Navigating Data Spaces: Technology & Governance

Thursday 23 November 2023

#dataspaces

www.gaiax.fi

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HOUSEKEEPING

- If you are **not** presenting, please **turn off your camera** and **mute your microphone.**

- **Please, raise your hand** if you have a comment or a question, they will be addressed in the Q&A. You can also ask questions or share your comments via chat.

- Sit back and **enjoy** – lovely to have you here!

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Programme

13-15 EET
(12-14 CET)

13:00	**Welcome** *Antti 'Jogi' Poikola, Senior Lead, Gaia-X Finland, Sitra*
	Towards a Holistic EU Data Governance *Oliver Dion, Co-founder, Onecub and aNewGovernance*
	Operationalising a data space: Case Catena-X *Matthias Buchhorn-Roth, Operationalising the automotive data space for Catena-X, Cofinity-X*
	Governance and Technology together *Antti 'Jogi' Poikola, Senior Lead, Gaia-X Finland, Sitra* *Oliver Dion, Co-founder, Onecub and aNewGovernance* *Matthias Buchhorn-Roth, Cofinity-X*
	Questions & Answers
	Event ends

PEOPLE

Antti Poikola

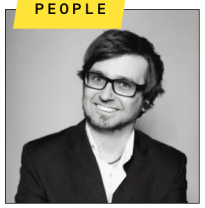
Senior Lead,
Gaia-X Finland,
Sitra

PEOPLE

Olivier Dion

Co-founder,
Onecub and
aNewGovernance

PEOPLE



Matthias Buchhorn-Roth

Operationalising
the automotive
data space for
Catena-X,
Cofinity-X

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Navigating Data Spaces – Governance and Technology

Antti 'Jogi' Poikola

Lead Architect
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linkedin.com/in/poikola

Slides: https://bit.ly/ds-gov-tech

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How to create governance framework for our data space?

How to set up the technical infrastructures for our data space?

Beata
Chief Executive Officer

Leo
Chief Legal Officer

Tessa
Chief Technical Officer

Oscar
Chief Operating Officer

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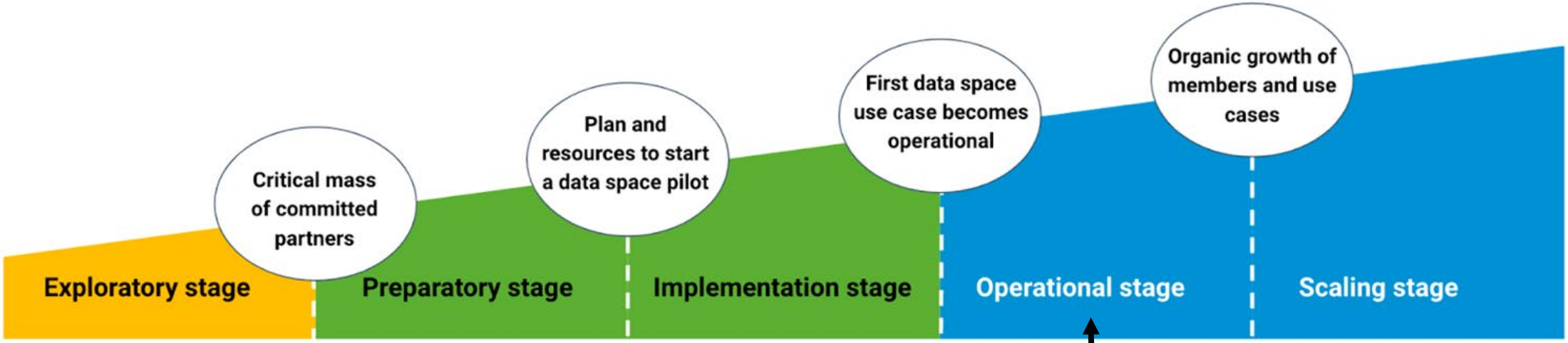
Jobs of Thessa and Leo



The **development stage** that starts when a **data space initiative** has a tested implementation of **infrastructure(s)** and **governance framework**, and the first **use case** becomes operational (data flowing between **data providers** and **data recipients** and use case providing the intended value).

Source: DSSC Glossary

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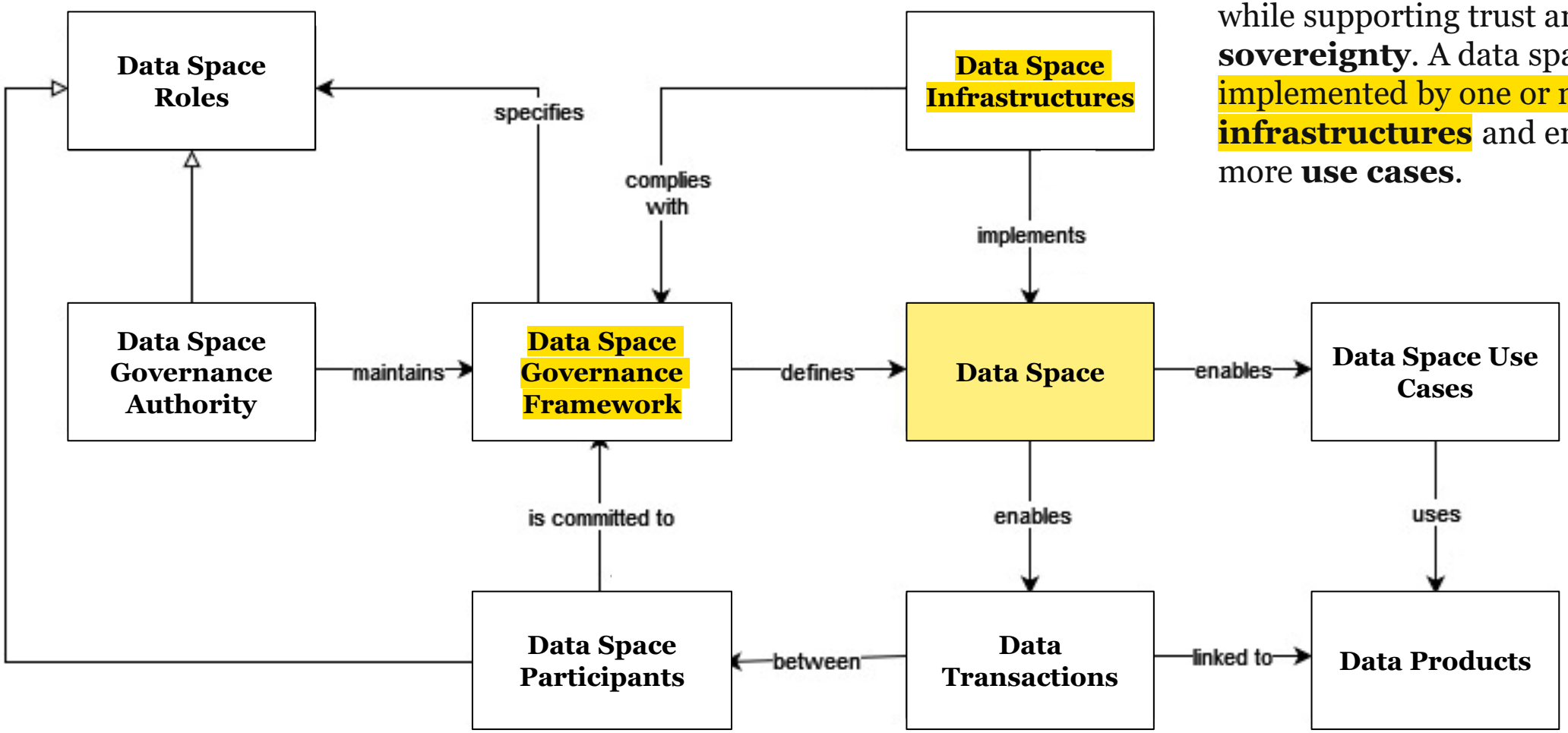
Data Space

A distributed system defined by a **governance framework** that enables secure and trustworthy **data transactions** between **participants** while supporting trust and **data sovereignty**. A data space is implemented by one or more **infrastructures** and enables one or more **use cases**.



Source: Conceptual Model of Data Spaces

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Data Space Rulebook and Infrastructure

Data space governance framework	The set of principles, standards, policies (rules/regulations), agreements and practices that apply to the governance, management, and operations (including business and technology aspects) of a **data space** as well as to the enforcement thereof, and the resolution of any conflicts.
Data space rulebook	The documentation of the **data space** governance framework for operational use. The rulebook can be expressed in human-readable and machine-readable formats.
Data space infrastructure	A technical, legal, procedural and organisational set of components and services that together enable actual **data transactions** to be performed in the context of one or more **data spaces**.

Source: DSSC Glossary

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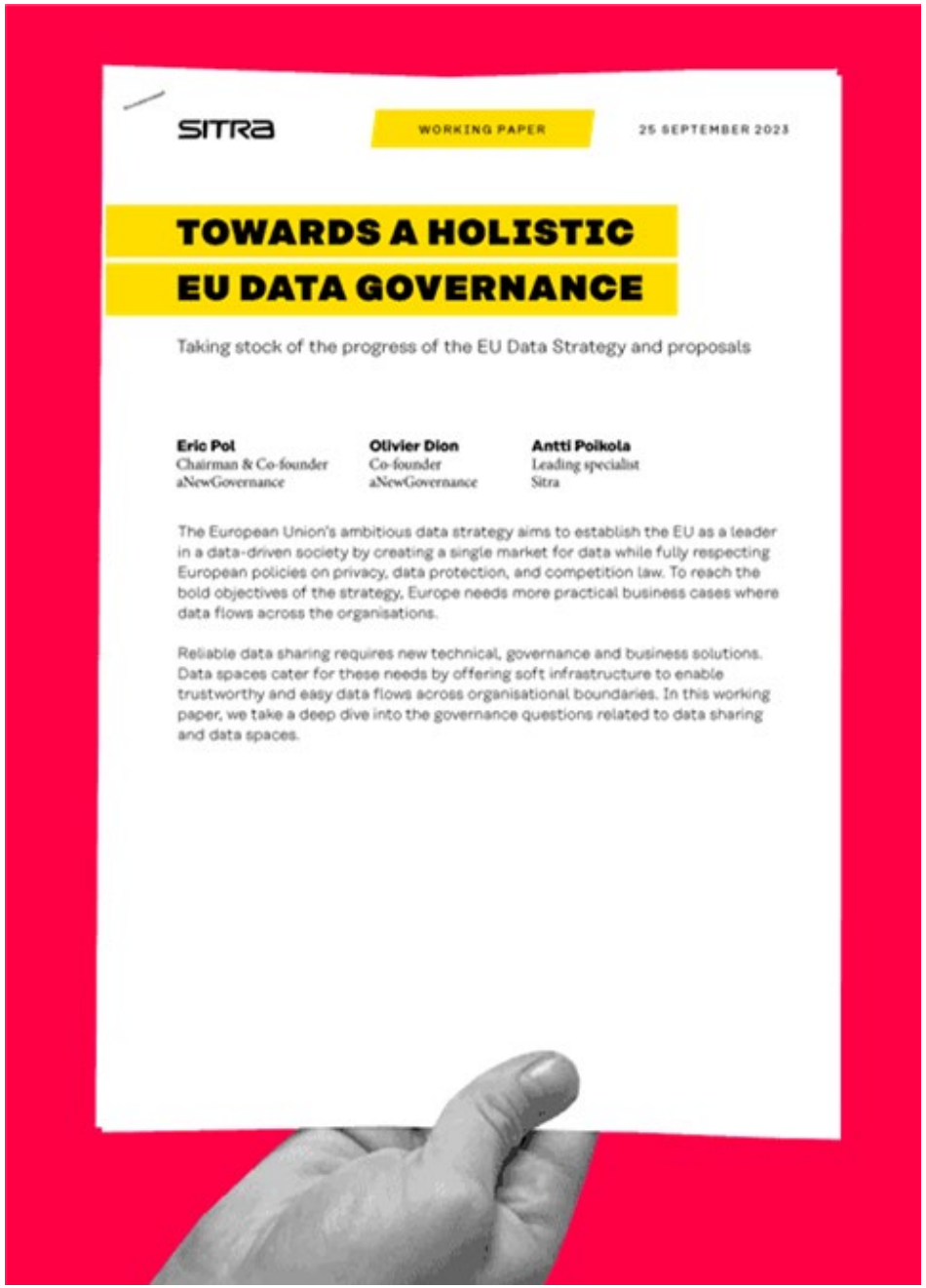

