



Willkommen

Data Logistics & AAS

The Strategic Road to Cost Efficiency and Interoperability

Jon Kåre Solås | Electronic Coast
Horten, 6. februar 2026

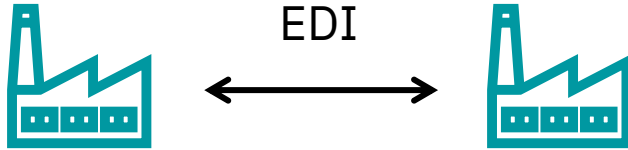
jsolaas@phoenixcontact.com



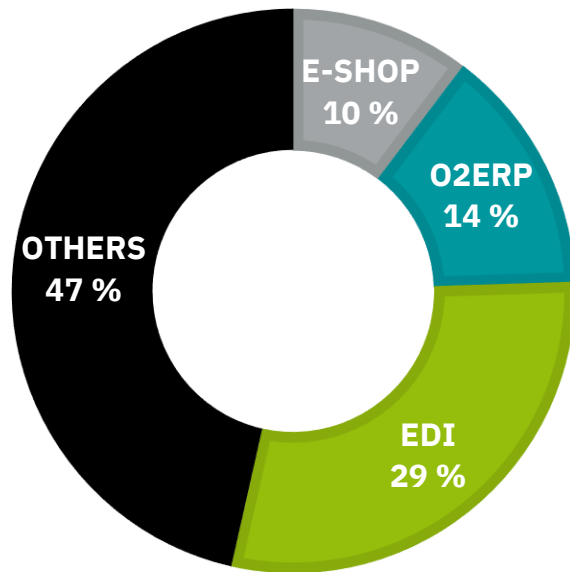
Overall target state



The challenge of data exchange in B2B: EDI

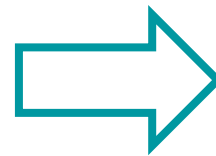


Share of sales 2024 (by order channel)



Reasons for long lead times of new EDI connections

- „no capacity on customer side during already started test phase“
- „customer decides to postpone the project“
- „new IT project started by customer that interferes with the schedule for EDI project“
- „parental leave on customer side“
- „non-availability of ERP system at planned testing time slot“
- „project stop due to open budget questions“



The root cause for long lead times is the necessity to start a „project“.

The challenge of data exchange in B2B: PLM → outdated info

Data set for Schunk robot gripper in PLM

IM0004095_PGN-Plus_Betrieb.pdf	05.04.2019 08:36
MPGplus16-64_DE.pdf	14.01.2015 16:53
MPG-PLUS-32-GREIFER.PDF	28.08.2018 11:27
MPG-PLUS-40-AS-GREIFER.PDF	28.08.2018 11:35
PGN_DE.pdf	06.01.2015 12:39



