Catena-X

THE FIRST OPEN AND COLLABORATIVE DATA ECOSYSTEM

28.06.2023

INFORMATION WEBSEMINAR

„WE MOVE IT", CVC SÜDWEST

Agenda

01. Introduction to Catena-X

02. Catena-X Automotive Network
How does it work?

03. Questions & Answers

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

| RESILIENCY | SUSTAINABILITY AND REGULATORY REQUIREMENTS | GEOPOLITICS AND INNOVATION | ECONOMICS |

"Today's peer to peer networks don't do the job"

EXECUTIVE AWARENESS

"Collaboration models needed to capture the entire value chain"

DATA ECOSYSTEM

"Sharing data is a matter of trust and sovereignty"

EUROPEAN VALUES GAIA-X

"Network adoption and inter-operability takes more than ONE"

INDUSTRY APPROACH

Taking the right turn

Towards, we (the industry) share mutual and pressing issues which we only can solve together.
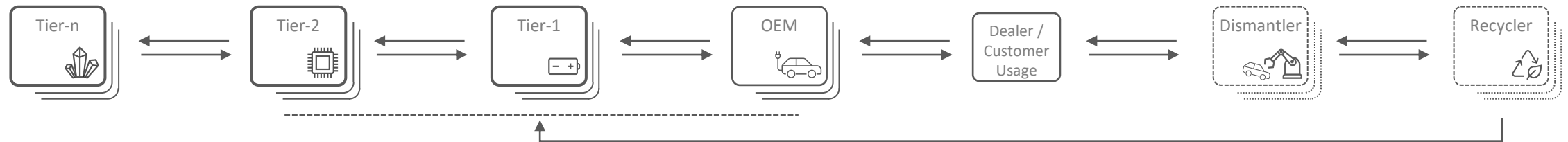
Catena-X value proposition

First time offer of a sovereign, multi-tier data exchange and use case collaboration across the entire value chain.

Optimization of **„our"** industry value chain processes

| Tier-n | ← → | Tier-2 | ← → | Tier-1 | ← → | OEM | ← → | Dealer / Customer Usage | ← → | Dismantler | ← → | Recycler |

→ Addressing the **entire problem** (end to end workflow)

→ **Creating flow** of information for all participants

→ **Scaling** across the industry and beyond

Catena-X value proposition in action

Example "Circularity": First time value derivation made possible by utilizing the trusted data space.

