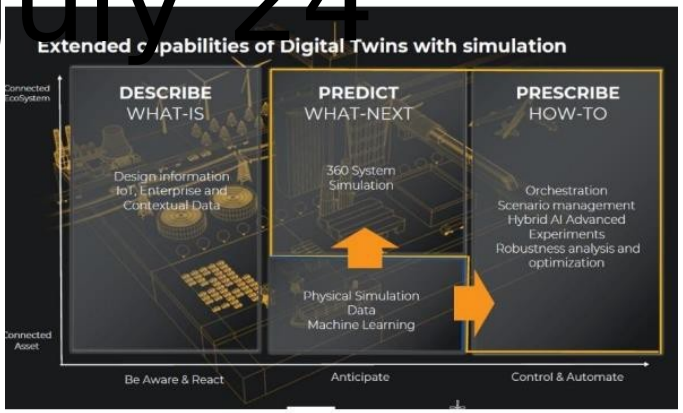
Currently 18 use cases identified

- 6 operational from 2024
- The Paris 2024 Olympics an accelerator

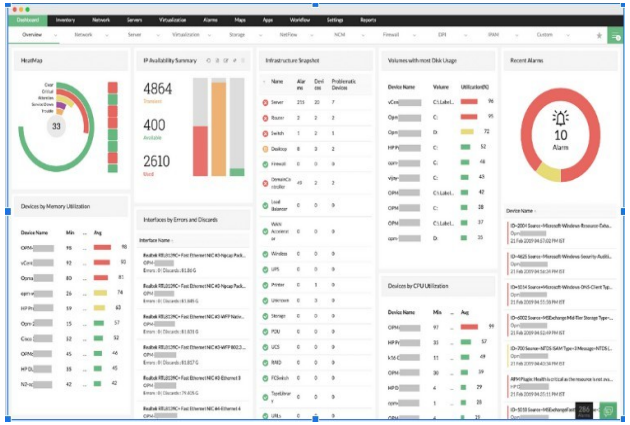


Flow management	Access / Mobility	Security	Services
Digital twin	Dispatch applications	Collaboration with authorities	Fluidification of PRM journey

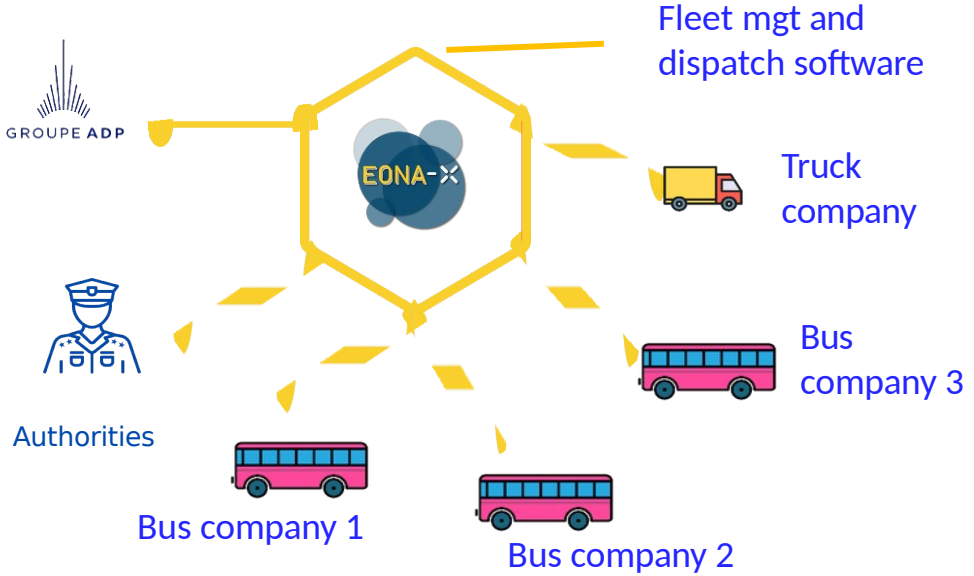
Olympics use case to deliver in July 24



Digital Twin



Dashboard of the delegation journey in the airport



Pick up areas

Bus/ Truck rear base

EONA-X Roadmap

Succeed in the Olympic Games

Service(s) around data quality and sustainability

Active participation in EU Projects

Supporting cross-border use cases (EDIC)

Welcoming new members

Method for researching economically viable use cases

Conditions for making company data available for AI training purposes

Work on interoperability with other Data Spaces

Data Quality Upgrade Program for tourism : 5 levels

Level 1 : title, description, contact, geolocalisation, opening and closure schedules, price (in several languages)

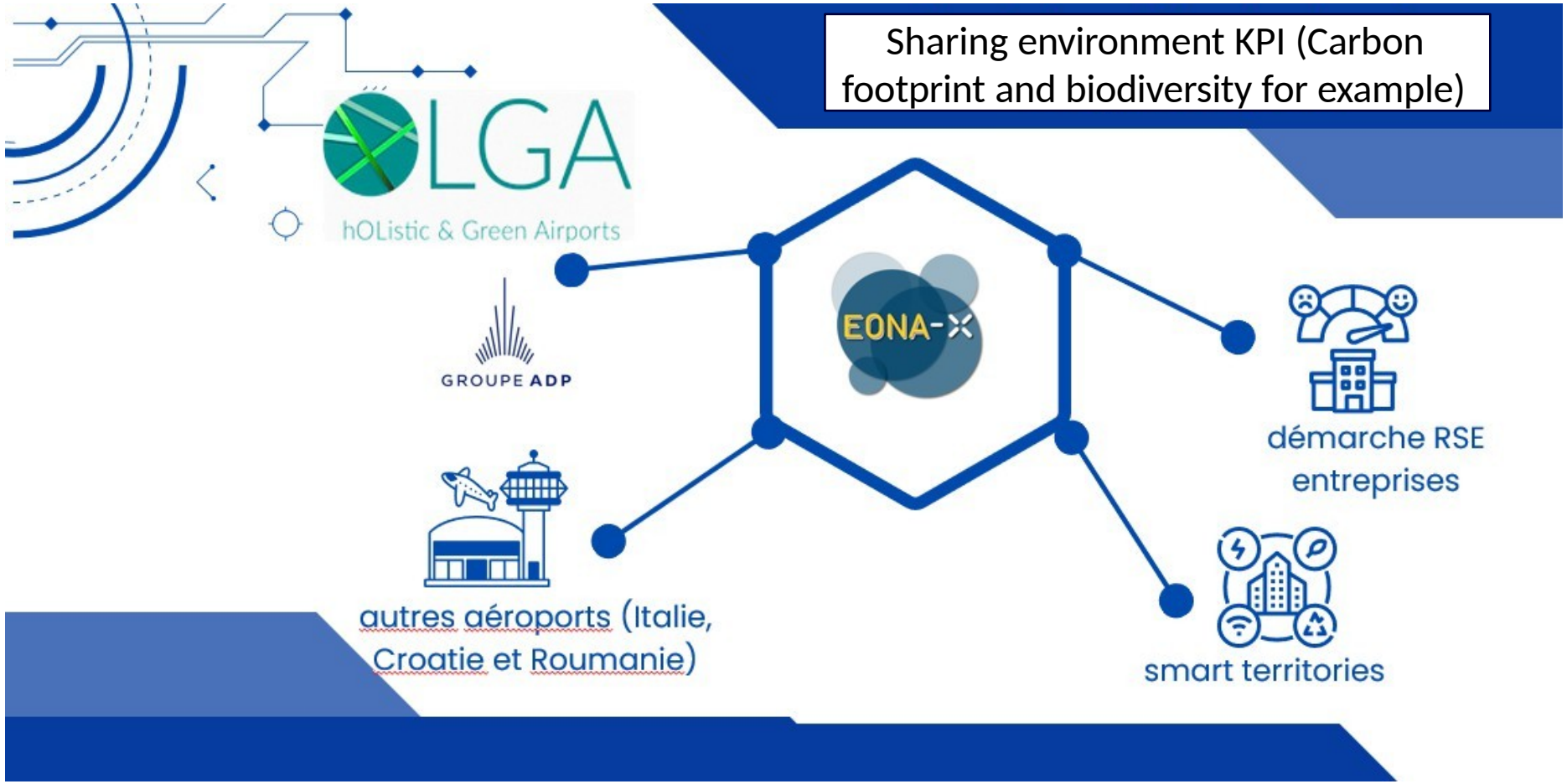
Level 2 : additional information to better use the data (cooking styles for restaurant, ranking or label for accommodation, customers typology (as an example, Apidae listed about 5 000 tags and criterias).