Superior Damping and Gripping

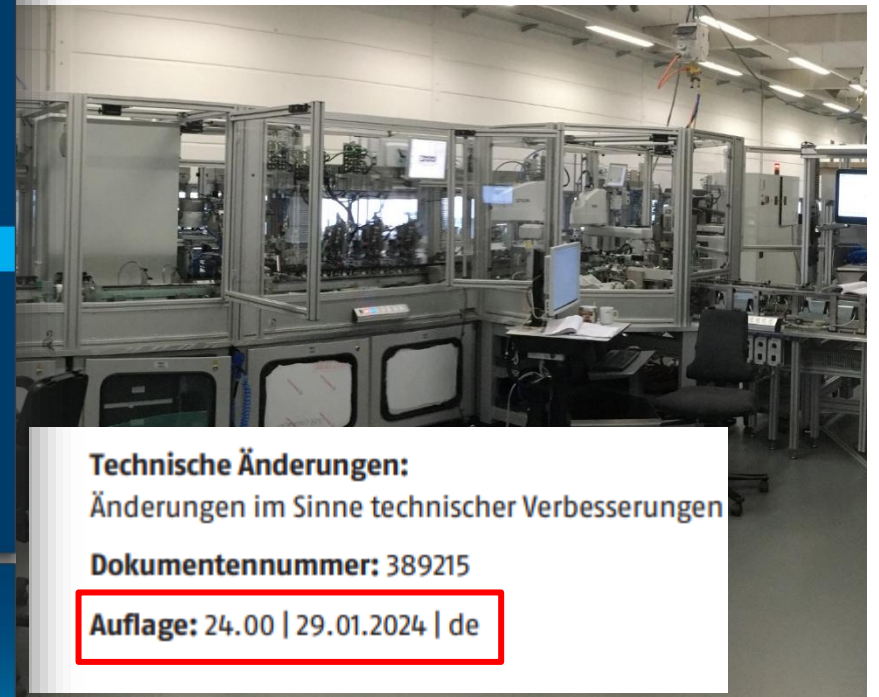
SCHUNK

Produktinformation
Kleinteilegreifer MPG-plus 40

MPG-plus
Kleinteilegreifer

Leistungsstärker. Schneller. Längere Finger.
Kleinteilegreifer MPG-plus

2-Finger-Heuteilegreifer mit leichtgängiger Wälzführung der Grundbocken



Technische Änderungen:
Änderungen im Sinne technischer Verbesserungen

Dokumentenummer: 389215

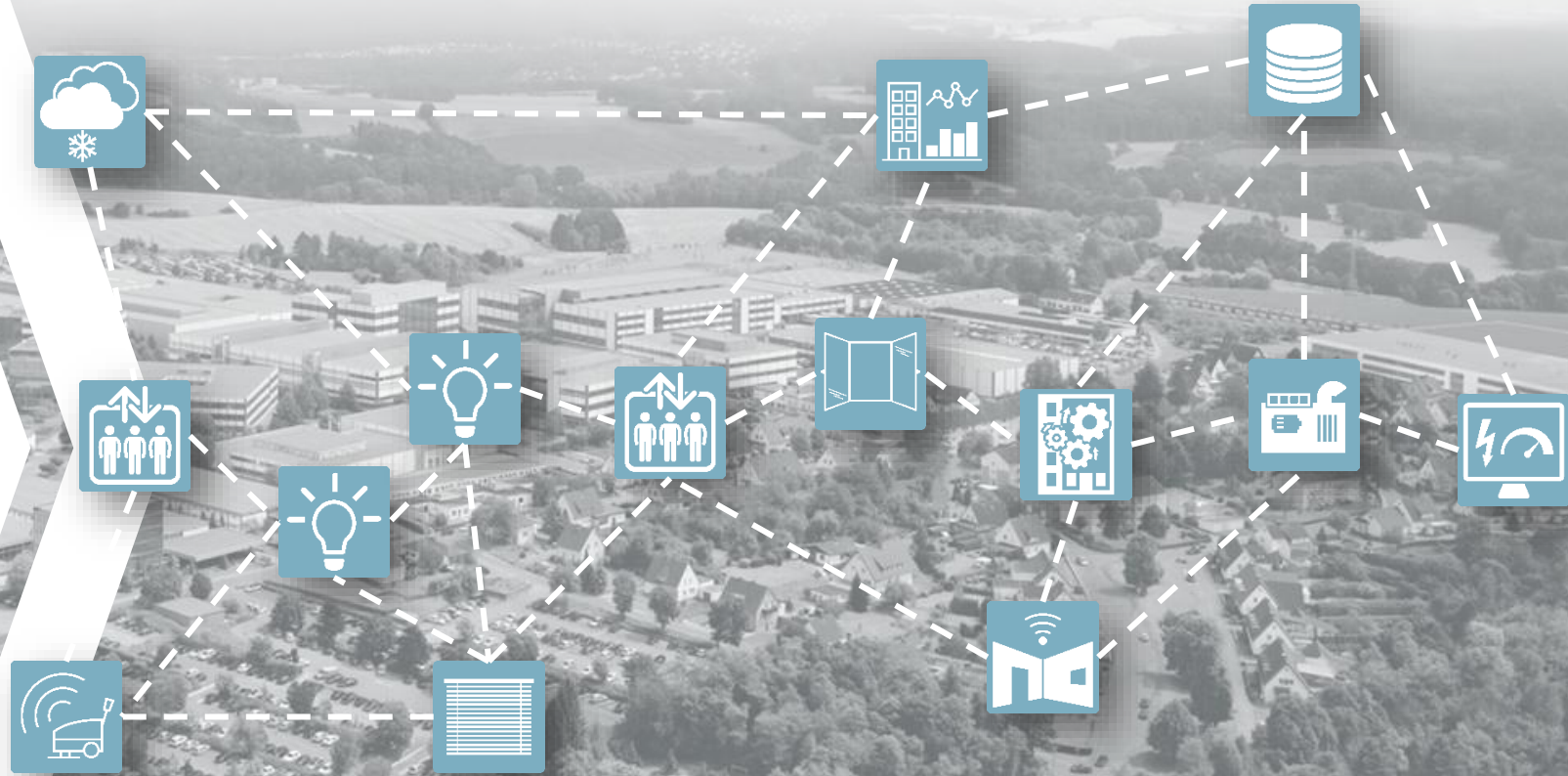
Auflage: 24.00 | 29.01.2024 | de

The challenge of data exchange in B2B: OT security & asset mgt.

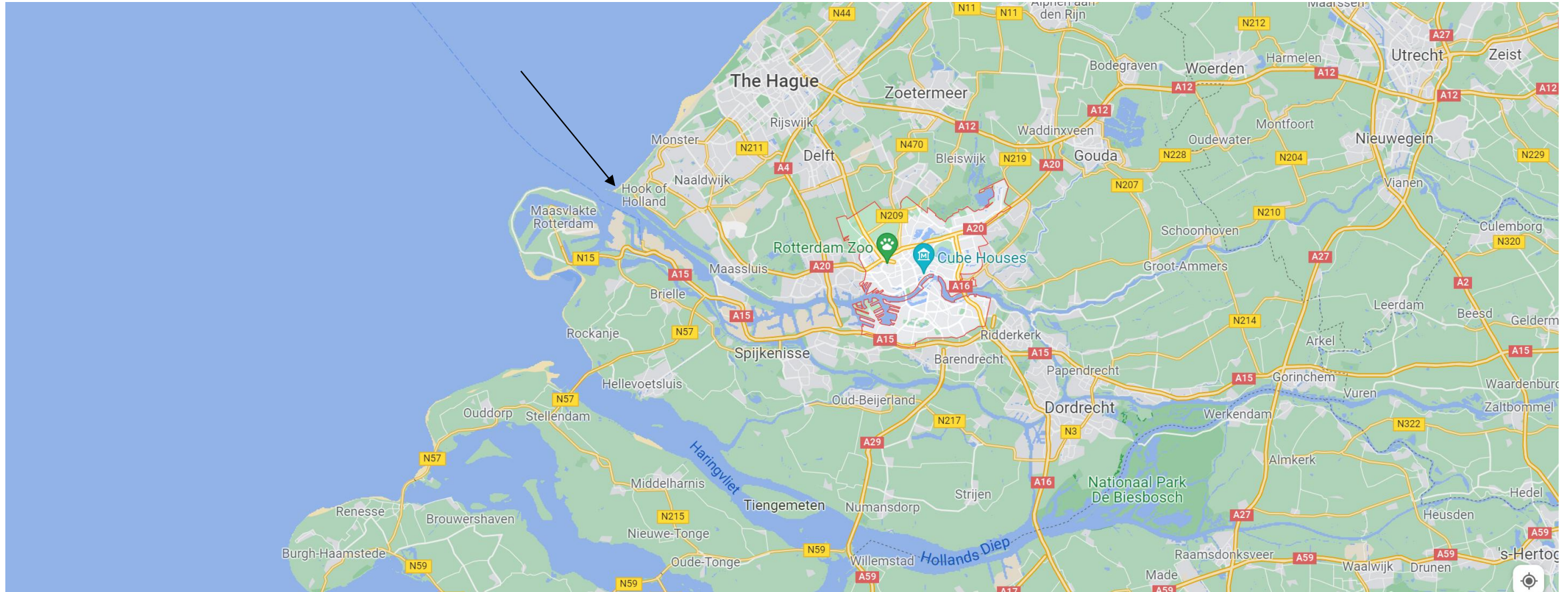
FACILITY
MANAGEMENT
AT BLOMBERG HQ
PLANT

