



The Concept DPP4.0 enables Digital Economy of Industry and supports implementation of ESPR-regulation on Sustainability

AIOTI Signature Event, Brussels, 27th September 2022

Prof. Dr. Dieter Wegener | Siemens AG & ZVEI-Speaker „Industrie 4.0“

1

Challenge I: Enable Digital Economy

2

Challenge II: Implement ESPR and DPP

3

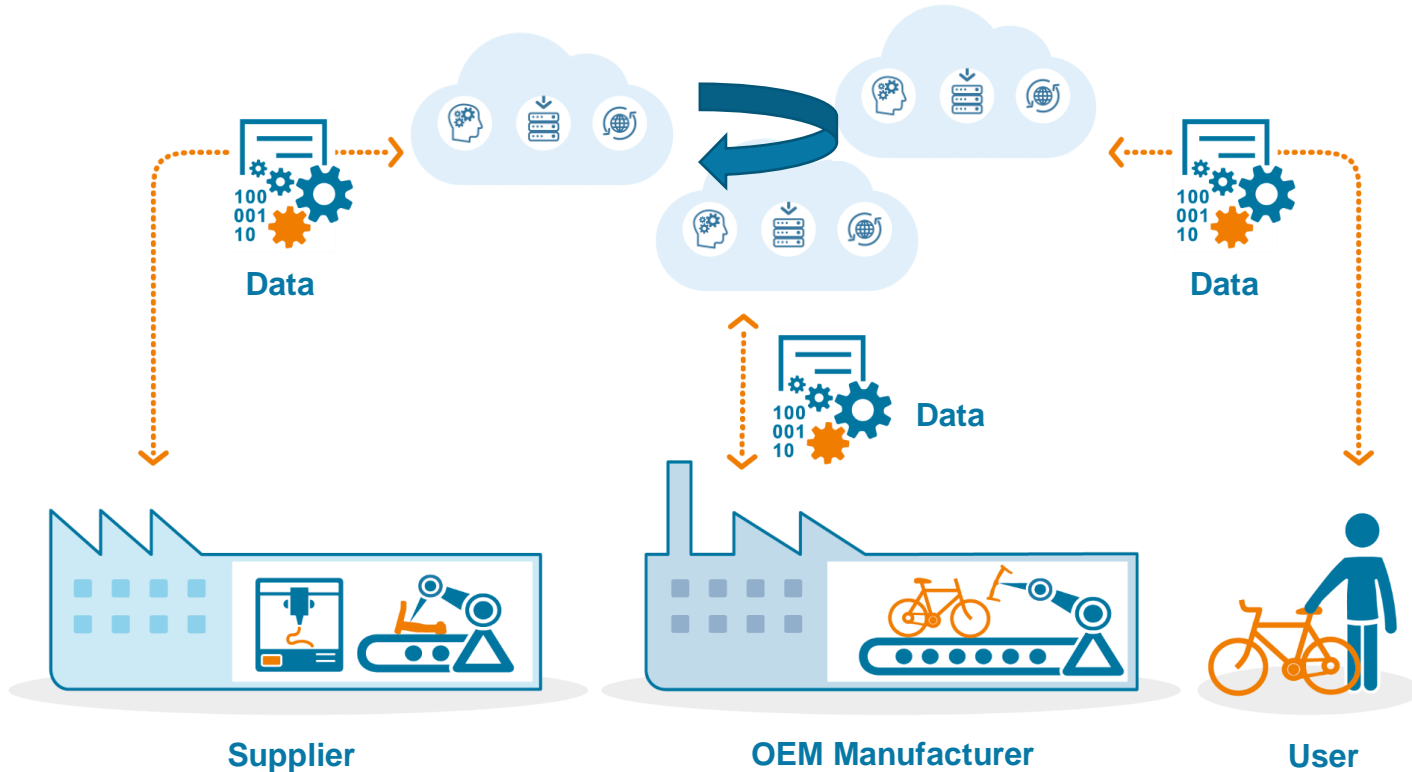
DPP4.0 is the answer on Challenges I + II