https://www.sitra.fi/en/publications/technology-landscape-of-data-spaces

https://www.sitra.fi/en/publications/towards-a-holistic-eu-data-governance

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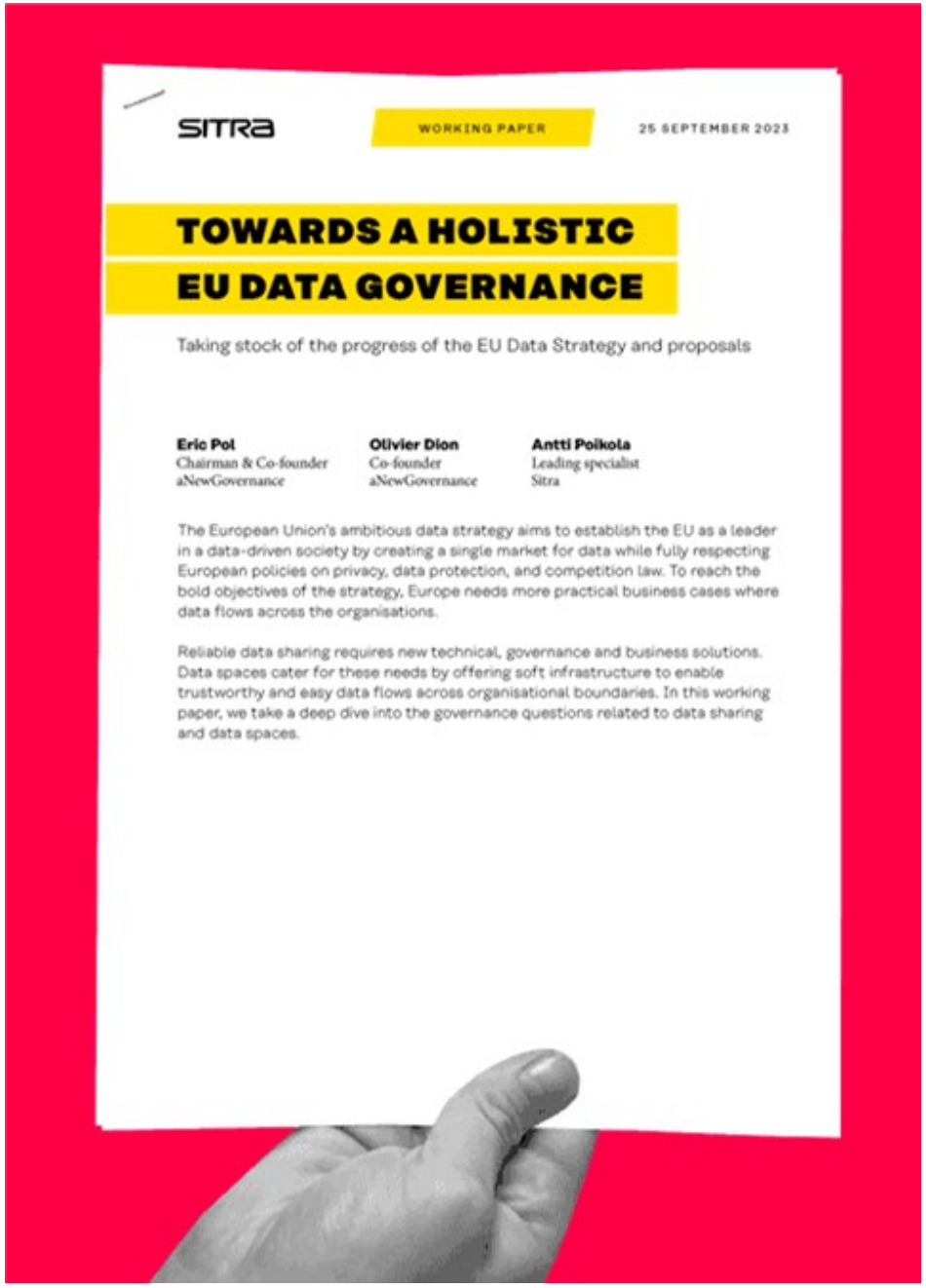
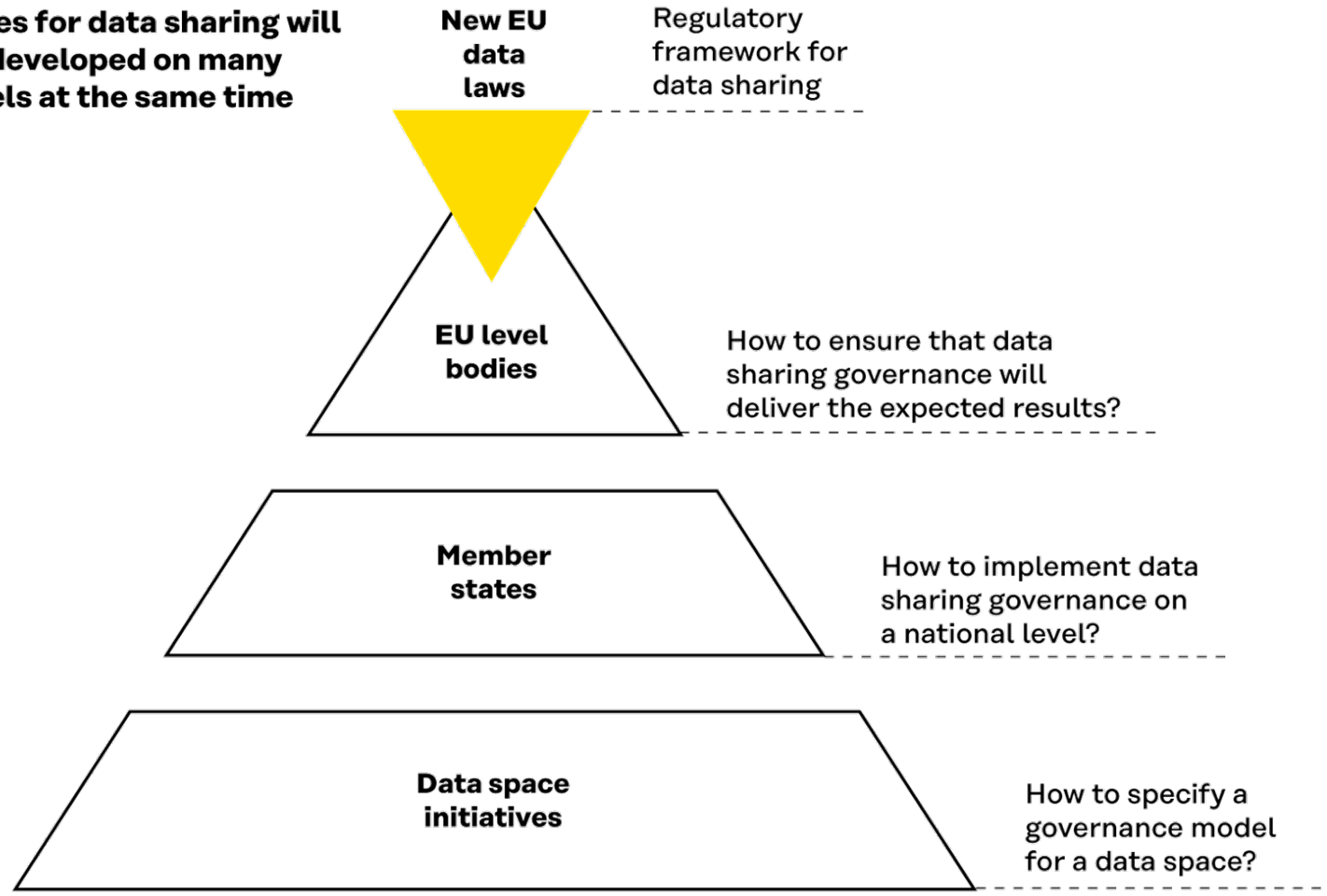


Rules for data sharing will be developed on many levels at the same time



https://www.sitra.fi/en/publications/technology-landscape-of-data-spaces

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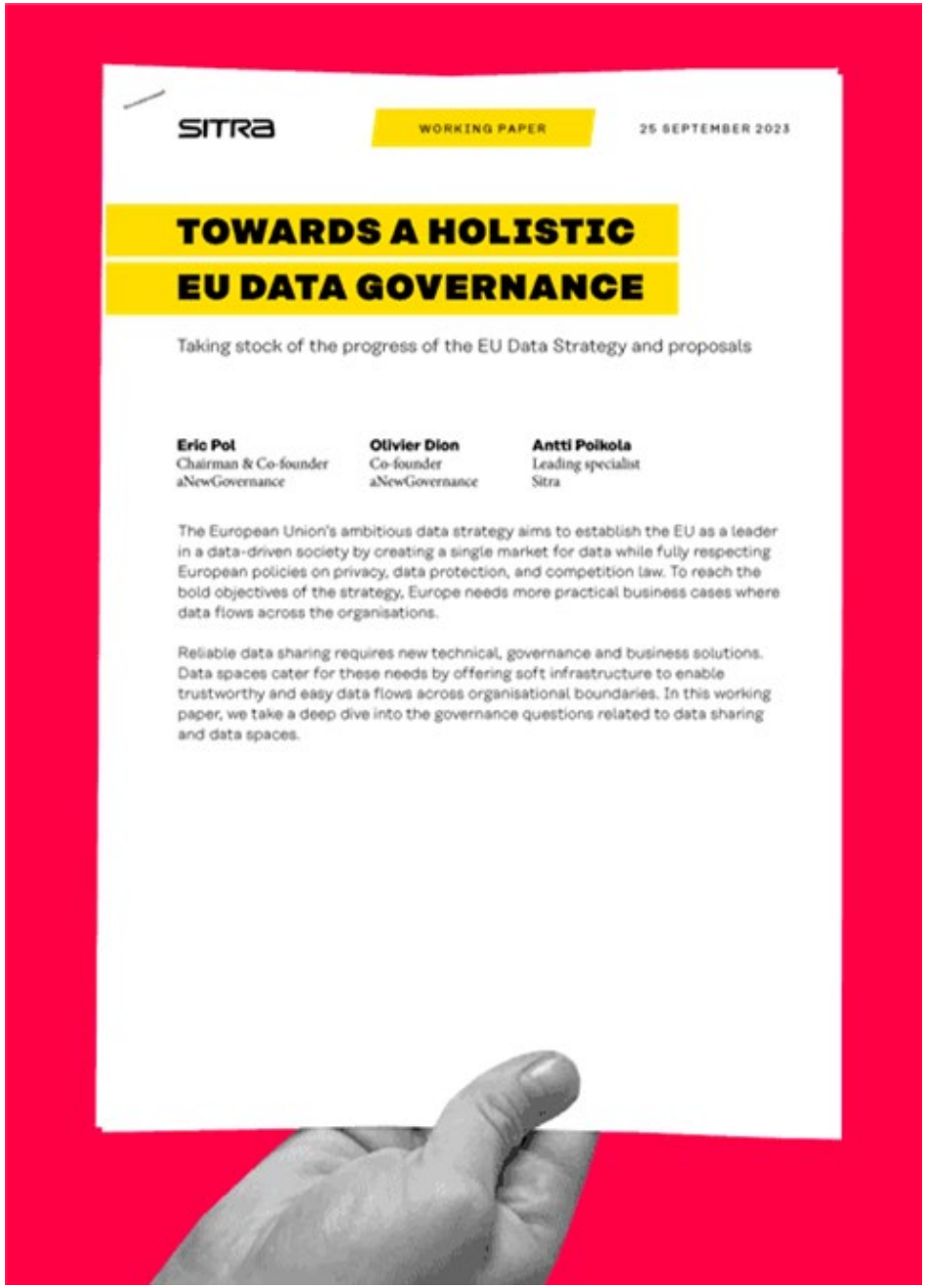

