

Catena-X Progress

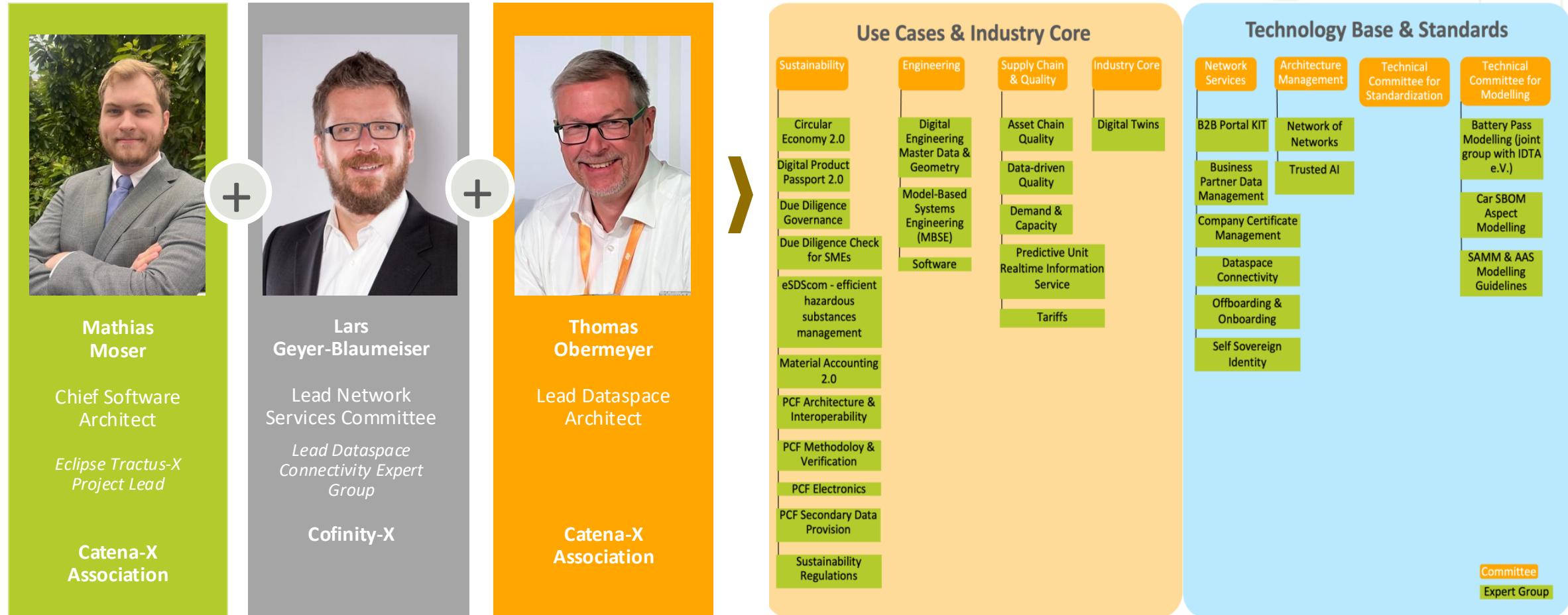
Catena-X Automotive Network e.V.

Bergamo, 06.10.2025





Who are we and in which model are we working





Agenda

- 1 Catena-X – Strategic Initiatives and Progress since June 2025**
- 2 Tractus-X EDC: Current Development & Connector Management**
- 3 Current work on Adoption and Complexity Reduction**



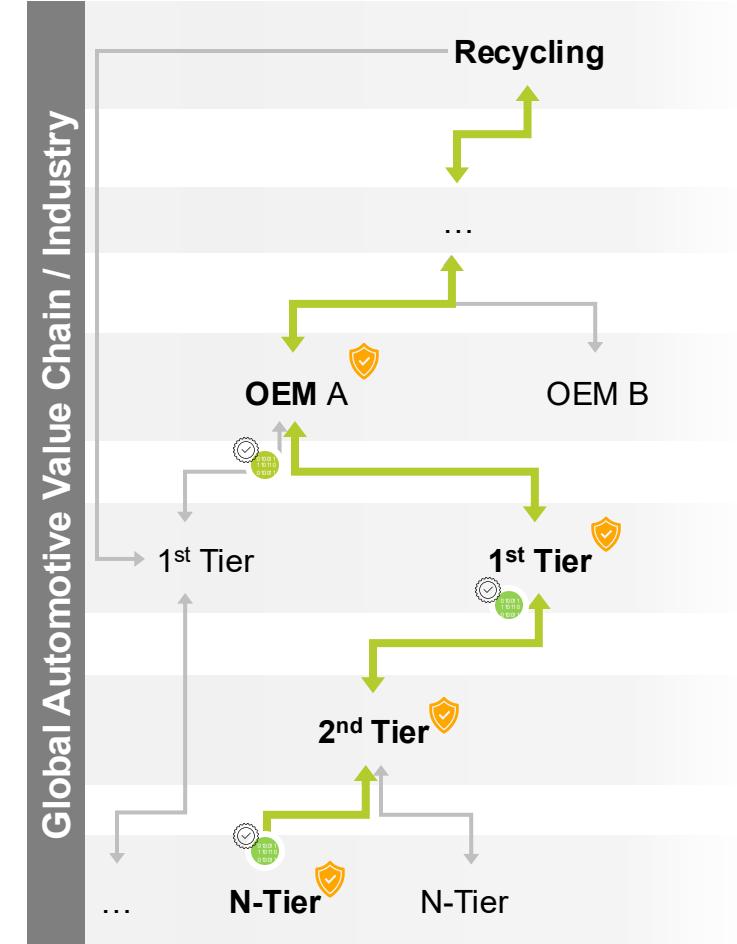
A clear mission for the entire automotive industry

Moving Data
up & down the value chain
across various Tier Level

- Resiliency / cost savings for core business processes (e.g., quality, logistics)
- Fulfill regulatory requirements at scale (e.g., product passports, CSDDD)
- Support breakthrough business innovation (e.g., AI-Agents)

