Catena-X

Innovation through collaboration

Welcome to Austin Texas

Oliver Ganser

What is Cantena-X?
Innovation through radical collaboration.

The transformation of our automotive industry is in full swing. Former business practices showed their limitations during Covid. Electric drivetrains are taking the place of combustion engines. Circular economy will become an essential new industry process for the supply of materials.

At the same time, digitalization offers opportunities to go beyond customer dreams, to de-carbonize our production processes and to make our supply chains more resilient and efficient. However, none of us – as an automotive industry participant – can leverage and scale this opportunity on its own. One company just does not have the reach to capture an entire value chain process, neither the money to scale, nor the trust that is needed for others to join.

Therefore, the only true answer is that we as an industry have to adapt to a new and data driven operating model. An operating model that fosters radical and open collaboration to build, run and govern our core automotive business processes on scalable, end to end and trusted solutions and environments. Catena-X was founded for that very purpose: To be the first open and collaborative data ecosystem for the automotive industry.

The Catena-X is not a single solution with a vendor lock-in. Catena-X rather enables solution providers to be interoperable with each other, to build multi vendor solution portfolios for a dedicated business purpose that scales across the entire business process. Catena-X enables – if permitted by the data controller – a multi tier and trusted data exchange within the data ecosystem. And, last but not least, Catena-X supports each company to onboard to the network and derive business value faster than before. Catena-X is built from the industry for the industry. Everything that holds us together is built upon open source, standards and policies.

Significant industry players in Europe started Catena-X 2 years ago and are now ready to offer the first services as of Q3/2023. We believe that together with you we can make Catena-X a global, fast scaling and value creating network for your company.

Oliver Ganser

Chairman of the Board of Catena-X Automotive Network e.V.
and Head of the Catena-X Industry Consortium

With Catena-X the automotive industry will transform into a trusted, open and collaborative data ecosystem. All participants are represented via end-to-end data driven value chains. Open, multi vendor solution portfolios offer complete customer journeys. Starting with taking the decision to join Catena-X to onboarding your organization to Catena-X up to solving the industries toughest problems with your business teams. Within Catena-X everyone has equal rights and shares the same frameworks, policies and standards. Catena-X empowers small and medium-sized companies to allow fair cooperation and collaboration. Catena-X is first in offering sovereignty and interoperability to foster trust, scalability and business innovation.

Note: The Catena-X data ecosystem trust framework is co-developed with and governed by external partners (e.g. International Data Space Association and GAIA-X)

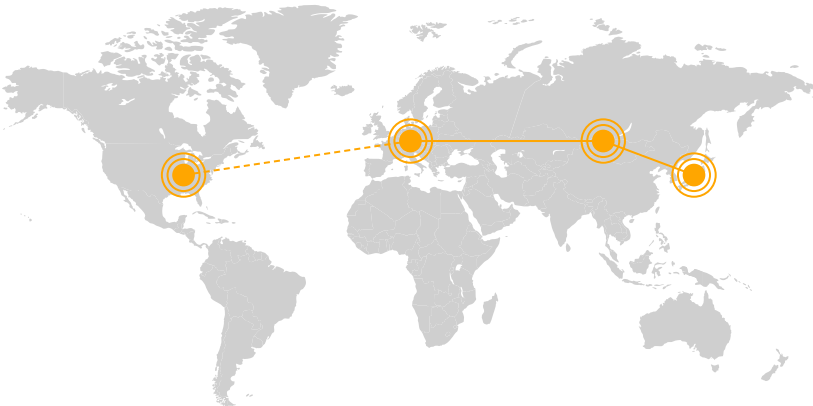01   Enabling cross industry collaboration to solve industries toughest problems.

"A global collaboration is the foundation for Catena-X. We need to improve synergies between companies in different countries to ensure complete data chains. With close partnerships, we can leverage the potential of Catena-X in every region. And this will lead us to develop a global community who will contribute to the international network. We already started our Catena-X Hub approach in France and Sweden. Our plan is to expand the Catena-X network with a Catena-X Hub for North America and Asia by the end of 2023."

Frank Göller
VP Internationalization at Catena-X Automotive Network e.V.
and Head of Digital Production at Volkswagen Group

Cantena-X-Hub-Concept
Implementation ot the Cantena-X- Hub-Concept empowers regional adoption and ensures flow of data across regions.

