Catena-X

THE FIRST OPEN & COLLABORATIVE DATA ECOSYSTEM

Bundesministerium
für Wirtschaft
und Klimaschutz

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Our Motivation

RESILIENCY	SUSTAINABILITY	GEO POLITICS & INNOVATION	ECONOMICS
“Today’s peer to peer supply chain network doesn’t do the job”	“Flow of data across the entire value chain requires new collaboration models”	“Sharing data is a matter of trust and sovereignty”	“Network adoption and inter-operability is a team effort”
EXECUTIVE AWARENESS	**DATA ECOSYSTEM**	**EUROPEAN VALUES GAIA-X**	**INDUSTRY DATA SPACE**

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Our Mission for the Catena-X Data Ecosystem

Build a **global data space** that can host our industry

275.000+
legal entities

x

 # locations
globally

x

 # digital twins
machines, products, …

x

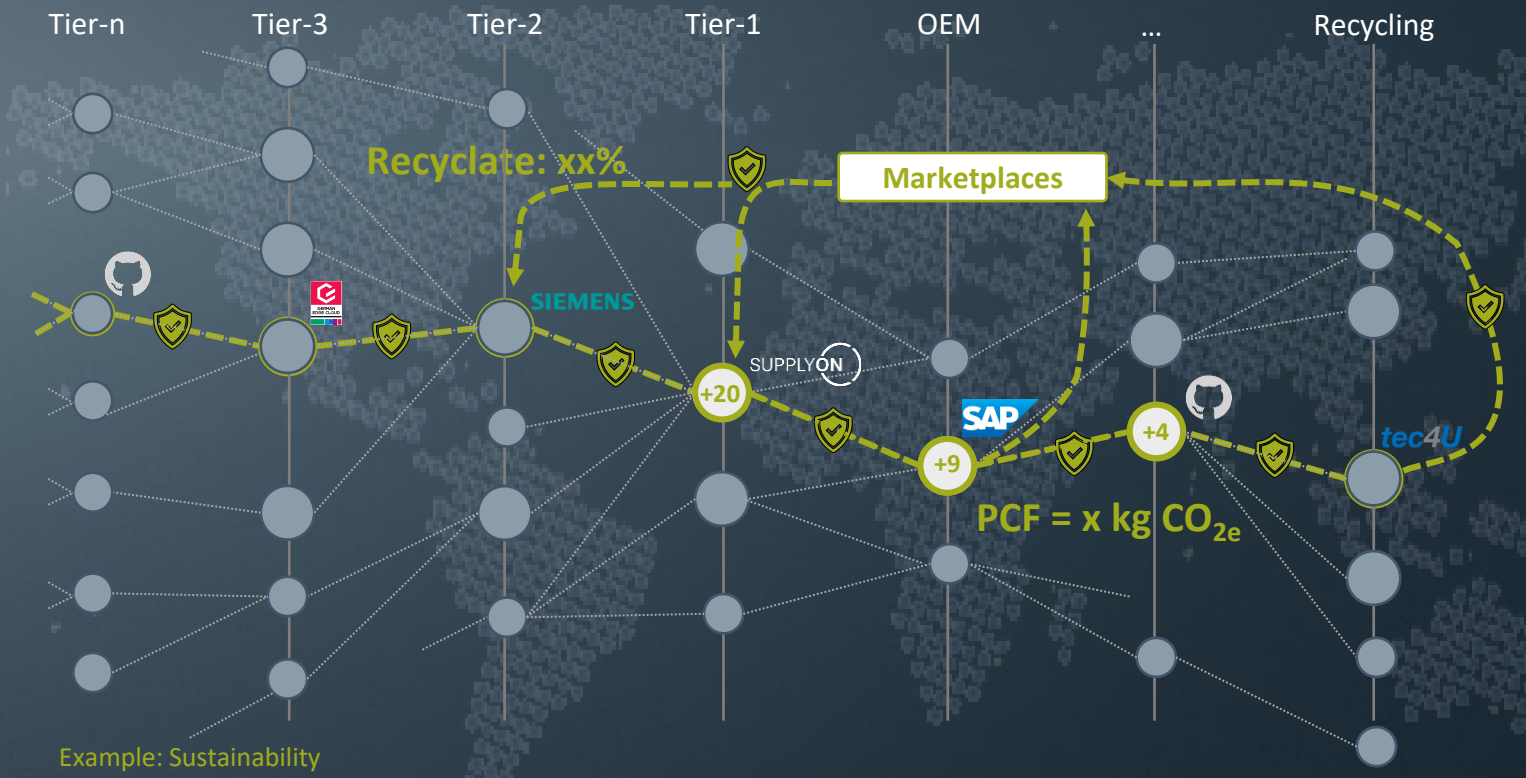
 # apps
business processes

x

 # users
business responsibility

optional adjacent industries

Create the first **data driven value chain**; incorporating all participants via interoperable and trusted solutions