✓ Interoperability ✓ Trust ✓ Global Acceptance ✓ Digital Readiness

Based on Open Source and Commercial Solutions





Catena-X Global Adoption through various initiatives

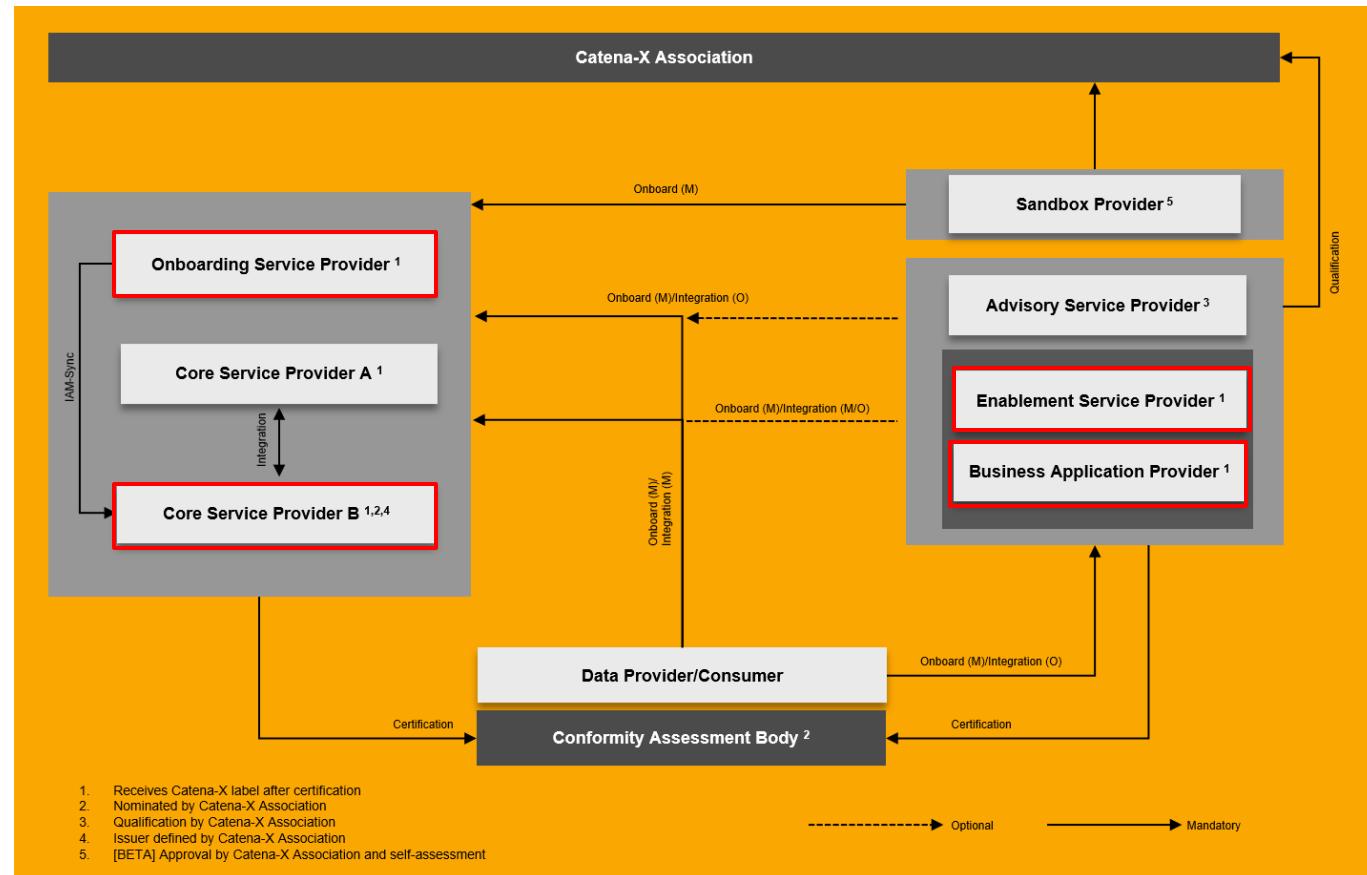
China is the link to global digital automotive supply chains





