Catena-X

THE FIRST OPEN AND COLLABORATIVE DATA ECOSYSTEM

Last Revision
31.07.23

VERSION 3.0
Our motivation
Collaborative, must win-battles for the global automotive industry

SUPPLY RESILIENCY

“Plan and ensure material flow and availability across multiple value chain steps”

SUSTAINABILITY

“Put targets into action by working with real PCF data to de-carbonize the value chain”

SYSTEMATIC COVERAGE

“Create interoperability standards and SME readiness for digitalization of processes”

COST OF INNOVATION

“Boost innovation and adoption by sharing network foundation & services built upon open source”

→ No market player, neither an OEM nor supplier nor outfitter can solve these problems on its own ←
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

- Addressing the entire problem (end to end workflow)
- Creating flow of information for all participants
- Scaling across the industry and beyond

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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
- 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

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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

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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
- Digital product passports capture and carry rel. information end to end
- Industrie connectors allow exchange of data and material with other sectors
- Material market places create a 2nd material supply chain & allow prediction of supply scenarios
- Network builder completes the value chain by connecting partners
- Circularity dashboards (SRQ / CO2) recommend optimal R-Strategies

Catena-X value proposition in action

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

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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.

Current status
- 29x Standards (R 2.0) +
- 1x Operating Model (R 2.0)
- 16x Standards (R 3.0) +
- 16x Standards (R 3.1) +
- 9x modified Standards (R 3.1)

Next expected update
- 09/2023 (R 3.2)
  + pot. 24x Standards
  + pot. 32x modified Standards

Current Status
- 2nd Release (R 3.1) 07/2023

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: 09/2023 (Release 3.2)
How the Catena-X data space works

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

Note: EDC = Eclipse Data Space Connector (OSS)
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

28 initial development partner started in 08 / 2021

Implementation of the **CX HUB-CONCEPT** empowers regional adoption and ensures flow of data across regions

160 global partner in Catena-X association (08/2023)

Examples of international Catena-X members; for a complete list click here
Organizing the activities of Catena-X

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

**Association Catena-X e.V.**

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

**Development Area**

- Kick- Starter (28 Partner)
- 1x Kick- Starter consortium
  - (08 / 2021)
  - Next Step: Opening up development area
    - (mid 2023)

- Service Provider n.n.
- Developer n.n.
- 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

**Certification**

- Governance & Stimulation
- Certification

**Standards Applicants**

- License & service agreements

160 members

(08/2023)

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Know your customers and their concerns

SYSTEMATIC COVERAGE requires a trusted & interoperable solution portfolio for companies with little data readiness.

~70% of our customers

Do you plan to exchange data with other companies within the next two years?

- 8% Yes, I already do so now
- 27% Yes, I do plan on that (as provider and receiver)
- 65% remain uncertain
  - Incompatible data sets
  - Legal uncertainty
  - Finding the right Partner
  - Difficult finding common ground
  - Economical attractiveness ...

Source: bitkom 05/2022, Datenökonomie – Wo steht die deutsche Wirtschaft?
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.

**CX deepdive**

**SOLUTION PORTFOLIO for services, apps and content**

- Inspire & self service
- Integration tools & services
- Business solutions, collaboration tools
- Co-competition and network power

**supported COMPANY JOURNEY**

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

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

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Connecting developer resources with adopters needs

Catena-X offers dedicated ARTIFACTS per use case KIT to stimulate and empower the solution provider offering.

**SOLUTION PORTFOLIO** for services, apps and content

- Business onBoarding Portfolio A
- IT onBoarding Portfolio B
- Business Apps Portfolio C
- Community Boost Portfolio D

**Shared industry foundation**

- offering strong developer resources / ARTIFACTS via use case KITs
- open source to empower collaboration and foster adoption

**supported COMPANY JOURNEY**

cover the entire company journey

Step 1: inform yourself & take the decision to become part

Step 2: Connect your company & teams to CX data space

Step 3: Boost data readiness and governance

Step 4: Adopt a data driven business process and derive value

Step 5: Utilize the full power of collaboration in your business teams

**Adopters**

- In various roles: Supplier / OEM / Recycler / …

**Inspire & self service**

- Certification: Certified Solutions

**Integration tools & services**

- Certification: Certified Solutions

**Business solutions, collaboration tools**

- Certification: Certified Solutions

**Co-operation and network power**

- Certification: Certified Solutions

**stimulate interoperable & dedicated solution portfolios**

- via dedicated use case KIT Artifacts

** definition and scope of Catena-X general ARTIFACTS click [here](#)**

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Building data chains via interoperable solution portfolios

Catena-X SOLUTION PORTFOLIOS allow providers to offer e.g. interoperable services for dedicated use cases.
## Catena-X Roadmap 2023

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<td><strong>CX official release 2.0</strong>&lt;br&gt; (Open Source / Standards)</td>
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### From pre-development & standards to beta
- **First case studies** ("family")
- Set up first hub "France"
- Company feedback
- Case study experience & trust in data space
- Search for core service B operator
- Nomination OpCo #1 by Catena-X e.V.

### From beta to industrialized & certified
- Start operating environment - beta live!
  - "We are live!"
  - Hannover Fair 17.04.
- Learn: onBoard partners ("friends"): legal, technical & business processes → How to onBoard and scale
- Beta readiness - KITs and standards
  - Core network services - MVP
  - Traceability Use Case - MVP
  - Golden Record / BPM Use Case - MVP
  - De-Carbonization Use Case - MVP
  - Circularity / BPP Use Case - MVP
  - Quality Use Case - MVP

### From industrialized & certified to global roll-out & further de-
- Interoperability of operating companies
- Start of operational phase
- Initiate → execute operational solution portfolio and foster adoption ("All")
  - Set up regional hubs (Asia, Americas, EU)

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FAQ

Do I need to be a member of the association in order to use Catena-X?
No. Using the data space requires a registration via a certified operating company and an additional conformity assessment (certification) for service providers.

When can I use Catena-X to exchange data?
Catena-X will start operations in Q2/2023 with a controlled beta phase and targets an initial offering as of fall 2023.

Who is already a member of the association?
click here

When should my company join the association?
Mainly, when you want to contribute to the network foundation based on open source, create standards and support the market adoption.

Can anyone join Catena-X and start a data chain and offering?
Catena-X is currently an automotive movement, every member of this industry is welcome to join. Building data chains is however a complicated endeavor and therefore will start in a controlled manner. Service provider offerings have to be certified before they can place their offering or use the Catena-X logo and name in their communication.

Is Catena-X available in all countries?
Since the automotive industry is a global network of partners, Catena-X will in general follow these value chains. Catena-X will release guardrails for a country based roll-out, incl. countries of no operation.

How can I access Catena-X standards and offer software?
Please click here for more details.

When is the next biggest event to get in touch with Catena-X?
Catena-X offers regular online events, see here
The next onsite event is planned for the Hannover Fair starting 17.04.2023.
Catena-X

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