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What does it mean, to be

… THE FIRST **OPEN** & **COLLABORATIVE** DATA ECOSYSTEM

Technology & Architecture

The network foundation is build upon shared services and GAIA-X / IDSA principals - **We all can take ownership**

Decentral	Open Source	Standards (e.g. for interoperability)
Catena-X Automotive Network		
Neutral Governance	Eco System Kit‘s	

and many more …

Working Modell

All industry players join forces to build, operate and utilize the data ecosystem - **Right from the Start**

Research	Transfer	Recycling	IoT / I4.0
OEM	Catena-X Automotive Network		Operators
1st Tier	n Tier	SME	Software

and many more …

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Who is the Team to kickstart the Eco System?

Catena-X
Automotive Network

Recycling
...
OEMs
Tier-1
Tier-2
Tier-n

WE ARE A DELIVERY ORGANIZATION

Guidance
gaia-x
Fraunhofer
DLR

Transfer
ARENA2036
ADAC

Core Industry
Mercedes-Benz
BMW
SCHAEFFLER
VOLKSWAGEN
ZF GROUP
BOSCH

Software
BIGCHAIN DB
SAP
SIEMENS
fetch.ai

Networks
Microsoft
SUPPLYON

Cross Industry
Henkel
BASF
We create chemistry

IoT / Tooling
TRUMPF
DMG MORI

SME
tec4U
CCT COATING SYSTEMS
up2parts
LRP Autorecycling
GRIS
mipart
on demand manufacturing

Timeframe/project outcome
08/2021 – 07/2024

10x
Use Cases with direct value contribution

1st
Gaia-X / IDSA compliant operating system

2-4 months
Time to value
to onboard partners

First Use Cases to kickstart the network.

10 business-critical end-to-end use cases

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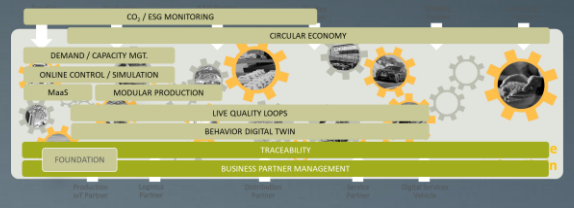
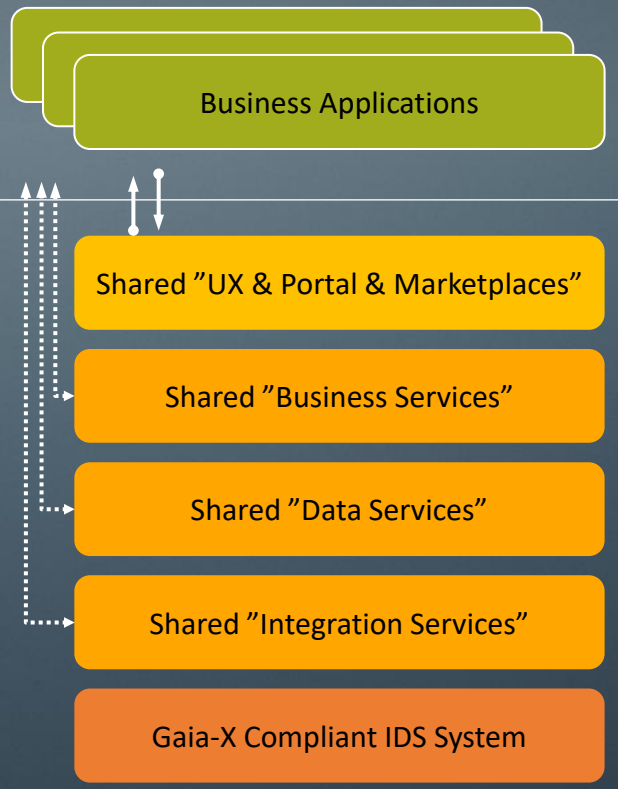
How Catena-X Works – GAIA-X Ready Architecture

Multiple
interoperable offerings
per use case, no lock in





ONE
mutually used
and federated
network base

Shared

strong network capabilities

open source community

GAIA-X / IDSA (web3 principals)

Overview

- **Five Catena-X core network assets**

- **Product Highlight:** Eclipse Data Space Connector EDC
- Pioneering approach to **unify all needs**
  From **SME** to large corporations and providers of services & apps
- **Incubation Room** for innovation & new business models
  → SDK & Open Source

