Catena-X
Your Automotive Network

Product Carbon Footprint Use Case

Ford – Flex

Challenge 1: Mastering the worldwide regulatory tsunami

New level of reporting incl. regional variances will hit our industry hard, if we are not prepared to scale

one-time reporting

average values

discreet data point

reporting on secondary data

choose your own calculation method

2020

selected upcoming regulations

- LkSG
- Forced Labour Products Ban
- Regulation on Deforestation-free Products
- ESRS
- Battery Recycling Policy
- End-of-Life Vehicle Regulation
- Eco-Design Regulation
- UK Modern Slavery Act
- Battery Regulation
- End-of-Life Vehicle Regulation
- CBAM
- Battery Recycling Bill
- Uyghur Forced Labour Prevention Act
- CSRD
- CO_2 Fleet Regulation
- CRMA
- REACH
- CSDDD

2030

CONTINUOUS
REPORTING OF LCA

THIRD PARTY
VERIFICATION

Different prescriptive methodologies

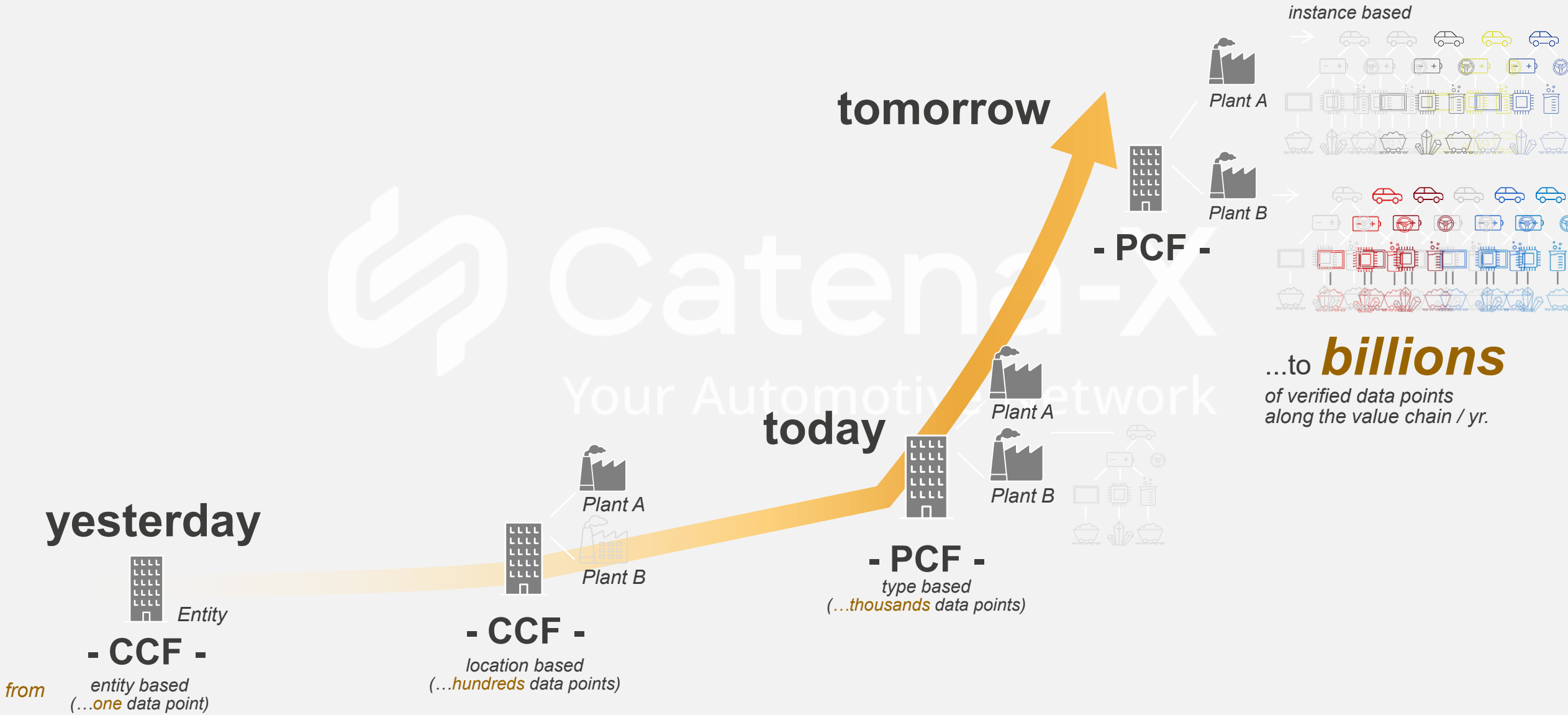
Sensitive data

Methodology depending on regulation and region