Fast Facts

100 billion
tons of material resources consumed annually

< 9%
of resources are recycled or reused

~ 30%
secondary material ratio per vehicle

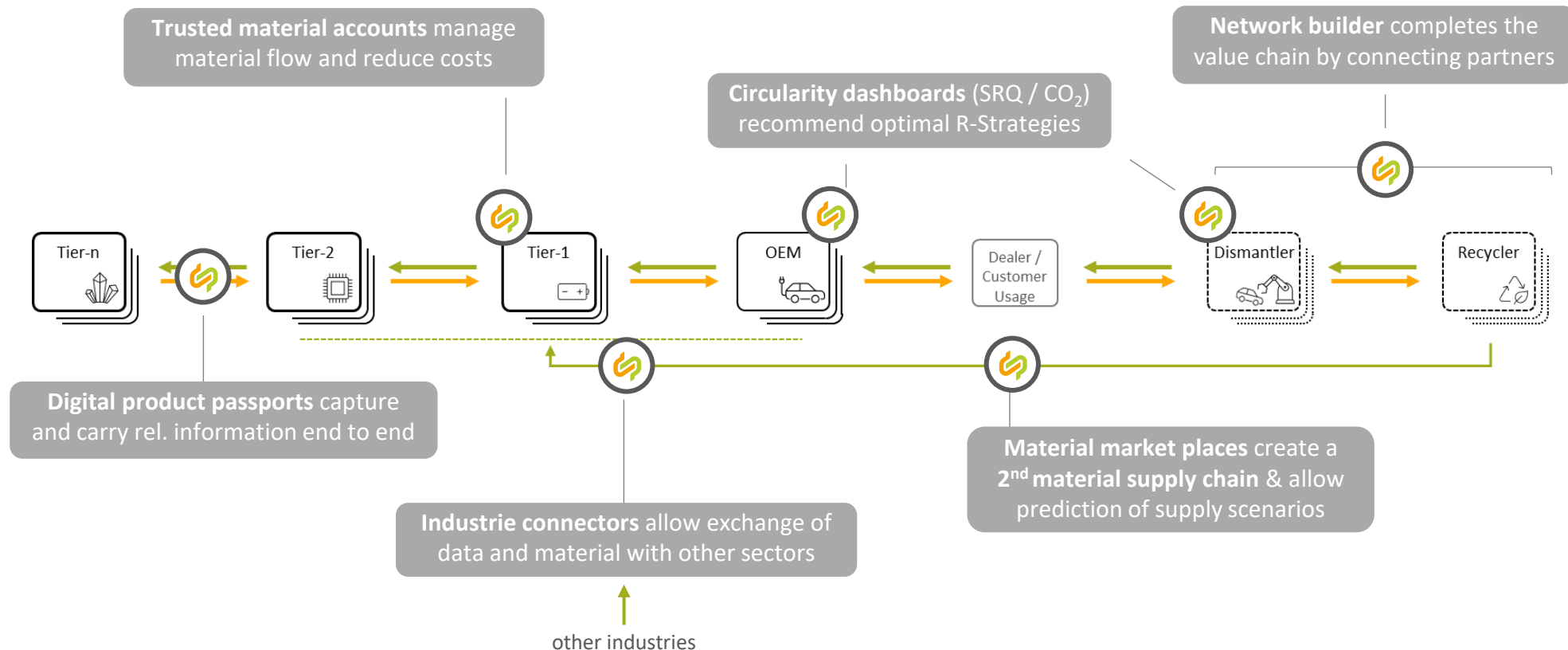**$4 Trillion**
demand for battery materials up to 2050

>30.000
to be connected industry partners (to close loops)

Catena-X Standards & Artifacts ( )

Connect partners, streamline flow of information and create solution portfolio to enable scalable value derivation

Trusted material accounts manage material flow and reduce costs

Network builder completes the value chain by connecting partners

Circularity dashboards (SRQ / CO_2) recommend optimal R-Strategies

Tier-n → Tier-2 → Tier-1 → OEM → Dealer / Customer Usage → Dismantler → Recycler

Digital product passports capture and carry rel. information end to end

Material market places create a **2nd material supply chain** & allow prediction of supply scenarios

Industrie connectors allow exchange of data and material with other sectors

other industries

What's in for me, as a company?

Catena-X focusses mainly on use cases; common GOALS. Every use case offers business value for adopters and solution providers. Catena-X is the enabler to capture these BENEFITS for all participants.

BENEFITS for each participant

Offer / gain digital SOVEREIGNTY

- **Data** - keep control over your data (usage policies, de-central, …)
- **Services** - choose your provider from open markets (interoperability, …)
- **Operations** - decide where your data is stored & operated (de-central, …)
- **Identity** - self managed and trusted (SSI, use across providers / data spaces, …)

Reduce time to VALUE and create positive business impact

- **Boost digital readiness** of your company via onboarding services
- **Empower your business via use cases** (e.g. share a service or collaborate)

Minimize COSTS for digital transformation and doing business, e.g.