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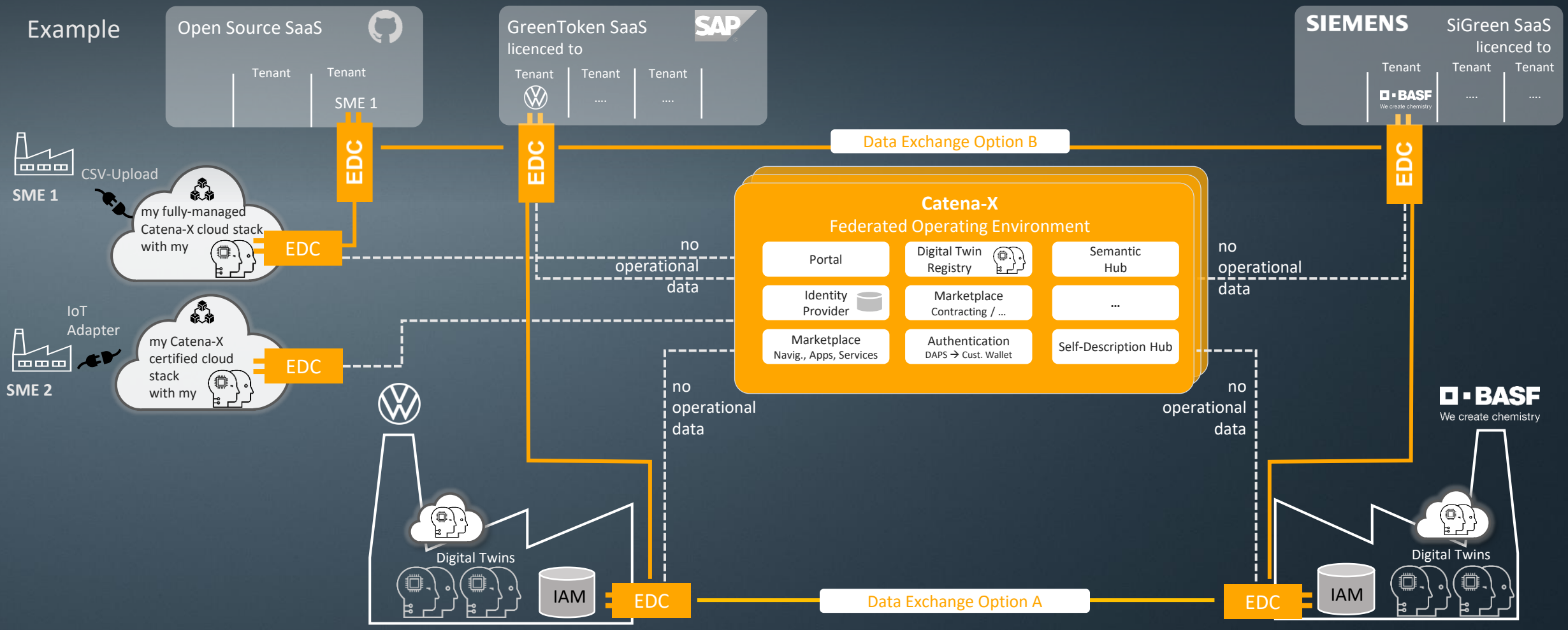
Catena-X Use Case End to End Experience