European level recommendations

Policy recommendation 1: rolebook

Policy recommendation 2: Regulators' super club

Policy recommendation 3: EU-level data governance forum

Policy recommendation 4: Regulatory dependency mapping

Member state level recommendations

Policy recommendation 5: National legislative coordination

Policy recommendation 6: Strengthen dialogue

Policy recommendation 7: National data space hubs

Data space level recommendations

Policy recommendation 8: Data space rulebooks

Policy recommendation 9: Common terminology

https://www.sitra.fi/en/publications/technology-landscape-of-data-spaces

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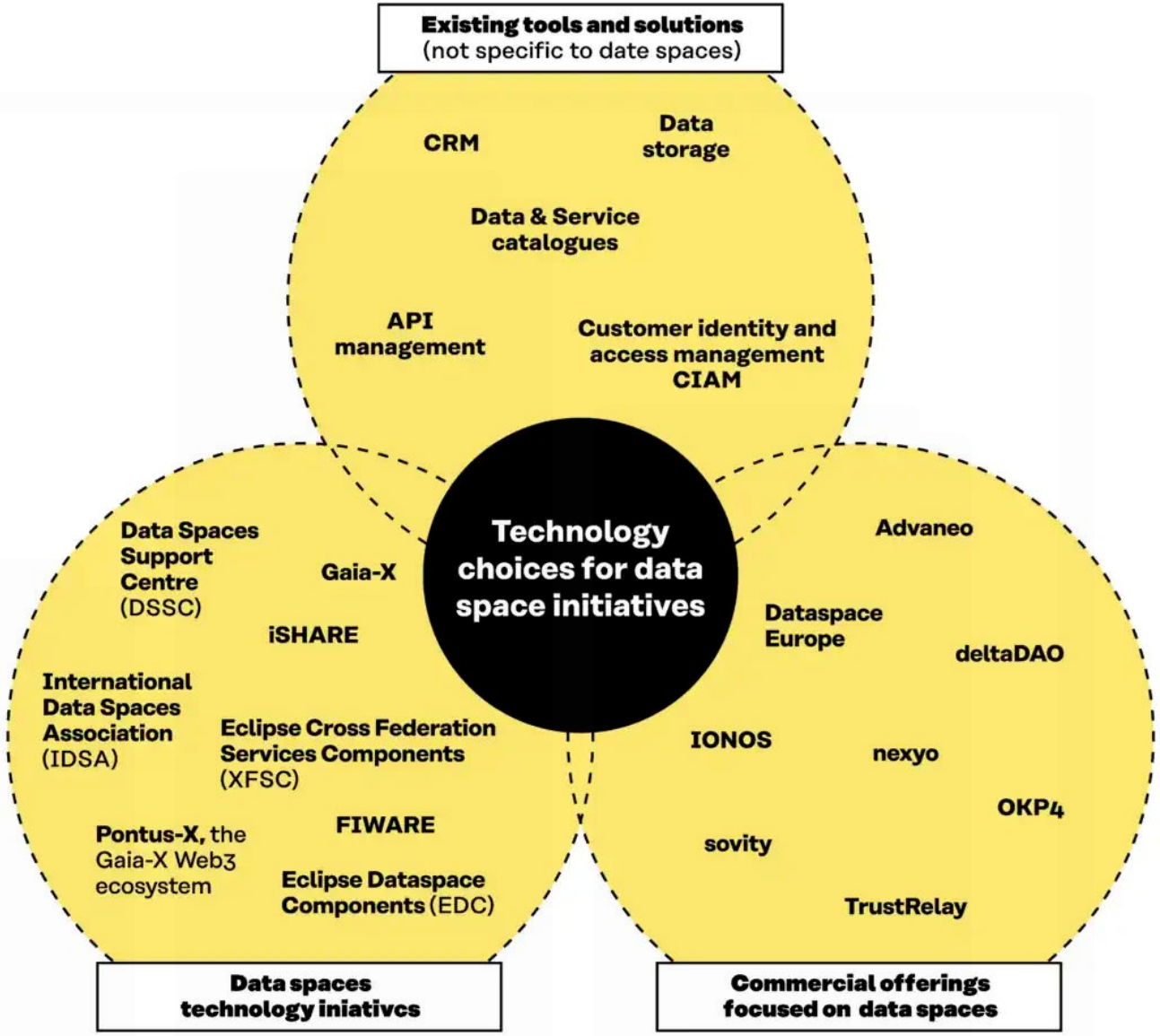

https://www.sitra.fi/en/publications/towards-a-holistic-eu-data-governance

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Recommendation 1: Support actors with multiple roles in data spaces

Recommendation 2: Test business cases against existing mature solutions

Recommendation 3: Monitor the market and provide feedback

Recommendation 4: Pay attention to user experience

https://www.sitra.fi/en/publications/towards-a-holistic-eu-data-governance

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Thank you!

Antti 'Jogi' Poikola

Lead Architect
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Twitter: @apoikola

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Why should you care?

Data spaces solve systemic challenges that go beyond a single company

- ☑ Build international competitiveness
- ☑ Digitalisation of the value & supply chain
- ☑ Meet Environment, Social, and Governance (ESG) requirements
- ☑ Reduce the cost of compliance

DATA FEST IVAL 2024

April 2024 in Helsinki

Show, tell, and learn about business models, technologies & regulations for data spaces and data economy

Sign up here

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@sitrafund

RISE TO SHINE!

sitra.fi/en/

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aNewGovernance

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Recommendations for a holistic data governance

Olivier Dion
aNewGovernance &
Onecub

regulation | innovation

aNewGovernance

why balance is key

create digital ecosystems that users never need to leave.

Apple and Google target digital ID market.
To access sensitive services like banking and healthcare seamlessly.

Decentralisation
through
3 governance levels

aNewGovernance

The EU Data Governance Pyramid

Rules for data sharing will be developed on many levels at the same time

New EU data laws

Regulatory framework for data sharing

EU level bodies

How to ensure that data sharing governance will deliver the expected results?

Member states

How to implement data sharing governance on a national level?

Data space initiatives

How to specify a governance model for a data space?

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How is a Data Space governed?

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The Data Spaces Rulebooks

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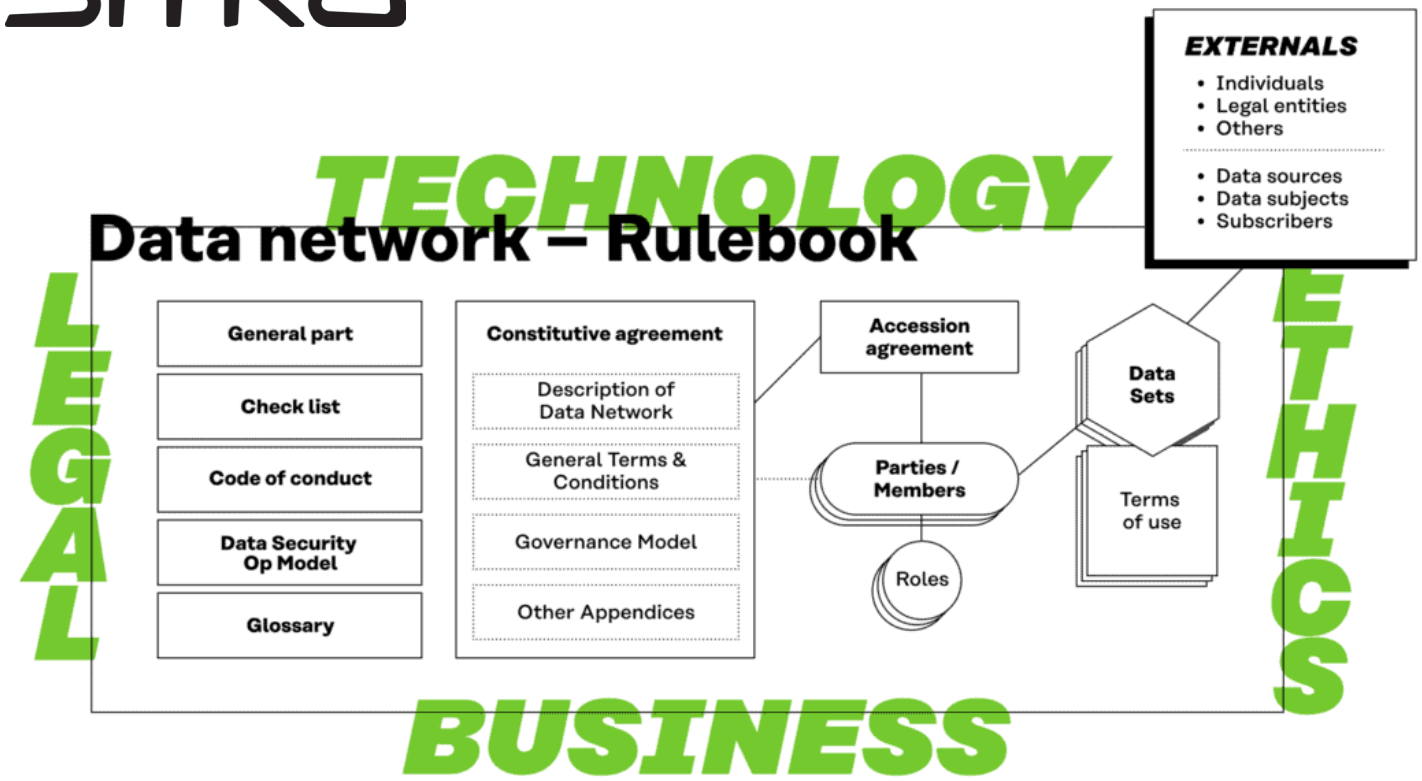

