



Frank Possel-Dölken
CDO – Phoenix Contact AS

**Data Logistics & AAS- The strategic Road to
Cost Efficiency and Interoperability**





Willkommen

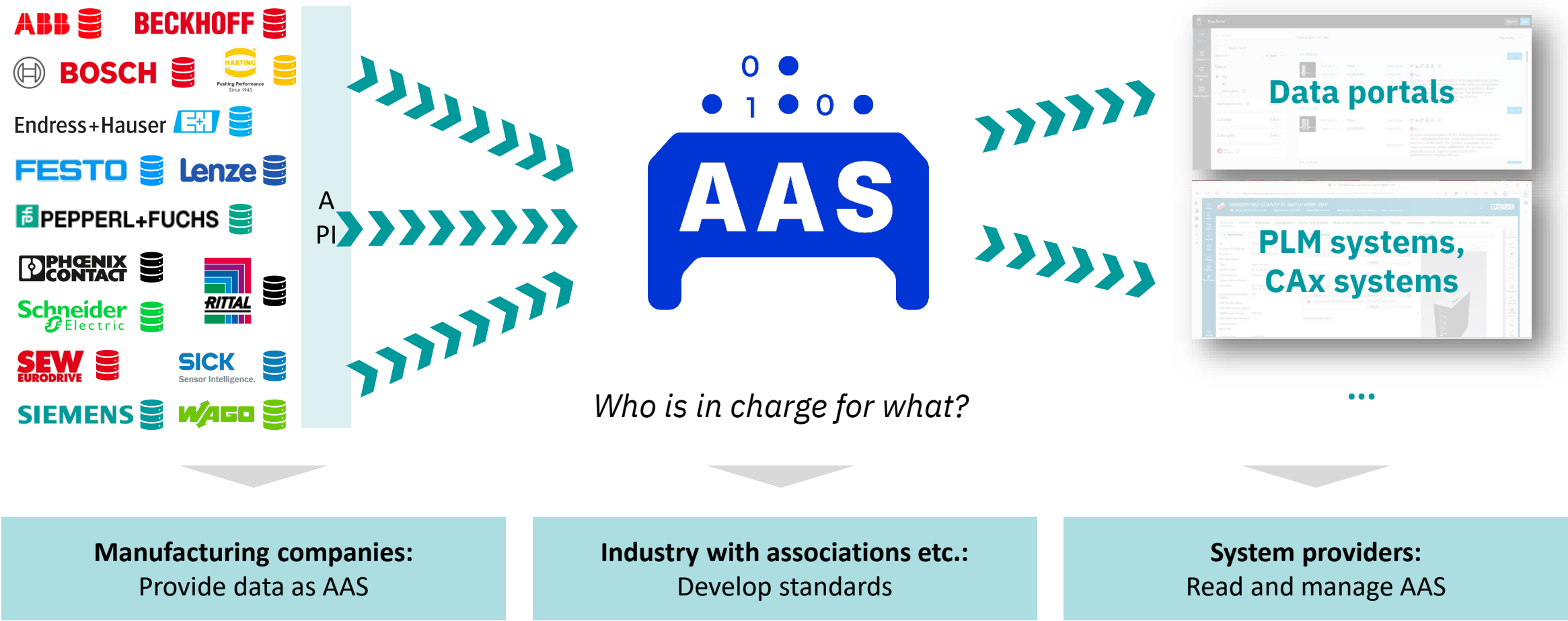
Data Logistics & AAS

The Strategic Road to Cost Efficiency and Interoperability

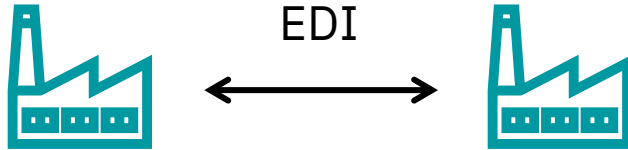
Frank Possel-Dölken | DISC Show & Tell
Stavanger, 1st December 2025