Level 3 : IP rights (mainly for media, sound, pictures, video). This is a complexity factor for the use of the Point of interest

Level 4 : additional attributes to adapt information to the context (winter /summer description, disability, Sports…).

Level 5 : links and medatata to seek additional inforation in other database, if possible in real teim (availability, transports proximity schedules, snow level, affluence…)

Sustainable initiatives to measure environmental impact



Thank you!

- Dominique.epardeau@eona-x.eu
- https://www.youtube.com/@eona-x
- https://eona-x.eu/

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Health-X dataLOFT

Ronny Stritzke
- Software Architect Bundesdruckerei GmbH

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HEALTH-X dataLOFT: Vision of an European Health

Transformation of primary and secondary health dataspaces

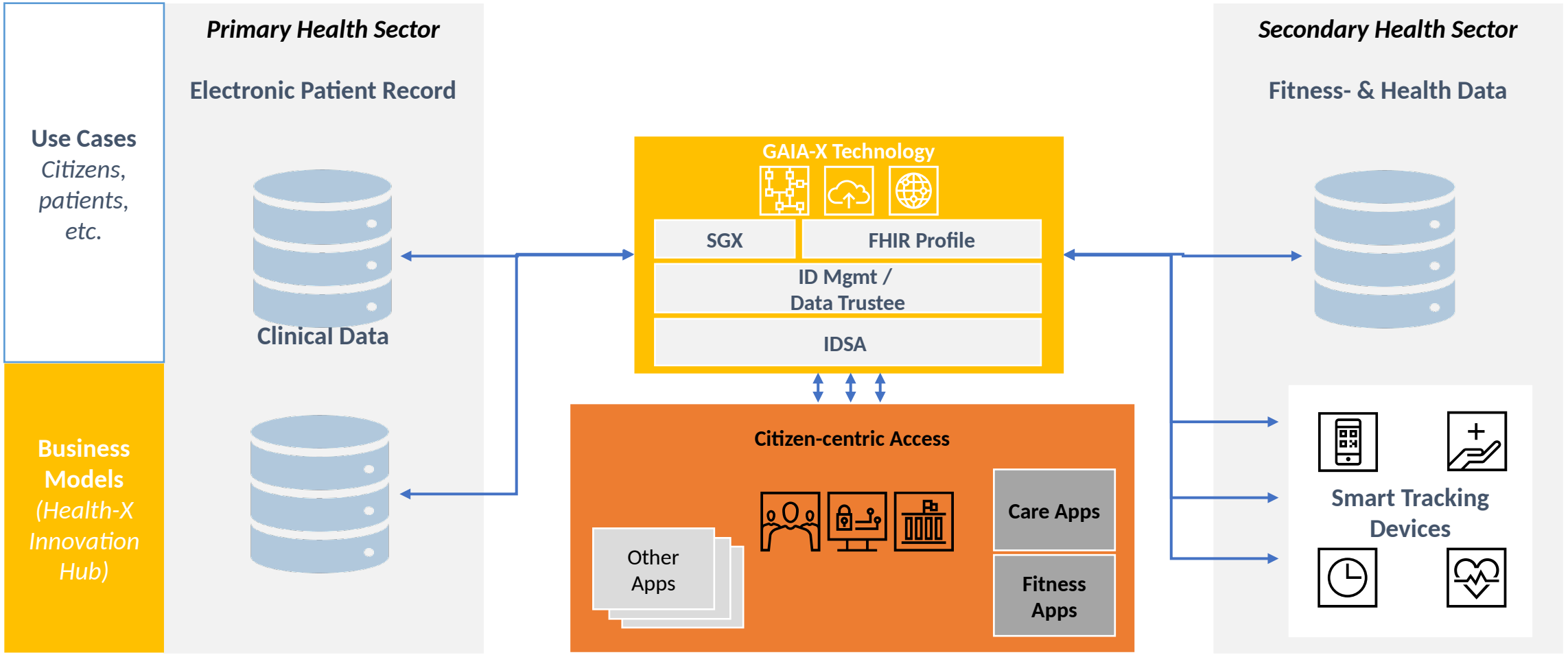
- Citizens a active participants in Health Dataspaces
- Make data of different sources available
- Creating a Health Data Ecosystem
- Databased science having Real World Evidence!

Combination and cooperation of existing solutions

HEALTH-X dataLOFT

- Federation instead of proactive sharing
- Consent is clear and transparent
- Open Standards
- Additonal Usecases