4

Live Demo on DPP4.0

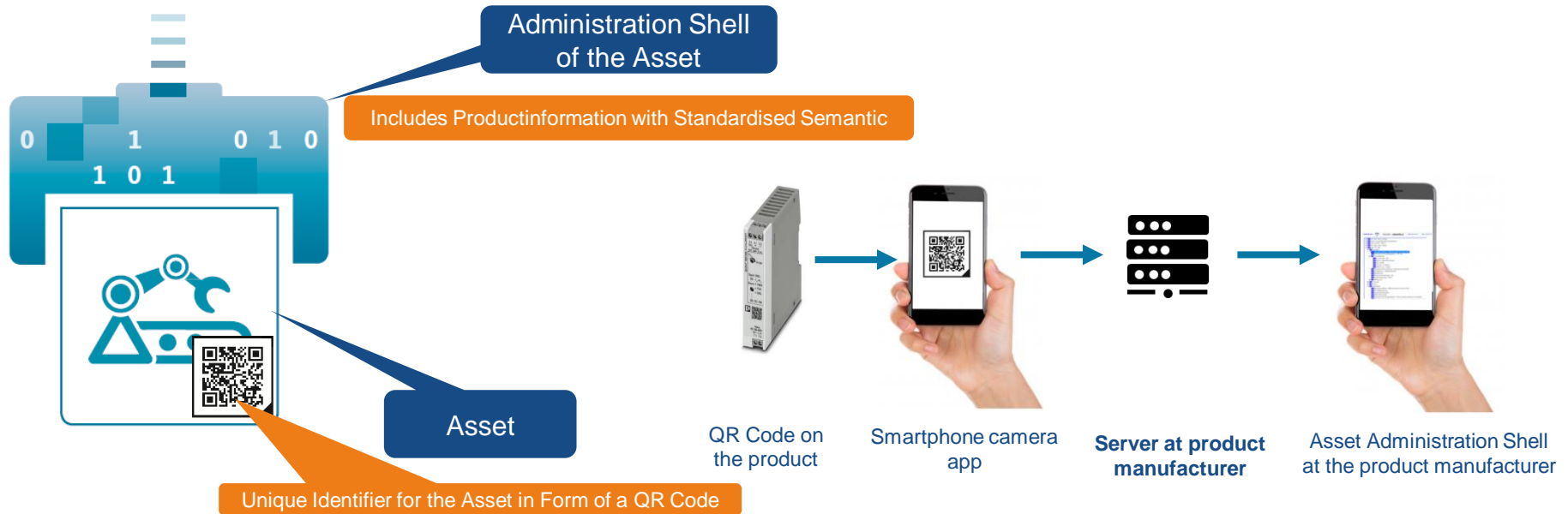
Digital Economy based on “Digital Twin”

Each Real Product will get a Digital Twin in the Virtual World



“Digital Twin“ based on the Asset Administration Shell (AAS)

Each Real Product will get a Digital Twin in the Virtual World



Source:
Plattform I4.0

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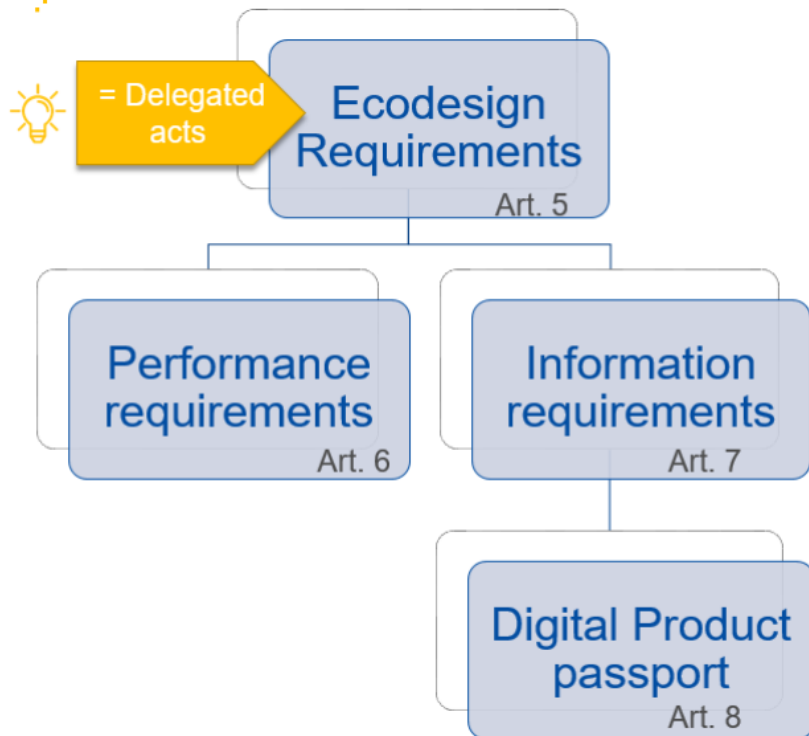
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ESPR