How Catena-X Works



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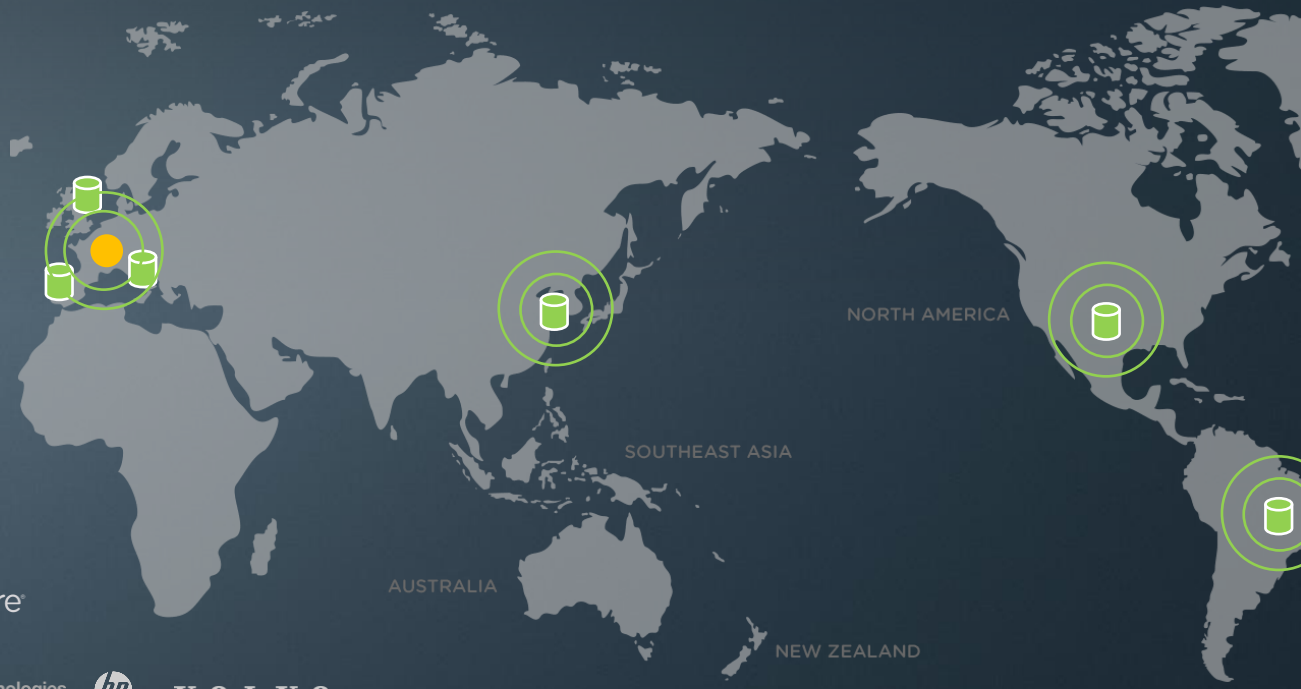
Catena-X is targeted to become a globally accepted and utilized Data Ecosystem.

Consortium

ADAC · ARENA2036 · BASF · BMW · ISTOS · LRP Autorecycling · Mercedes-Benz · BIGCHAIN · DB · CCT · DLR · fetch.ai · mipart · BOSCH · Microsoft · Fraunhofer · GAIA-X · GAIS · Henkel · SIEMENS · T · SUPPLYON · tec4U · TRUMPF · VOLKSWAGEN · ZF GROUP · up2parts · SCHAEFFLER · SAP

Association

allsafe · APHERIS · APLIKO · ARXUM · AsahiKASEI · VDA · AAI · BRAIN OF MATERIALS · Capgemini · CDQ · CIRCULARISE · circunomics · WITTE AUTOMOTIVE · vmware · dccs · Deloitte. · DENSO Crafting the Core · Continental · HANSELMANN & COMPAGNIE · HELIOT EUROPE · Kaputt · 23 Technologies · hp · VOLVO · IAV · ILI.DIGITAL · iPoint · itemis · Atos · DRÄXLMAIER · em engineering methods AG · Ford · CGI · MAGNA · Scheer · owncloud · SSC · Valeo · thyssenkrupp · tributech · STELLANTIS · fagorederlangroup · IBM · HELLA · brembo



Pot. Catena-X Hubs

Starting Point
German Automotive Industry

For the complete list of all 104 members (Status: 06/2022) please visit www.catena-x.net

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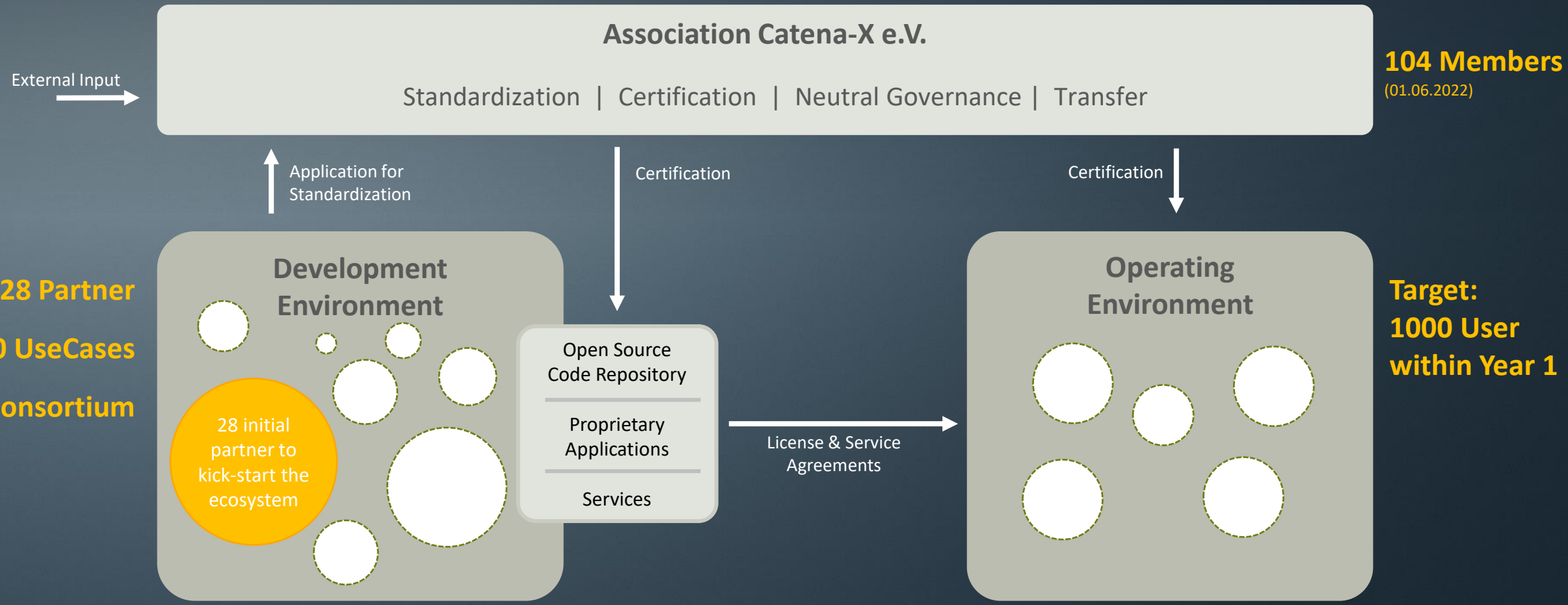
It takes an Open and Balanced Approach to build and run a Global Data EcoSystem for our Industry