2023

- De-Carbonization of the Automotive Value Chain & ESG Reporting
- Traceability of Parts
- Business Partner Data Management
- Circularity & Product Passport
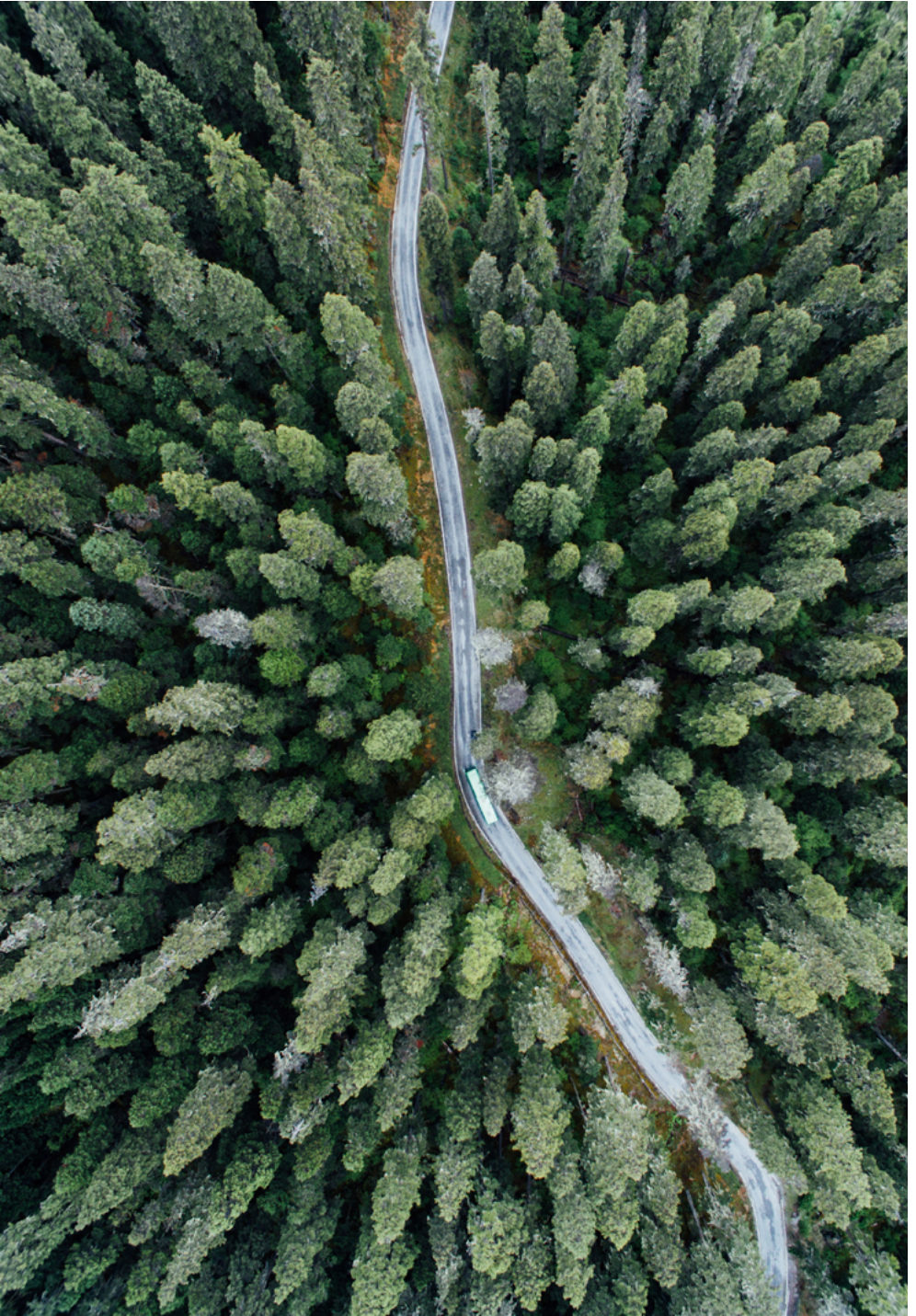- Live Quality Loops & Root Cause Analysis

2024

- Manufacturing as a Service
- Modular Production
- Online Control and Simulation
- Behavior Digital Twin

01

01 Catena-X enables trace-
ability across the entire
parts value chain.

02 Catena-X puts targets into
actions with real PCF data
to de-carbonize the value
chain.

De-Carbonization of the Automotive Value Chain
Sustainability is one of the main collaborative business challenges
Catena-X will address. Via a broad interoperable solution portfolio of
applications, Catena-X aims to support companies to reduce their carbon
emission across the production process. Catena-X solutions range from
supporting companies to calculate their initial product carbon footprint, to
exchange and manage their product carbon footprint with their partners
and to verify the data via neutral 3rd party organizations. All offerings are
based off standards which are collaboratively developed with external
partners (e.g. WBCSD) and utilize synergies between Catena-X use cases,
such as Traceability and Business Partner Management.

Business Partner Management
Today, most of the industry partners manage their business partner
master data on their own. This occupies a significant amount of resources
and talent in a mostly non-differentiating field of our business. New
external requirements (e.g. legal, security, ESG, finance) add more
relevance to business partner master data and raise the bar in terms of
data quality and immediate availability.

Catena-X will offer a so-called Golden Record Service including a unique
identifier: the Business Partner Number (BPN). The Golden Record Service
is built and operated as a shared industry service at reduced costs while
having the best available industry data instantly available.