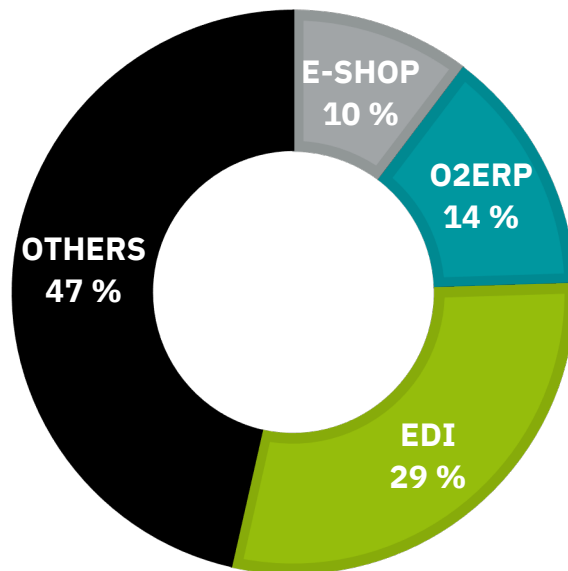
Overall target state



The challenge of data exchange in B2B: EDI

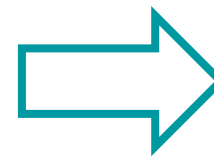


Share of sales 2024 (by order channel)



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“

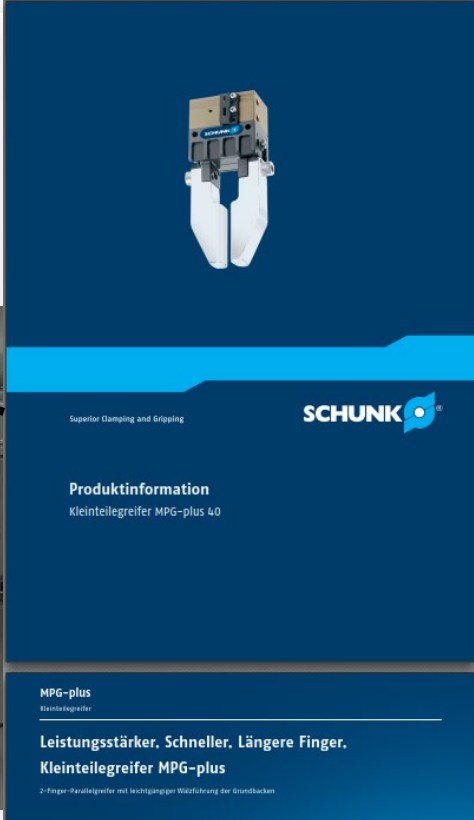


The root cause for long lead times is the necessity to start a „project“.

The challenge of data exchange in B2B: PLM → outdated info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-Beuteltgreifer mit leichtgängiger Wälzlagerung der Grundbacken