Reasonable assurance

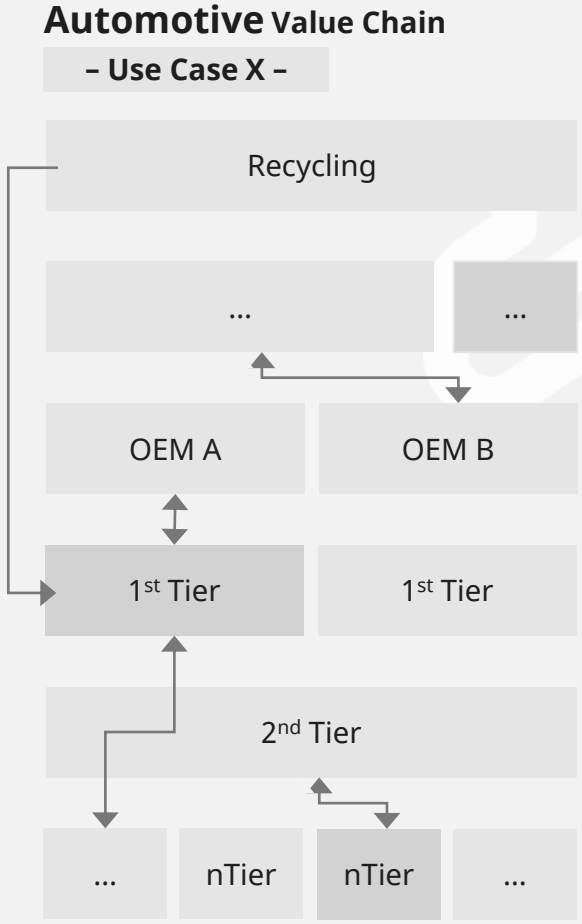
INSTANCE
LEVEL

Challenge 2: Scalability & trust



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Catena-X: Four main alternatives



Today's Alternative 1

Central Data Base for all industry partners

+ No cost for supplier
+ Established / available

− Trust / Verification
− Data Protection / IP
− Cyber-Security
− Business Process Readiness

Today's Alternative 2

One IT Provider for all partners of the same value chain

+ Trust / Verification
+ One solution provider

− Compliance / AntiTrust
− Scalability in Business
− Enforce Usage (nTier)
− Costs / Synergies

Today's Alternative 3

Every Partner has its own solution

+ Data Protection / IP
+ Freedom of Choice

− Trust / Verification
− Business Compliance
− Compatibility / Logic
− Scalability in Business
− Overall Costs

Industry Standards

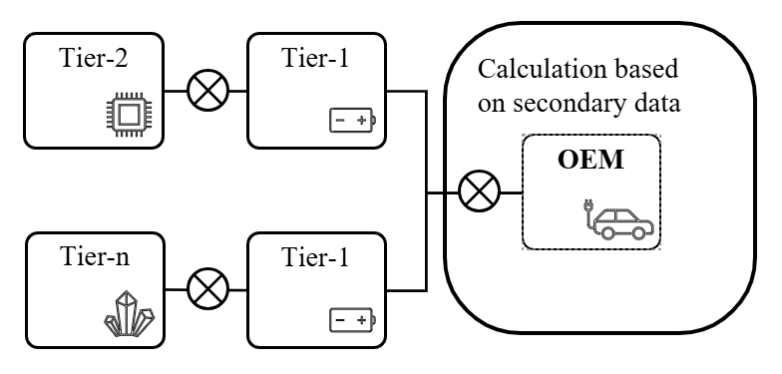
Industry standards create inter operability between providers