> **1,100**

controllers
from different vendors



Hoek van Holland



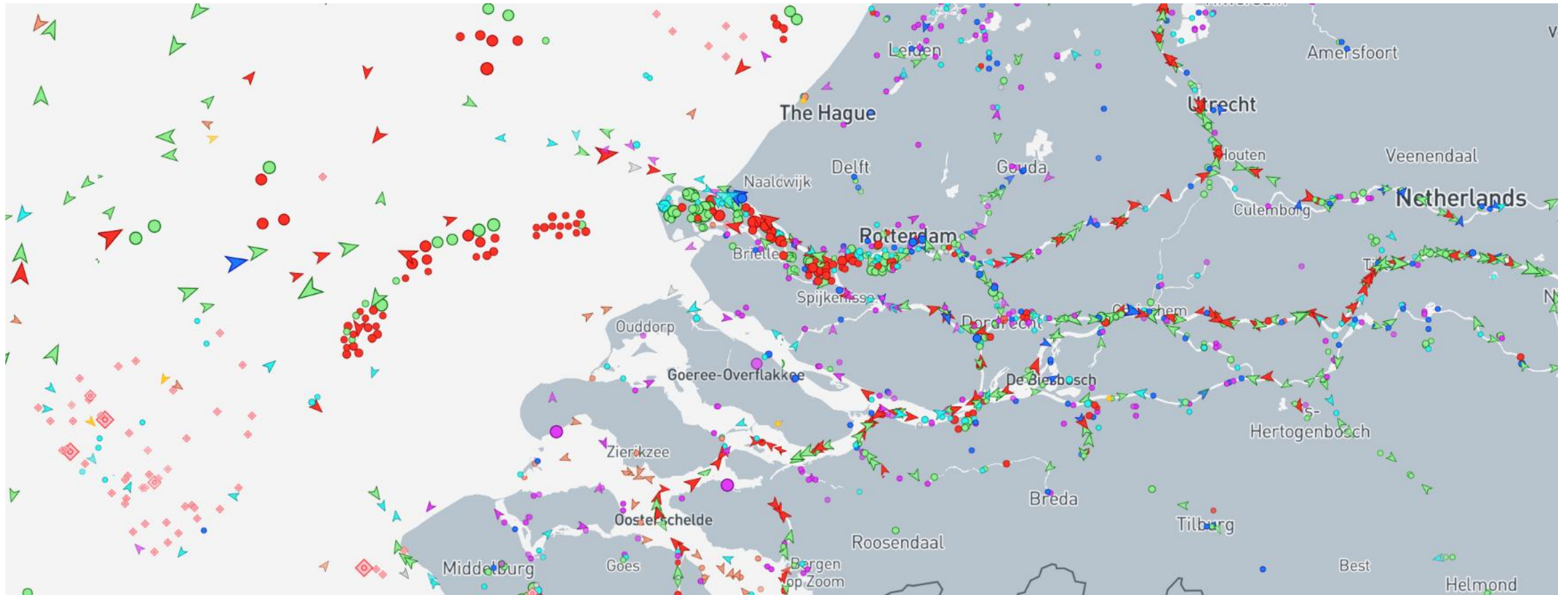
Source: Google Maps

Data Logistics

Hoek van Holland



Hoek van Holland on www.marinetraffic.com



Source: www.marinetraffic.com

Hoek van Holland



ISO-Container (ISO 668)

Standard Dry Cargo Container

Refrigerated Container

Car Carrier Container

Tank Container

Accommodation Container



Source: KMJ, CC BY-SA 3.0,
<https://commons.wikimedia.org/w/index.php?curid=1443327>



ISO-Container (ISO 668) and their history



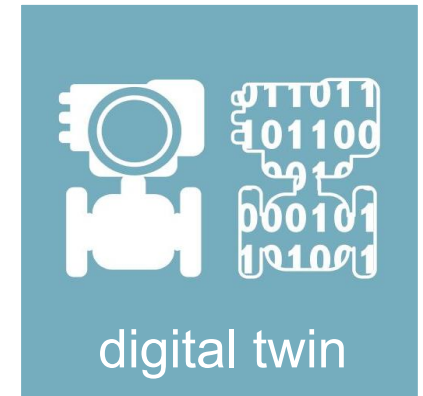
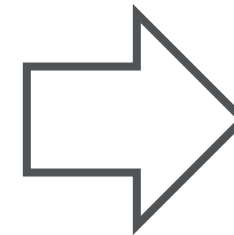
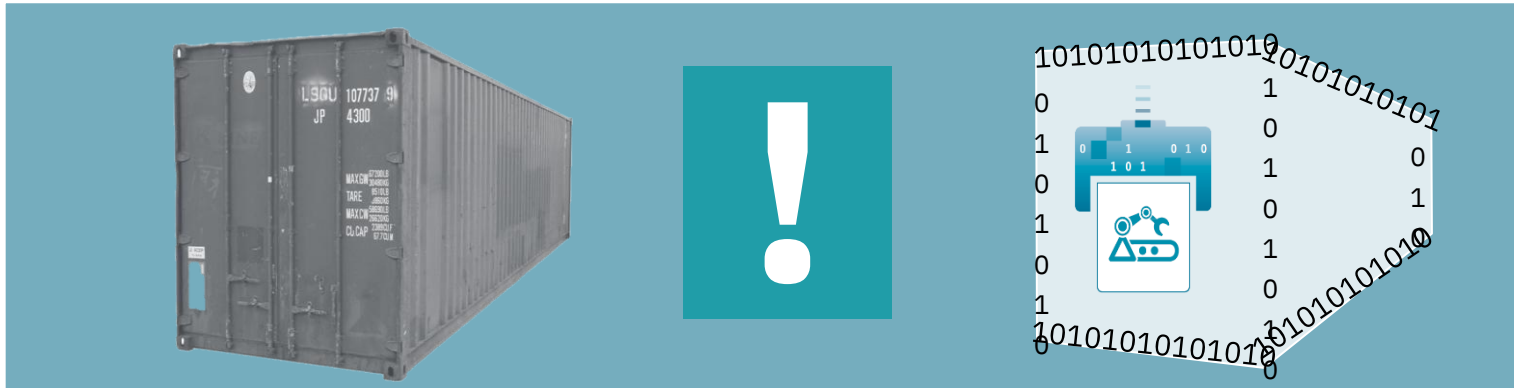
Source: Maersk Line - Malcolm McLean at railing, Port Newark, 1957, CC BY-SA 2.0, <https://commons.wikimedia.org/w/index.php?curid=27640875>

- Malcom Purcell McLean
November 14, 1913 – May 25, 2001
- After high school, he bought a used truck and started a small trucking company.
- Frustrated by long waiting times during loading and unloading.
- Implemented the idea of containers through his shipping company Sea Land.
- April 26, 1956: First loading of containers onto a converted tanker ship in Newark.
- May 6, 1966: First unloading of containers at the Bremer Overseas Port.
- 152,500,000 (2019) and 183,200,000 (2024) twenty-foot containers (TEU) transported worldwide.

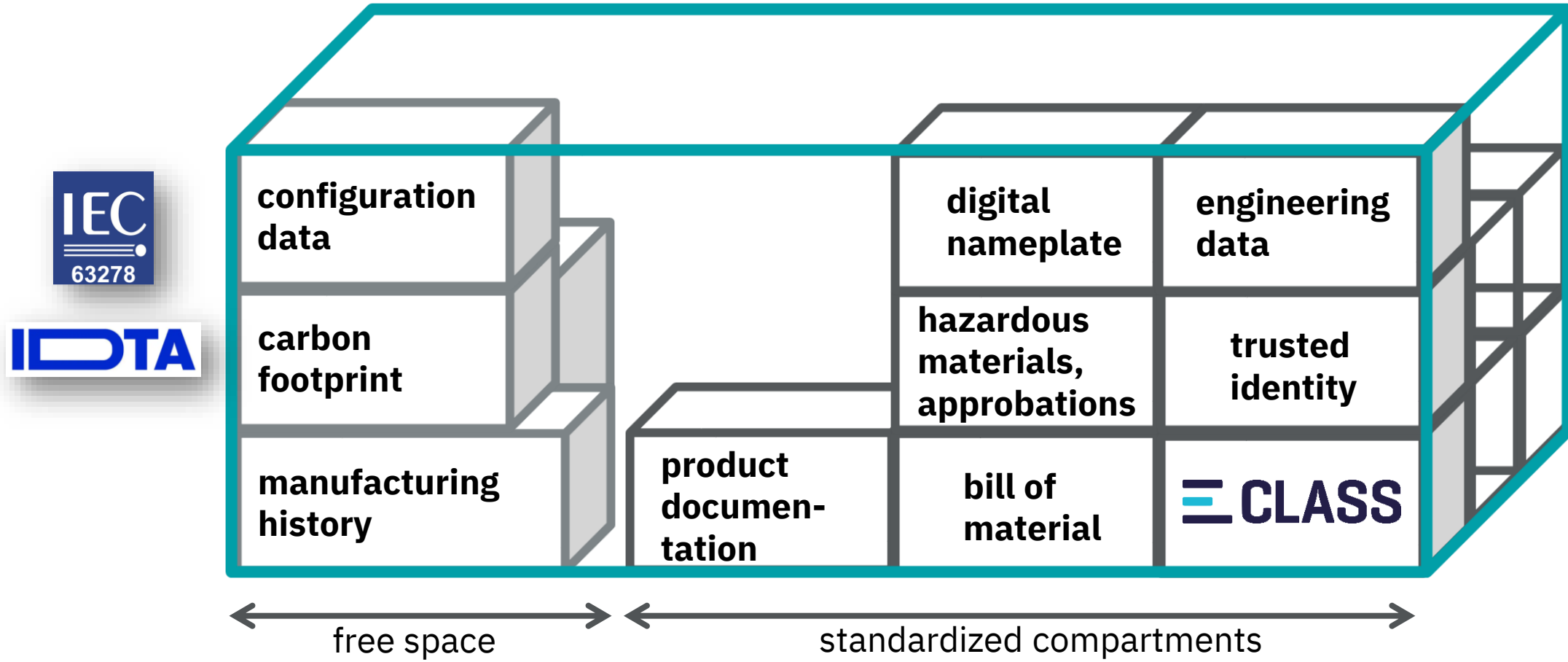
Factor of disruption: Container-based data logistics