Roles in the Catena Ecosystem

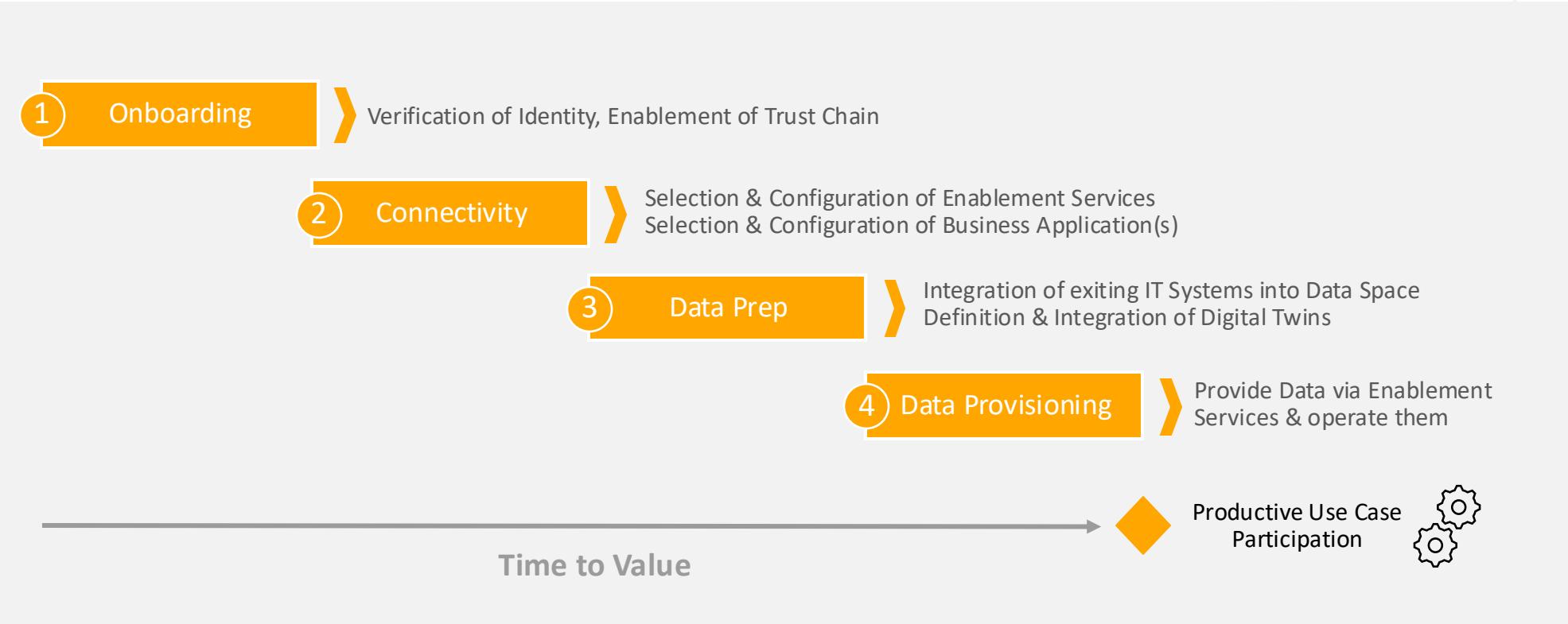
Find your sweet-spot in the ecosystem



<https://catenax-ev.github.io/docs/operating-model/why-understanding-the-catena-x-data-space>



Complexity Drivers | Simplification needs





Current Integration Challenges by User Personas

SME e.g. Car Dismantler
Profile <ul style="list-style-type: none">• Very few employees• No IT personal / skills• Very cost sensitive• Infrequent, unregular usage
Current Challenges (Future Requirements) <ul style="list-style-type: none">• Pay-Per-Use, on-demand usage• Light-weight deployment & operation needed

Large Enterprise e.g. OEM & Tier 1
Profile <ul style="list-style-type: none">• Multiple use cases deployed• Multiple locations• Regional, global usages
Current Challenges (Future Requirements) <ul style="list-style-type: none">• EDC tightly coupled to business apps• License & operations costs• Management of policies across multiple EDC



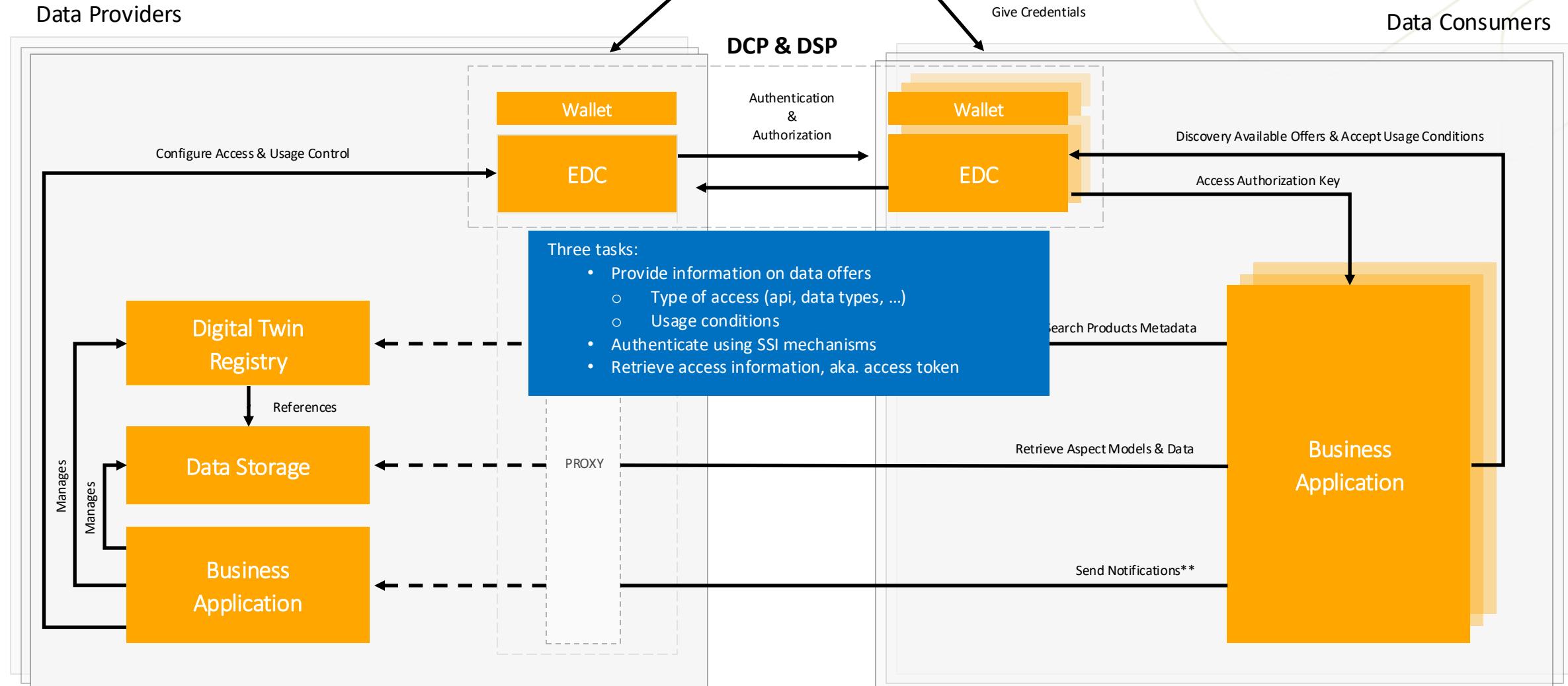
All personas irrespective of site request: Reduced foot-print, limit data transfer volume (costs), establish trust



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Current Catena-X Architecture



Current developments

- ✓ **Roles in companies**
 - Use cases expert ➤ integration into existing tool landscape
 - In many different flavors
 - Policy expert ➤ support in dataspace specific constraints
 - Governor ➤ Overview of dataspace activities (contracts, transfers), i.e., dashboards, metrics
 - IT operator ➤ Health of the service infrastructure, i.e., dashboards, filtering detailed information (logs)
- ✓ **Data offer design**
 - Range from every submodel is an own offer to one submodel service
 - Reduce the amount of contract negotiations
 - Impact on interactions with AAS and connector infrastructure
 - Connector based vs. divided authorization
- ✓ **Changes in an operated data space**
 - Backward compatibility is holy, i.e., support for multiple DSP versions, DCP versions, policy specs, ...