- **Consolidate IT interfaces** (e.g. data exchange, global reach)
- **Share services** within the industry (e.g. golden record master data)
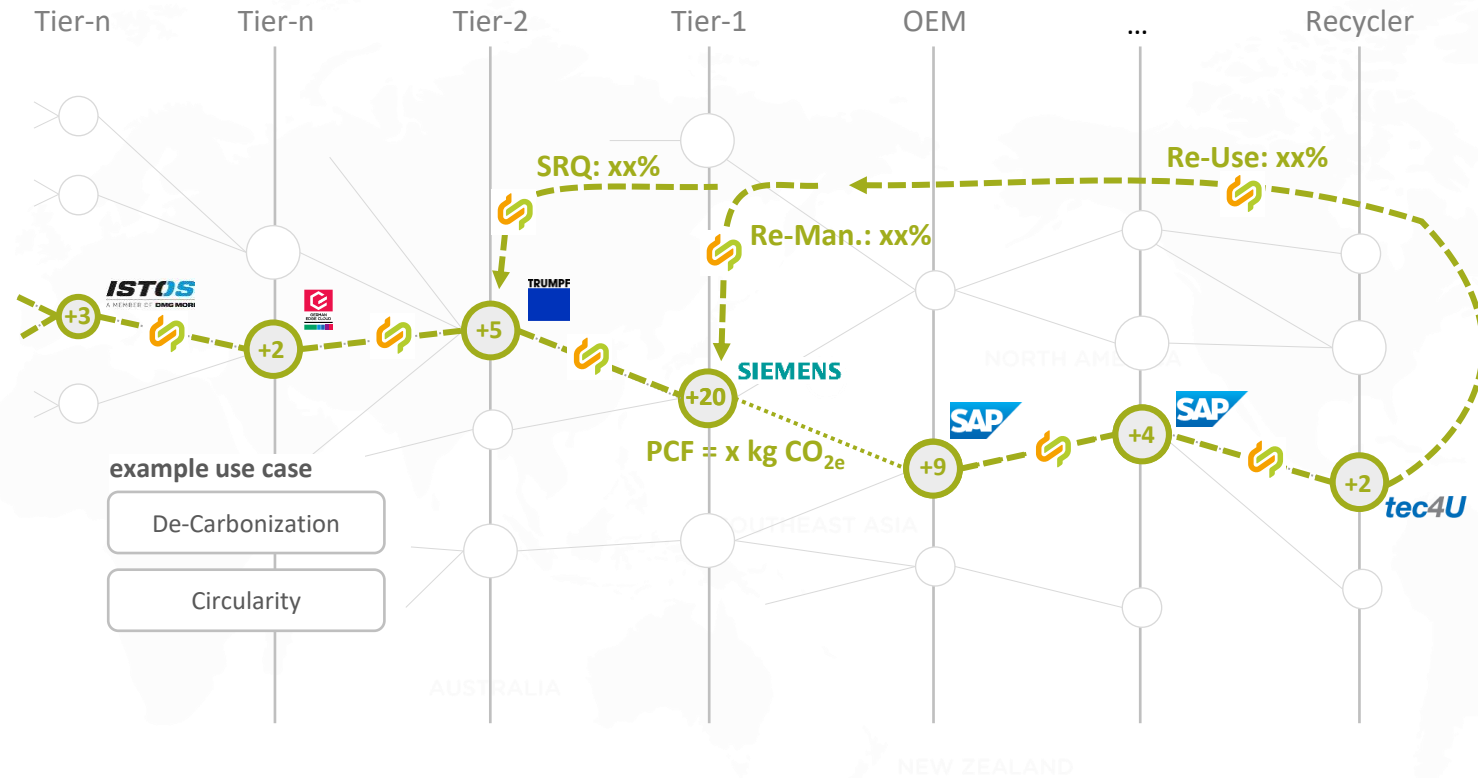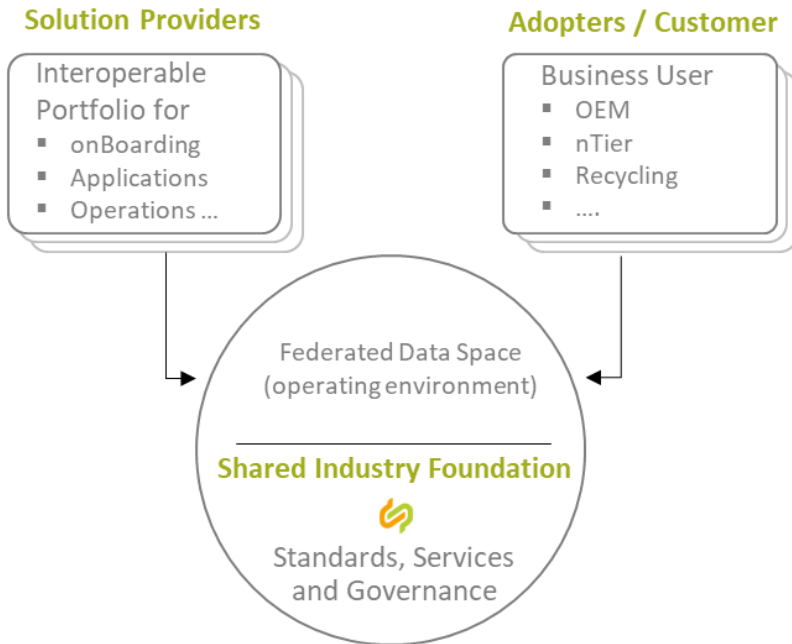- **Capture synergies** between use cases (building blocks & network effects)