Key Ecodesign product aspects



- **durability, reliability; reusability; upgradability;**
- **reparability;** possibility of **maintenance** and **refurbishment**;
- presence of **substances of concern**;
- **energy use** or **energy efficiency**;
- **resource use** or **resource efficiency**;
- **recycled content**;
- possibility of **remanufacturing** and **recycling**;
- possibility of **recovery** of materials;
- **environmental impacts**, including carbon and environmental footprint;
- expected generation of **waste** materials.

The EU Digital Product Passport (DPP)



WHAT

*A structured collection of product related data with predefined scope and agreed data ownership and access rights conveyed through an **unique identifier***

HOW

***Decentralised** system with a central registry*

SCOPE

Information related to sustainability, circularity, value retention for re-use/remanufacturing/recycling

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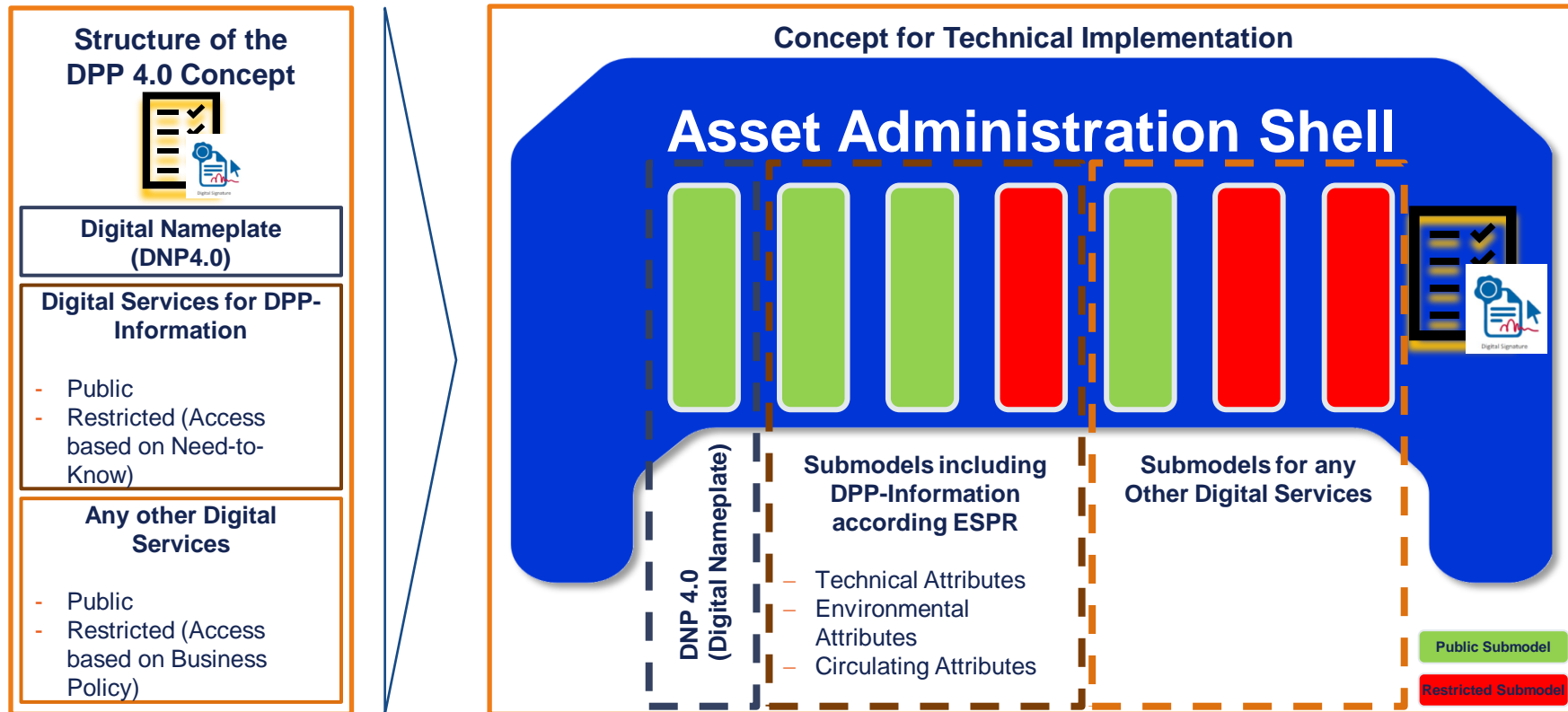
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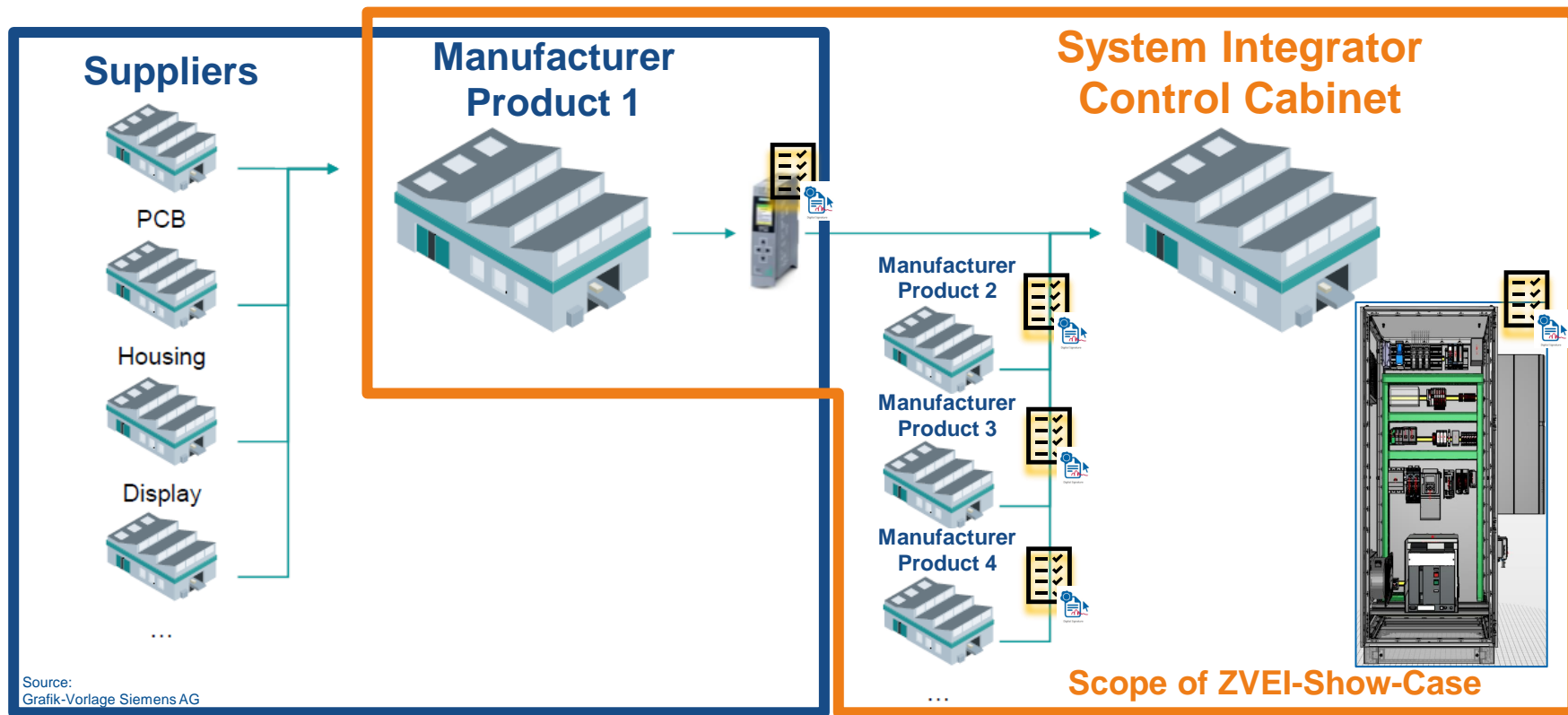
The Digital Product Passport 4.0 (DPP4.0)