+ Freedom of Choice (vendors) → Anti Trust
+ Data Protection / Cyber Security
+ Trust / Verification
+ Scalability in Business

− Industry Transformation
− Initial Complexity

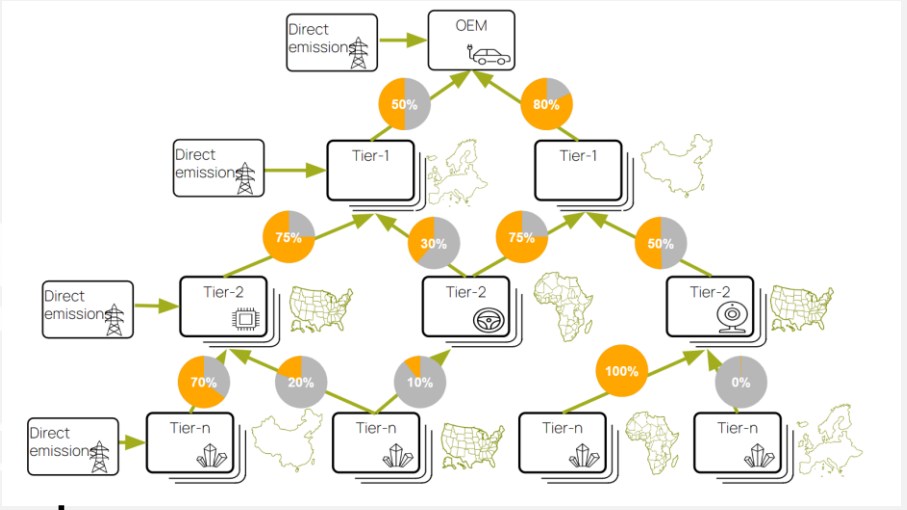
What does PCF change?

TODAY without Catena-X PCF



PCF calculation uses average values per technology from LCA databases.

TOMORROW with Catena-X PCF



- **PCF aggregation from the value chain**
- **Reliable and verified primary data**
- **Interoperability between applications**

Catena-X enables to collect and share trusted PCF data across the supply chain and enables the aggregation to a full vehicle PCF at the OEM

Catena-X PCF end to end business approach,

enables your company to continuously adapt and implement present and future PCF regulations