dataLOFT: Architecture



Use Cases: Platform Illustration

Fitness- & Health Data

Clinical Data

Electronic Patient Record

Citizen-centered Data Access

Use Case 1

Self-determined everyday health

- Individual prevention and health maintenance

Use Case 2

Clinical Companion

- Interdisciplinary and cross-sector care
- Personalized therapy recommendation

Medical Professionals

Citizens

Freigabe & Kontrolle

Use Case 3

Personalized Health Services

- AI based assistants
- Individually tailored pharmaceutical care

Use Case 4

Secondary use of data

- „Data donation“

Scientists

Bundesministerium der Justiz

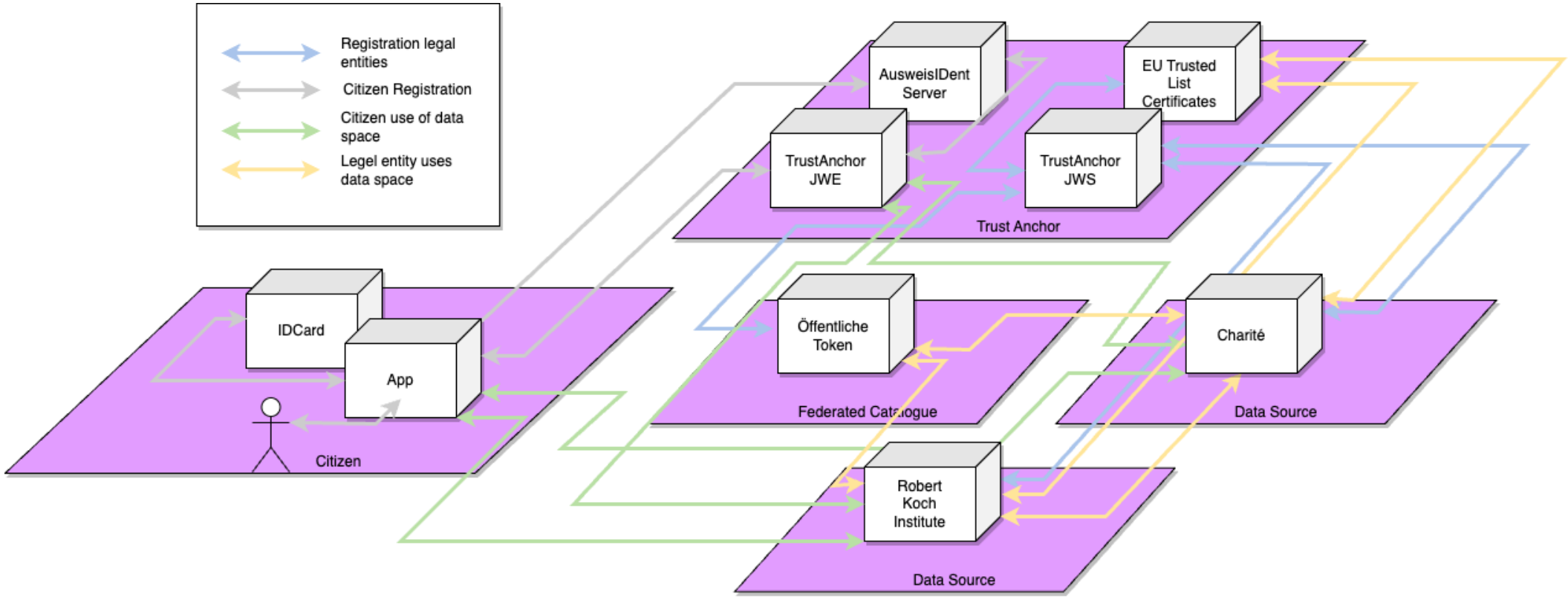
Bundesamt für Justiz

Gesetz über Personalausweise und den elektronischen Identitätsnachweis (Personalausweisgesetz - PAuswG)

Natural identities are not compatible with Gaia-X per-se!

Digital copies of ID card data must be protected against unauthorized reading and modification.

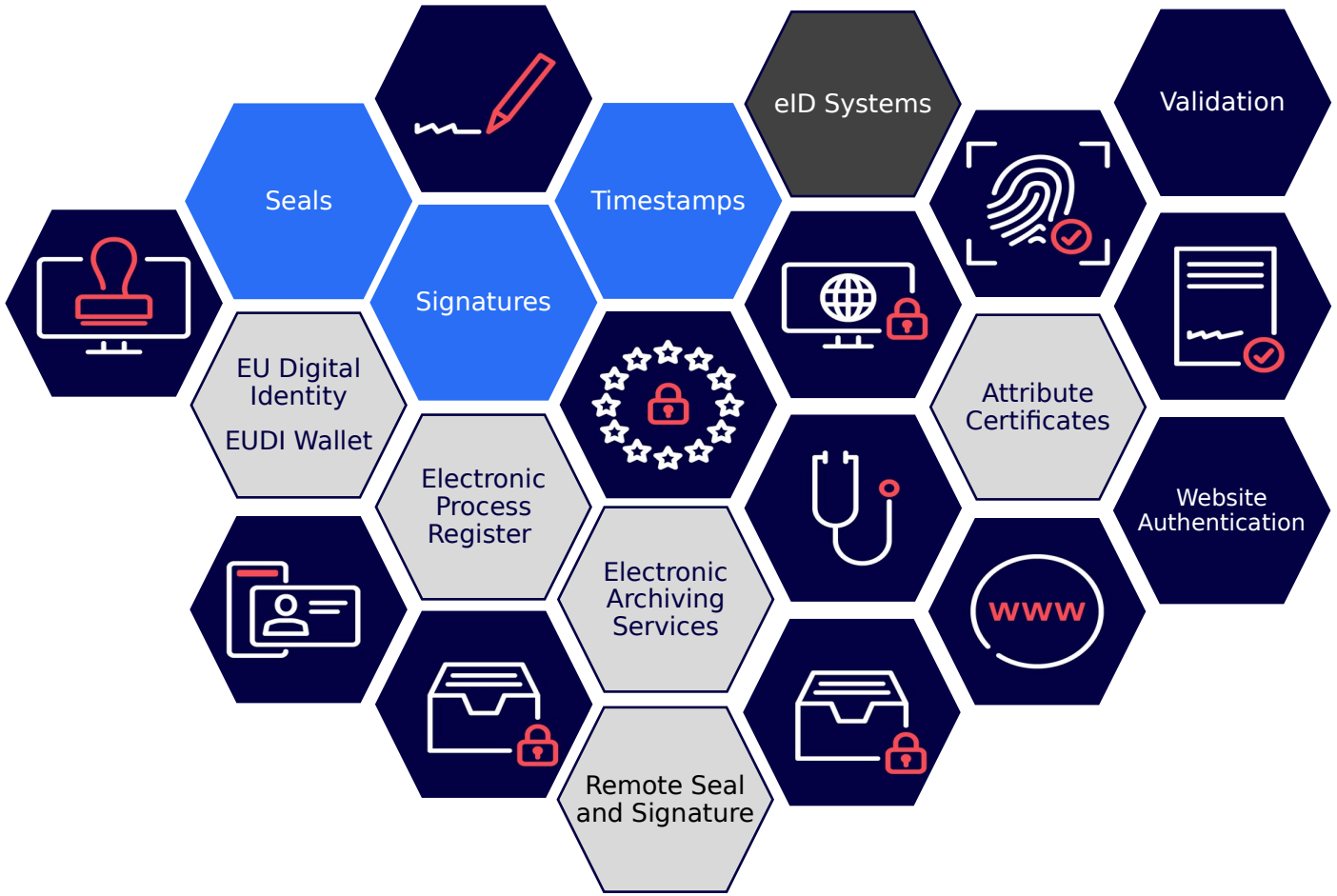
Data Space with citizen integration



European Health Data Alliance e.V.

- Association oriented towards the common good, with the goal to further t he development of citizen centered health data spaces in Europe
- Trail Blazer, Think Tank, and Hub for EHDS compliant projects providing best practices and specifications
- Basis for sustained development of data driven health solutions
- EHDA is the logical continuation of the HEALTH-X and TEAM-X projects
- Founding of the Association under German Law on Dec 4th, 2023

Using eIDAS and D-Trust as qTSP for GXDCH



Thank you!