Structure of the DPP4.0-Concept and its Technical Implementation



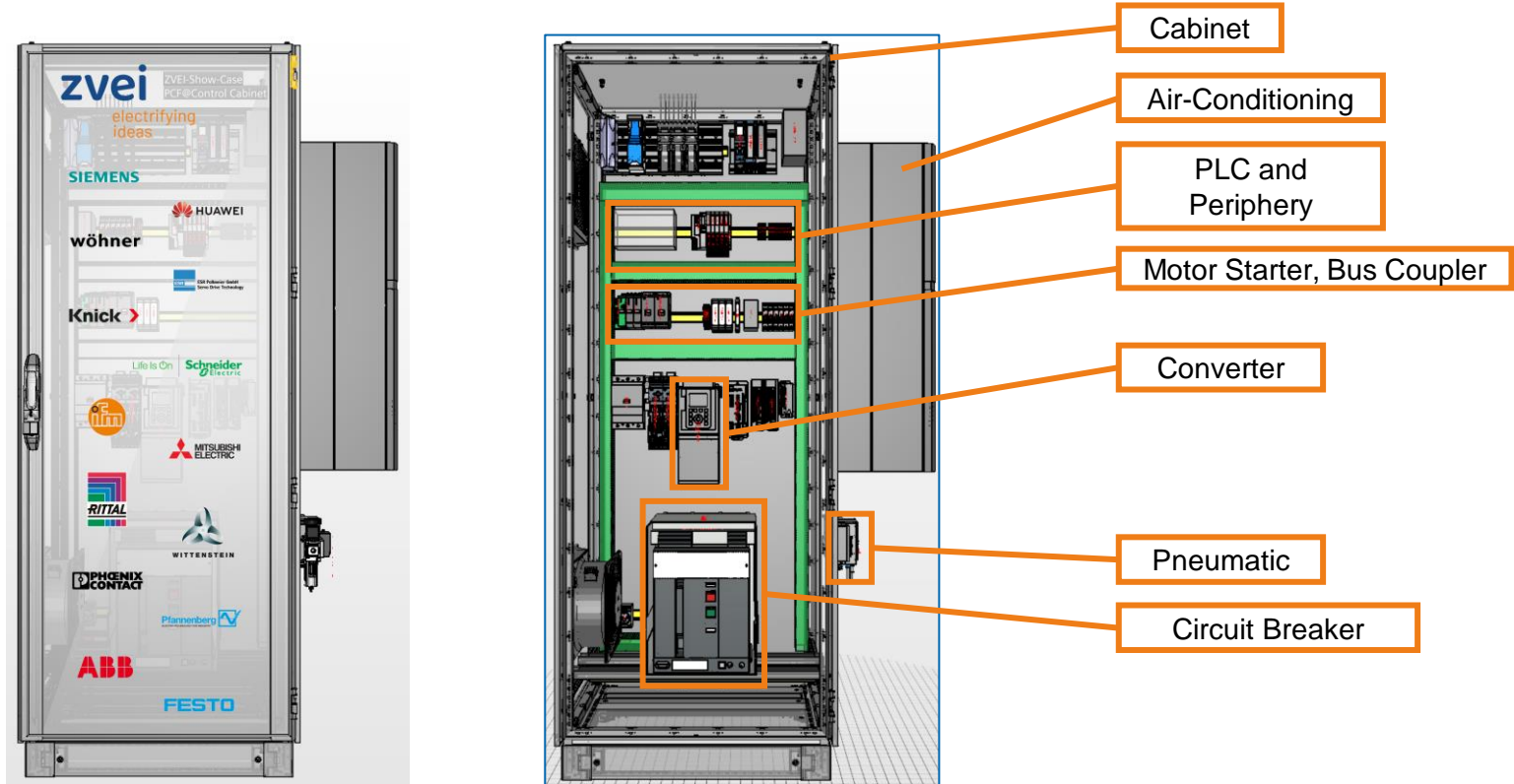
ZVEI-Show-Case “PCF @Control Cabinet” based on DPP4.0