Circular Economy
Climate changes, growing regional policies and resource scarcity are
forcing our industry to rethink traditional business practices to ensure
material flow for the production process. This applies not only to battery
relevant components, but also plastics and other materials to reduce
waste and CO_2 emissions. Catena-X will offer solutions, standards,
policies and processes that start circular economy for your business.
Interoperable Material Passports, Market Places, Material Accounts will
further trigger new value pools by offering highly efficient solutions for our
top industry problem.
Our offerings are based off standards which are collaboratively developed
with external partners (e.g. GBA) and utilize synergies between Catena-X
use cases, such as Traceability and Business Partner Management.

Live Quality Loops & Root Cause Analysis
Modern automobiles and production processes are increasingly complex. Large technical platforms offer lower costs but also the risk of super-scaling a quality problem. Detecting and solving quality issues at the launch of a new vehicle or while in use is however mostly still a very linear, company centric and lengthy process, resulting in customer dissatisfaction and high costs for all. Catena-X offers solutions targeting the two main quality levers for all:
- Lightspeed detection of (potential) quality issues in the field or production process via Live Quality Loops.
- More accurate containment of affected parts and vehicles via joint Root Cause Analysis.

Catena-X offers value chain partners for the first time the possibility to join forces quickly and build data models in a collaborative and sovereign environment.

Traceability of Parts
Catena-X enables parts traceability across the entire automotive value chain. In the future, interoperable hardware and software applications ranging from production to recycling will enable traceability via unique part IDs and scalable standards (e.g. API, Semantics). This consistency will form the basis for numerous other use cases within the Catena-X ecosystem. Catena-X further supports companies with little data readiness by offering services to create and manage their Digital Twins from as small as CSV or even JSON files. Most importantly though, Catena-X follows a de-central approach, meaning that there is no central data storage or intermediary. Your data stays within your company and will only be exchanged with the business partner you have a direct data contract with. Period! This is a Catena-X core principal to ensure data sovereignty. All offerings are based off standards which are collaboratively developed with external partners (e.g. Industrial Digital Twin Association)

Testimonials

01

02

01 Oliver Zipse
02 Oliver Blume

"

With Catena-X, we want to connect companies across industries. An end-to-end data networking from small and medium-sized enterprises to OEMs will help to make important progress in the sustainability of our products and the resilience of our supply chains.

Oliver Zipse

Chairman of the Board of Management BMW Group

"

The auto industry is shaping the digital transformation. Data is the driving force, ensuring greater efficiency and sustainability. Constantly connected data chains are helping to further enhance our productivity – from the supplier all the way up to the manufacturer. Catena-X provides the basis for this.

Oliver Blume

CEO Volkswagen Group and CEO Porsche AG

03 Christian Klein
04 Dr. Roland Busch

> "
>
> To achieve sustainable and efficient processes in the automotive industry, data and information must be exchanged in a secure and reliable way along the entire value chain. This needs common standards.

Christian Klein
Chief Executive Officer SAP SE

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> Through digitalization, we can make our economy more productive, efficient and sustainable. To do this, we need to connect companies with each other along the entire value chain. With Catena-X, we are developing the necessary standards and technologies for this in the European automotive industry. This is a crucial step toward leveraging the opportunities of digitalization in this industry – and it can serve as a role model for other sectors as well.

Dr. Roland Busch
Chief Executive Officer Siemens AG

The Catena-X onboarding journey

The Catena-X onboarding journey focuses mainly on two target groups: Solutions Providers and Adopters. With our holistic and modular approach, Catena-X will cater to the needs of every partner – from small to large organizations, with little to high readiness. For Solution Providers, the goal is to offer a rich area for developers enabling teams to understand and implement the relevant Catena-X artifacts and standards swiftly, followed by a successful certification. For adopters, the goal is to provide all the expertise and technical support necessary to boost their digital and data readiness – in form of a highly collaborative approach.

De-centralized Operating Companies such as Cofinity-X will guide Adopters and Solution Providers in joining the Catena-X data ecosystem and supporting both to take the first steps towards value creation.

Highlight: Adopter Journey

1) Get ready

Initially it is important to prepare your organization from a technical point of view. Connect your data sources to the ecosystem using certified Catena-X solutions

2) Start now – Create your ID

Verify your company in the ecosystem to be a trusted partner for your customers and suppliers. With this you will get access to the open marketplaces.

3) Pick & Choose

Here you can find business applications, managed services and consulting services from different providers. These partners will help you to adopt to the ecosystem. Interoperability is at the heart of what we do – no matter which solution or service provider you choose, no vendor lock-in will be created.

01 Catena-X offers end to end onboarding services to help every company and team becoming part of the data ecosystem.

The Catena-X Automotive Network

Catena-X is forming, operating and governing the first open and collaborative data ecosystem for the automotive industry. This ecosystem is driven by the industry to solve the toughest value chain challenges together as a community.

This industry community unites companies of all sizes and roles, to fulfill our mission. Currently the Catena-X Association has 152 international members which define, shape and govern the Catena-X data ecosystem. A full list* can be found here.

Important note

All automotive industry related companies can adopt and use Catena-X without being a member of the Catena-X Association. The onboarding to the data ecosystem will take place via de-centralized operating companies, such as:

Cofinity-X

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*Per May 2023