- Ronny Stritzke
- ronny.stritzke@bdr.de

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Lighthouse project TEAM-X

Jochen Bauer
- C&S GmbH / TEAM-X

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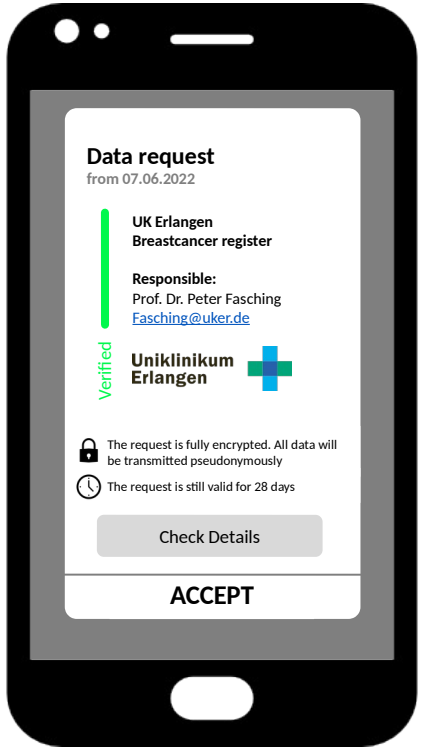
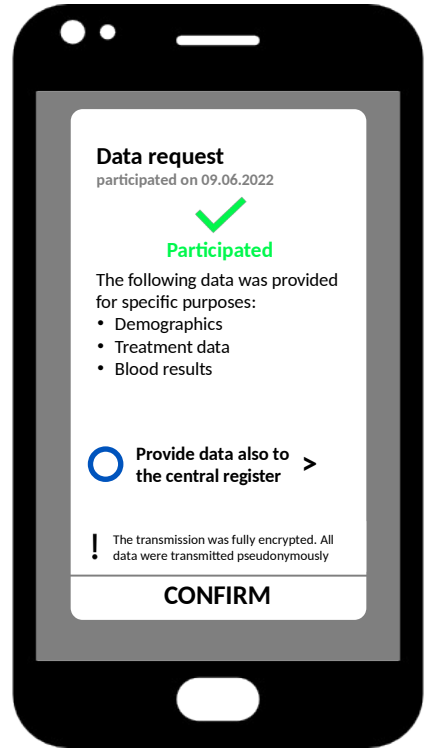
TEAM-X aims to unite data providers and recipients, to make data usable and to build trust.



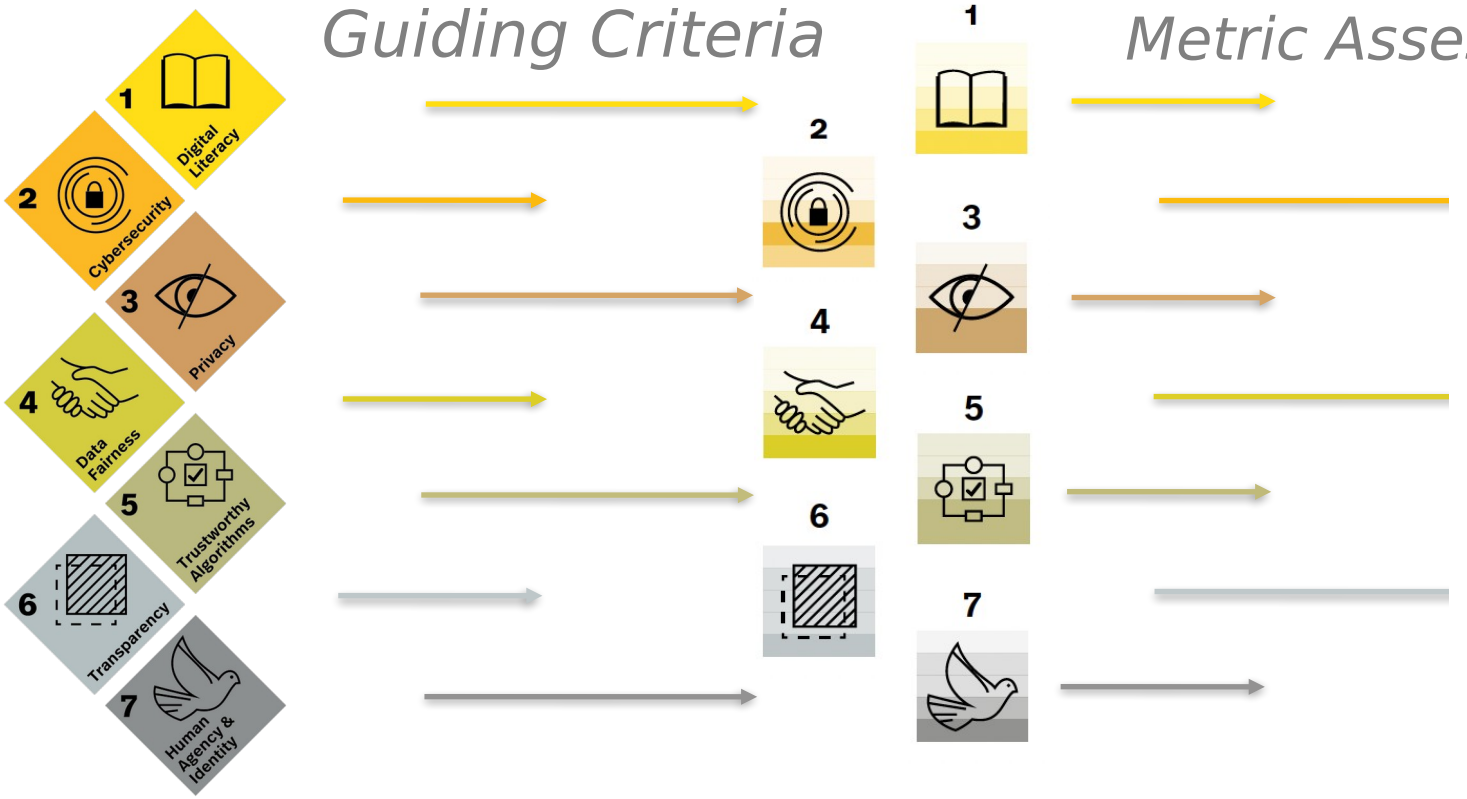
- TEAM-X...
- ...builds a **protected and trusted digital data ecosystem**
- ...is the basis for **future-oriented healthcare provision**
- ...strengthens the **competence and self-determination of citizens** in dealing with their data
- ...can **serve as an example** as a solution for all till now unused medical data
- ...**empowers SMEs** to develop and market data-driven business models, products and services