Your company will have to

MEASURE

what and how to

electricity

natural gas

…

CO_2 / kWh

CO_2 / cbm

…

ALLOCATE & CALCULATE DATA

My products

CSRD

CBAM 2025

EU Battery-Pass

others

Trusted & secure

VERIFY DATA

Verification Framework

How to verify and accept upstream PCF w/o further checks

PROOF PCF

Audited PCF for my product

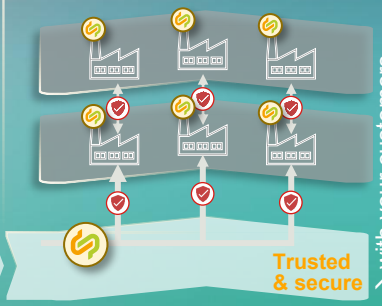
incl. overall verification share

SHARE PCF

Trusted ID & connector

compliant policies

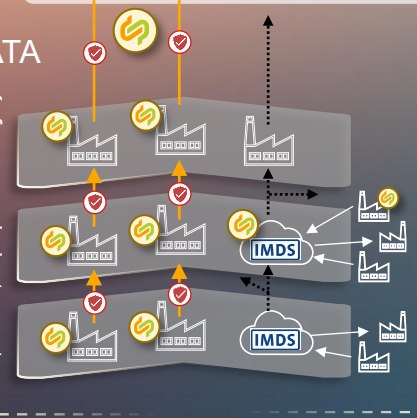
Your industry partners



→ with your customers

ENSURE CONTROL

RECEIVE DATA & REDUCE REPORTING LIABILITIES



← from your industry partners

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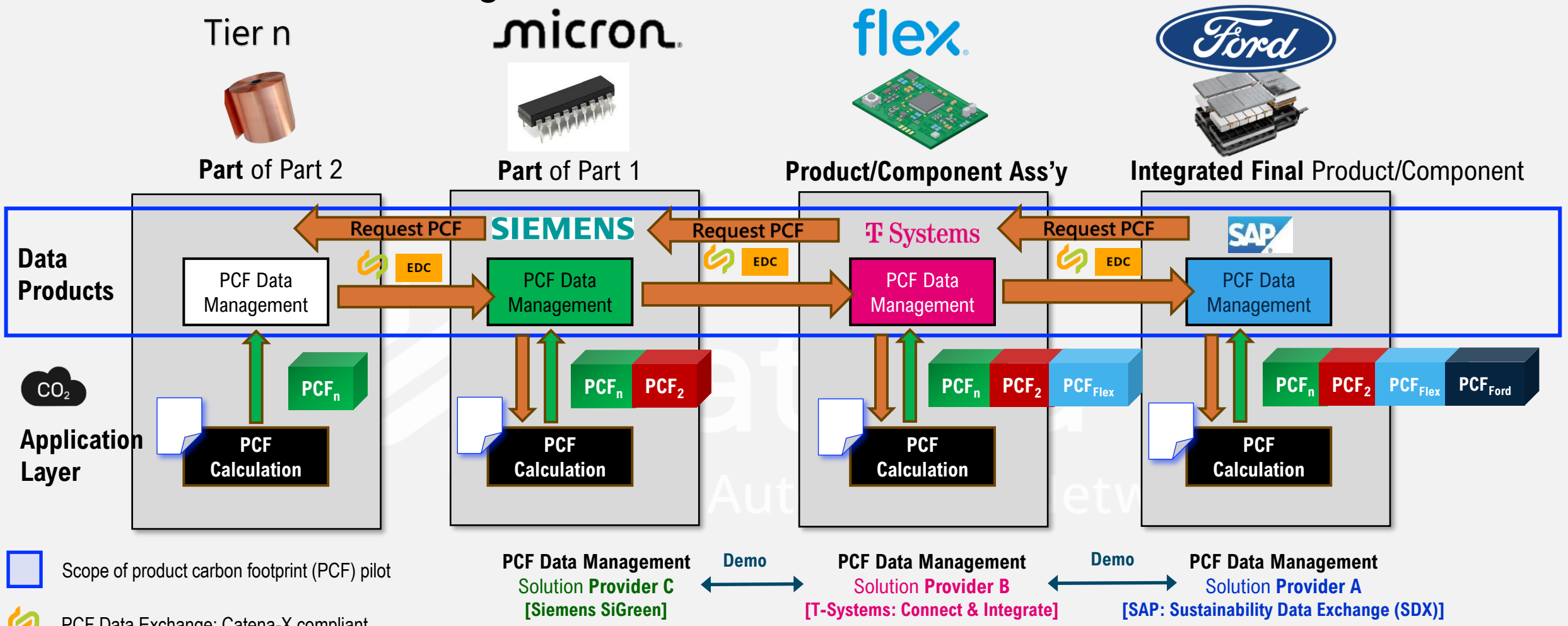
Trusted // Verified // Secured

Frameworks // Standards

The boost for you to master PCF reporting

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Multi-tier PCF data exchange via Catena-X



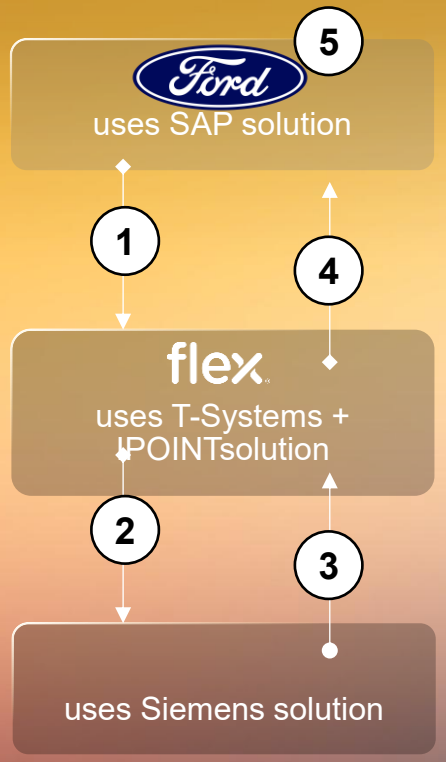
PCF_n PCF_2 PCF_{Flex} PCF_{Ford} = $PCF_{PRODUCT}$