Foster INNOVATION and digital transformation

- **Enter new value pools** and gain competitive advantages

Building data chains via interoperable solution portfolios

Catena-X SOLUTION PORTFOLIOS allow providers to offer e.g. interoperable services for dedicated use cases.
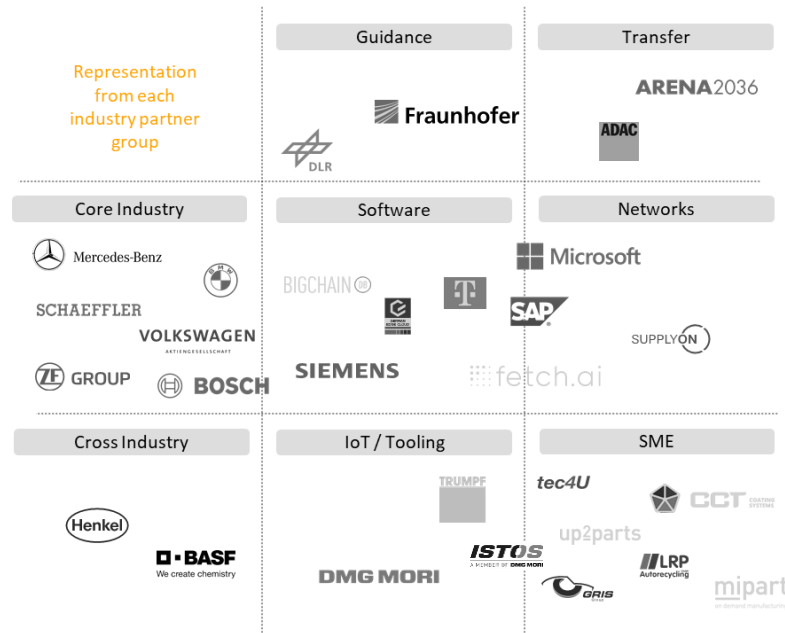
Starting and scaling the Catena-X data ecosystem

It takes the right balance of partners to start with and a global way forward to foster adoption.

KICK START - TEAM to build and launch the initial foundation; all interest groups are represented

Representation from each industry partner group

Guidance	Transfer
Core Industry	Software	Networks
Cross Industry	IoT / Tooling	SME