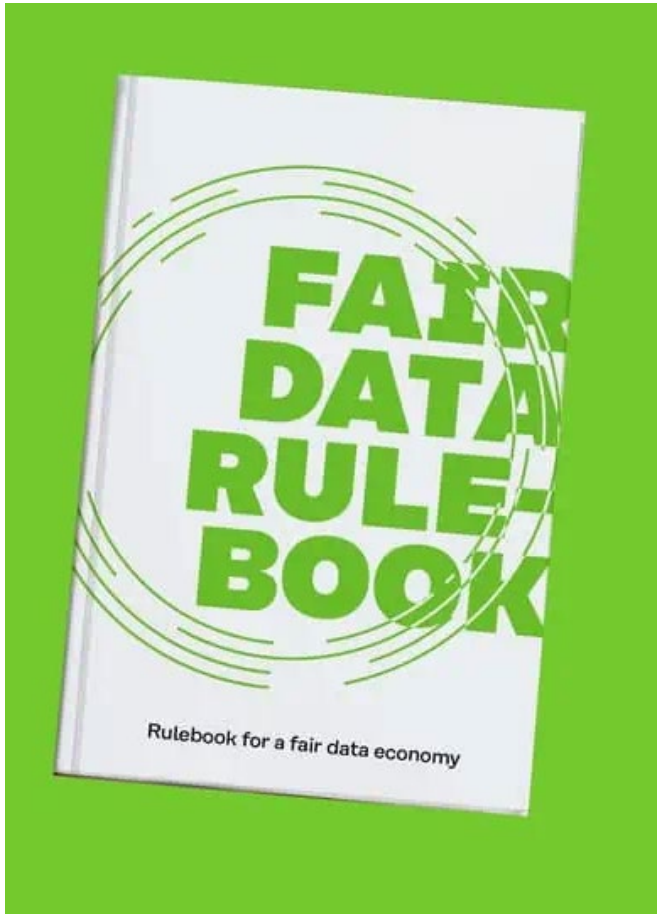

aNG
aNewGovernance

What kind of rules in a Rulebook?

aNewGovernance

Hard and Soft Law

EU Regulations	**MS regulations**	**Technological standards**	**Sectoral standards**	**Internal business rules**	**Etc.**
GDPR DGA / DA DMA / DSA AI Act IE Act EHDS	Cloud Data AI Sectoral regulations	Gaia-X IDSA FIWARE eIDAS SOLID	Sectoral guidelines and code of conduct	Local business agreements between Data Space members	

aNG
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How to know who decides for what?

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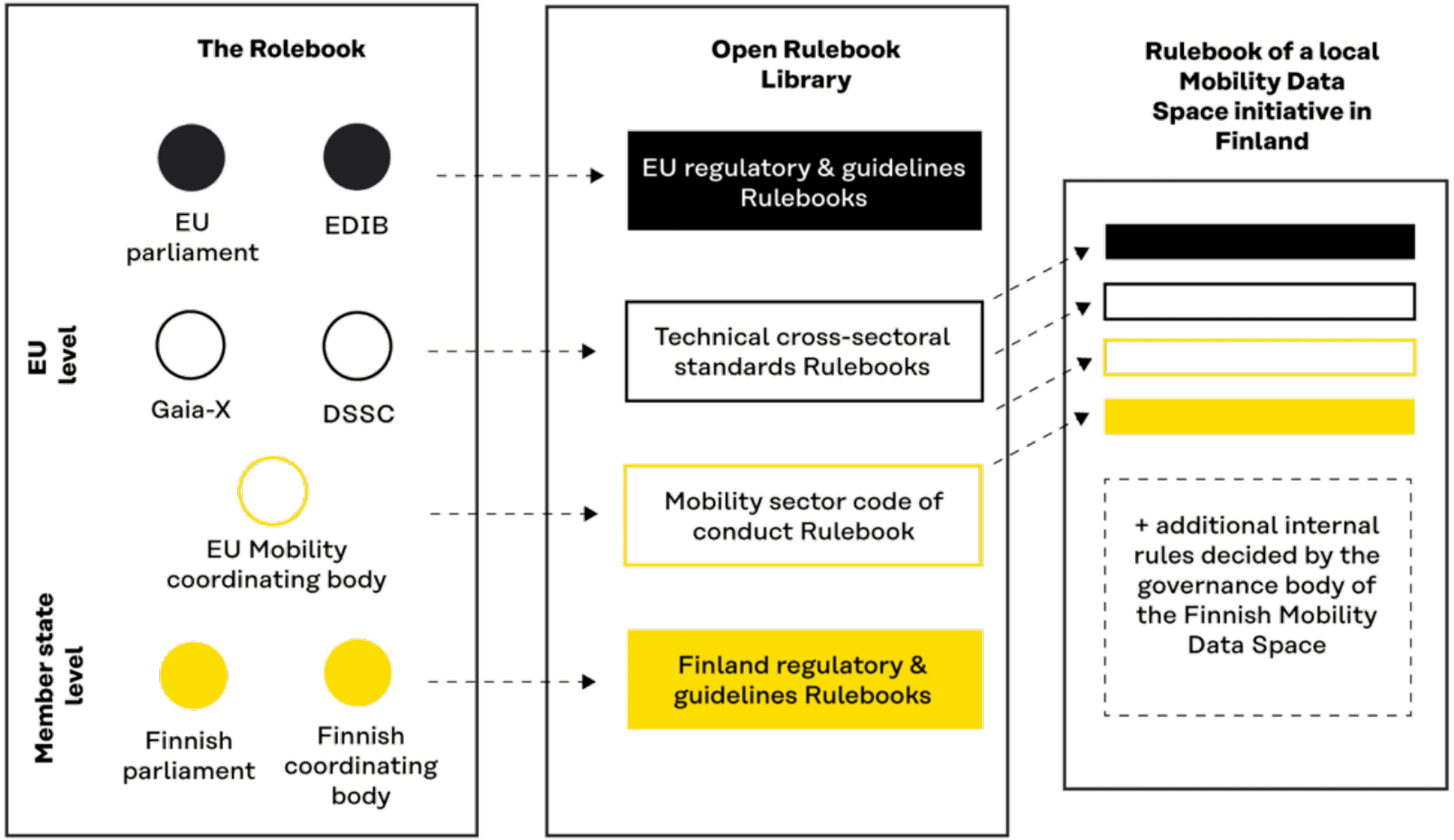
The data-sharing Rolebook

DEFINITION

The Rolebook is an **open**, **transparent**, and **dynamic registry** of roles and bodies involved in data sharing.

The Rolebook would comprehensively document **'Who does what'** and **'Who decides what'** and establish an interconnected network of data-sharing decision-making entities.



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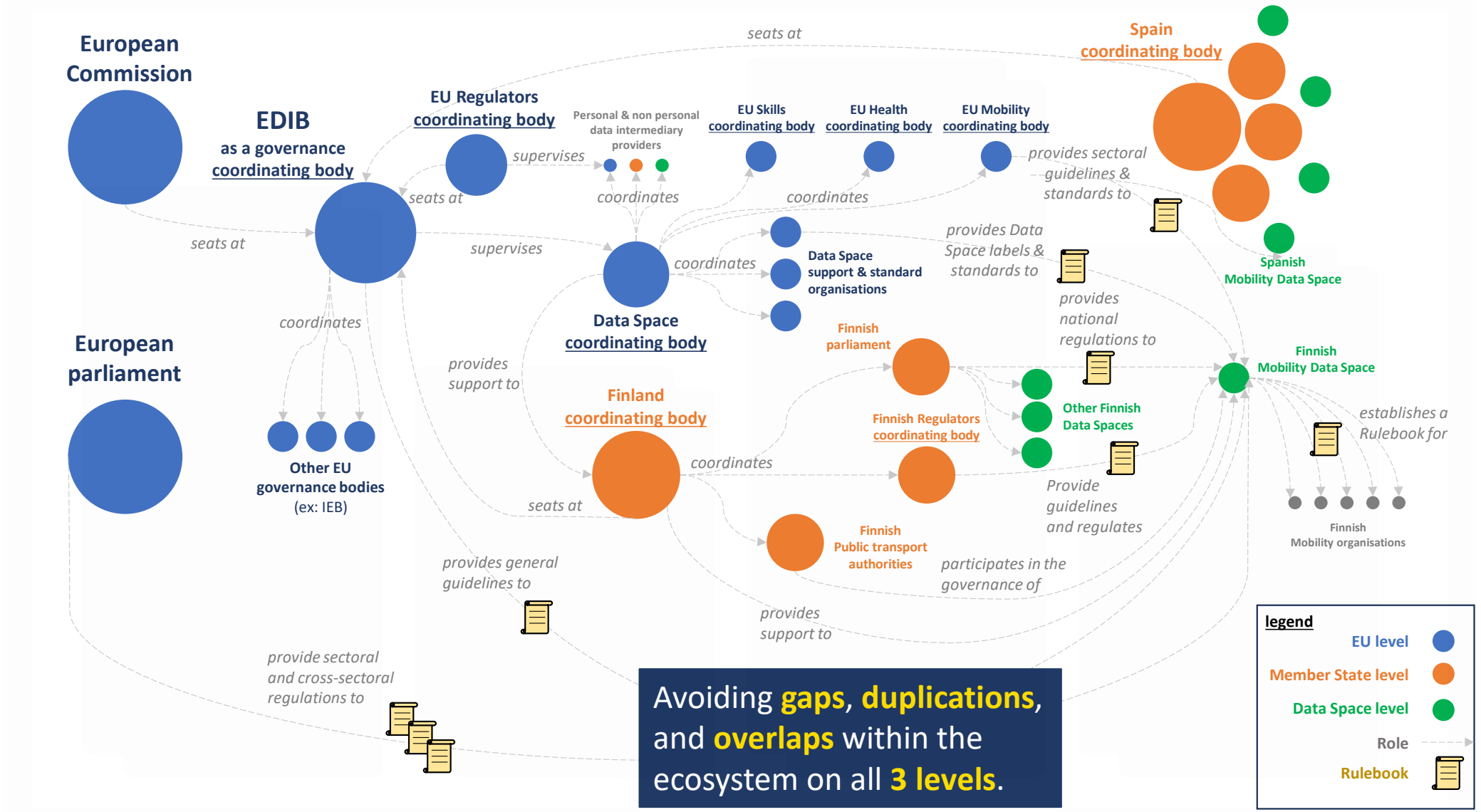
A Rolebook x Rulebooks network



aNewGovernance

Key recommendations by governance level

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EU level

Challenge: Many stakeholders at the European level and in the member states, and also within the data space initiatives **struggle to understand the roles and responsibilities of all the different bodies involved in EU data governance** now and in the future.

Policy recommendation: Create a Rolebook

Member State

Challenge: Member states are **under intense pressure to implement all the regulations of the EU data and digital strategies**. If member state authorities do not coordinate the division of responsibilities and tasks, there is a risk of fragmented and sub-optimal results.

Policy recommendation: National legislative coordination

Data Spaces

Challenge: Data space initiatives **struggle to create internal governance and rulebooks**.