#GaiaX #MarketX24

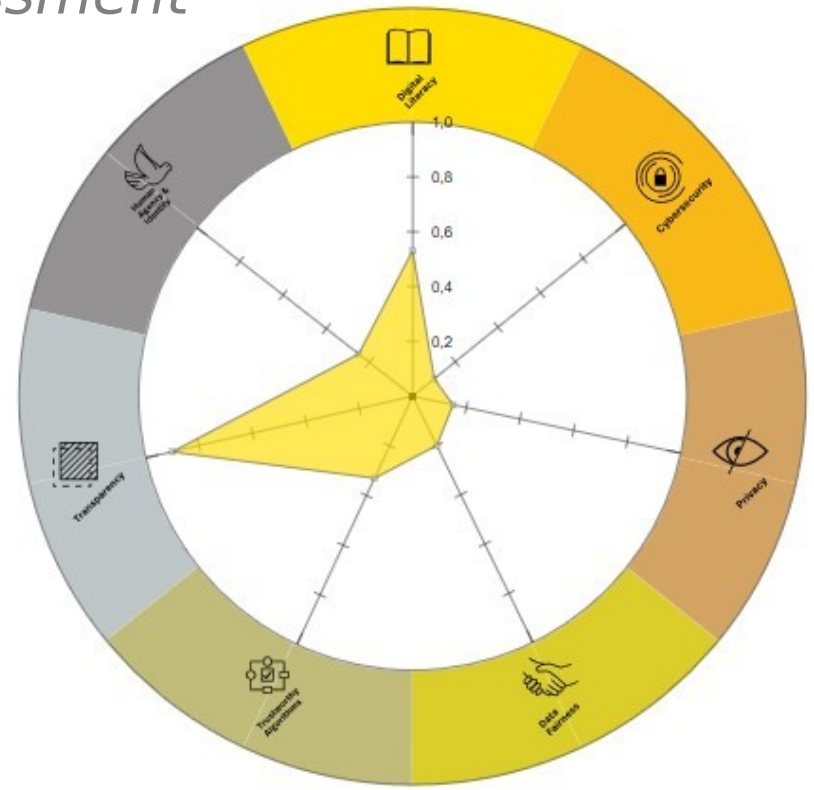
Digital Responsibility Goals®

Measurable criteria for transparency and comparability create trust.



Digital Responsibility Goals®

Digital Responsibility Index



DRG Dashboard

#GaiaX #MarketX24

TEAM-X develops these solutions based on two real and highly relevant use cases:

Women's health

Breast cancer care:
Data from inpatient and outpatient care during the course of the disease. Data exchange and communication between patients, physicians, and health care providers.

&

digital care platform

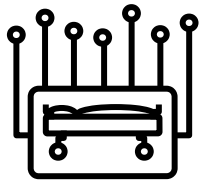
Inpatient care for the elderly:
Data from nursing documentation and sensors

Health location household:
For a self-determined and data-sovereign life in old age

#GaiaX #MarketX24

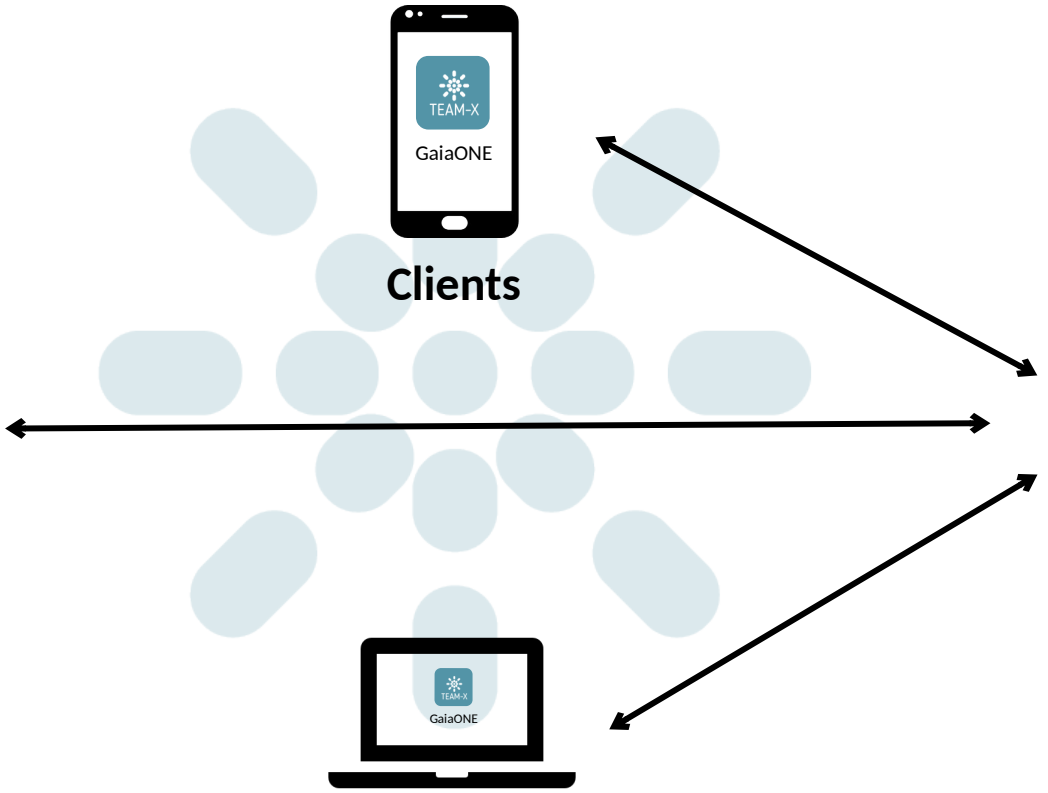
Cloud infrastructure
GaiaCLOUD for use case care

IoT potentials in inpatient and home care are connected - for example via (SENSE)-WoT and EEBus - always under patient control.



IoT

Features:
- Self-sovereign identities
- Data sharing can be set or withdrawn by the client at will
- Sharing of data fully documented



Client collects data on health, activity and preferences manually or automatically. If required, it can be made available to a doctor, care service or support system.

Use of the Gaia-X technology stack and networking with the existing C&S platform.

The client decides which data she wants to release for which target group and for which occasion.

Decentralized infrastructure GaiaONE for use case women's health

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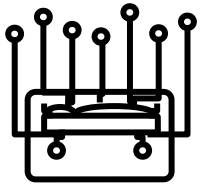
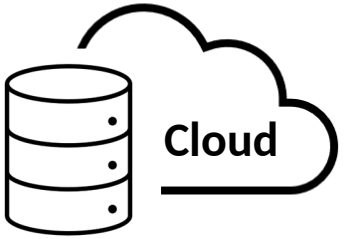
Integration of innovative patient-centered diagnostics and home monitoring methods.



IoT

Patients

Various documents, medical reports and data from different clinical disciplines are stored in a local database.



Cloud

Features:

- Synchronized across all devices
- Scalable memory and computing power
- Data stored redundantly and securely
- Keys private and local
- Data encrypted at all times
- Data sharing seamlessly documented

Interdisciplinary doctors

Interfaces to primary systems (PMS, HIS, ...) and other infrastructures (e.g. telematics infrastructure) + Value added services such as federated learning and AI.

Digital tool supports data exchange and communication in longitudinal care.

Go-live Plan as Gaia-X compliant project & GXDCH elements

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market-x

Thank you!

