2024 Hannover Fair Special

Catena-X and Telekom Products – Overview and user manual

christoph.schlueter-langdon@telekom.de (business lead of Telekom dataspace unit & Catena-X agile Product Manager; Research Associate Professor, Peter Drucker School, Claremont Graduate University, link)

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Catena-X ecosystem overview

Catena-X (CX) is the first open data ecosystem for the automotive industry designed to create data chains that will enhance your value chain. It's elements include:

- **Catena-X Association** (link): runs the ecosystem, has more than 170 members, and owns overall governance including standardization of key software.
- **Catena-X Consortium** (link)**:** The ecosystem and its software development was launched with the CX Consortium, a €250 million, 3-year, 2021-2024, project of 28 partners in automotive with funding support from the German government (link).
- **Tractus-X software foundation** (link)**:** The CX Consortium has developed the foundational software for the data ecosystem, which participants have contributed to the open-source Tractus-X (TX) project under the Eclipse Foundation. This comprehensive software system comprises multiple components and "reuses" certain elements and specifications from other sources, such as the Eclipse EDC project (link), the Gaia-X trust framework (link), and the International Data Spaces Association (IDSA, link).
- **Operating environment:** The ecosystem itself is coming alive through various operators and vendors of operating environments, applications, and advisory services all specified and certified by the CX Association in accordance with its "Operating Model" (link).
- **3 elements:** From an information system perspective the Catena-X ecosystem is comprised of (1) a dataspace (link), (2) first data product templates for data chains like digital twins (link), and (3) super-apps like product carbon footprint (PCF) tracking and material traceability for material pass and next-generation quality management.

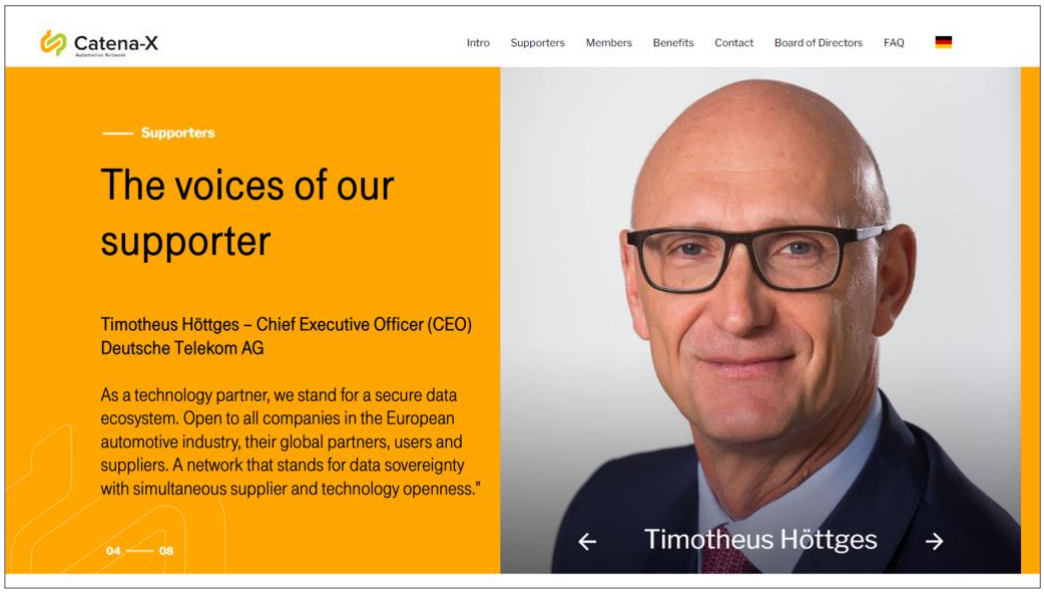

Figure 1: Tim Höttges, CEO Deutsche Telekom, co-founder of CX Automotive Network (Catena-X)

Getting started: A user manual – "as easy to use as your phone"

The CX ecosystem works a lot like a national phone system. As an end-user here is what you need to do: Obtain a government ID (Catena-X ID), pick a telco carrier (CX operator) for a SIM card with network access, and in the carrier's store choose your phone (CX enablement service) and mobile apps (CX business applications). In a national phone system the government regulates standardization (CX Assoc defines standards and enforces them thru certification), and issues an ID required for a phone service contract (CX Assoc issues CX ID); telco carriers provide the network (CX certified operators like Cofinity-X provide a production environment), and outfitters offer phones (CX enablement services) and mobile apps (CX business applications).

Deutsche Telekom involvement

Tim Höttges, CEO Deutsche Telekom (DT), who was part of the pioneers initiating the Catena-X Automotive Network, positioned DT's T-Systems International (TSI) subsidiary to lead data sovereignty and operations (see Fig. 1). When the project was reorganized into an agile setup based on "SAFe" (link), TSI assumed agile roles of Business Owner (BO), Product Manager (PM), System Architect (SA), and several Product Owners (POs) with their feature teams (link). Today, TSI offers …

- **"Dataphones"** (CX enablement services) required to connect to a dataspace; with a long list of productivity features all readily usable as a managed service without systems integration and complete with a browser-based UI optimized for intuitive use by non IT-users (link).
- **Development sandbox with a built-in dataspace** based on CX tech stack (link). This allows a business to focus on its use case rather than dataspace tech. Furthermore, it enables iterative development with partners on a test track first before taking it on the "Autobahn" or into production. TSI offers 3 versions, all operated by TSI, all based on CX tech stack but with different governance and ownership options: TX Sandbox (TSI governs, owns, operates), CX Sandbox (under CX governance – coming with Release 24.05), your LivingLab TX (you govern and own, TSI operates).

Figure 2: Ford-Flex data chain launch at CES, IMX trip to Greenville SC, and CX prelaunch in Austin TX

The train has left the station: From pilots to internationalization in U.S. and Asia

As core system developers we are happy to see first pilots following global supply chains (see Fig. 2):

- **CES, January 2024**: Launch of a Ford-Flex live data chain for primary scope-3 product carbon footprint (PCF) tracking data; IBM's 2min video; Research note; Flex LinkedIn post
- **Greenville, October 2023**: Launch of 10-nation International Manufacturing-X (IMX); 2-pager
- **CESMII 2023:** Dataspaces have arrived in U.S., link
- **IAA & Catena-X** Munich: Data drives software-defined vehicle and supply chain, link
- **Prelaunch** Austin: First success and next steps, link
- **Hannover Fair**: Catena-X dataspace goes live with Cofinity-X and beta phase, link
- **Catena-X With GAIA-X**: Will Data Space Be the Word of 2021? Link