28 initial development partner started in 08 / 2021

Implementation of the **CX HUB-CONCEPT** empowers regional adoption and ensures flow of data across regions
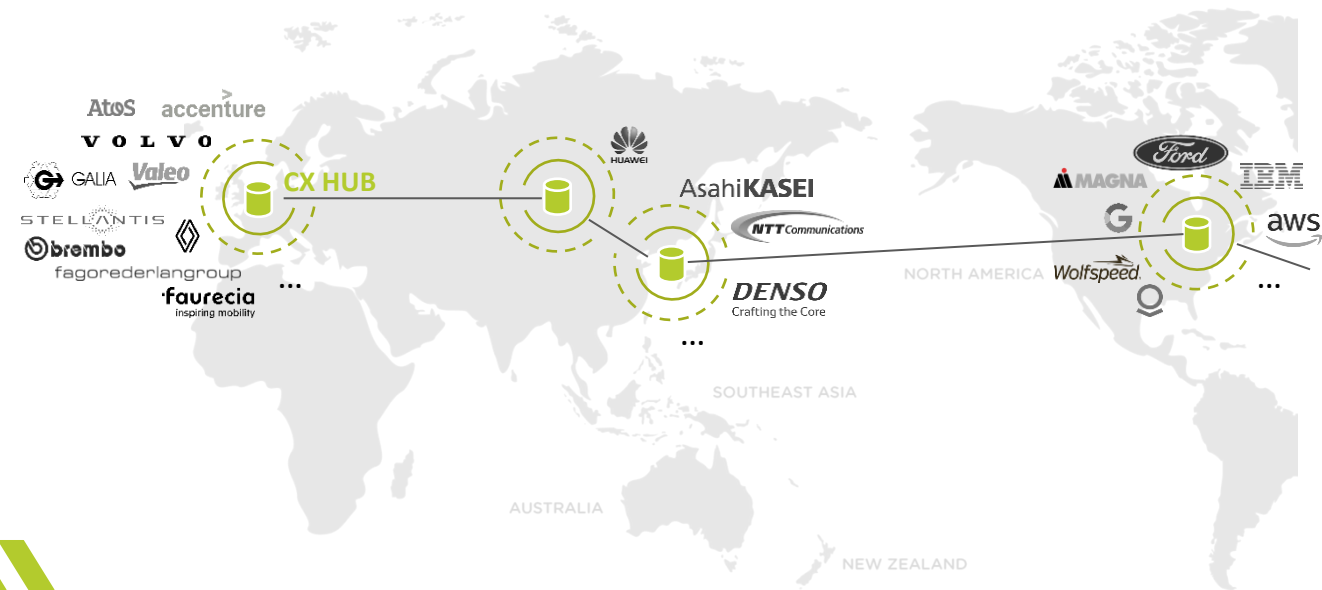
154 global partner in Catena-X association
(06/2023)

examples of international Catena-X members; for a complete list click here

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Catena-X will start Beta Phase Operations of the world's first industry data space

**Radical Collaboration started with
4x Open Source KITs, 43x Standards, 1x Operating Model**
(now publicly available via Catena-X website and Eclipse Foundation)

Catena-X
Automotive Network

First GAIA-X compliant Industry Data Space
>> Multi-vendor & customer journey centric marketplaces of interoperable and trusted solutions <<

Multi Vendor offerings for..

OnBoarding a company to a dataspace
→ onboarding / integration Services

Solving the industries toughest problems together
→ Business Applications

Utilizing and operating data space relevant services
→ Managed Services

First Operating Company to open the Catena-X data space and start onBoarding of Partners
(10x of the strongest industry partners started a joint venture to mutually open up the data space)
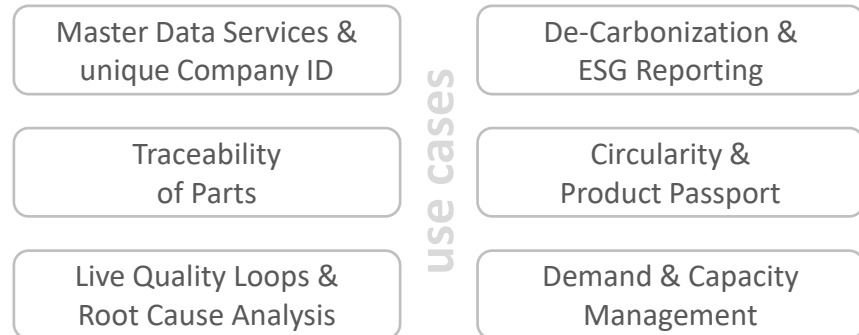
Cofinity-X

What is new about Catena-X, compared to previous solutions

Catena-X doesn't replace existing offerings, it fills gaps and redirects forces towards a common **GOAL.**
Catena-X enables all participants to collaborate compliantly within one shared global **DATA SPACE**.