- jochenbauer@cs-ag.de

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Gefördert durch:
Bundesministerium für Wirtschaft und Klimaschutz
aufgrund eines Beschlusses des Deutschen Bundestages

gaia-x Lighthouses

market-x

Energy data space for data exchange in Gaia-X

Linda Rülicke, Fraunhofer IEE

- energy data-X

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A Future Powered by Data

Current challenge

- **Isolated data in closed data silos** is slowing down innovation and new business models in the energy sector

energy data-X as a bridge to the digital future

- **Cross-sector, interoperable integration** of renewable energies
- **Ensuring grid stability** through **free and sovereign** data exchange
- Realizing **efficiency gains** through **central process handling**
- Basis for **new business models**

With energy data-X, we are Laying the Foundation for a Sustainable Data Economy in the Energy Industry

energy data-X

- Establishment of an **Energy Data Space in Gaia-X** as the basis for a sovereign data exchange.
- Shared **Data Space** for cross-actor **digital business models and innovations**
- **Cyber resilience aspects** for data exchange of critical infrastructures
- Two **exemplary use cases** for the evaluation of a Data Space prototype

Network operators and users

TenneT Consortium lead, amprion, e·on*, ARGE NETZ*, 50hertz* (Elia Group), TRANSNET BW*, EWEnetz*

Research, ICT, standardization

DKE, Fraunhofer, Microsoft*, Schneider Electric, EVIDEN*, INTERNATIONAL DATA SPACES ASSOCIATION*, PPC Power Plus Communications, SPHERITY

* associated

Project duration 3 years

Oct. 2023 — Q3 2026

First Use Cases in the Data Space With Improved Data Availability

Improve quality of balancing group management

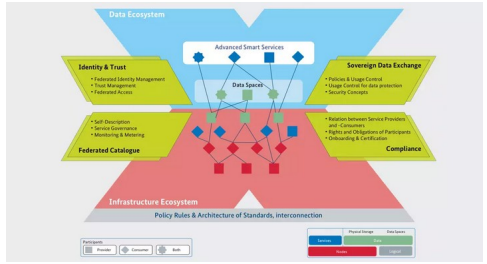
- Direct **transmission of measured** values in fine temporal granularity
- **Short-term reactions** of **the balancing group manager/supplier to deviations**
- Short-term estimation of the **balancing group management** quality

Automated visibility of decentral flexibilities

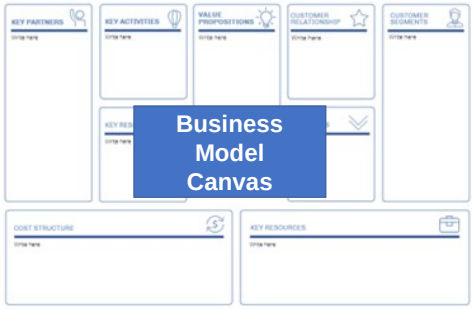
- **Integration** of **flexibility sources**
- Demonstration of the **provision of flexibility** for the energy system based on **automated processes**
- **Transfer concept** for **further flexibility options** for other actors and assets (e.g. heat pumps)

- **Faster integration of renewable energies to achieve climate targets**
- **Dampening grid expansion cost**
- **Increasing security of supply**

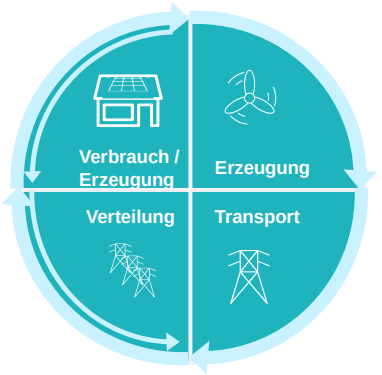
Outlook: Data-Based Business Models as Drivers of the Energy Transition

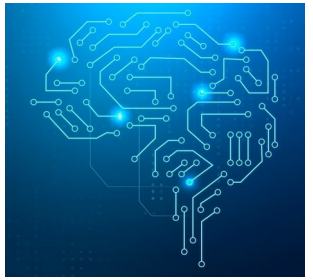


Grafik Gaia-X: BMWK



- **energy data-X as the nucleus of a Data Space** in the German Energy Industry
- **Cross-value chain** data exchange in the **energy sector**
- **Value chain networking** of different **sectors**
- Basis for **sovereign data networking at EU level**
- Increasing integration of **artificial intelligence**
- Development of further **new business models** of market participants across sectors





Thank You

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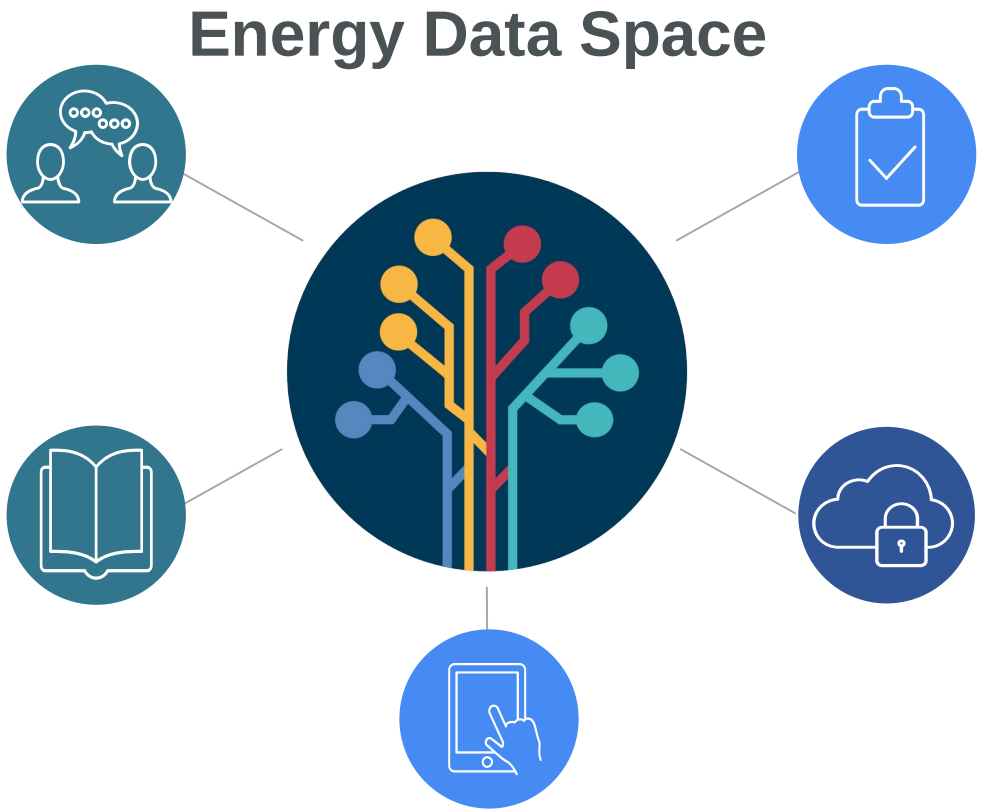
für Wirtschaft
und Klimaschutz

aufgrund eines Beschlusses
des Deutschen Bundestages

Five Federated Services as an Entry Point to the Energy Data Space



Identity & Trust

What identity do participants have, how do they gain access, e.g. what market role does a participant have, is the participant really who they claim to be

Service Offering / Federated Catalogue

Description of the data/services offered according to an agreed data model

Finding the data/services you are looking for via a catalog that describes the data and, for example, its granularity

Compliance

What rules exist for data exchange, e.g. which data/services may be used by which participant for what purpose and for how long

Portal/API (Clearinghouse)

Registration/onboarding in the data space
Machine to machine communication via APIs for automated access to data/services
(How are services billed?)