Technische Änderungen:
Änderungen im Sinne technischer Verbesserungen

Dokumentennummer: 389215

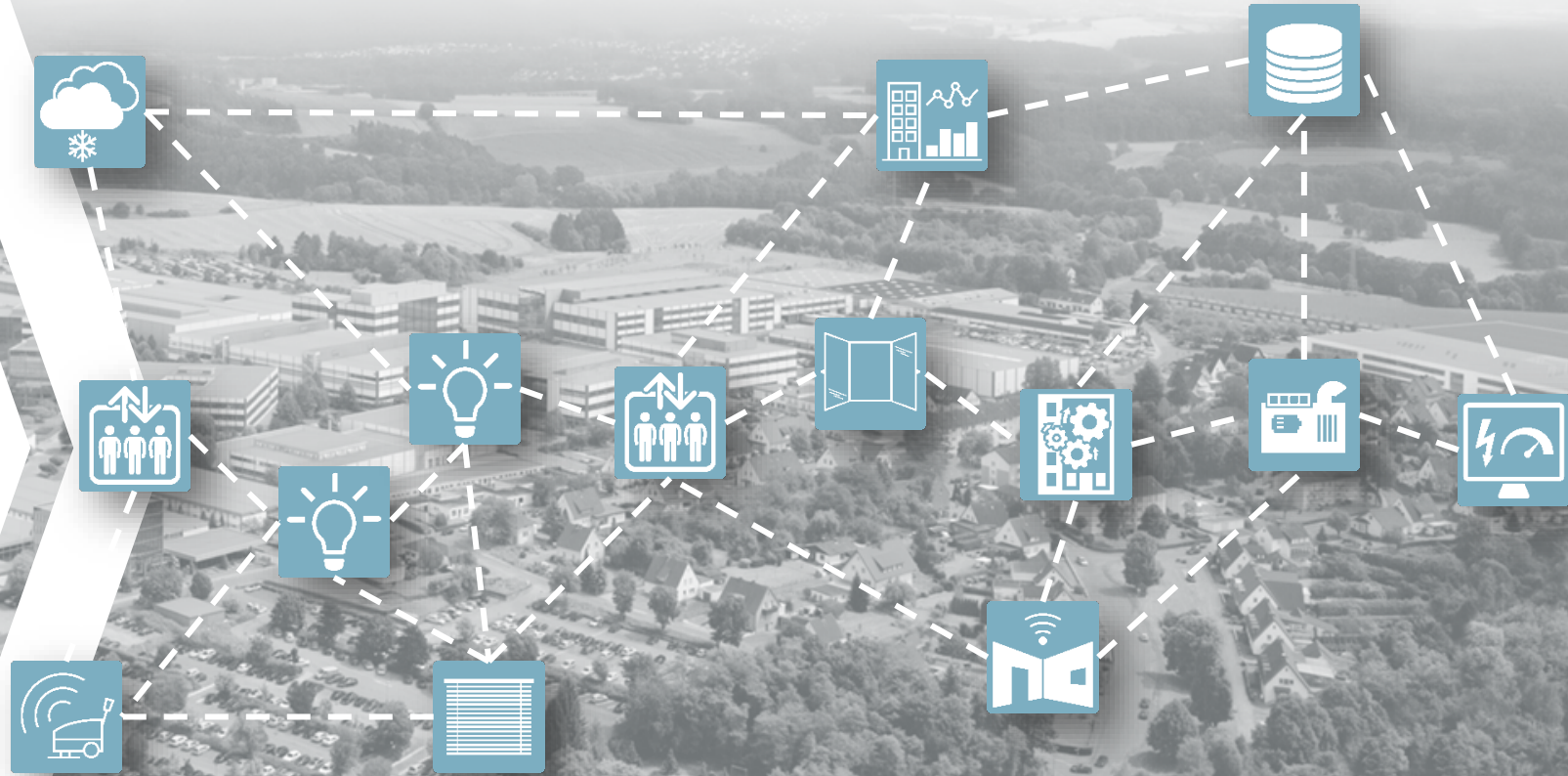