container-based data logistics

IEC 63278 – asset administration shell



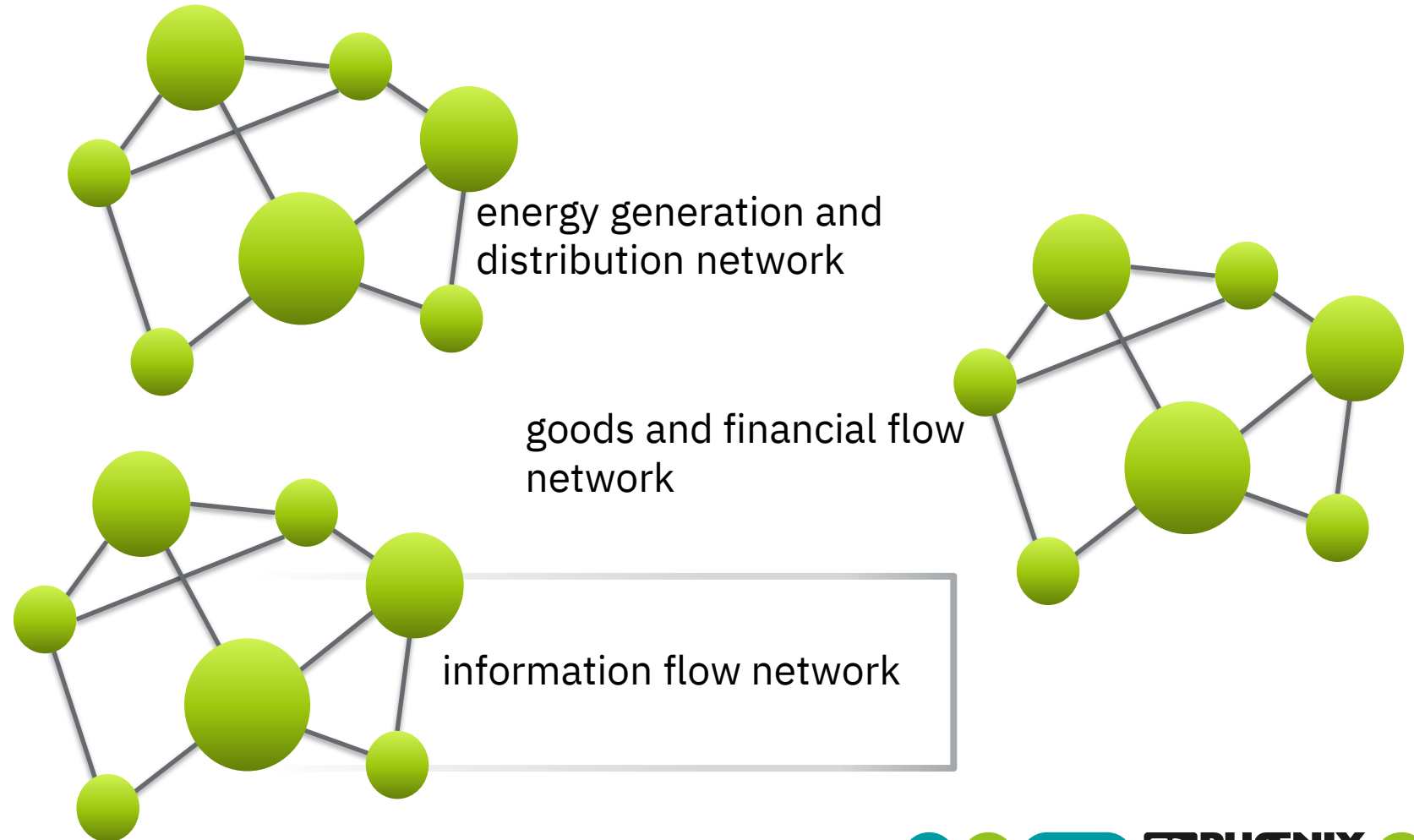
Understanding the data container



Zero-marginal cost: Foundations of growth



Jeremy Rifkin
Economist and Public Intellectual
*Founder & President of the
Foundation on Economic Trends
(FOET)*



The beginning of the end

We continue to discuss the vision in many conferences.

We participate in public-funded research projects
without real impact for daily operations.

The obstacles in daily business remain unchanged.

We continue to pay too much money for required data flows.

The end of the beginning

We walk the talk.

We start to realize first steps in daily business,
creating incremental change

and step by step put together the building blocks for
super-efficient global data logistics with zero marginal cost.

Today: Achievements at/with contribution of Phoenix Contact

Provide data as AAS



- Provision of Type-AAS for 85.000 catalogue products (currently four submodels, more to come)
- Provision of >280.000 Instance-AAS from ~300 products
- DT4I-API on PxC API Gateway

Develop standards



- Development of new submodel „Product Change Notification“
- Development of security concept
- Initiation of joint working group for the development of events/notifications

Receive and manage AAS



- Joint development of prototypes for realizing data flows from Phoenix Contact to EPLAN Dataportal and PTC Windchill
- Pre-Development project with Siemens for AAS Teamcenter integration

Walk the talk @ Phoenix Contact

Push IT systems providers



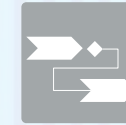
- Targets: providers of engineering IT solutions
- Use customer power to bring AAS interfaces on roadmaps for coming releases
- Partner with other „users“ to push IT solutions providers on the realization journey
- Commit to buy licenses when features are available