Scope of the Show-Case: From Manufacturer to System Integrator



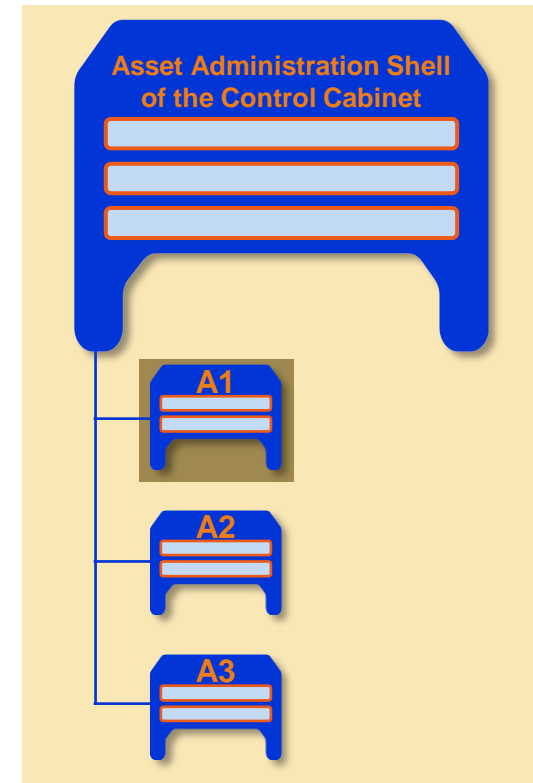
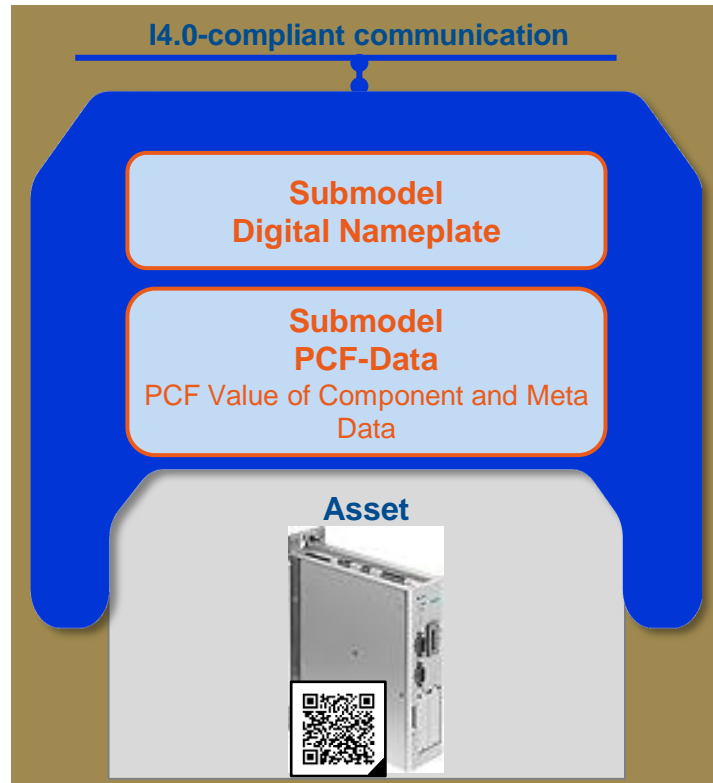
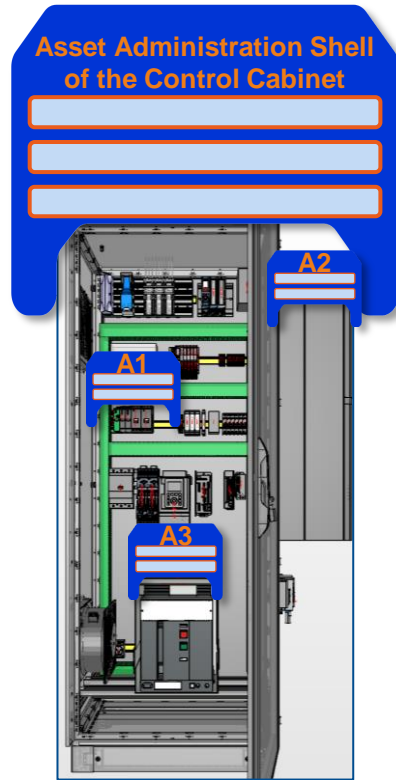
ZVEI-Show-Case “PCF@Control Cabinet” based on DPP4.0