Data Sovereignty Service / Connector

Access to the data space, which also implements the rules on who may use which data and with what level of security, e.g. regulated grid operators with different rights than a competing energy service provider/distributor

Thank you!

Linda Rülicke, Scientific Expert Digital Ecosystems
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Gefördert durch:

Bundesministerium für Wirtschaft und Klimaschutz

aufgrund eines Beschlusses des Deutschen Bundestages

gaia-x Lighthouses

market-x

Part of
Data Spaces Symposium (DSS)
12 -14 March 2024

COOPERANTS – Gaia-X Lighthouse Project Aeronautics and Space

Felix Beckmann
R&T Manager
Airbus Operations GmbH

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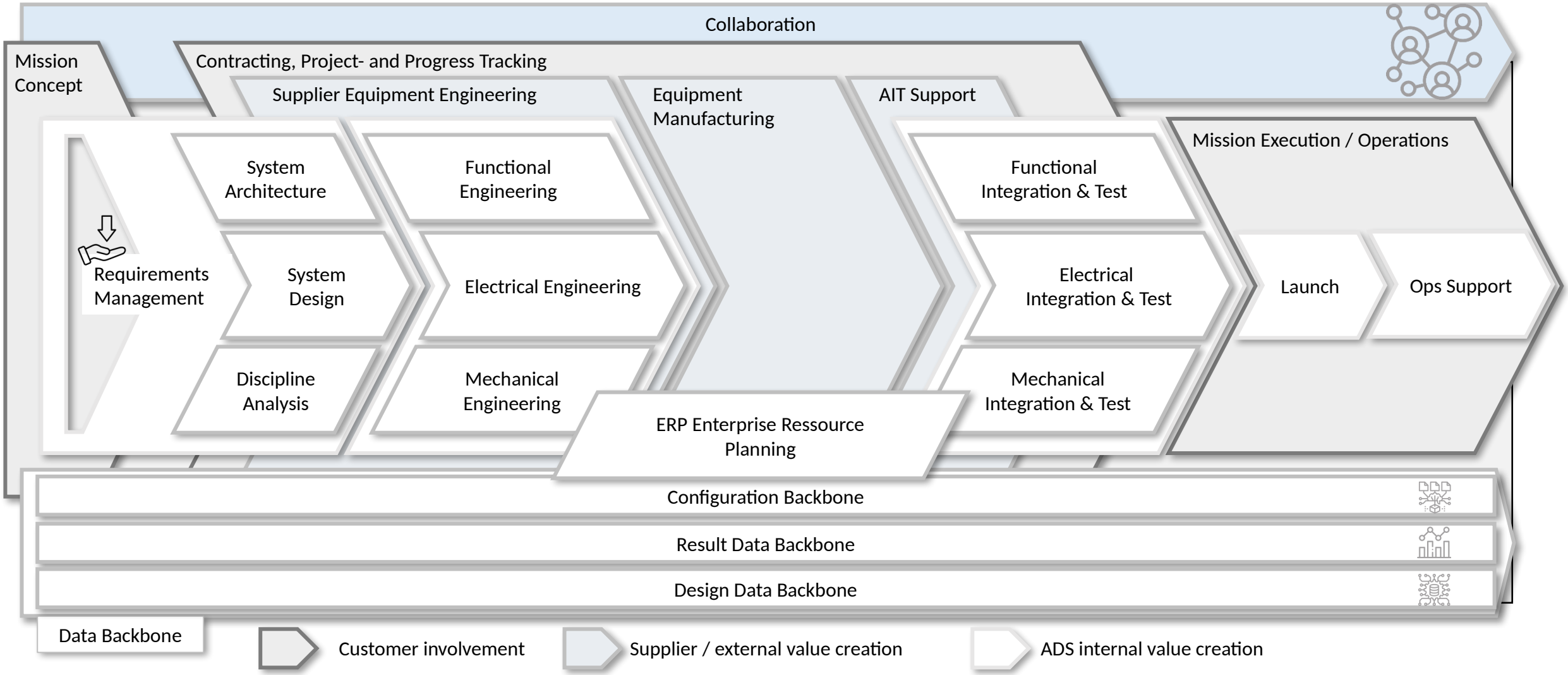
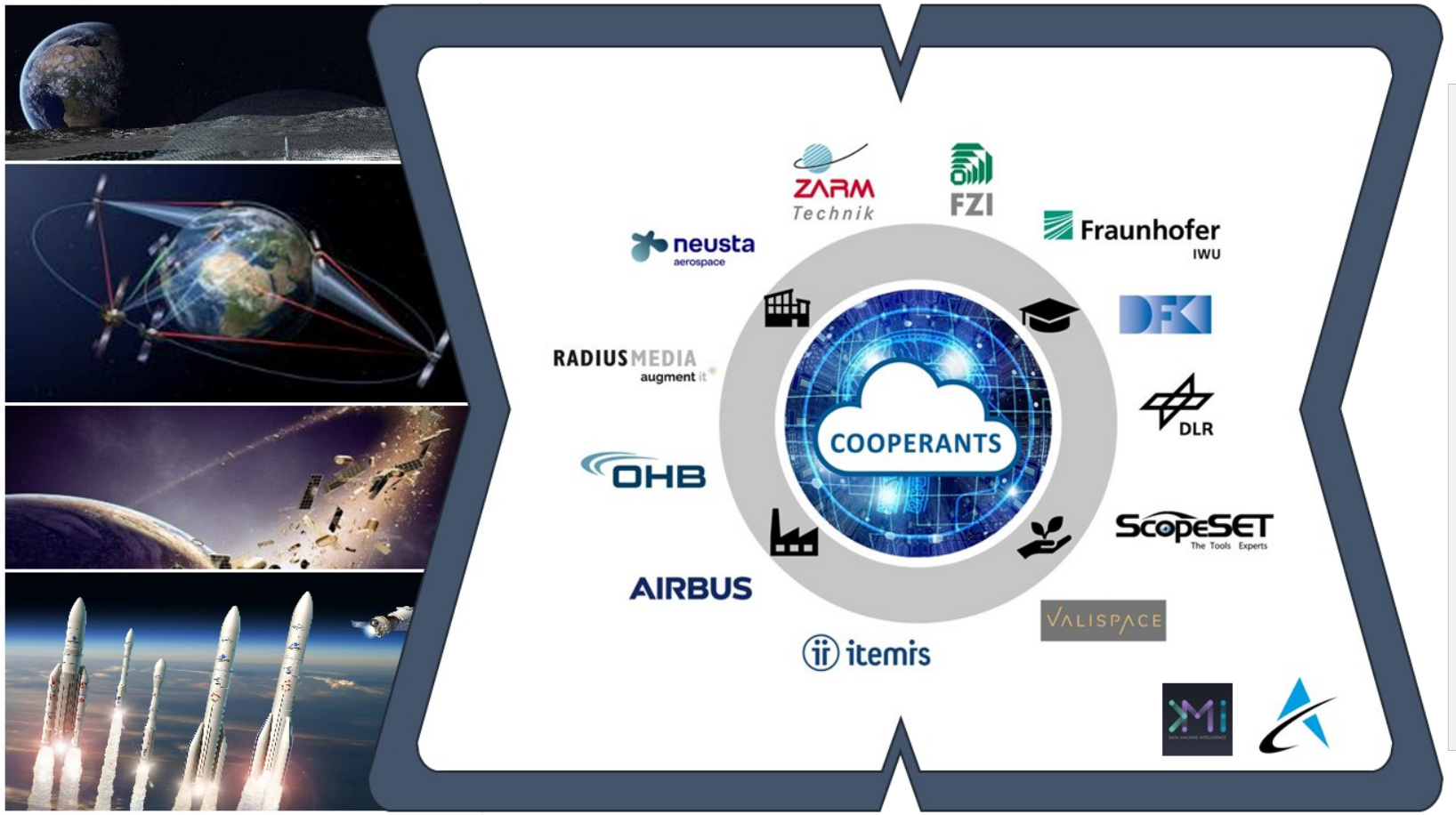
Part of
Data Spaces Symposium (DSS)
12 -14 March 2024