Partner with customers and suppliers



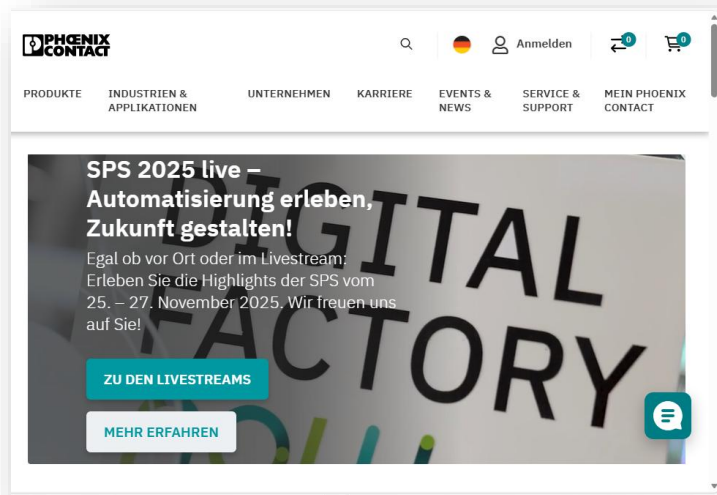
- Targets: Bring AAS into usage in daily business
- Realization of product-related data flows between us and selected third party companies
- Implement data flows to data portals based on AAS and eClass

Build internal processes and services

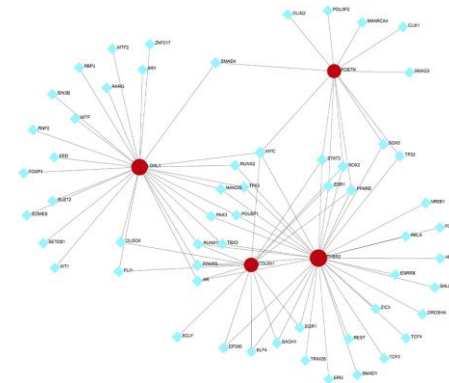


- API portal as part of our web services offering
- Create AAS product type data as part of development process
- Create AAS product instance data as part of the production process of selected products

Creating value with AI – what's the role of AAS?



Today we launch the first version of our AI-driven assistant on our web page (in selected countries)



To increase intelligent capabilities we need a graph database populated with product know-how

How can we fill such a graph database with know-how on products and their semantic relations in terms of e.g. applications?

Creating value with AI – what's the role of AAS?

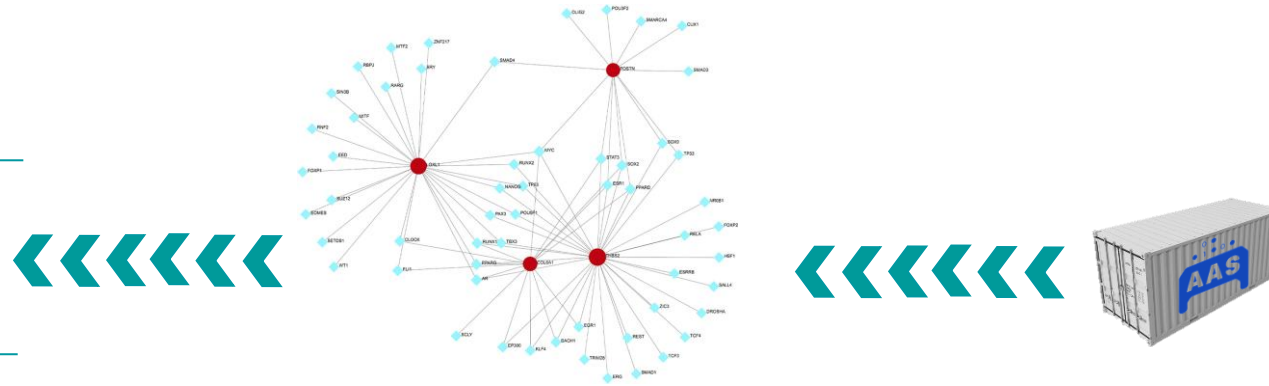
AI-driven engineering and lifecycle management

AI-supported asset management

AI-supported operations

AI-supported maintenance

...



Semantic database on products, their functions and semantic links/connections

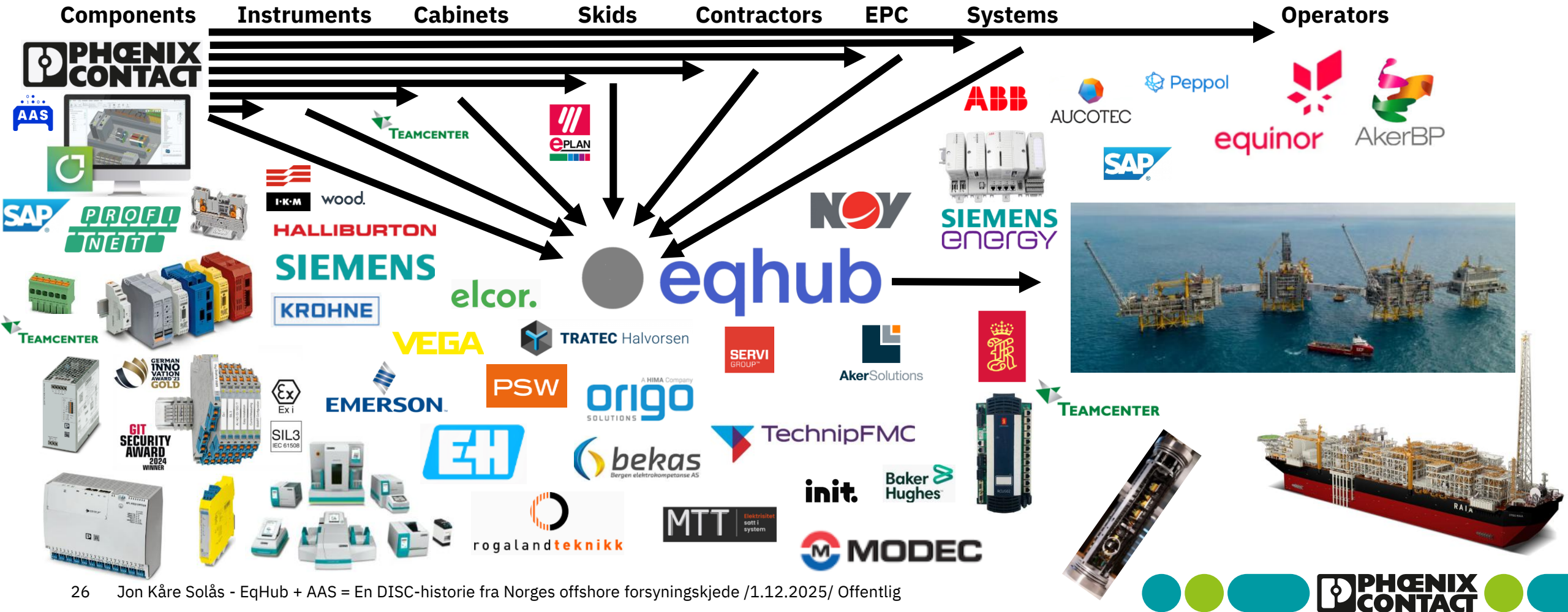


PLUS: AAS Made Easy - the holistic picture and examples (added by Jon Kåre - not part of the presentation in Stavanger)