Policy recommendation: Data space rulebooks & universal rule language

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Cofinity-X

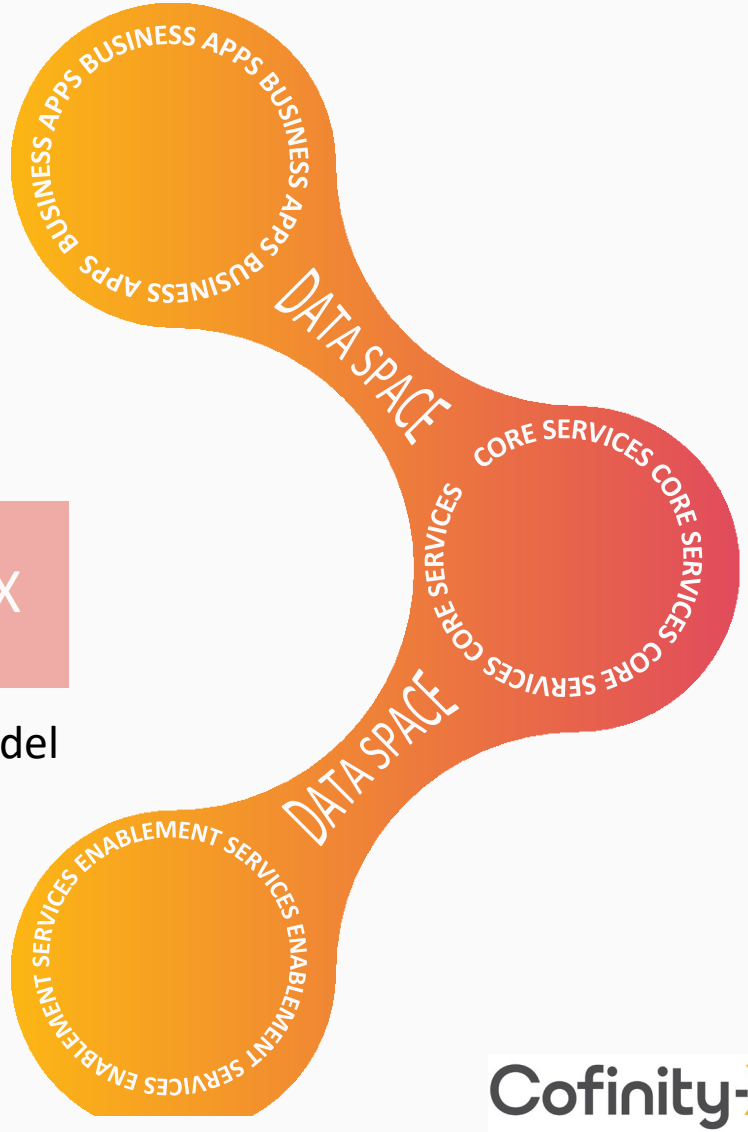
Operationalizing the automotive data space for Catena-X

Matthias Buchhorn-Roth - Product Lead

Navigating Data Spaces: Technology & Governance

November 23th, 2023

1. Operational model
2. Governance
3. Onboarding
4. Use cases



Cofinity-X

Internationalization

Catena-X connects the world.
We've already got Europe covered. And we're busy working to include America, China, and the rest of the world in our network. Radical collaboration has no borders!

Operating Environment

Operating companies are the foundation of our network, and the first one is up and running. Milestone? Check. But we want more, and there will be other operating companies coming.

We're live!

Our vision is becoming reality:
We're live!
But we're not standing still – the next features are already in the pipeline.

Co-creation

Our Association partners as well as the open-source community are divers and are co-creating our network. We've already established several expert groups that are continuing to develop the Catena-X Core, Standards, and Use Cases. Join us to contribute your know-how and make it better for all of us!

Open-Source

Our open-source Tractus-X community is growing steadily. And you're invited to join our Open-Source Planning Sessions.

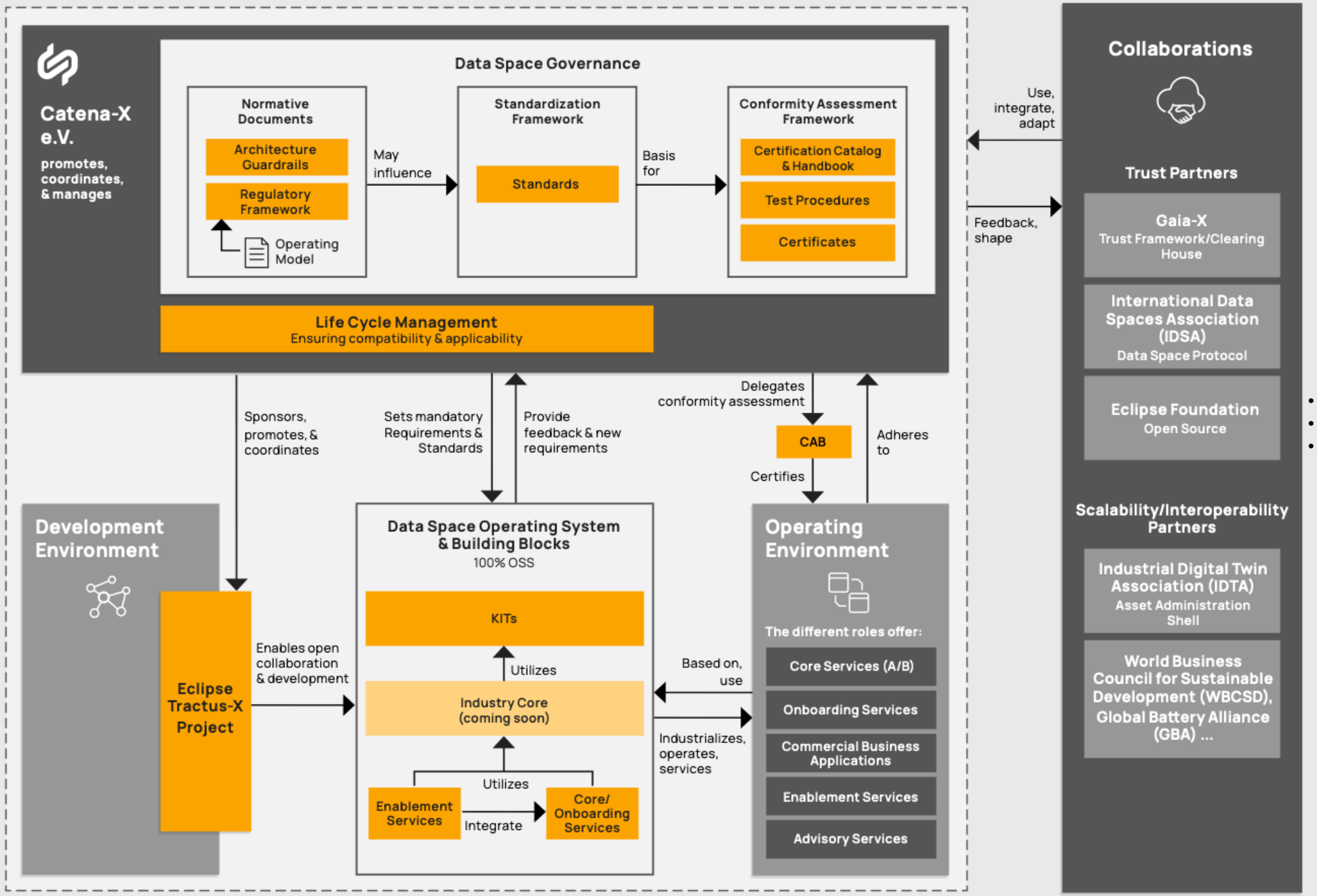
Cofinity-X

1. Operation Model of Catena-X

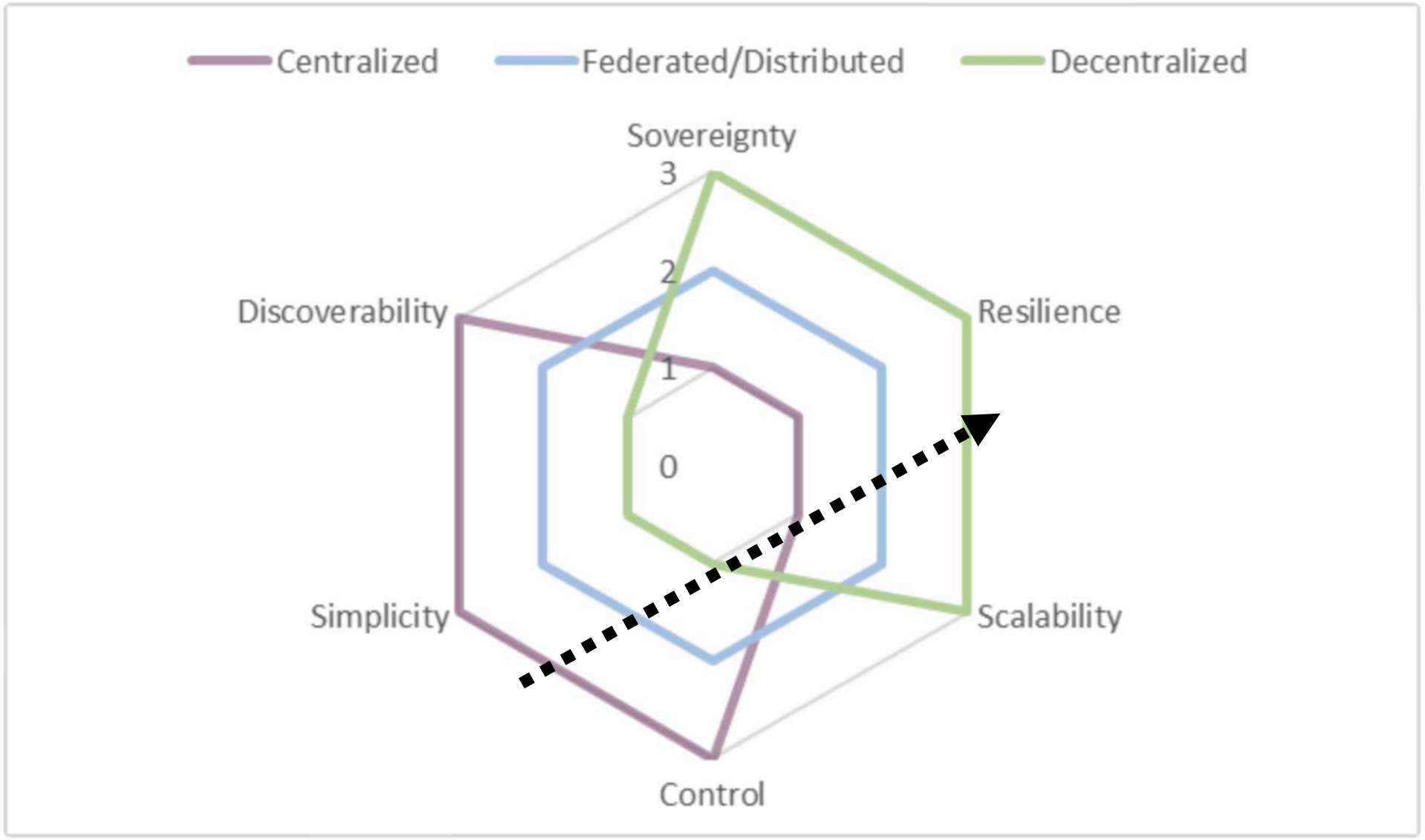
Implement a fair data sharing ecosystem with Federated and Decentralized Services