Connector Management

- **Catena-X defines the role of an Enablement Service Provider**
 - Several certified providers are in place
 - Tasks:
 - Operate enablement services (connector, AAS infrastructure) for a dataspace participant
 - Provide access to the services in order to manage the content
 - Enablement Service Provider have different approaches for offerings
 - In breadth (from pure connector to industry core-based offerings)
 - In depth (from lightweight abstractions to model specific approaches)
- **Open questions in support for different Manufacturing-X initiatives with Catena-X**
- **Onboarding:**
 - ✓ Already provided by Enablement Service Provider offerings, Run a connector is typically only a few clicks away
 - ✓ The onboarding challenge is setting up data transformation (provider) and making use of the data (consumer)



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THE PROBLEM WITH THE DATASPACE

ADOPTION

The Three Dataspace Adoption Phases

PHASE 1 - DOCUMENTATION

UNDERSTAND

SELECT USE CASE

GENERATE FIRST VALUE



PHASE 2 - SCALABLE USE CASES

TEST

INTEGRATE

PLAN EXTENSIONS



PHASE 3 – SCALABLE INFRASTRUCTURE / CLOUD

DEPLOY

OPERATE/MAINTAIN

SCALE





ECLIPSE Tractus-X™

Where we build dataspaces!



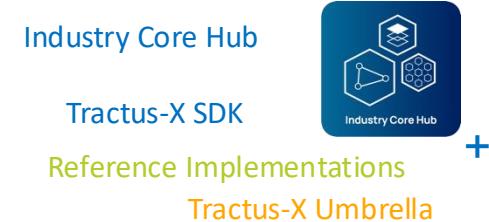
The Three Dataspace Adoption Phases

TWO OF THEM WE SOLVE WITH ECLIPSE TRACTUS-X

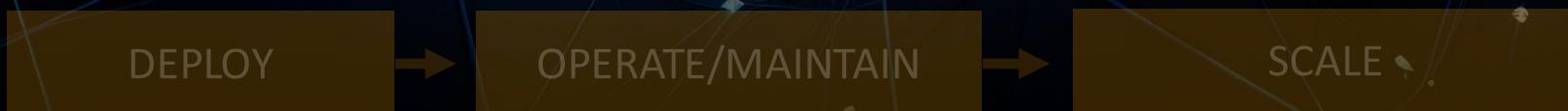
PHASE 1 - DOCUMENTATION



PHASE 2 - SCALABLE USE CASES



PHASE 3 - SCALABLE INFRASTRUCTURE / CLOUD





area2030 x prokt

DOCUMENTATION

© Arcun2030

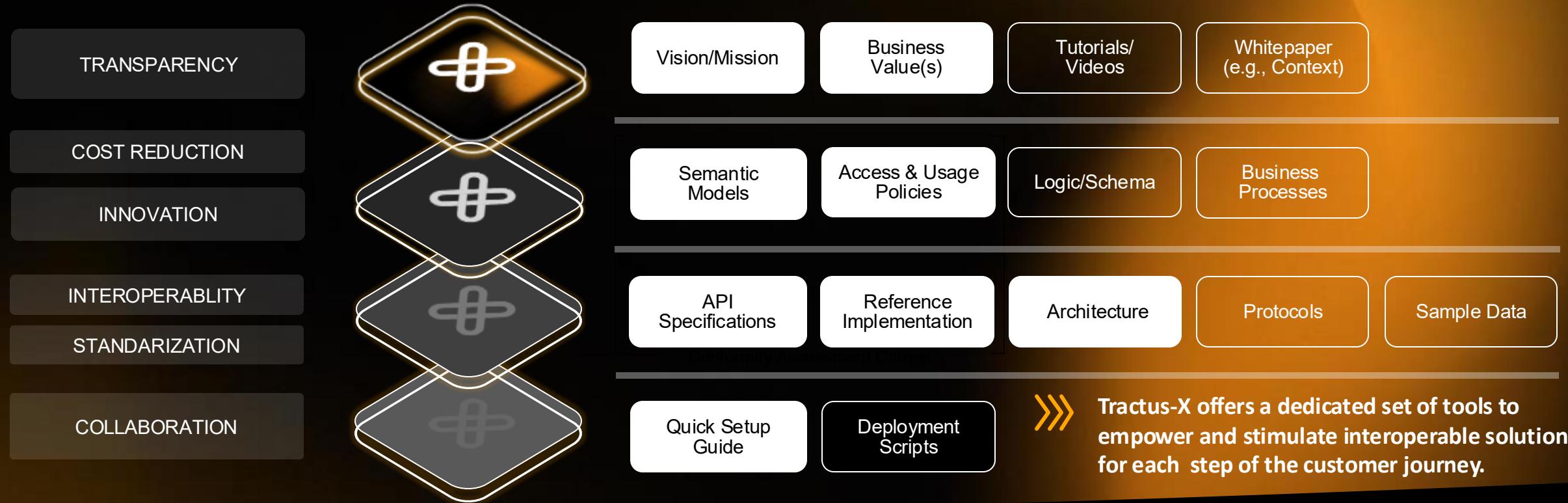
Adoption

Powered by Eclipse Tractus-X Open-Source KITs



Eclipse Tractus-X KIT (Keep It Together)