- Phoenix Contact as supplier to the Norwegian Offshore industry
- The big picture
- Information Exchange Platforms and bidirectional information flow
- Eplan: enabling interoperability and collaboration
- AAS and Peppol enabling a standardized value chain
- ID Link – an independent alternative for identification
- Open Source and open standards to ensure interoperability and cost effective implementation.
- AAS + ID Link = DPP 4.0
- AAS Made Easy

Asset Administration Shell = Industry 4.0-based digitalization of Norway's Offshore Supply Chain

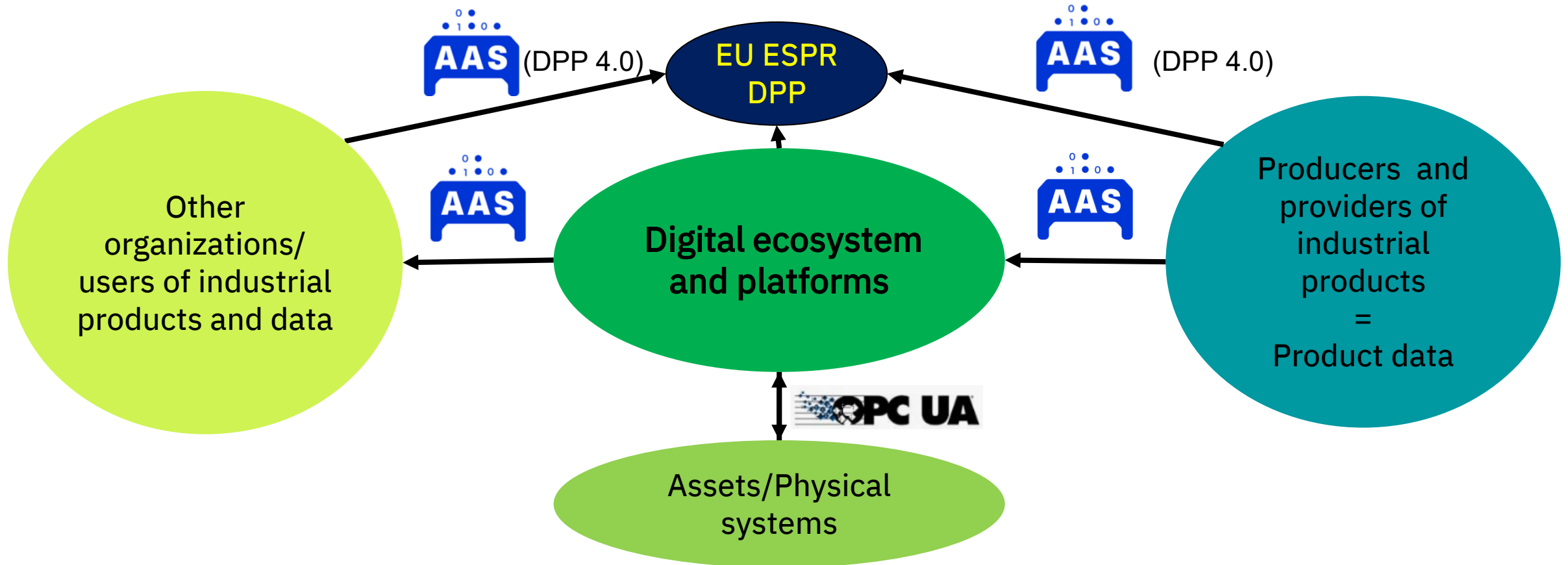
Phoenix Contact in the perspective of Offshore Oil and Gas



Asset Administration Shell = Industry 4.0-based digitalization of Norway's Offshore Supply Chain

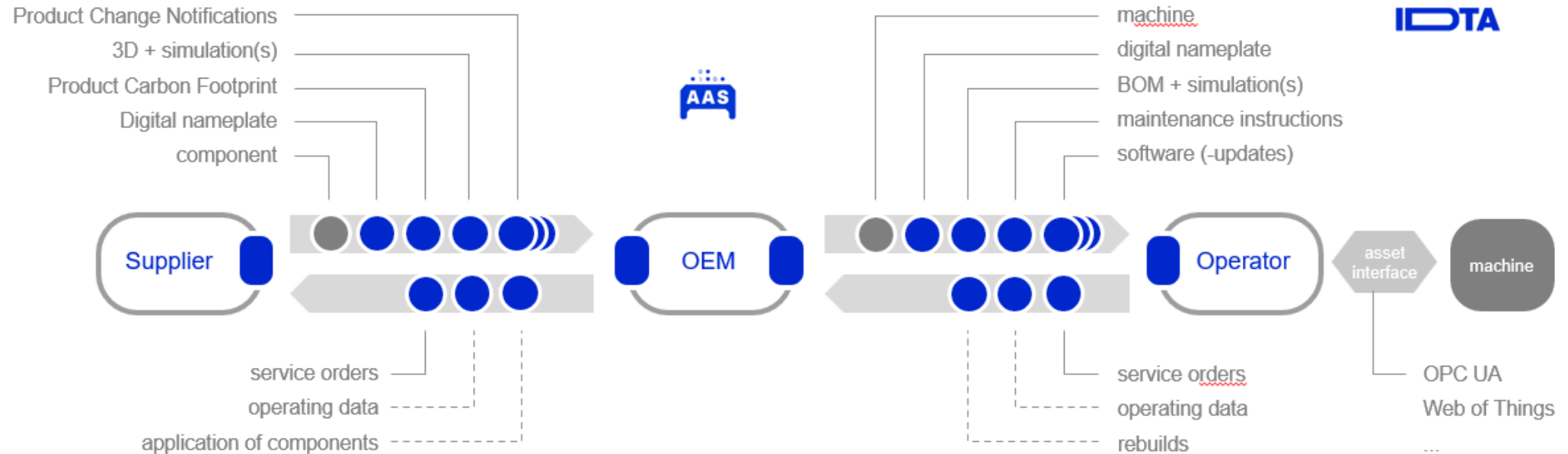
The holistic picture:

Platform Industrie 4.0: AAS + OPC UA (+ DPP 4.0)



Asset Administration Shell = Industry 4.0-based digitalization of Norway's Offshore Supply Chain