Common **GOAL**

Solve top industry problems together and now

Master Data Services & unique Company ID		De-Carbonization & ESG Reporting
Traceability of Parts	use cases	Circularity & Product Passport
Live Quality Loops & Root Cause Analysis		Demand & Capacity Management

... many more to come 2024

Shared global **DATA SPACE**

- One **operating model** and **federated operating system** for the data space

- **Customer value journeys** for common GOALS enabled by open, multi vendor marketplaces

- Foundational services and **standards** built upon **OSS** (KITs) with dedicated **developer journeys**

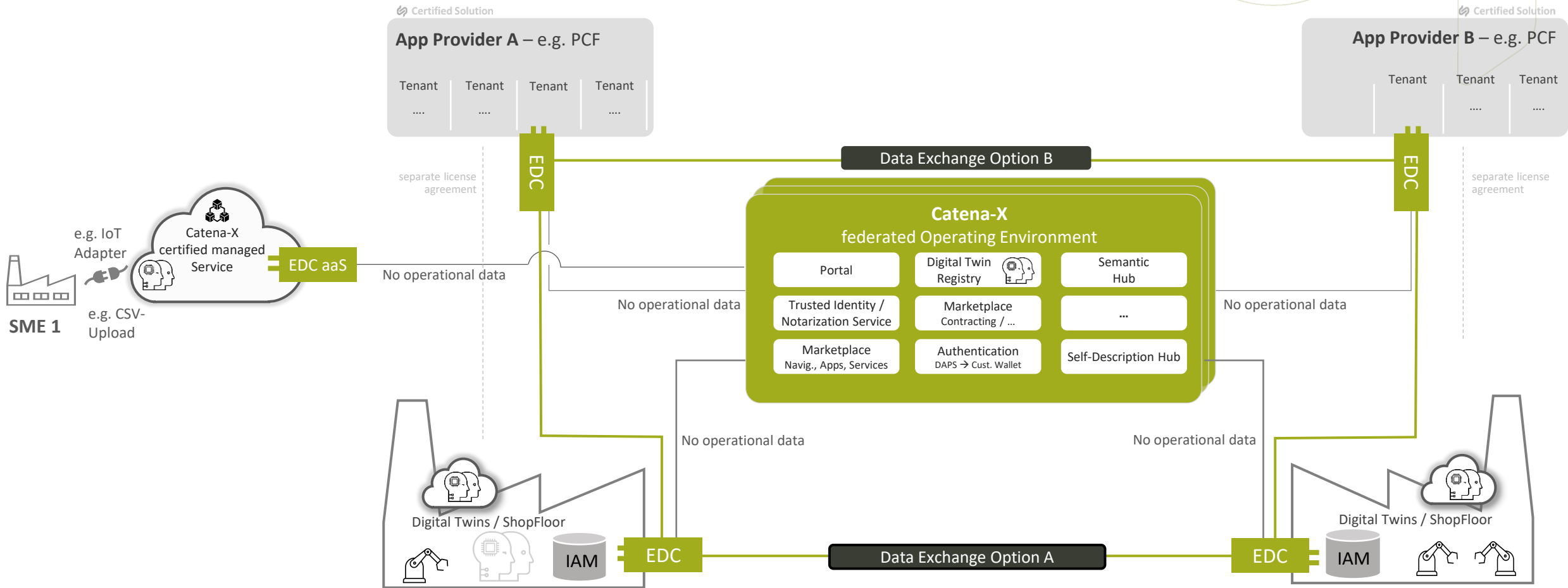- **Neutral governance**, incl. conformity assessment body

We simply call this „**NETWORK of NETWORKS**"

Enabling a data driven value chain collaboration for the first time

How the Catena-X data space works

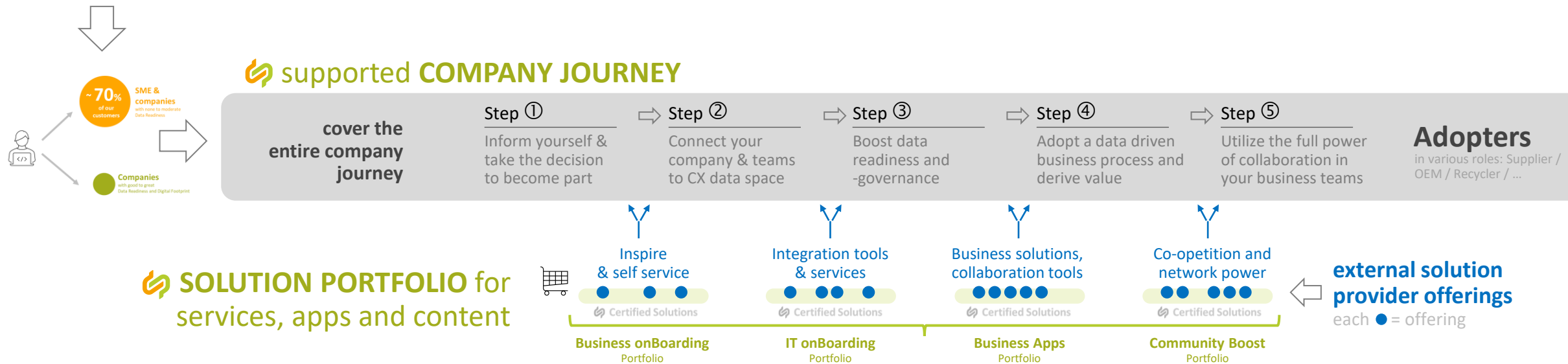Sovereign, federated and interoperable. Incorporating GAIA-X principals and frameworks.