Auflage: 24.00 | 29.01.2024 | de

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

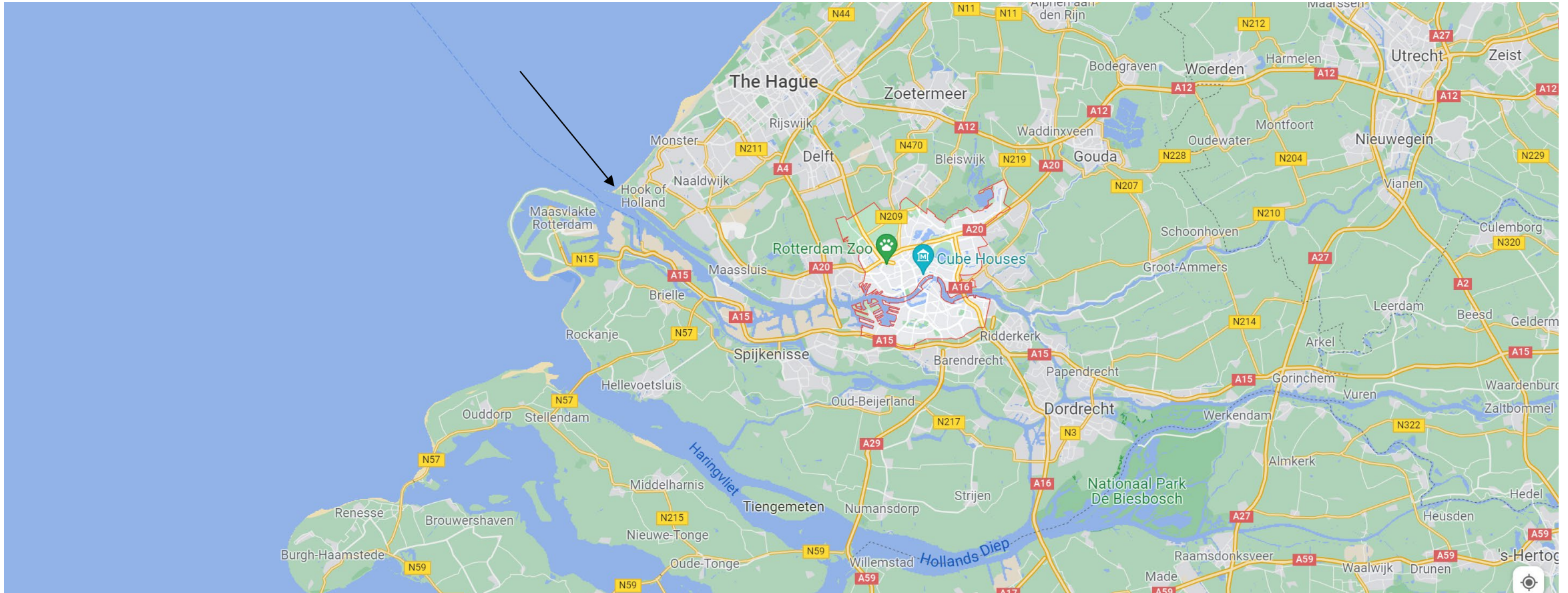
FACILITY
MANAGEMENT
AT BLOMBERG HQ
PLANT