EqHub + AAS: Big Picture – Closing the cycles

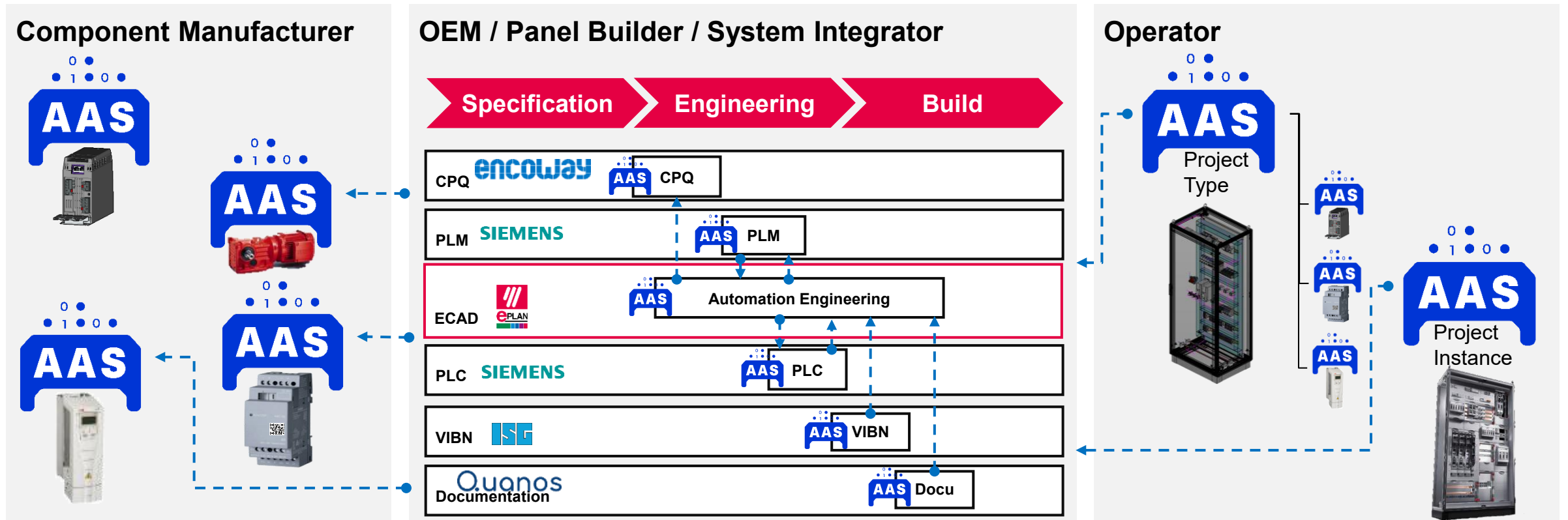


- = AASX Registry, Repository (e.g. servers, PLM system, ..)
- = available today
- = future thoughts

- | | |
|---|---|
| <p>←</p> <ul style="list-style-type: none"> - Data quality - Product quality - ? | <p>→</p> <ul style="list-style-type: none"> - Product Change Notifications (PCN) - Security Advisories - Secure Software Distribution - It's up to the industry |
|---|---|

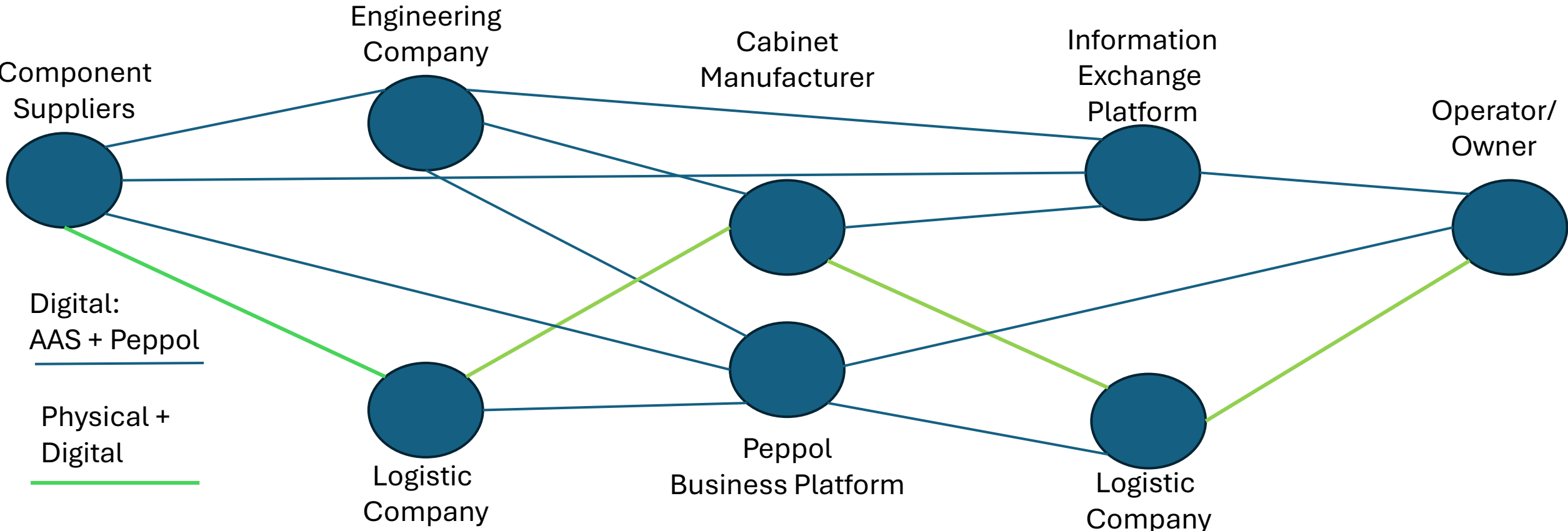
Technology perspective of interoperability and collaboration

Industry 4.0 concepts – Closing the Gap



! Vendors and software providers incorporating common data formats and interfaces is essential to enable collaborative engineering and asset life cycle management.

AAS and Peppol enabling a standardised valuechain for procurement, logistics and life cycle management - example



Digitalization: AAS – OPC UA – MTP - ID Link



PHOENIX CONTACT

Digital Twin



Asset ID

What is AAS



Phoenix Contact


PLCnext Control
AXC F 1252
Item number 1646469

Project name ---
Serial number 2038055917
Firmware version 2025.6.1 (25.6.1.63)
Hardware version 01