Demonstrator: Control Cabinet



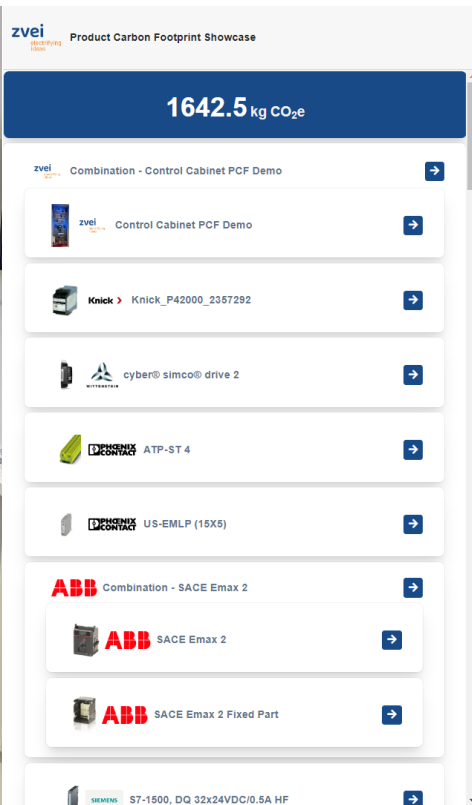
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Demonstrator: Control Cabinet

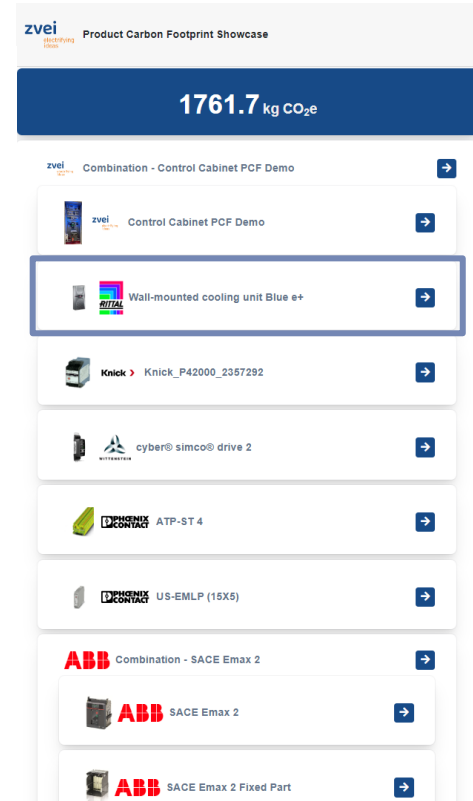


ZVEI-Show-Case “PCF@Control Cabinet” based on DPP4.0

Demonstration Hannover Fair 2022



QR-Code scan
for virtual
assembly



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Implementation @ SIEMENS

Scan 2D Code with Camera App



One-to-one Product Identification



Online Representation of the Product in Browser



Technical Data

Certificates

Manuals

Mall

... freely expandable

Live Demo

Product



ID-Link

 i.siemens.com >

Package



Online
Digital Nameplate



Online Declaration
of Conformity



PDF

PDF of original
Dec. of Conf.



Q & A

zvei
electrifying
ideas

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(1) since 2014	Chair of ZVEI Management Circle "Industrie 4.0", Frankfurt (ZVEI = Electro and Digital Industry Association)
(2) since 2015	Vice-President DKE, Frankfurt (DKE = German Commission for Electrical, Electronic & Information Technologies of DIN and VDE)
(3) since 2016	Chair of Advisory Board SCI4.0 (Co-Founder), Frankfurt (SCI4.0 = "Standardization Council Industrie 4.0")
(4) since 2019	Vice-Chair of DMEC (Co-Founder), Digital Europe, Brussels (DMEC = Digital Manufacturing Executive Council)
(5) since 2019	Chair of DIN Presidential Committee FOCUS.ICT for "German ICT- Standardization", DIN, Berlin
(6) since 2019	Member of DIN/DKE-Coordination Group "German AI-Standardization Roadmap", DIN, Berlin
(7) since 2021	Vice-Chair of ZVEI Management Circle "Environment-, Energy- & Climate Politics", Frankfurt