>1,100

controllers
from different vendors



Hoek van Holland



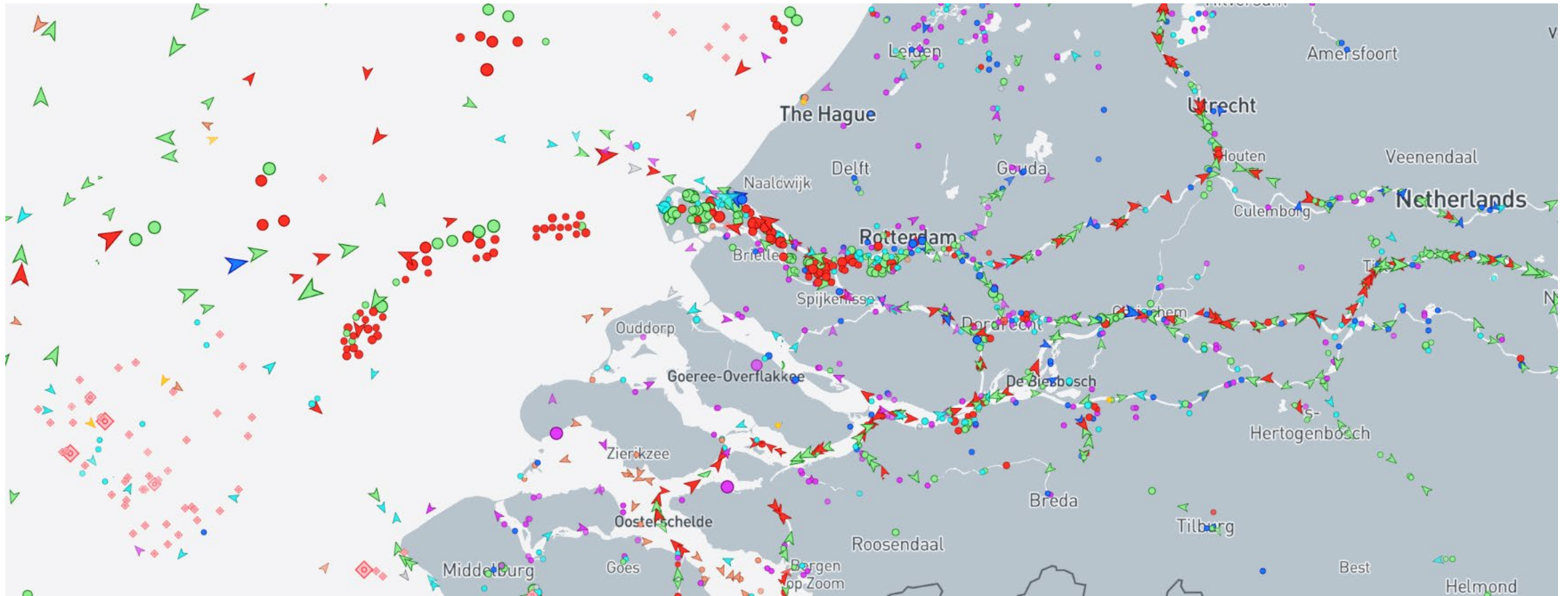
Source: Google Maps

Data Logistics

Hoek van Holland



Hoek van Holland on www.marinetraffic.com



Source: www.marinetraffic.com

Data Logistics

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>

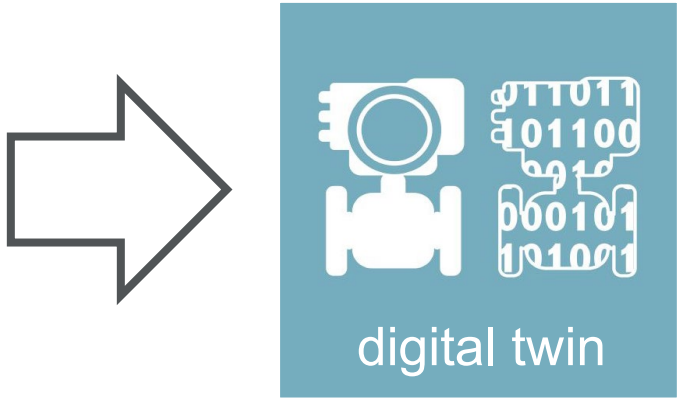
- Malcom Purcell McLean
November 14, 1913 – May 25, 2001