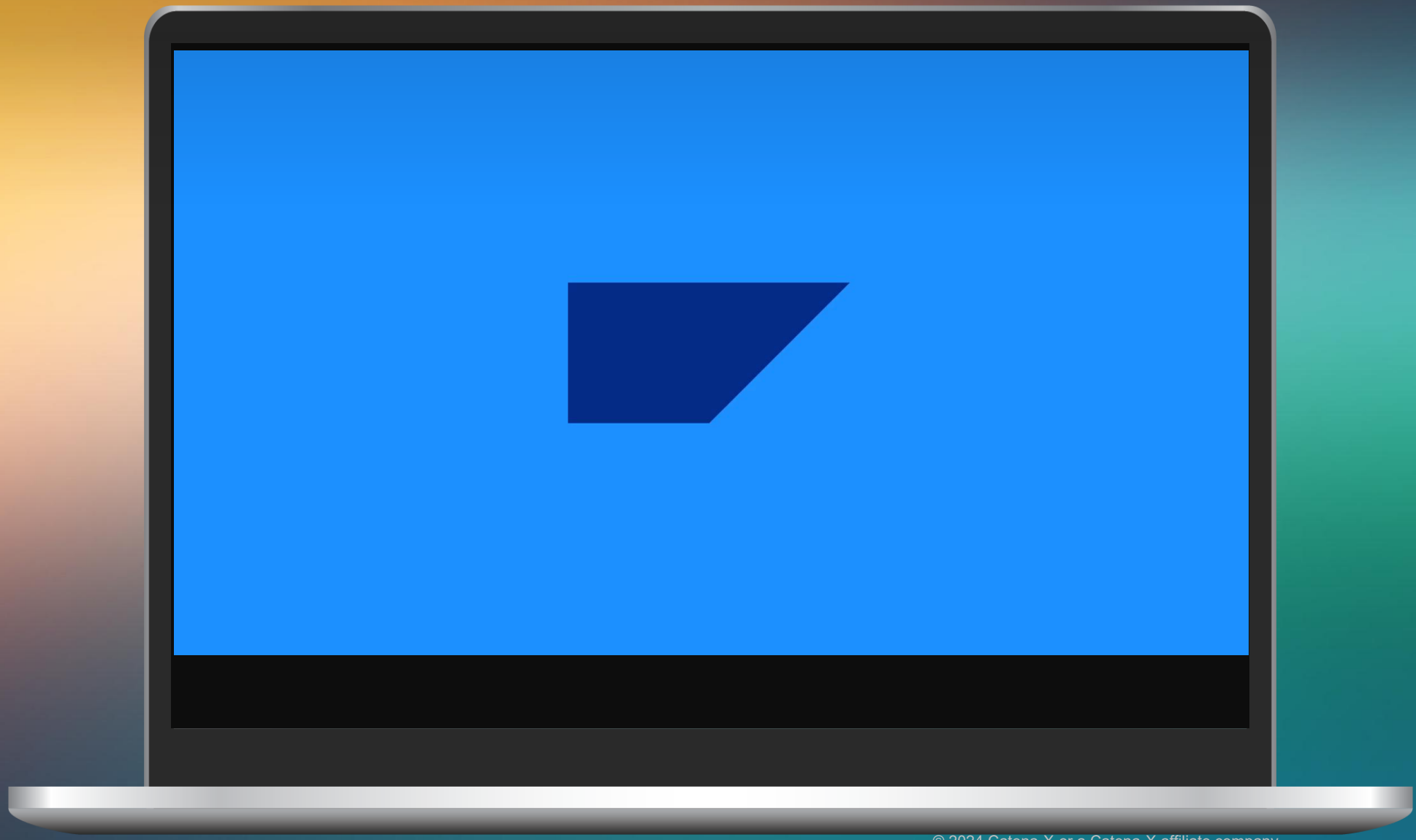
PCF Interoperable Solutions Pilot - Catena- X