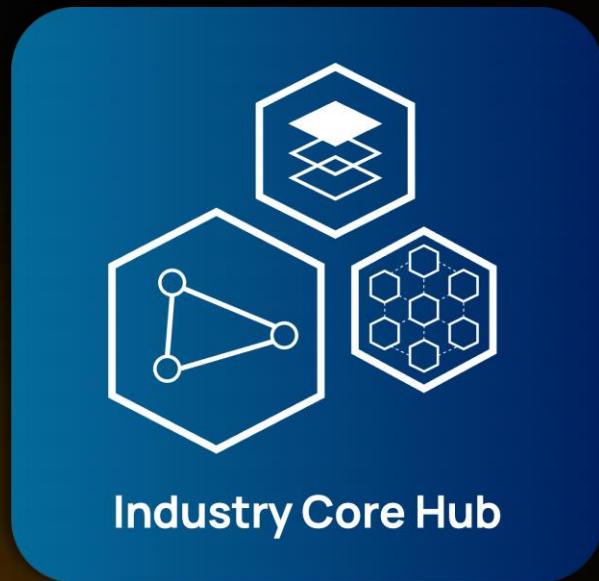
KITs are **available to everyone** as part of the Eclipse Tractus-X open-source project, which facilitates participation in the design and development of Dataspaces Based on Catena-X. KITs have a broad applicability and are **not limited** to the **automotive value chain**. There is at least one KIT to support companies for every use case.



TECHNOLOGY

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Eclipse Tractus-X Industry Core Hub



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Eclipse Tractus-X

The Use Case Adoption
Speedway

Mathias Moser

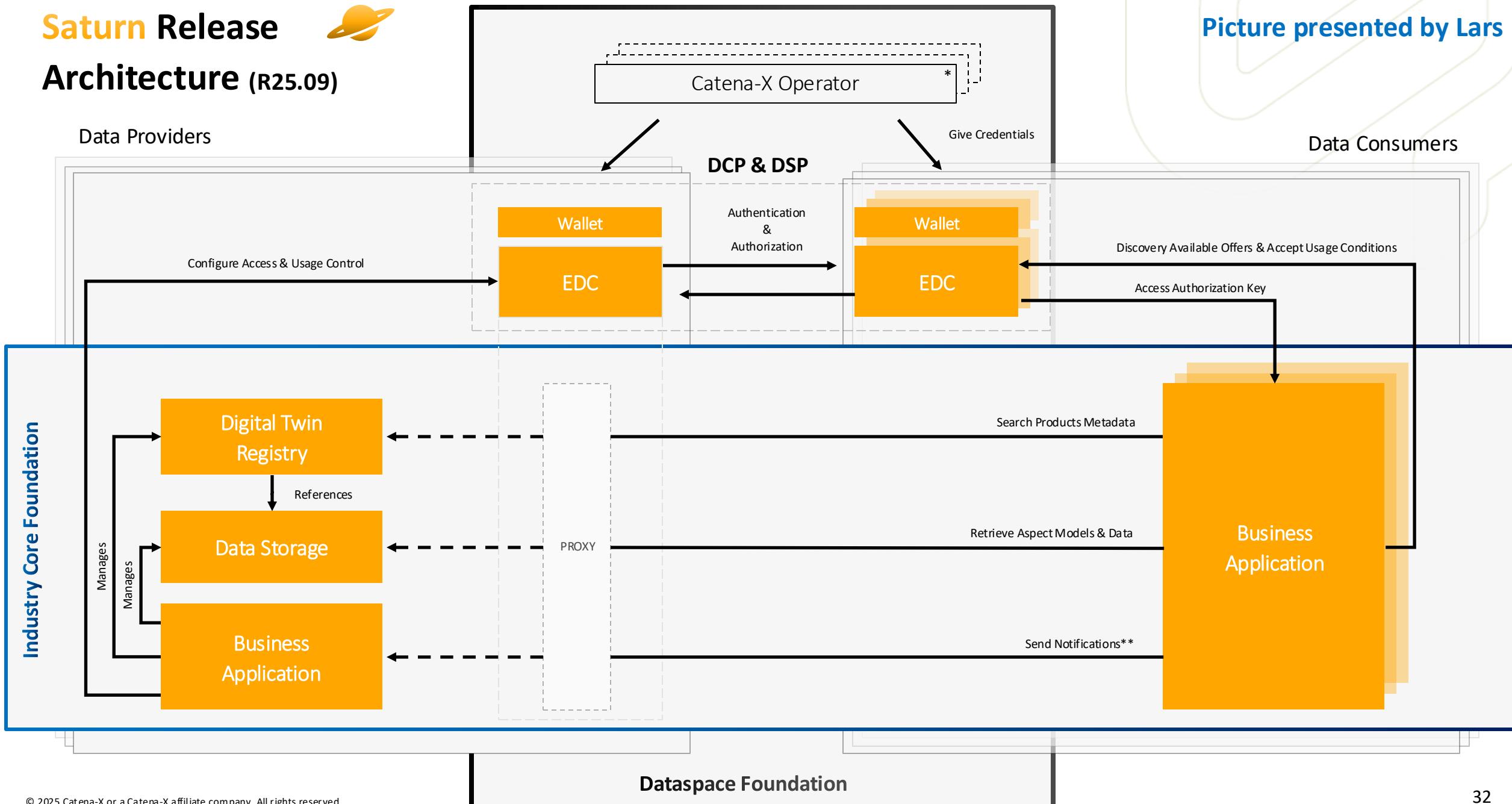
Chief Software Architect

Catena-X Association





Architecture (R25.09)