https://catena-x.net/en/catena-x-introduce-implement/how-to-operate-catena-x

The Catena-X Data Space



- Eclipse Dataspace Components
- Eclipse Tractus-X
- Eclipse Dataspace WG

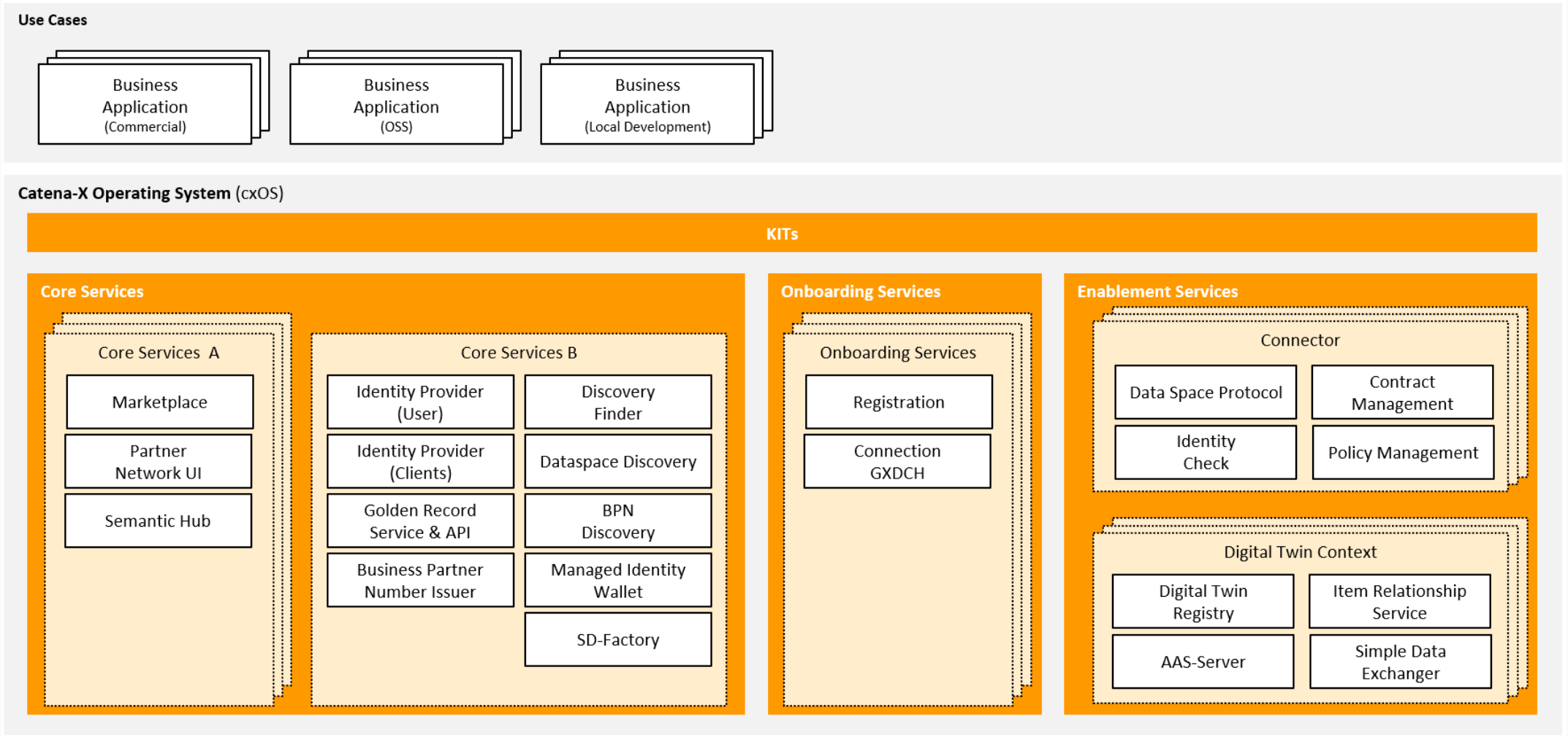


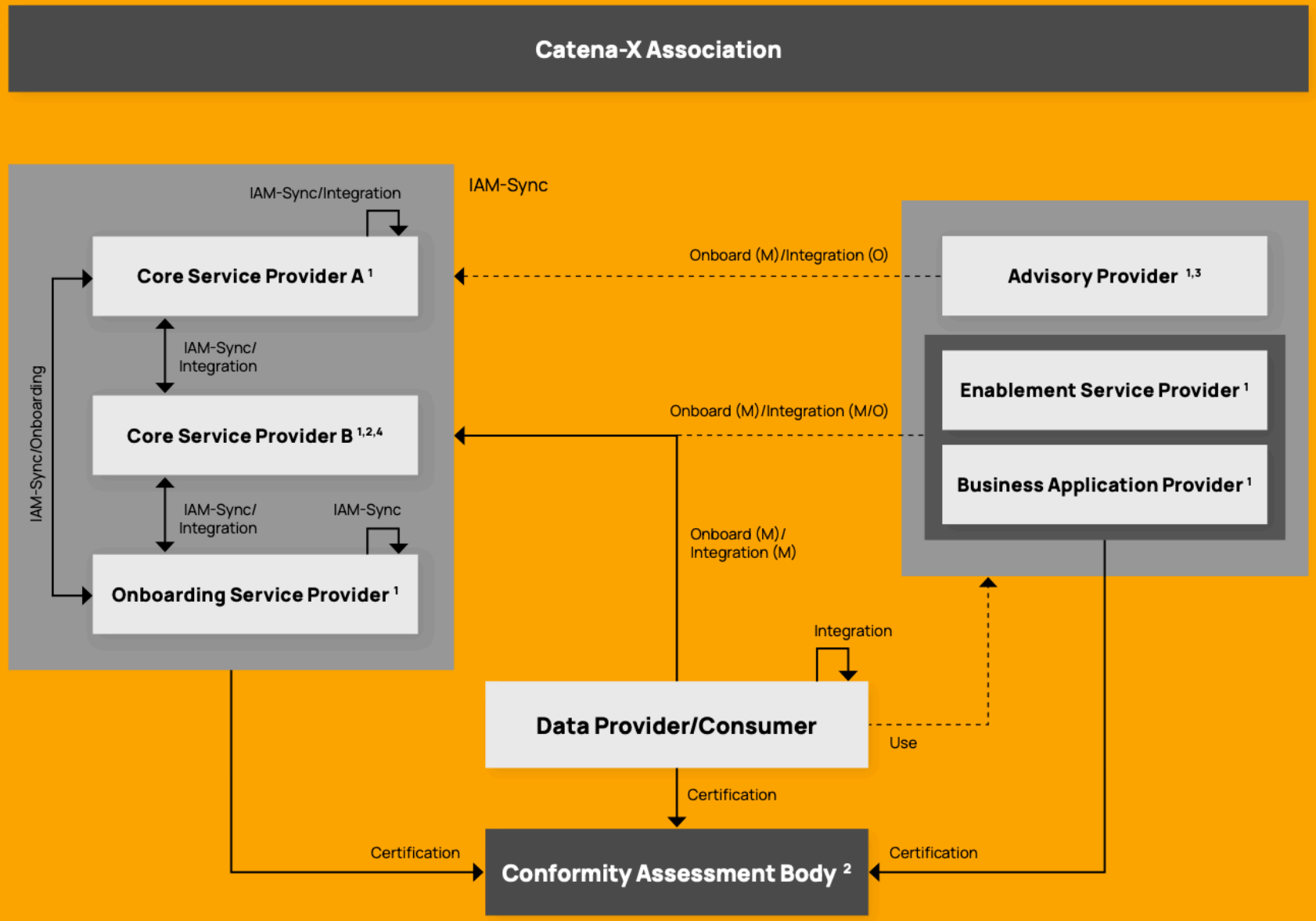
Catena-X data space is evolving

https://docs.internationaldataspaces.org/ids-knowledgebase/v/idsa-rulebook/idsa-rulebook/3_functional_requirements

Cofinity-X

Service Map (Deployment View)