Ford flex Tier 2 Cofinity-X SAP T Systems SIEMENS

System demo

OEM requests product carbon footprint data from direct supplier



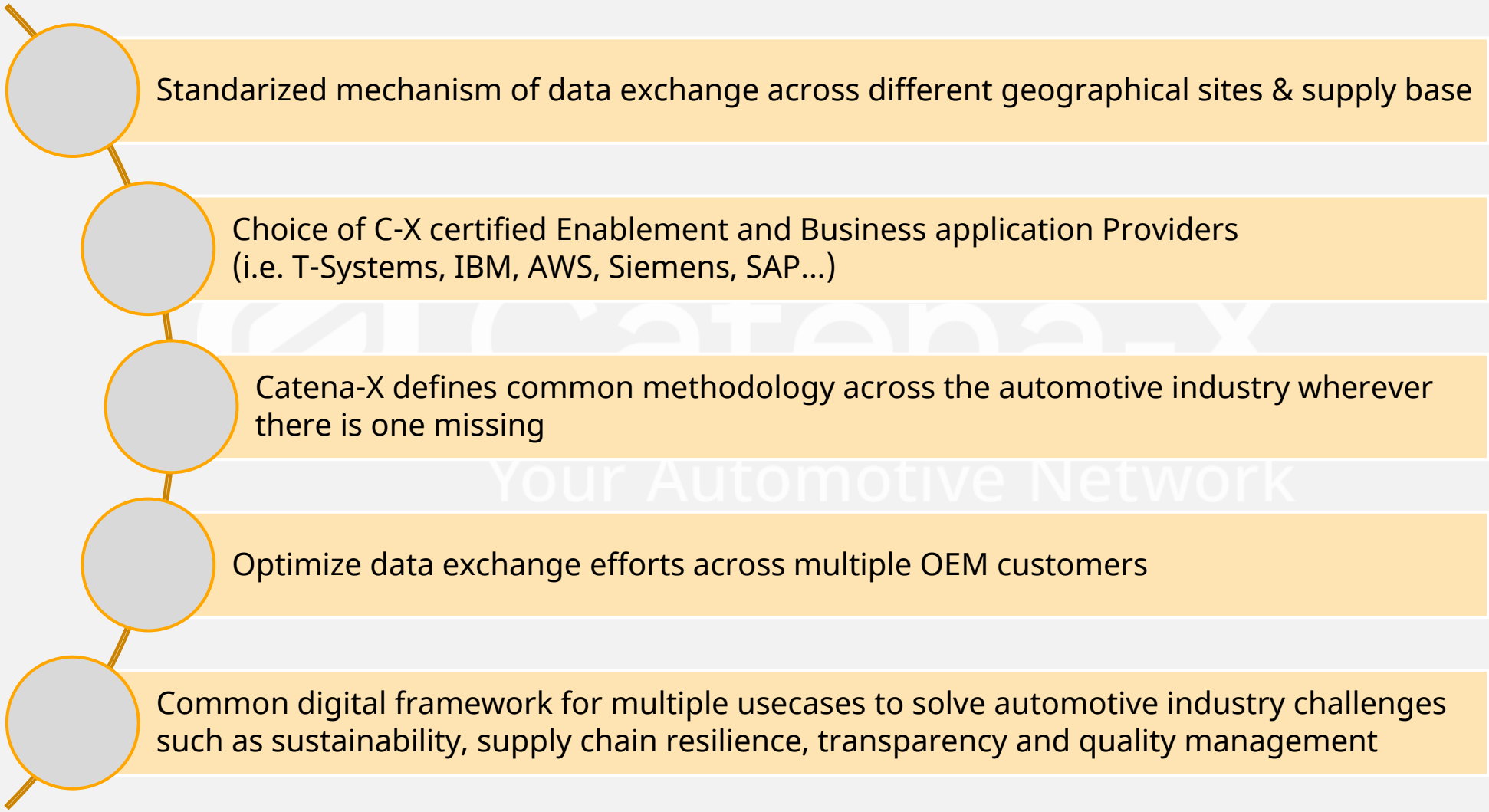


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Example: How Ford (OEM), Flex (Tier1), and Micron (Tier2) lower costs and reduce emissions with proper PCF reporting