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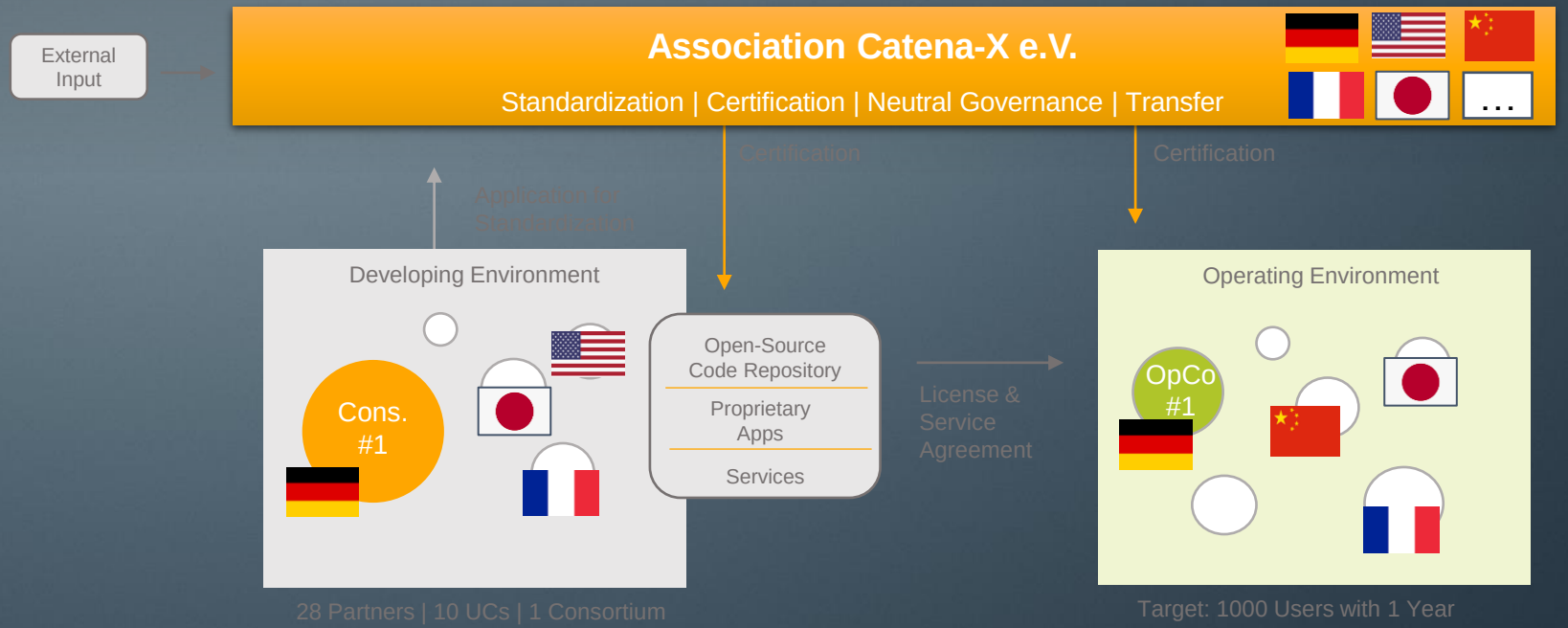
Catena-X From Kickstarter to decentralized Sovereign Hubs Global Hubs