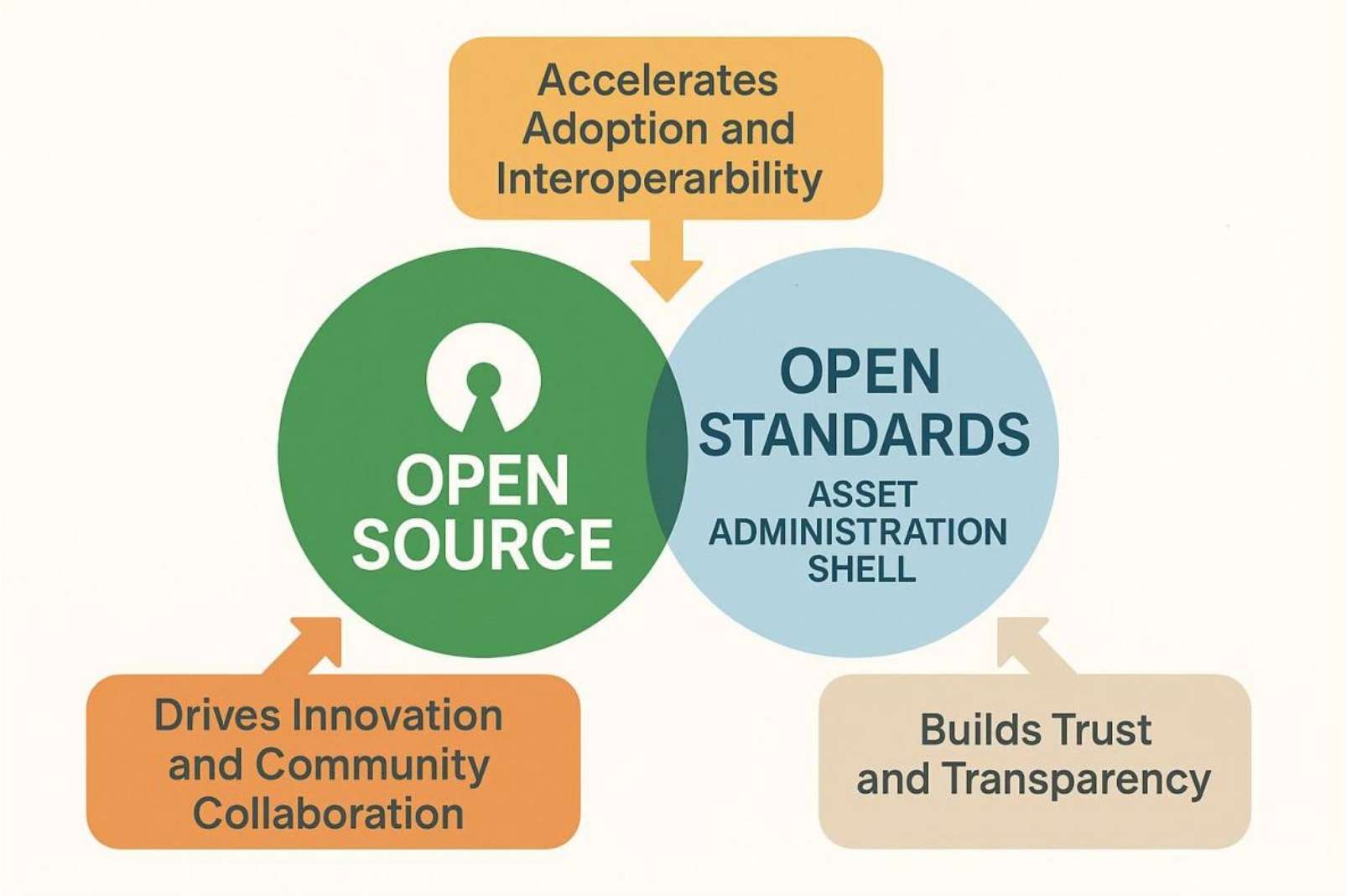
General data

Vendor	Phoenix Contact GmbH & Co. KG
Address	Flachsmarktstr. 8, D-32825 Blomberg
Internet	http://www.phoenixcontact.com
Device type	AXC F 1252
Item number	1646469
Serial number	2038055917
Firmware version	2025.6.1 (25.6.1.63)
Hardware version	01
FPGA version	3.1.37

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Address Flachsmarktstr. 8, D-32825 Blomberg
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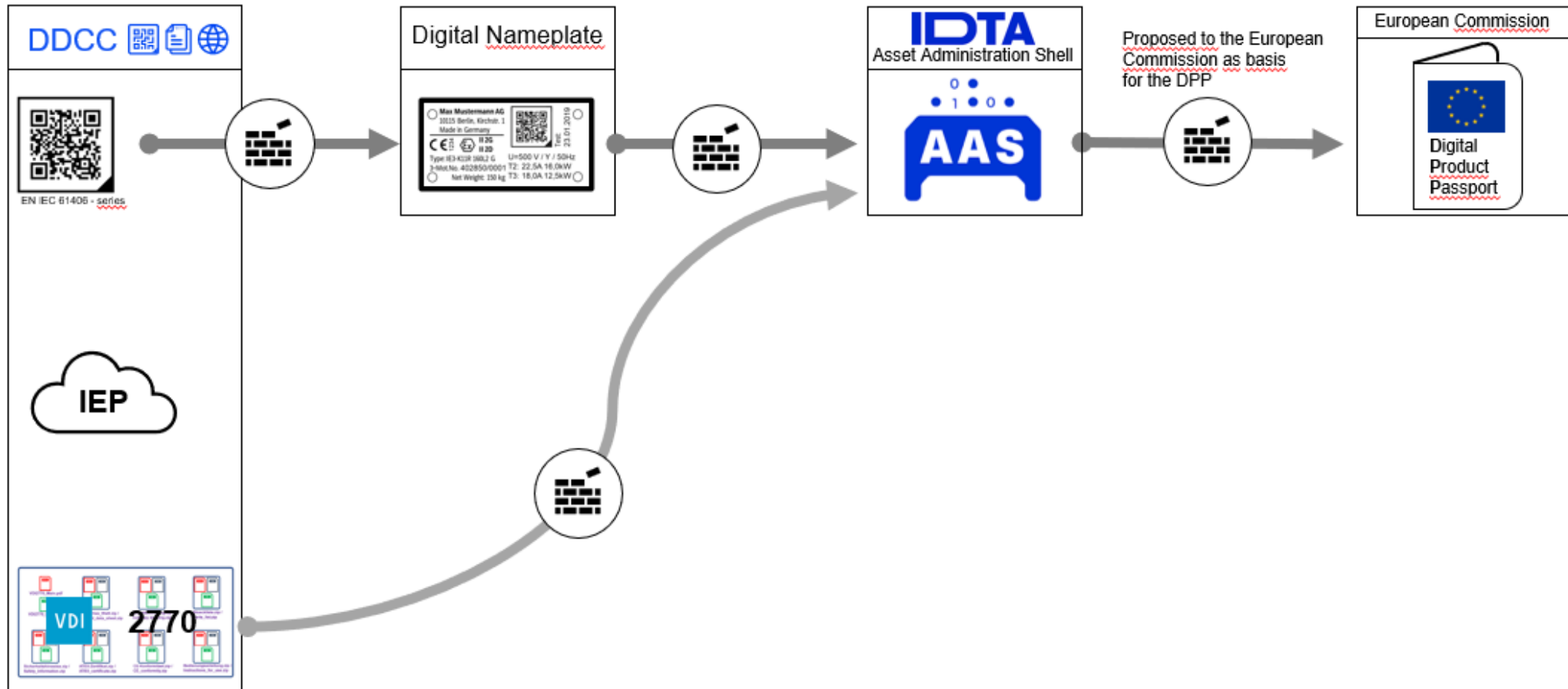


Open source and open standards to accelrate adoption and ensure futureproof interoperability



AAS + ID Link = DPP 4.0

DIGITAL DATA CHAIN → relation to other standards and technologies



What is AAS

AAS made easy

- AAS is complex
 - AAS Metamodel + AAS REST API + AAS Security + AAS Submodels
- What is made easy?
 - Making it easy for data consumers to get AAS
 - Making it easy for data providers to supply AAS
 - Making it easy to evaluate
- How is it made easy?
 - Standardised Data + Standardised API + Standardised Security
 - Open Source



Willkommen

Data Logistics & AAS

The Strategic Road to Cost Efficiency and Interoperability

Frank Possel-Dölken | DISC Show & Tell
Stavanger, 1st December 2025