Note: EDC = Eclipse Data Space Connector (OSS)

Core offering and value proposition for ADOPTERS

Support the individual adopter to become part of a dedicated Catena-X use case and create instant value by offering them a multi vendor and interoperable SOLUTION PORTFOLIO along their COMPANY JOURNEY.

Example: Targeted business value for use case "de-carbonization": Report and steer the de-carbonization of our value chain with dedicated measures based on real PCF values, without compromising upstream data sovereignty

~70% of our customers — **SME & companies** with none to moderate Data Readiness

Companies with good to great Data Readiness and Digital Footprint

supported COMPANY JOURNEY

cover the entire company journey	Step ①	Step ②	Step ③	Step ④	Step ⑤
	Inform yourself & take the decision to become part	Connect your company & teams to CX data space	Boost data readiness and -governance	Adopt a data driven business process and derive value	Utilize the full power of collaboration in your business teams

Adopters in various roles: Supplier / OEM / Recycler / …

SOLUTION PORTFOLIO for services, apps and content

Inspire & self service	Integration tools & services	Business solutions, collaboration tools	Co-opetition and network power
Certified Solutions	Certified Solutions	Certified Solutions	Certified Solutions
Business onBoarding Portfolio	**IT onBoarding** Portfolio	**Business Apps** Portfolio	**Community Boost** Portfolio

external solution provider offerings each ● = offering

Core offering and value proposition for DEVELOPERS

Releasing and updating standards, incl. policies and reference-implementations are amongst Catena-X' key offerings to enable collaboration and interoperability.

Catena-X
Automotive Network

… uses two channels for publishing standards and developer resources

… is build upon the latest GAIA-X Trust Framework (22.10)

gaia-x

click here for more info

Website
standards & whitepapers

click here for more info
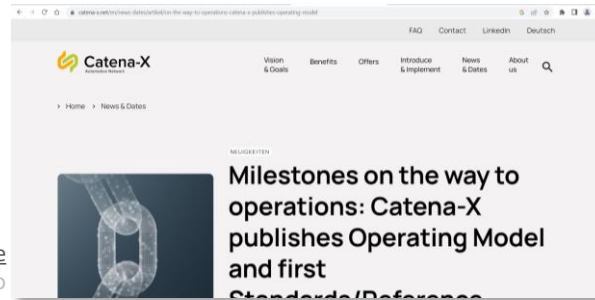
Apache 2.0 / CC BY4.0

reference-implementations and developer resources

click here for more info

Current status
29x Standards (R 2.0) +
1x Operating Model (R 2.0)

click here for more info

Next expected update
03/2023 (R 3.0)
+ pot. 16x Standards

Current Status
1st Release (R 3.0) 03/2023

Network & Core Services KITs | Sustainability Solutions KITs | PLM / Quality Solutions KITs | Resiliency Solutions KITs

4x solution domains with dedicated developer journeys and artifacts (→ KITs)

Note: Catena-X plans 4x releases per year // Winter x.0 → Spring x.1 → Summer x.2 → Fall x.3 //
The next release is expected: 03/2023 (Release 3.0)

Questions?