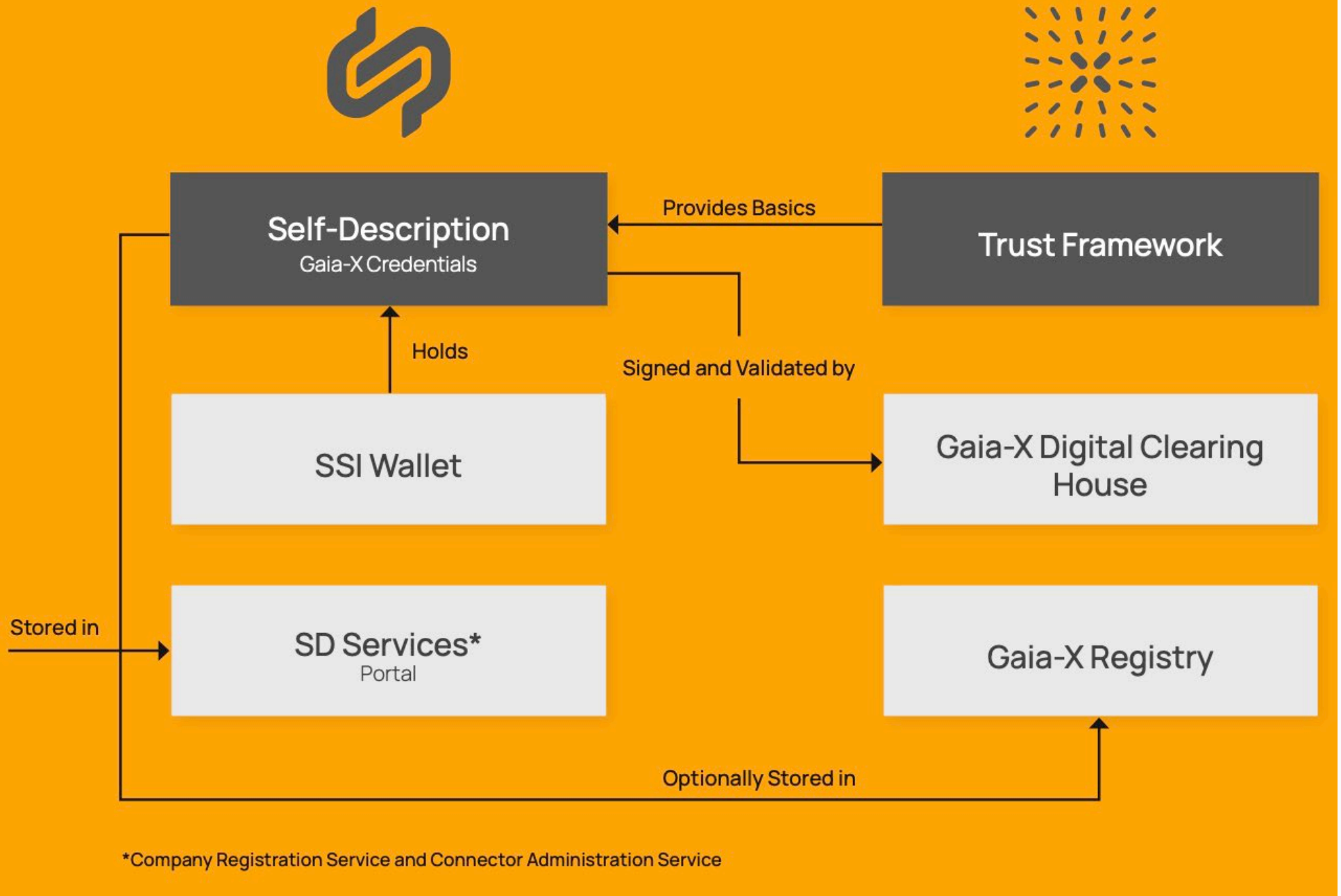


Roles
Responsibilities
Relationships

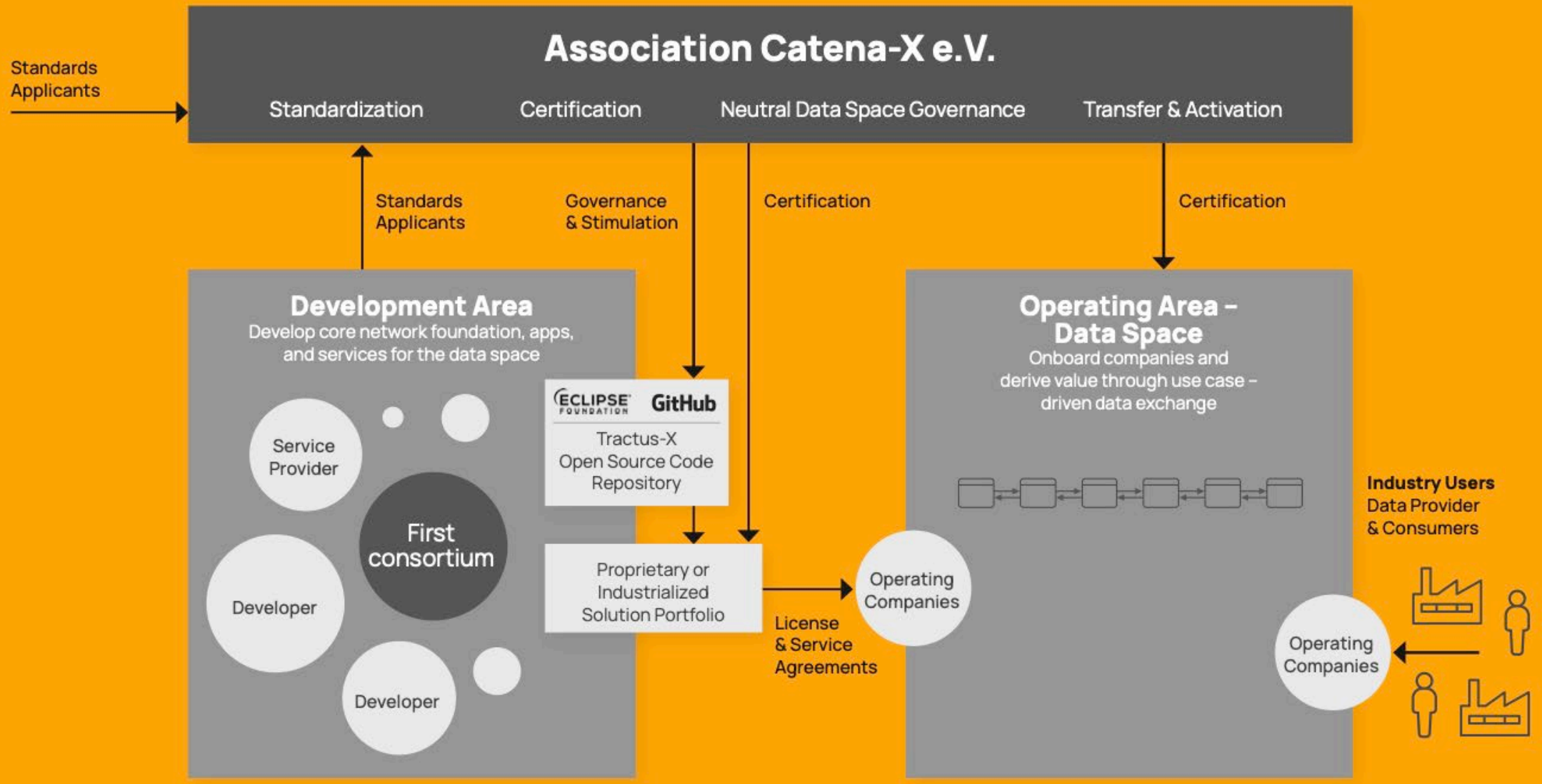
2. Dataspace Governance

GAIA-X Trust Framework and Digital Clearing House

https://catena-x.net/fileadmin/_online_media_/231006_Whitepaper_DataSpaceGovernance.pdf



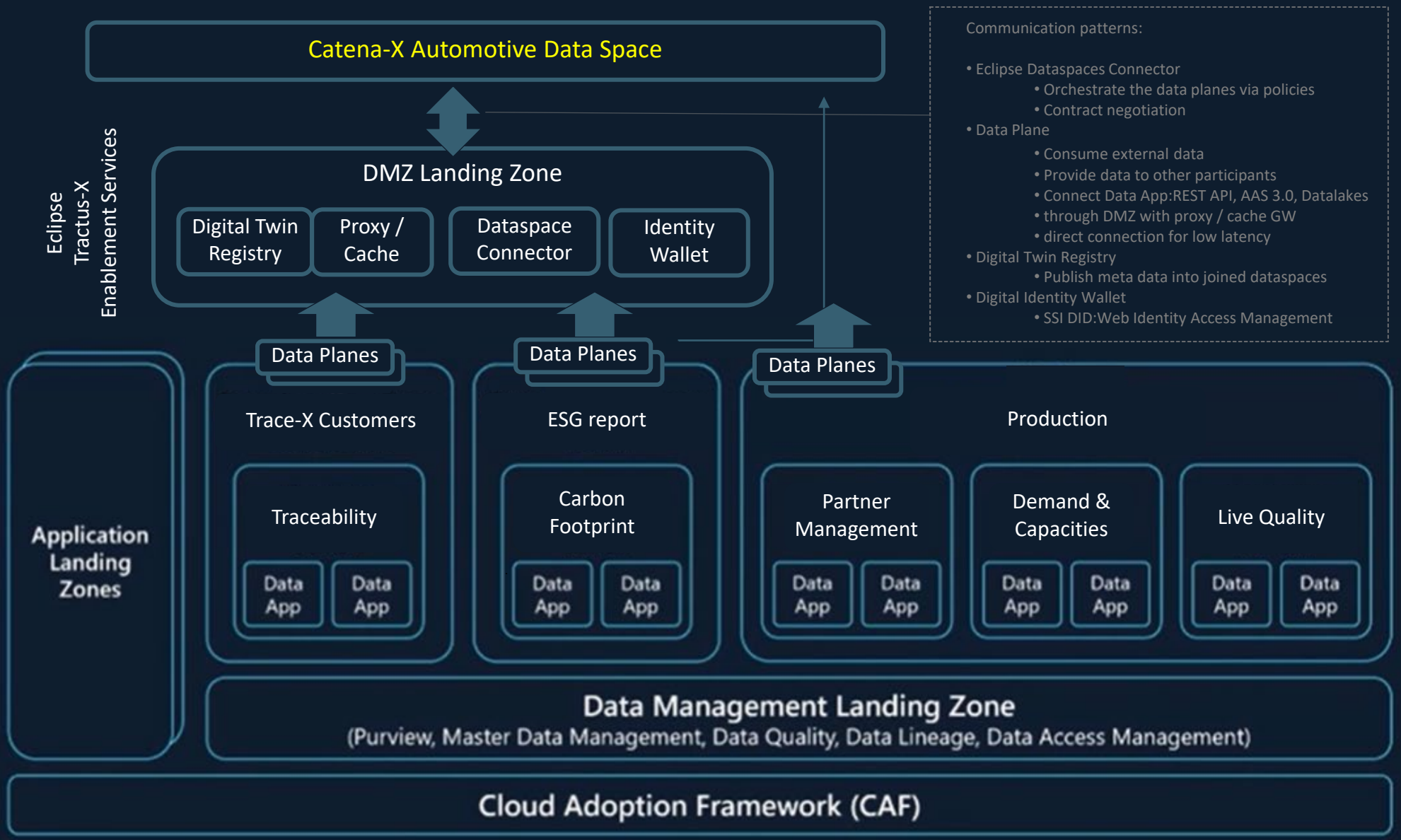
Catena-X and Gaia-X components and their interplay


Association Catena-X e.V.
Standardization
Certification
Neutral Data Space Governance
Transfer & Activation
Standards Applicants
Standards Applicants
Governance & Stimulation
Certification
Certification
Development Area
Develop core network foundation, apps, and services for the data space
Service Provider
First consortium
Developer
Developer
ECLIPSE FOUNDATION
GitHub
Tractus-X Open Source Code Repository
Proprietary or Industrialized Solution Portfolio
License & Service Agreements
Operating Companies
Operating Area – Data Space
Onboard companies and derive value through use case – driven data exchange
Industry Users
Data Provider & Consumers
Operating Companies

3. Onboarding

Setup an secure and scaleable data architecture in your company and the role of the onboarding and advisory partners

Implement data landing zones with Data Mesh and Data Spaces



4. Uses Cases

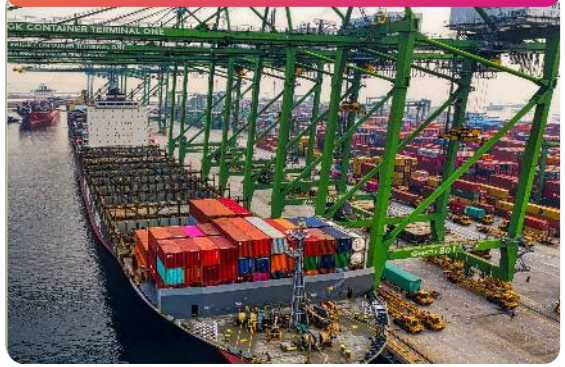
For interoperable business applications Catena-X consolidates all essential code and non-code artefacts for a use case into KIT's

https://catena-x.net/fileadmin/_online_media_/231006_Whitepaper_KITs.pdf

Never Let a Good Crisis Go to Waste (W. Churchill)

Navigate your Supply-Chain with Catena-X, operated by Cofinity-X

RESILIENCY



SUSTAINABILITY AND REGULATORY REQUIREMENTS

GEOPOLITICS AND INNOVATION

ECONOMICS

- Perfect storm for suppliers, overwhelming their capabilities, capacity, budget
- Collaboration models need to be inter-operable and capture the entire value chain
- Sharing data is a matter of trust, sovereignty, and standards

Tractus-X KITs

Behaviour Twin Kit RuL Kit

Provide and get RuL values.

Business Partner Kit

Get high-quality data business partner data records including the unique identifier.

Connector Kit

The EDC as a connector implements a framework agreement for sovereign, cross-organizational data exchange.

DCM Kit

Demand and Capacity Management Kit for quick build of solutions for companies of any size to engage a collaborative capacity management in the Catena-X dataspace.

MaaS KIT

This is a preview for the manufacturing as a service kit. This will be published soon.

Data Chain Kit

Data Chain Kit is made for apps and services to access connected data distributed between organizations.

Digital Twin

Digital Twins enable data-level interoperability - even between parties previously unknown to each other.

Eco Pass

Leverage the transparency of digital product passports to strengthen sustainability & compliance.

PURIS KIT

This is a preview for the predictive unit real-time information system kit. This will be published soon.

MP KIT

This is a preview for the manufacturing as a service kit. This will be published soon.

Online Simulation

Gain increased supply chain transparency through collaborative simulation across all stakeholders.

Quality

Quality KIT enables data provider and consumer to exchange and analyse existing data across company boundaries.

Traceability

Trace parts and materials across the entire value chain to enable data driven use cases over all n-tier levels.

Agents Kit

Scalable & Efficient
Semantic Dataspace Federation
Generate Knowledge from Data

MORE COMING SOON..

There will be more Kits coming in the next months. Stay tuned.