3 Key Levels of Interaction = Interaction has to be organized globally



1 Association Level

- Community of trusted members within the automotive global supply chain
- Industry data space with shared values, principals and neutral governance

2 Consortium Level

- Breeding ground for Innovation, efficient development space and interoperability
- Mutually shared Industry problem / opportunity and collaboration on use cases

3 Operating Company Level

- Multi vendor, interoperable, innovative and scalable Eco System
- Access to enabling services, applications & data solutions through the C-X marketplace

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Hannover Fair 2022 – Catena-X World Premiere

Catena-X Consortium Event

- 500+ Participants
- 12 Speaker
- Executive Keynote
  Markus Heß, BMWK

Catena-X Collaborations

20+ Speaker Opportunities, e.g.

- Leaders Dialogue
- Keynote BM Robert Habeck
- Media and TV Engagements

Catena-X on Site

- Main Booth with political delegations, executive visitors and many more
- 1.200+ coffees served
- Represented at 11 partner booths

Top Announcements

- One Year Catena-X
- Member #100 Continental
- MoU with IDTA
- MoU with IDSA
- Demo of various Apps

Focus Topics

- Circular Economy
- CO_2 Footprint Management
- Onboarding Process esp. SME
- Manufacturing as a Service

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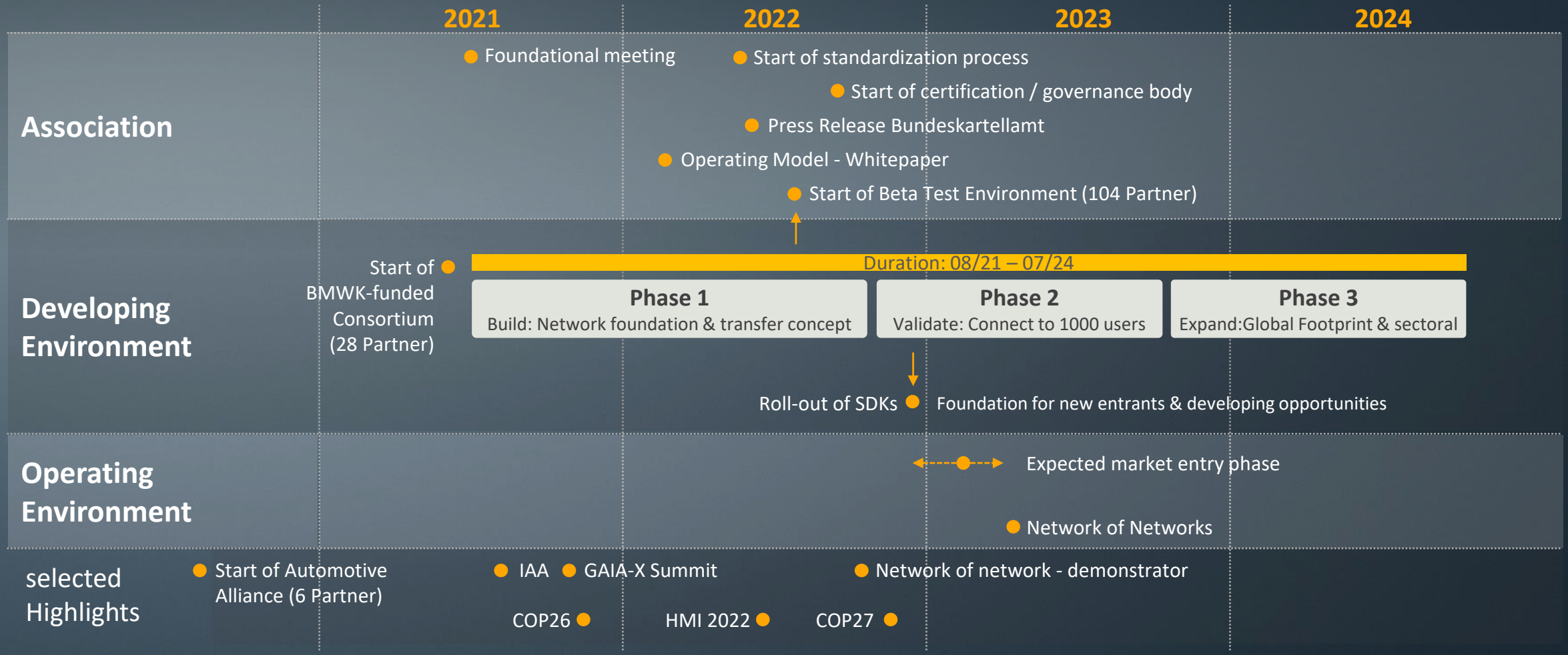
Roadmap