- After high school, he bought a used truck and started a small trucking company.
- Frustrated by long waiting times during loading and unloading.
- Implemented the idea of containers through his shipping company Sea Land.
- April 26, 1956: First 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.



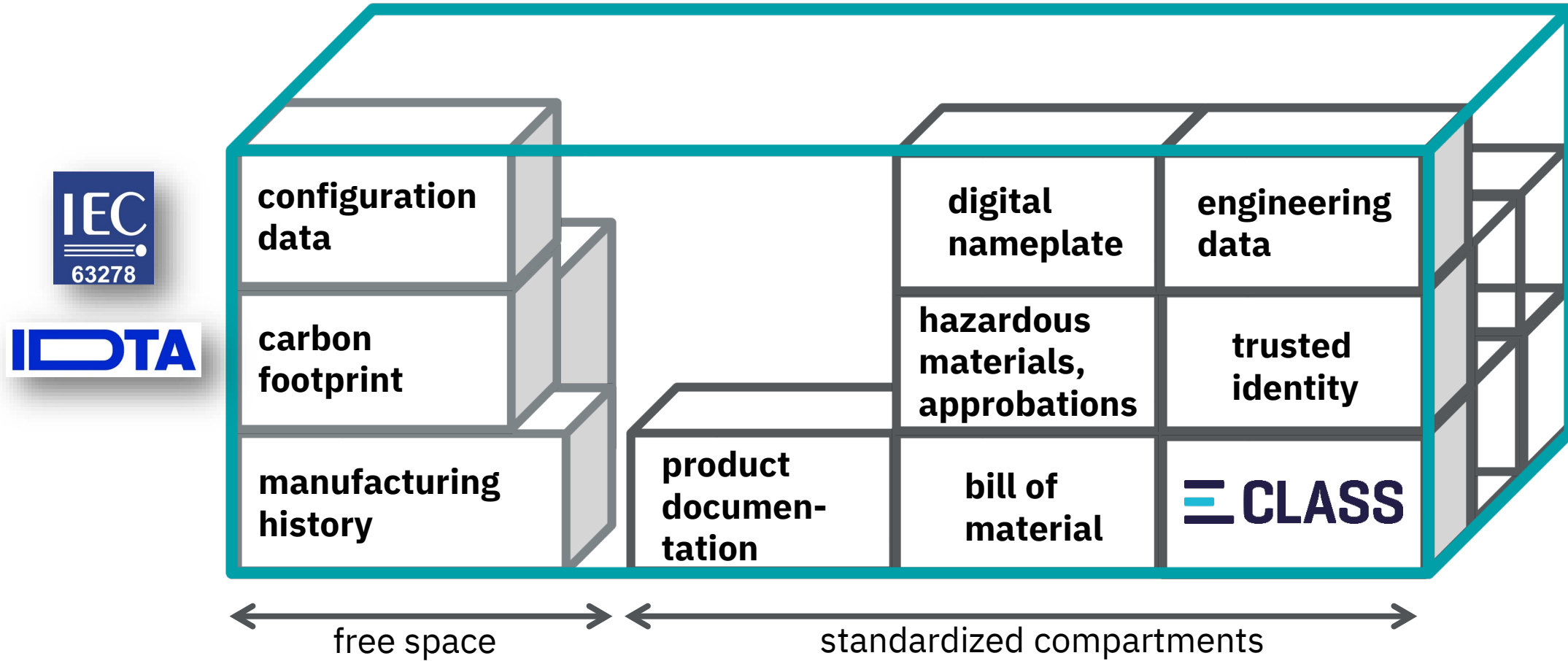
Factor of disruption: Container-based data logistics

