

Erleichterung der ESG-Berichterstattung mit digitalen Zwillingen



InterSystems DACH Symposium 2023

Creating
success.
Together.

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This is us.

Responsible. Reliable. Competent.

 **InterSystems®**
Creative data technology



>270
Personen

4
Standorte

>35
Jahre
Erfahrung



Our Mission & Vision Statement.



Our Vision:

We are a full-range software partner and drive the digital future of our customers.

Our Mission:

We turn visions for a digital world into reality.



Our Services.

Comprehensive. Clear. Customized.



Full range software partner



Vision



concept &
design



development



production &
launch



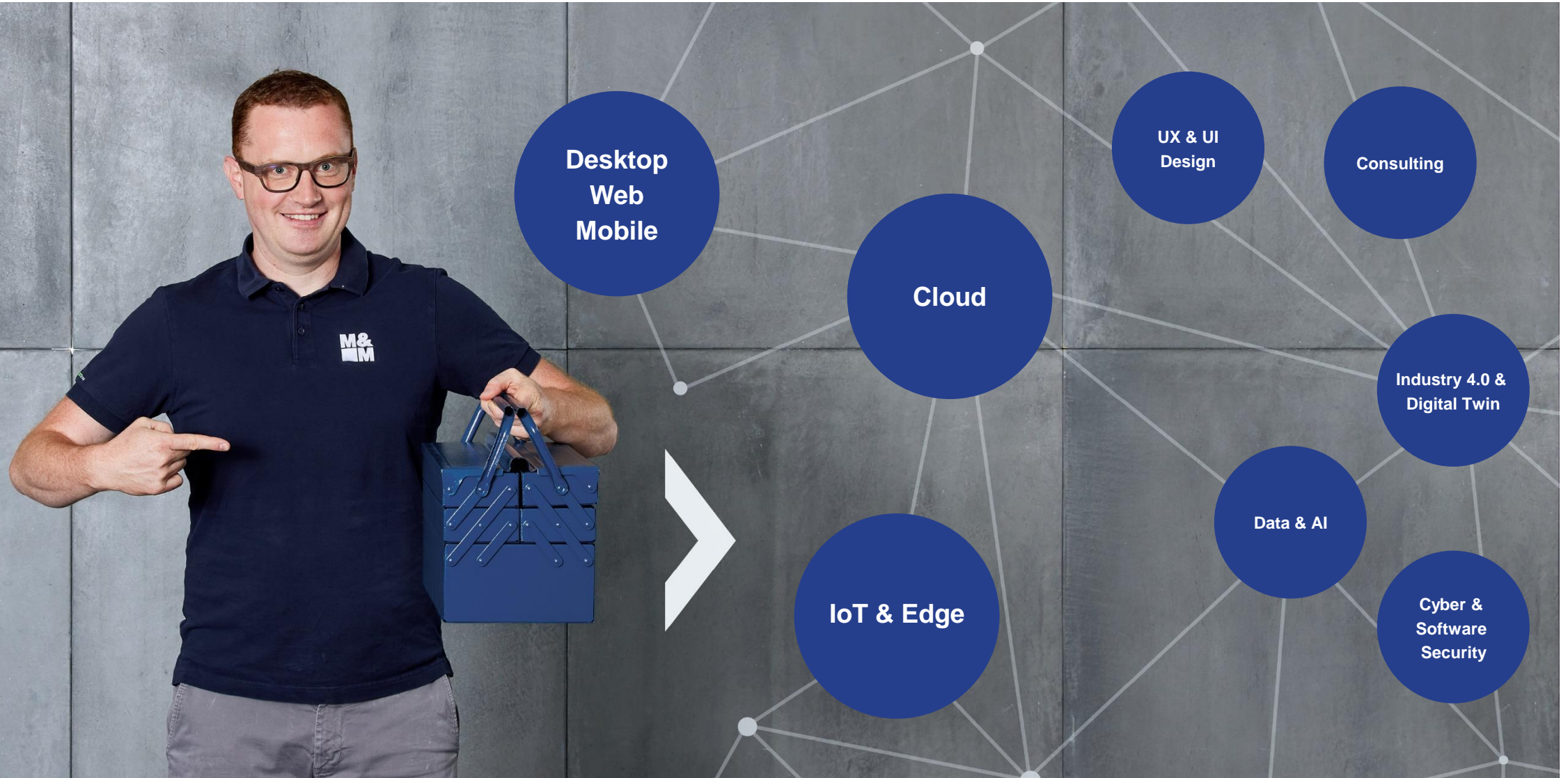
services &
support



retirement

Our Competencies.

Innovative. Safe. Diverse.



Our References.

Powerful. Innovative. Global.



Developing
the future.
Together.