- **Access to Primary Data**: All partners gain access to verified, primary PCF data, allowing for more precise carbon footprint calculations.
- **Emission Data on the correct level:** By relying on primary data instead of industry averages the PCF values have been **reduced by 46%*** compared to values based on industry averages – enabling targeted sustainability measures.
- **Multi-Tier Collaboration**: For the first time, OEMs, Tier-1, and Tier-2 suppliers seamlessly exchange PCF data along the value chain – while using the IT solution of their choice.

Benefits of Catena-X from a Tier 1 perspective



FLEX & Catena-X.
3+ YEARS of Implementation Experience.

ACCOMPLISHMENTS

- Prepared Flex’s digital infrastructure for further Catena-X use cases.
- Enabled productive Catena-X data exchange across use cases.
- Increased Catena-X awareness among Tier-2 suppliers.
- Validated interoperability across Catena-X app providers.

KEY LEARNINGS FOR SUPPLIERS

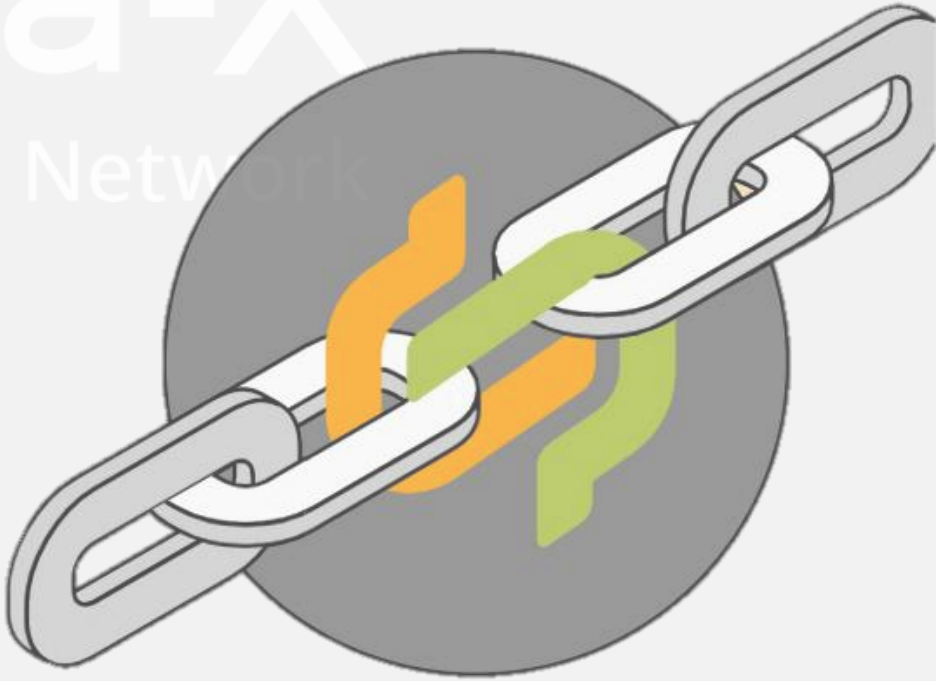
- Catena-X onboarding follows clear steps but takes time and coordination.
- Standardized data models reduce cycle time and costs.
- Early multi-stakeholder involvement is critical for success.
- App providers can be flexibly chosen within the ecosystem.

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This Journey Requires Collaboration across the value chain.

CALL TO ACTION

- **Don’t wait to engage** – start now by connecting with anyone from the team.
- **Create internal alignment** – bring Catena-X into your internal cross-functional level enterprise meetings early on.
- **Partner with your customers** – begin with one use case.
- **Bring your suppliers along** – educate your key suppliers.



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