container-based data logistics

IEC 63278 – asset administration shell



Understanding the data container

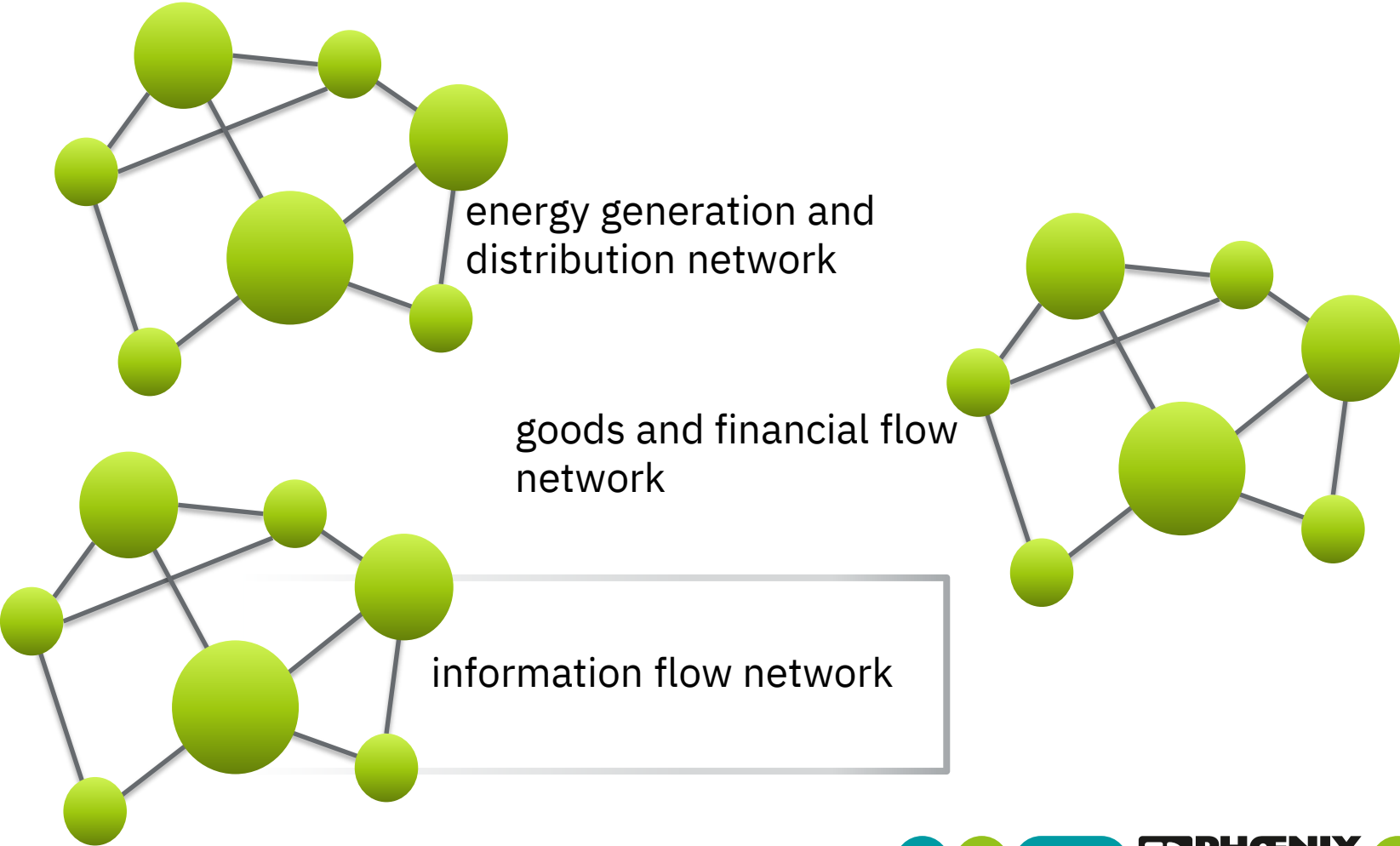




Zero-marginal cost: Foundations of growth



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

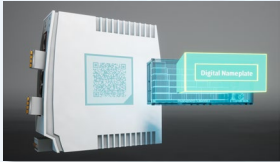
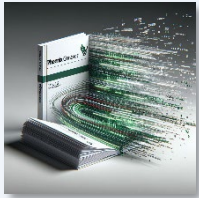
We walk the talk.

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 Chance 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



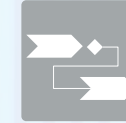
- Targets: providers of engineering IT solutions
- Use customer power to bring AAS interfaces on roadmaps for coming releases
- Partner with other „users“ to push IT solutions providers on the realization journey
- Commit to buy licenses when features are available

Partner with customers and suppliers



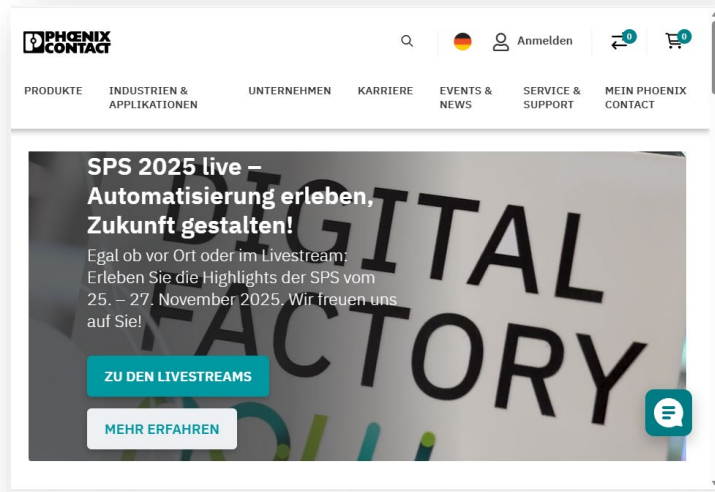
- Targets: Bring AAS into usage in daily business
- Realization of product-related data flows between us and selected third party companies
- Implement data flows to data portals based on AAS and eClass

Build internal processes and services

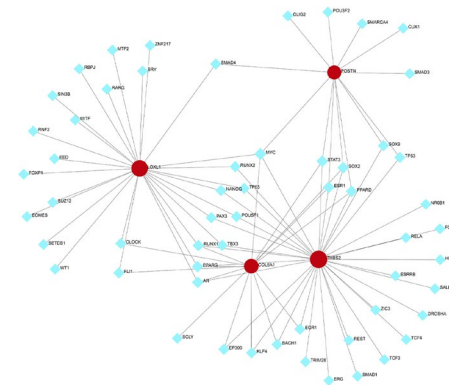


- API portal as part of our web services offering
- Create AAS product type data as part of development process
- Create AAS product instance data as part of the production process of selected products

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)