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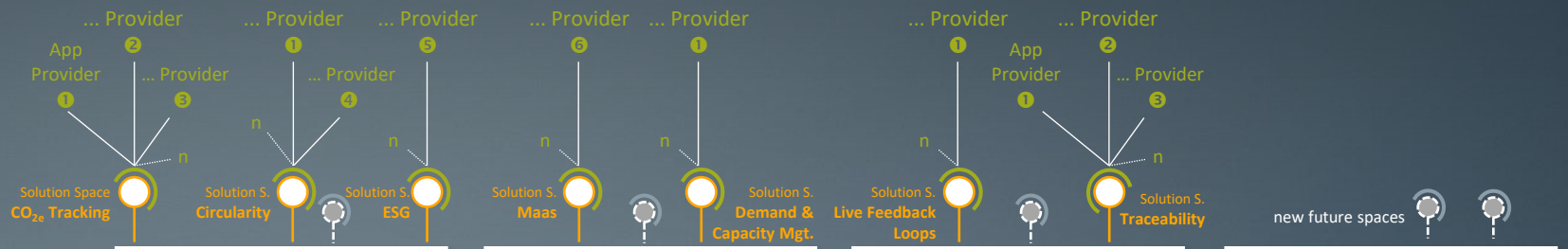
Preliminary Planning Assumption – Subject to change
Status 06/2022

KITs: Unique Super-Power Assets to Scale our Network

- schematic illustration -



Sustainability -KIT

Mission „Save our Planet“

API | Experience Environment | Libraries| Documentation | Standards

- Semantic Model
- Unique ID
- Roles & Policies
- ...
  - Material Passport
  - Material Marketplace
  - Dismantling aaS
  - PCF Calculator
  - PCF Rulebook
  - ...

Resiliency -KIT

Mission „Material Flow“

API | Experience Environment | Libraries| Documentation | Standards

Quality & PLM -KIT

Mission „Zero Defects“

API | Experience Environment | Libraries| Documentation | Standards

? next big thing -KIT

Mission „. . . .“

API | Experience Environment | Libraries| Documentation | Standards

Core Network & Plattform -KIT

Mission „Sharing Services for the Automotive Industry“

API | Experience Environment | Libraries| Documentation | Standards

Unique Catena-X Capabilities (selection)

- Portal
- Unique ID / BPN
- Marketplaces
- Contract Templates
- Roles & Policies
- Item Relationship Service (IRS)
- Semantic Hub
- ...

Providers of Apps and Services utilize the KITs
for their offerings and create a multi vendor, interoperable, innovative and scalable Eco System

CX Solution / Use Case Area
::: Mutually shared Industry Problem / Opportunity

Powerful Software Development KITs to enable CX Sub Eco System Solutions

::: Breeding Ground for Innovation, Efficient Development Space and Interoperability

::: Shared Services & Standards build upon Open Source to foster trust and collaboration; governed by the Association

Powerful Software Development KIT for the entire CX Eco System

::: Enabler of Sub Ecosystems + Network of Networks

::: Unique Services & Capabilities that can only be found here

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Prepare Catena-X Market Entry – Package

Set of onBoarding Services

Ramp-up in 2nd Half 2022

Target: Boost Digital Readiness of all Industry Partners

from to

Global Partner - Pool

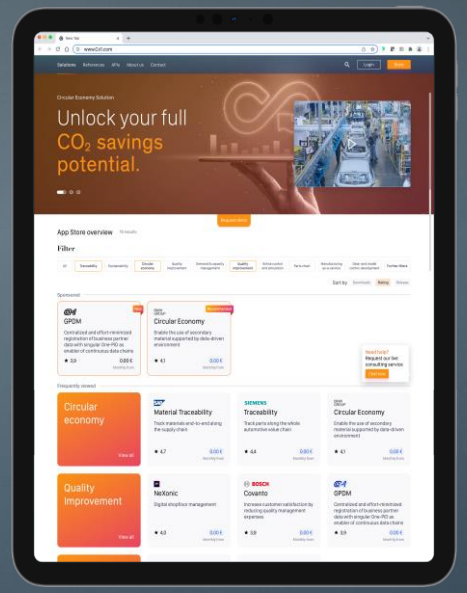
for

Guidance

Technical Enablement

Organizational Enablement

Technical Operations



Initial Catena-X Portfolio

First Minimal Viable Offerings for

- Sustainability CO_2 - Tracking
- Circularity
- Traceability
- Business Partner Management

Portal / Marketplace
Shared CX Services
Federated Network Foundation

Outlook

1st Half 2023

more MVPs to solve Top Industry Problems (e.g. Supply Chain Resiliency, Quality, MaaS)