Please contact info@catena-x.net

Visit us:

www.catena-x.net
https://www.linkedin.com/company/catena-x-automotive-network

Organizing the activities of Catena-X

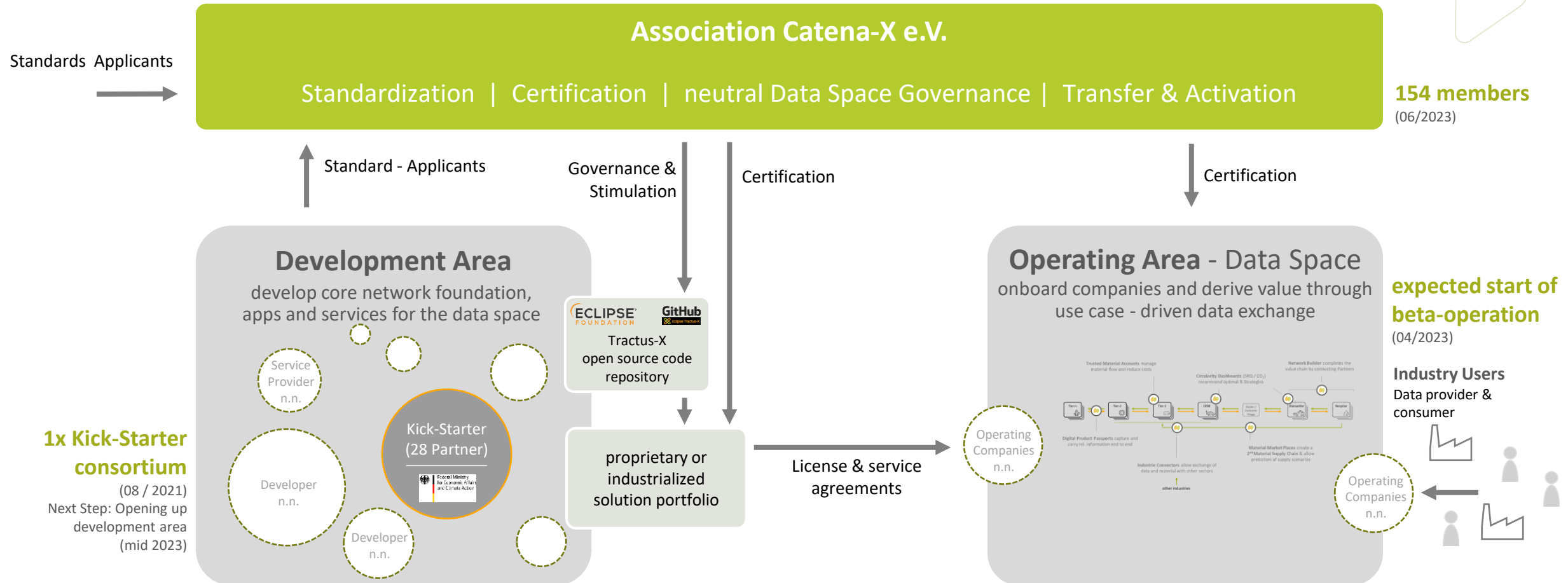The art of BALANCING POWER and FOSTER COLLABORATION within a data ecosystem.

Standards Applicants

Association Catena-X e.V.

Standardization | Certification | neutral Data Space Governance | Transfer & Activation

154 members
(06/2023)

Standard - Applicants

Governance & Stimulation

Certification

Certification

Development Area
develop core network foundation, apps and services for the data space

ECLIPSE FOUNDATION   **GitHub** Eclipse Tractus-X

Tractus-X open source code repository

Kick-Starter (28 Partner)

Federal Ministry for Economic Affairs and Climate Action

Service Provider n.n.

Developer n.n.

Developer n.n.

1x Kick-Starter consortium

(08 / 2021)
Next Step: Opening up development area
(mid 2023)

proprietary or industrialized solution portfolio

License & service agreements

Operating Area - Data Space
onboard companies and derive value through use case - driven data exchange

expected start of beta-operation
(04/2023)

Operating Companies n.n.

Industry Users
Data provider & consumer

Operating Companies n.n.

Catena-X

THE FIRST OPEN AND COLLABORATIVE DATA ECOSYSTEM

Need more information: info@catena-x.net // www.catena-x.net