Cofinity-X

Cofinity-X provides new products and services in an regular release cycle

October 2023

- Core Services & first commercial offers
- Golden Record Service

December 2023

- Trace-X Application
- EDC & Simple Data Exchange as a Service

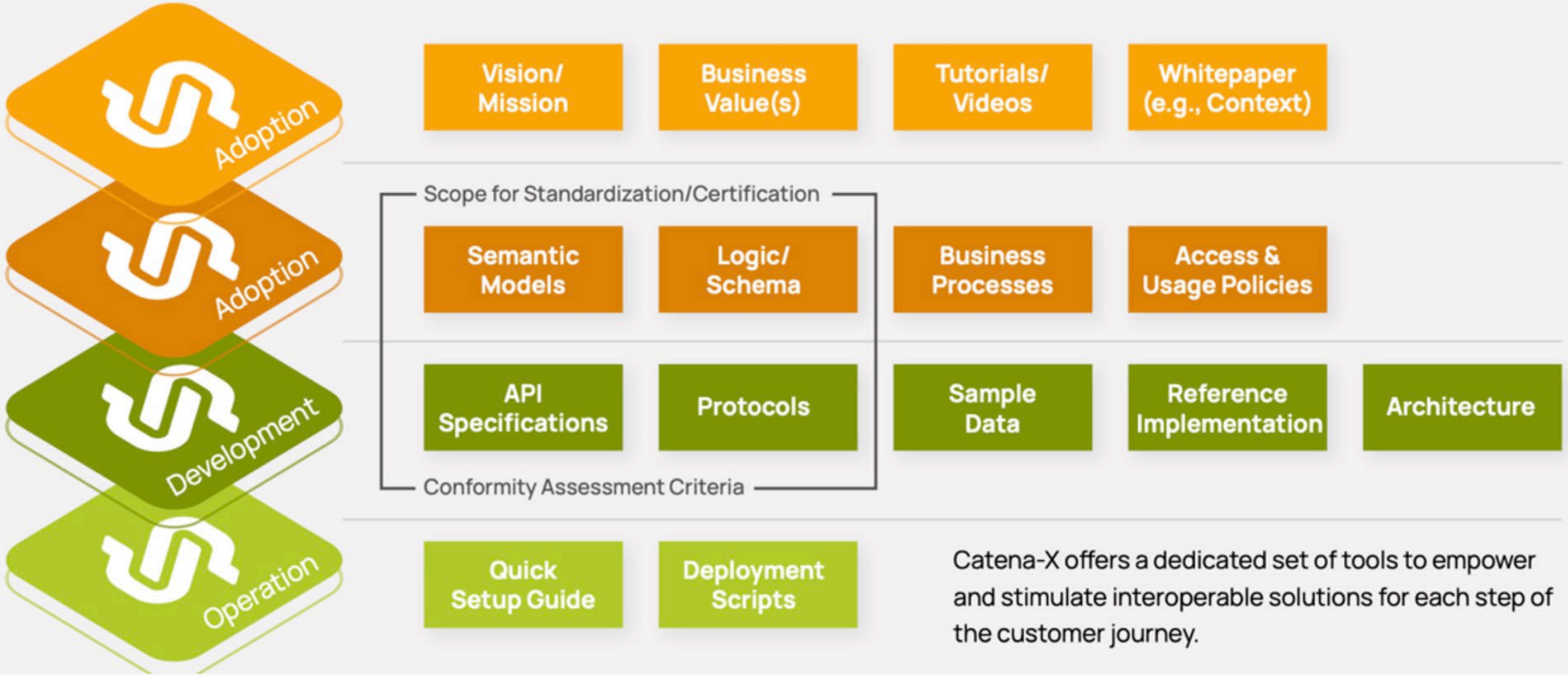
February 2024

- Value Added Services (GPDM)
- Digital Twin Registry as a Service

Cofinity-X

Eclipse Tractus-X

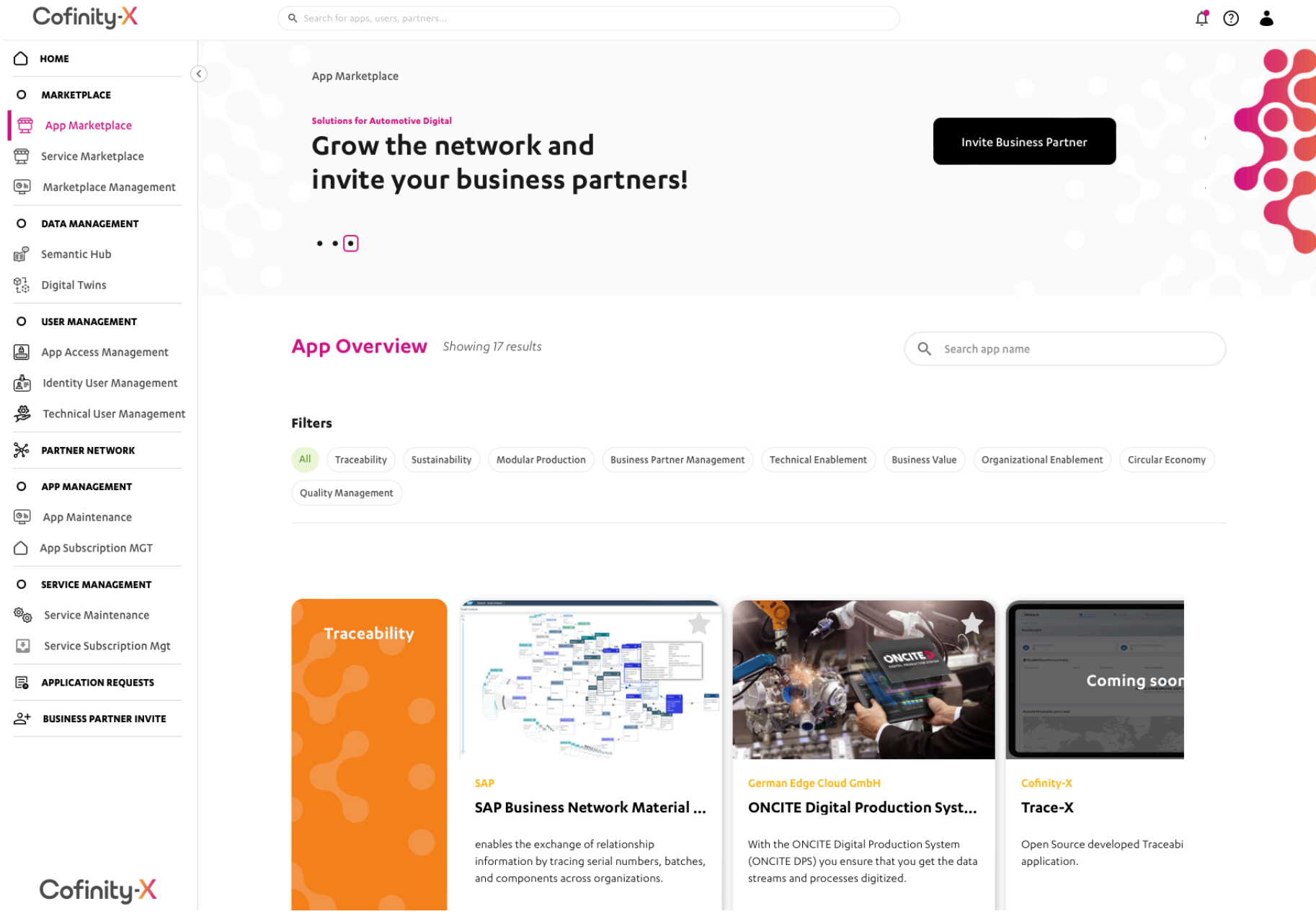
Open-Source-Community is developing applications for the Automotive ecosystem.



https://eclipse-tractusx.github.io

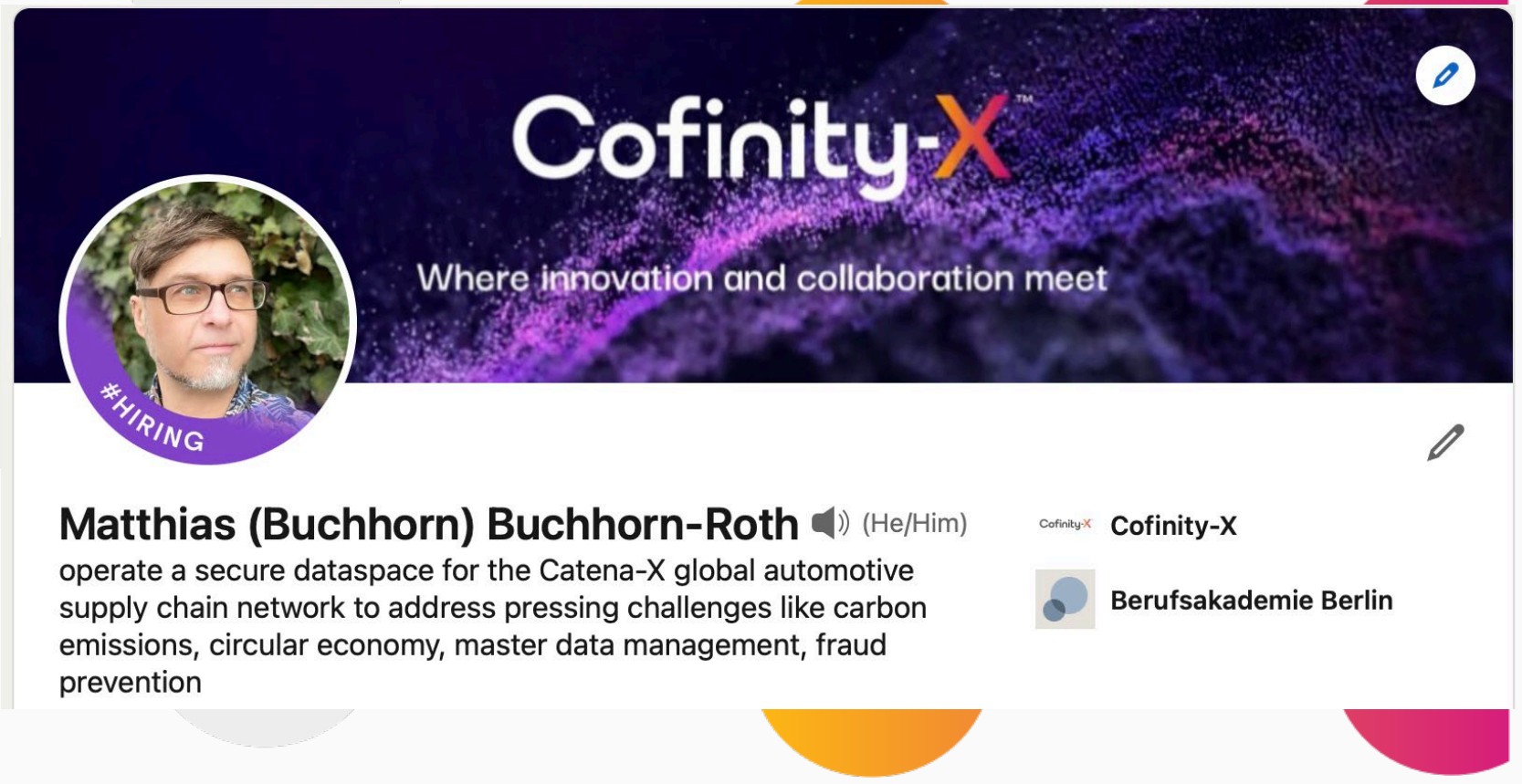
Cofinity-X

Cofinity-X Marketplace



linkedin.com/in/mbuchhorn/

Let's connect and start a great journey together.



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