Continues Feature Boost & App Upgrades

EcoSystem + Plattform KITs

Network of Networks

Proof of Value Hypothesis by 1000 User within 12 months after market entry

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Catena-X Assets aka Unique Value Propositions are defined

1

Boost to Digital Readiness

Time to value promise via holistic onboarding services, made for SME

2

Community of Trusted Members

Industry data space with shared values, principals and neutral governance

3

Largest Library of Digital Twins

Comprehensive data sets across all partners united by e.g. shared semantics

4

Active Data Chains

Joined digital twins and members, incl. building- & governance-services

5

SDKs & Services for an Open EcoSystem

Boost collaboration & utilization. Breeding ground for innovation

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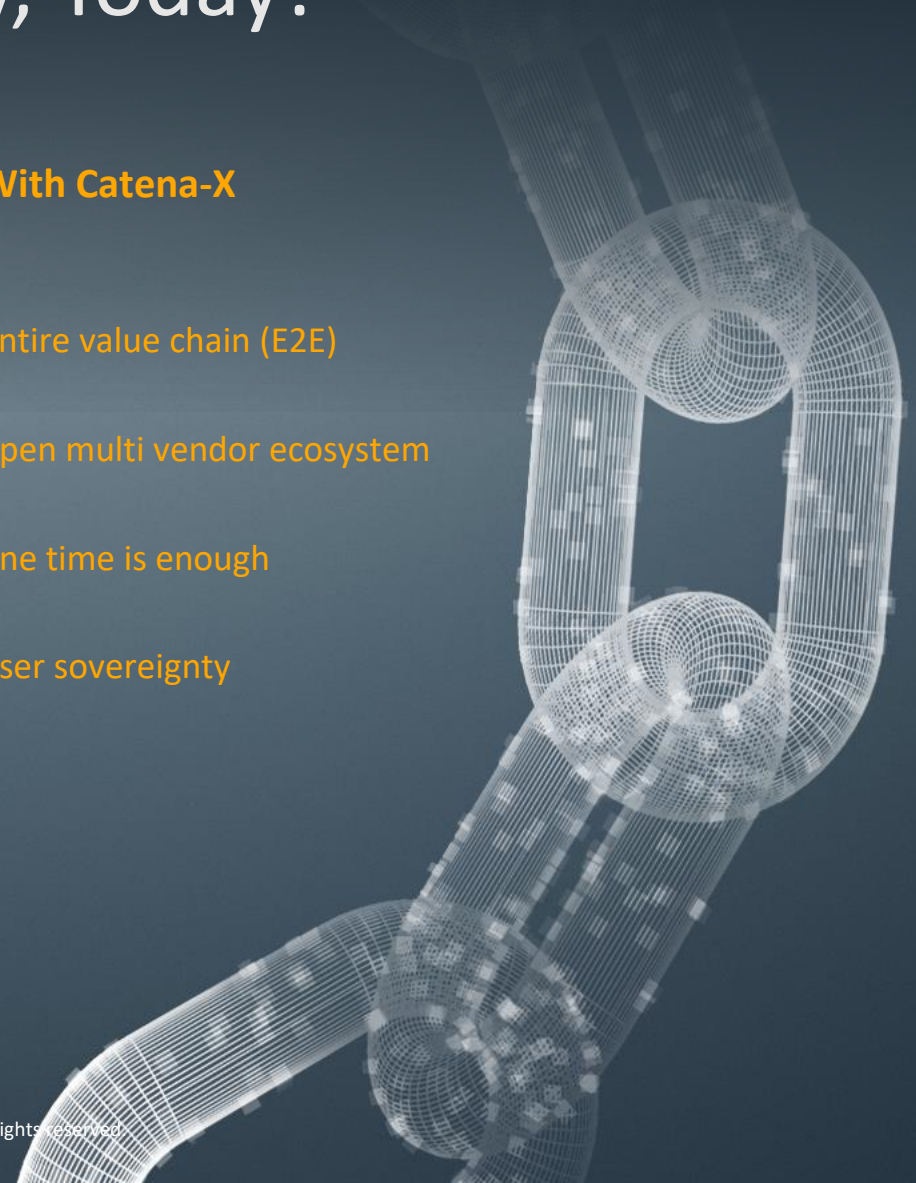
Ladies and Gentlemen,

Thank You for Your Commitment to Radically Change Our Industry, Today!

Without Catena-X	**With Catena-X**
mainly supply chain & peer to peer	entire value chain (E2E)
proprietary	open multi vendor ecosystem
multiple standards	one time is enough
intermediary / trustee	user sovereignty



We are the

fitness program

for the automotive industry & tab into

new value pools

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