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

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

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

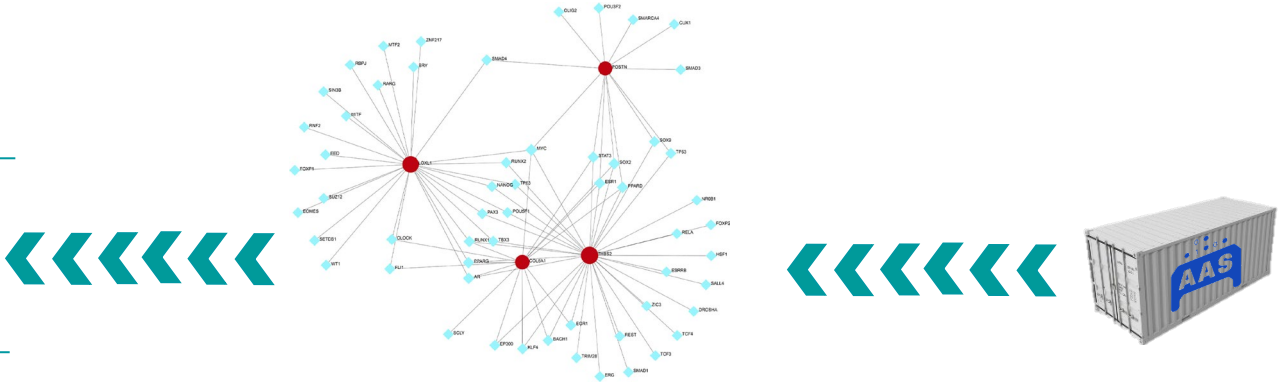
AI-driven engineering and lifecycle management

AI-supported asset management

AI-supported operations

AI-supported maintenance

...



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





Willkommen

Data Logistics & AAS

The Strategic Road to Cost Efficiency and Interoperability

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

SUMMARY OF “DATA LOGISTICS & AAS” by F Possel-Dölken at DISC SHOW & TELL 2025

1. Introduction & Context

- The session addresses the challenges and opportunities of making industrial data flow seamlessly across companies, tools, and disciplines.
- Key enablers discussed: Asset Administration Shell (AAS) and EqHub, which together provide a backbone for structured, interoperable, and trustworthy data exchange.
- The importance of organizations like PCA in defining shared language, symbol libraries, and taxonomies is highlighted.

SUMMARY OF “DATA LOGISTICS & AAS” by F Possel-Dölken at DISC SHOW & TELL 2025

2. The Challenge of Data Exchange

- Despite decades of digitalization, most B2B data exchange (e.g., EDI) is still manual or semi-automated, requiring project teams and causing long lead times.
- Internal data management is also problematic: documentation for assets (like robot grippers) is often outdated, and asset management for thousands of controllers is complex and fragmented.
- Cybersecurity adds further requirements for precise asset management.

SUMMARY OF “DATA LOGISTICS & AAS” by F Possel-Dölken at DISC SHOW & TELL 2025

3. The Logistics Analogy

- The presentation uses the example of global logistics—specifically, the standardized shipping container—to illustrate how a universal standard can dramatically reduce costs and enable global scalability.
- The lack of a similar universal standard for digital data exchange is a major barrier to efficient, scalable digitalization.

SUMMARY OF “DATA LOGISTICS & AAS” by F Possel-Dölken at DISC SHOW & TELL 2025

4. The Role of Standards and AAS

- The Asset Administration Shell (AAS), standardized under IEC 63278, is proposed as the “container” for digital data logistics.
- AAS enables structured, modular, and extensible data exchange, supporting everything from product documentation to configuration data and carbon footprint.
- The goal is to achieve “zero marginal cost” for setting up new data flows, just as containers did for physical logistics.

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5. Implementation & Achievements

- Phoenix Contact has provided Type-AAS for 85,000 catalogue products and over 280,000 Instance-AAS from around 300 products.
- They have developed APIs, new submodels, and security concepts, and initiated joint working groups for event/notification standards.
- Collaboration with system providers (e.g., EPLAN, Siemens) and customers is key to pushing AAS adoption into daily business.

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6. AI and the Future of Data Logistics

- AI-driven assistants and applications are being launched, but their effectiveness depends on high-quality, semantically rich data—something AAS can provide.
- The next step is to populate graph databases with product knowledge and semantic relationships, enabling advanced AI-driven engineering, asset management, and operations.

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7. Call to Action: “Walk the Talk”

- The industry must move from endless discussion and proof-of-concept projects to real implementation in daily operations.
- Every company should push IT partners to support AAS and invest in building the necessary infrastructure.
- The vision is to create super-efficient, global data logistics with zero marginal cost, unlocking value for all stakeholders.

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Key Takeaways

- Just as the shipping container revolutionized global trade, a universal digital “container” like the Asset Administration Shell is essential for scalable, cost-efficient, and AI-ready industrial data logistics.
- The time for implementation is now - “walk the talk” and make standardized, interoperable data exchange a reality in daily business.



Thank you for joining us!