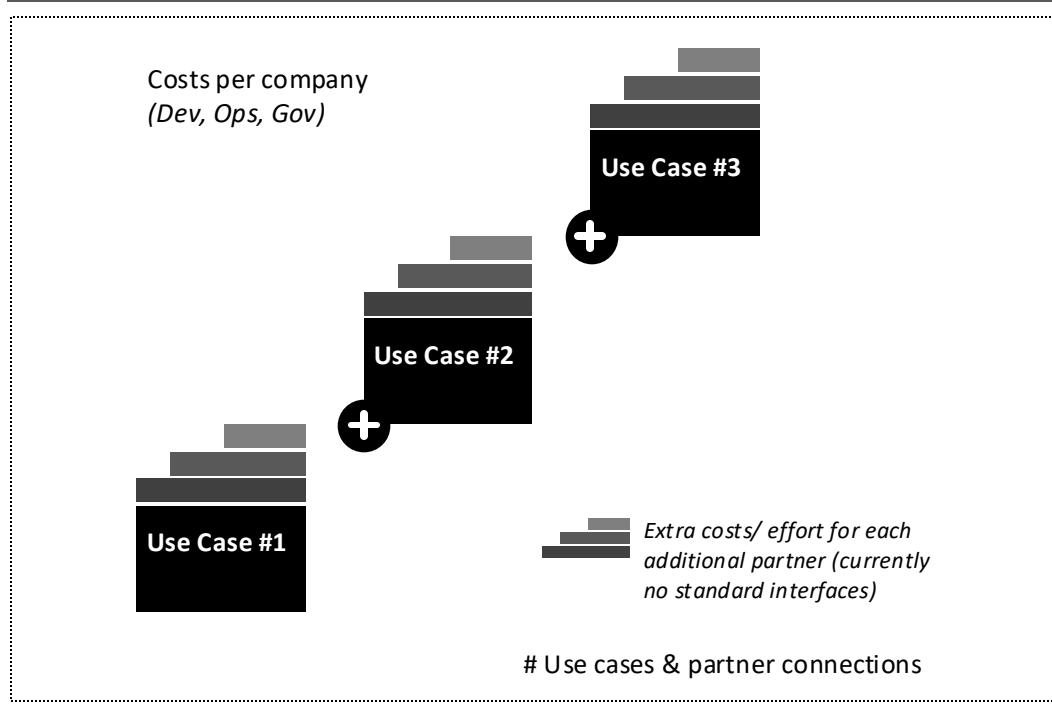
WHAT IS THE
INDUSTRY CORE?



Why Industry Core? Problem Statement:

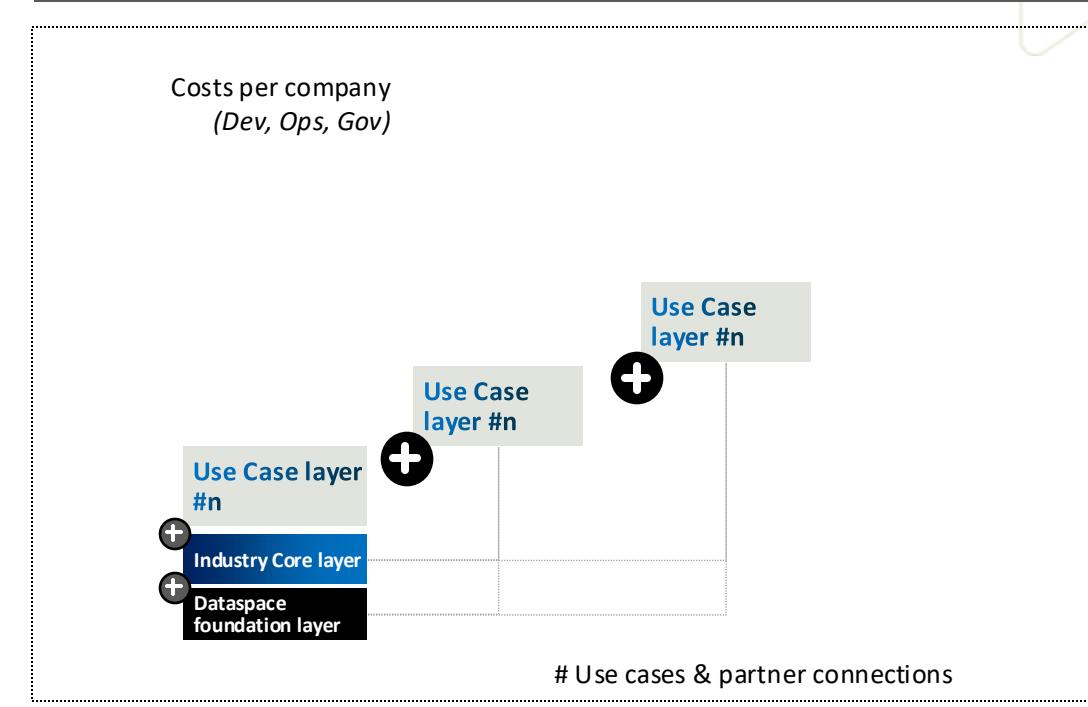
Cutting costs and speeding up time to value by cross use case synergies → The LARGER the Industry Core, the GREATER the synergies.

YESTERDAY without Catena-X Industry Core



- Limited to none cross use case synergies
- Rising Ops costs for n-partner connections
- Massive governance & policy handling