From the current co-development process…



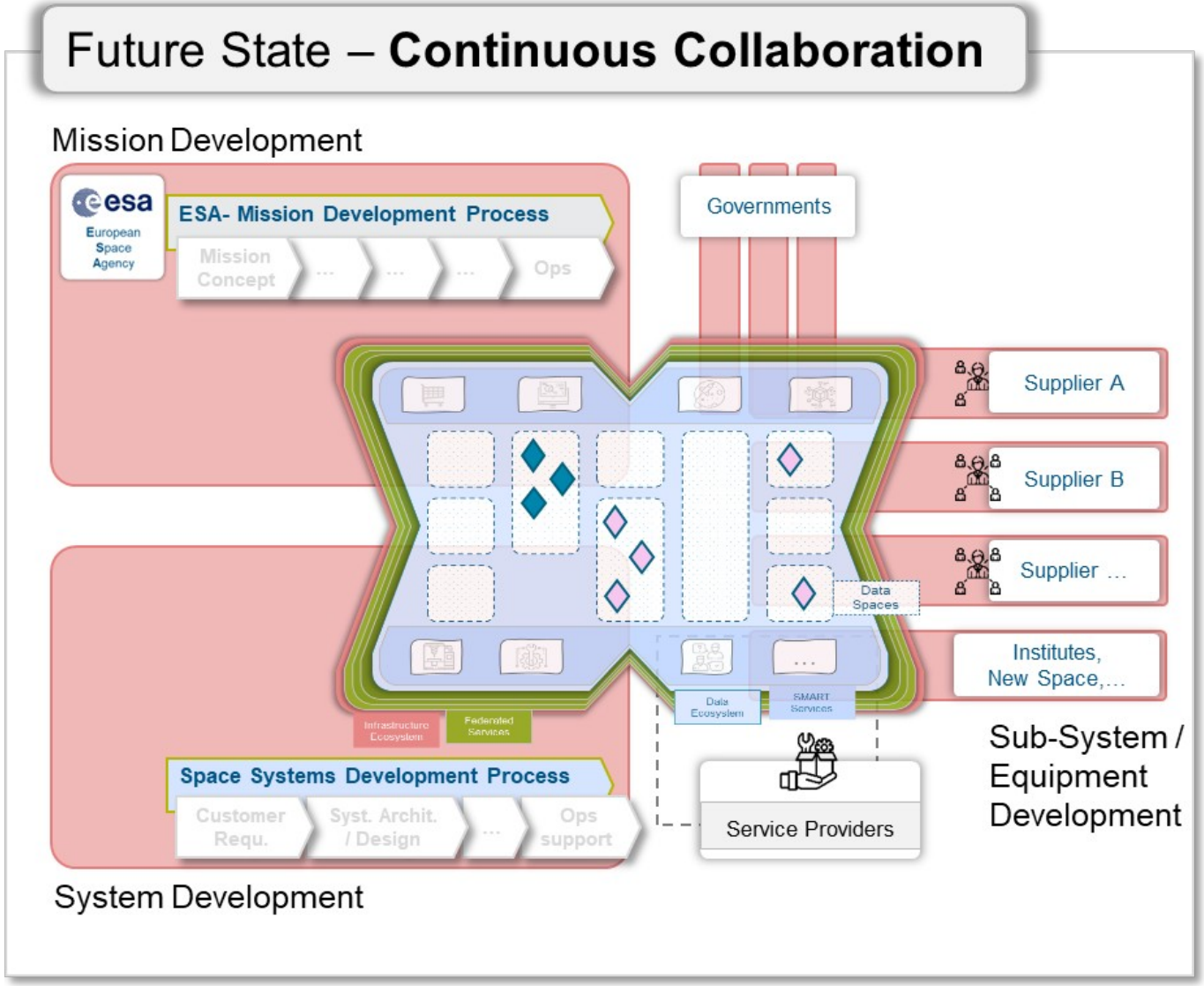
…via COOPERANTS and digitizing processes in aerospace…



The Consortium

- Gathers the very heterogeneous aerospace industry behind a common vision of digital transformation along the **entire value chain.**
- Is generating the technical foundation with participation of A&S* key players.
- Serves as experts on the peculiarities of the industry: **valuable data in a high-tech industry**, specific standards and regulations, export control requirements (ITAR, EU dual use), extremely high reliability requirements, individual production and small series.
- Develops cutting edge digital services and research facilities
- Prepares transfer of project content to other domains

…to the future of continuous collaboration



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Thank you!

- Contact Details

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Interactive Expo

market-x

15:00 –16:30

Joined Gaia-X Lighthouses Booth Programme

15:10 – Structura-X
15:20 – Omega-X
15:30 – Prometheus-X
15:40 – Euprogigant
15:50 – Eona-X
16:00 – Boot-X
16:10 – Accurate
16:20 – Gaia-X mobiliy4future

Gaia-X Booth Programme

15:10 – 15:30 What is the value of sprints? How to collaborate?
16:00 – 16:20 All about Gaia-X Working Groups

Note: You can find us at the Gaia-X booth on the 13th of March as well, during the breaks!

12:30 – 12:50 Gaia-X Ecosystems
15:00 – 15:20 All about Gaia-X Membership

Part of
Data Spaces Symposium (DSS)
12 -14 March 2024

Sign up for our exhibition tour!

Discover exhibitors' efforts to bring data spaces to life!

Tour 1 & 2 | 3:15 pm

Tour 3 & 4 | 3:45 pm

Meeting point is room SPECTRUM

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Coffee Break

16:30 –17:00

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