TODAY with Catena-X Industry Core



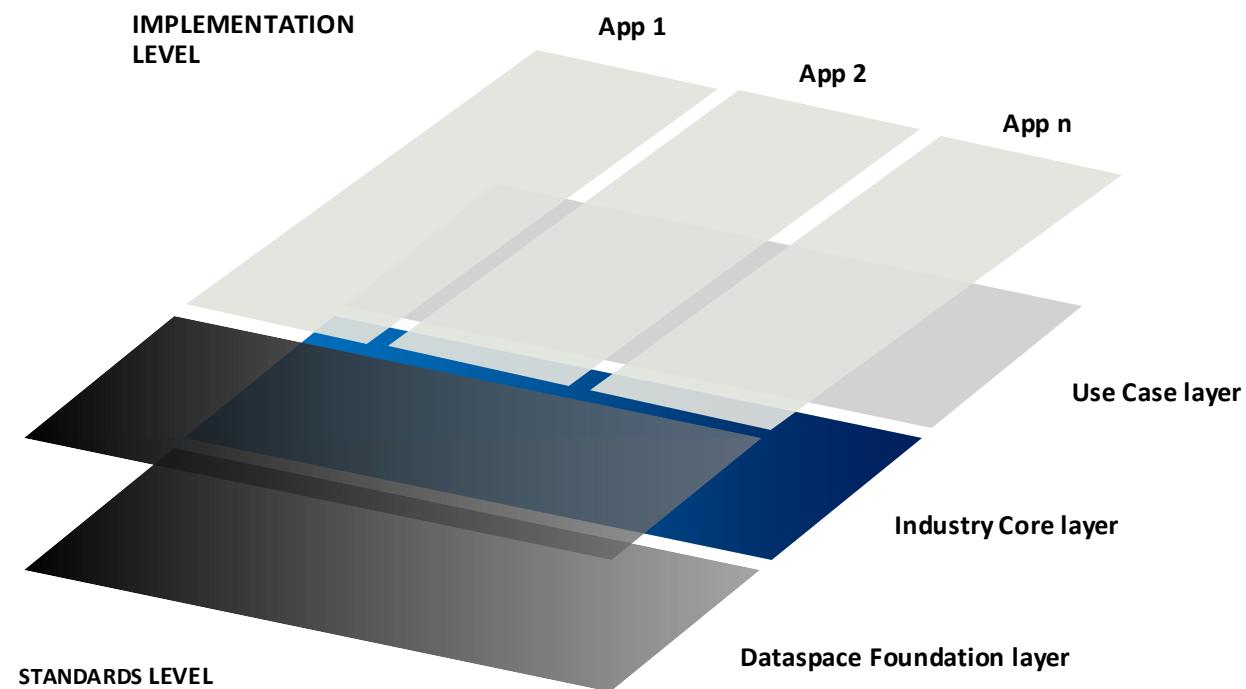
- + Freedom of choice
- + Improved cyber security
- + Synergies of horizontal platform
- + Boost your existing landscape and providers



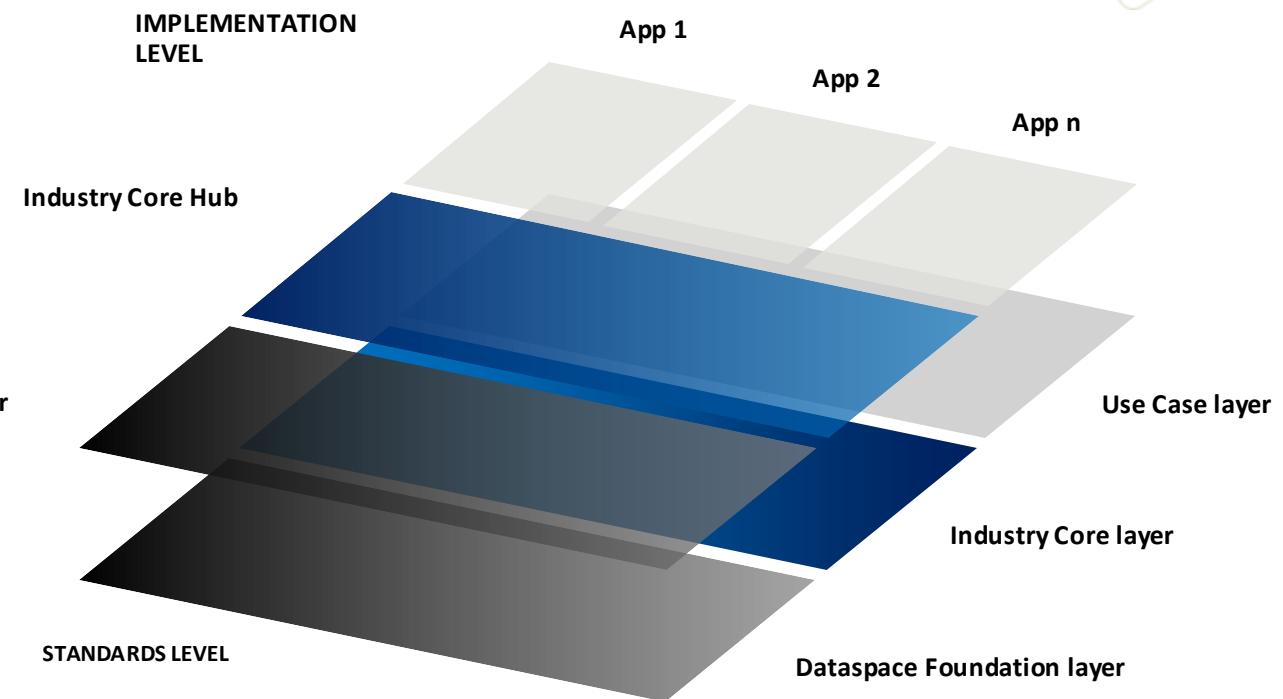
And technically? The Industry Core Hub

IC-Hub Eclipse Tractus-X Reference Implementation Technical view

YESTERDAY



TODAY



Industry Core is realized only Standards level, not on implementation level. Each application is currently implementing Industry Core functionality themselves.

Provide a common and reusable base for all applications across use cases and applications.



INDUSTRY CORE HUB

A DATASPACE KICKSTART APP WITH DATA PROVIDER AND CONSUMER FEATURES



Sharing Functionality
similar to a Sharepoint



An easy-to-use UI with
focus on UX



Extendable for infinite
Use Case



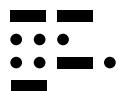
Easy Partner
Management



Product Data
Management IDE



Data Consumption with
one click



Tractus-X SDK

"Use Case Agnostic"
Reusable Code



Modular Plug & Play
Architecture (BYWEDC,
BYWDTR)



Interoperable with
other Catena-X
solutions



Open-Source Code &
License



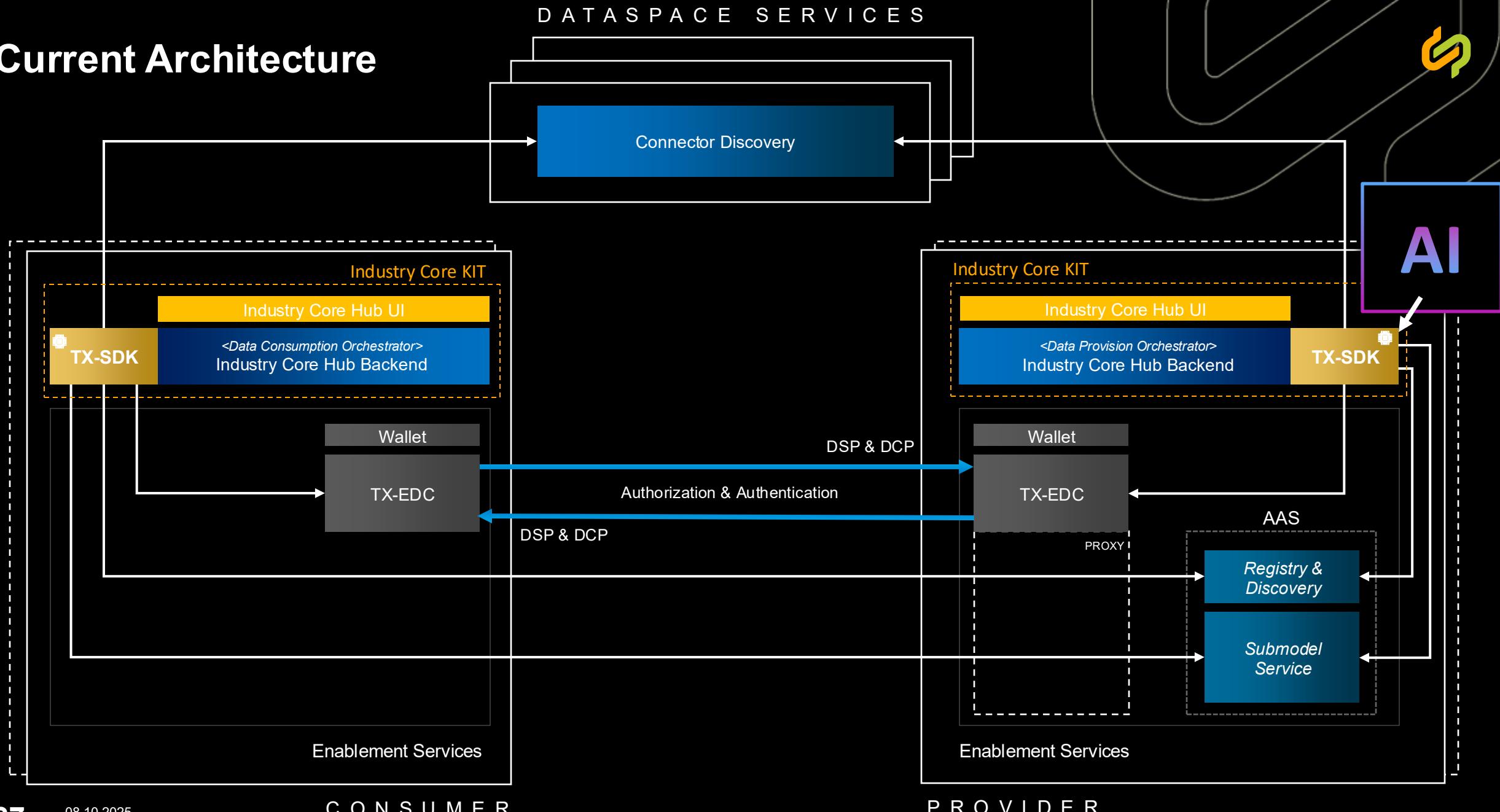
Coming Soon
Notification
Management



Coming Soon
Fully Automated
Access & Usage
Permissions Config



Current Architecture



ECLIPSE TRACTUS-X COMMUNITY DAYS

⌘ Tractus-X

⌚ Catena-X

▲ ARENA2036

ECLIPSE®
FOUNDATION



A speaker in a black hoodie stands on stage, gesturing towards the large screen. The audience is visible in the foreground, looking towards the stage.

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DEMO SCENARIO

MODULE SUPPLIER

BPNL0000000093Q7

1. Setup
2. Product Data Creation (1x Cell + 1x Module)
3. Add Battery Manufacturer to contact list
4. Sharing Module data with the Manufacturer
8. Data Consumption & Discovery
9. Advanced Search + Other Features



Battery



BATTERY MANUFACTURER

BPNL00000003CRHK

5. Add Module Supplier to contact list
6. Data Consumption & Discovery
7. Data Provision of 1x Battery



1x TX EDC Connector, 1x AAS Registry, 1x IC-Hub

1x TX EDC Connector, 1x AAS Registry, 1x IC-Hub



frontend-ichub.int.catena-x.net

Industry Core Hub - Eclipse Tractus-X

Industry Core Hub - Eclipse Tractus-X

Tractus-X

Industry Core Hub

CATALOG PARTS

+ CREATE CATALOG PART



No catalog parts available, please check your ichub-backend connection/configuration

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IT IS VERY GOOD , BUT IT IS NOT ENOUGH...

“MATHIAS, WE NEED TO SCALE AND
LOWER THE ENTRY POINT FOR SMEs!”

Small and Medium Enterprises



The Three Dataspace Adoption Phases

The dataspaces and dataspace apps need to run somewhere!

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UNDERSTAND

SELECT USE CASE

GENERATE VALUE



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PLAN EXTENSIONS



PHASE 3 - SCALABLE INFRASTRUCTURE / CLOUD

DEPLOY

OPERATE/MAINTAIN

SCALE



+ ECA
Industrial Dataplane
EDC-V
EDC 2.0

Is what we are doing here! Making **HISTORY** together!

Classification: INTERNAL





Catena-X Website
and all Use Cases



Get to know
Eclipse Tractus-X





YOU ARE INVITED TO YOUR NEXT ECLIPSE TRACTUS-X COMMUNITY DAYS!

4th – 5th of December 2025

Stuttgart – Arena2036

Its free!



❖ Developer



Open Industry Core KIT 



Industry Core Hub Repo 

Thank you!
Q&As are welcomed!