avacon

BIZERBA

 **BOMAG**
FAYAT GROUP



enercity
positive energie



Lenze

LIEBHERR



Schneider
Electric

SEW
EURODRIVE

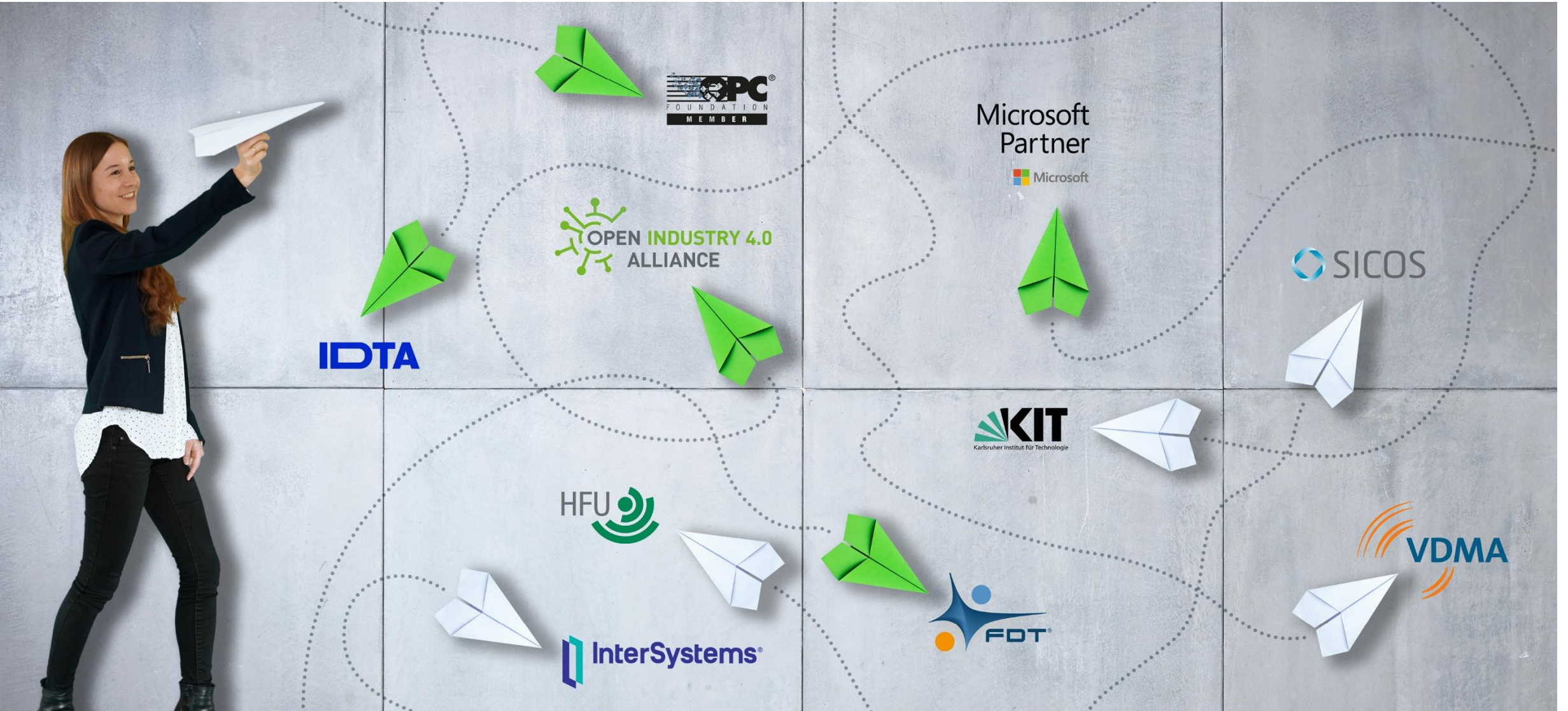
SWO
Netz GmbH



WAGO

Our Network.

Sustainable. Inspiring. Open.



/imagine

„Frankfurt city skyline today.“



2023

2100

/imagine

„Frankfurt am Main city skyline in the future year 2100.

All tipping points in the climate system are passed. Impact of the Climate change are measurable.”



2023

2100

/imagine

„Frankfurt am Main city skyline in the future year 2100. All Sustainable Development Goals SDG of the UN are reached. The impact of the **European Green Deal** is measurable.”



Increase Environmental Sustainability



Promote Circularity



Support Legal Compliance



Digital Product Passport



Reporting

2023

2100

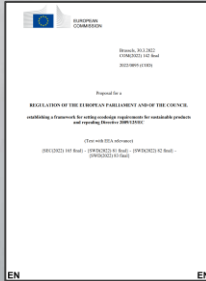
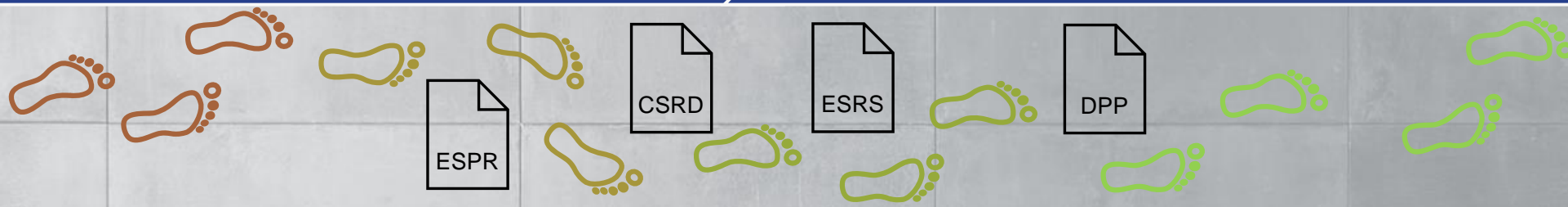
European Green Deal | Upcoming Legislation



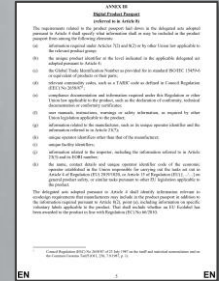
Corporate Sustainability Reporting Directive (CSRD)
2025



European Sustainability Reporting Standard (ESRS)*



Ecodesign requirements for Sustainable Products Regulation (ESPR)
2023



Digital Product Passport (DPP)
2026

Environmental Data Collection

Today:

Carbon Footprint and other environmental data mostly determined with database values



Eco-Design Requirements for Sustainable Product Regulation (ESPR) | Roadmap

The DPP business case

- Track **raw material extraction/production** supporting due diligence efforts

- Track the life story of a product, enabling new business models related to its **remanufacturing, reparability, re-use/re-sale/second-life, recyclability, new business models**



- Support **market surveillance and customs authorities** with necessary checks

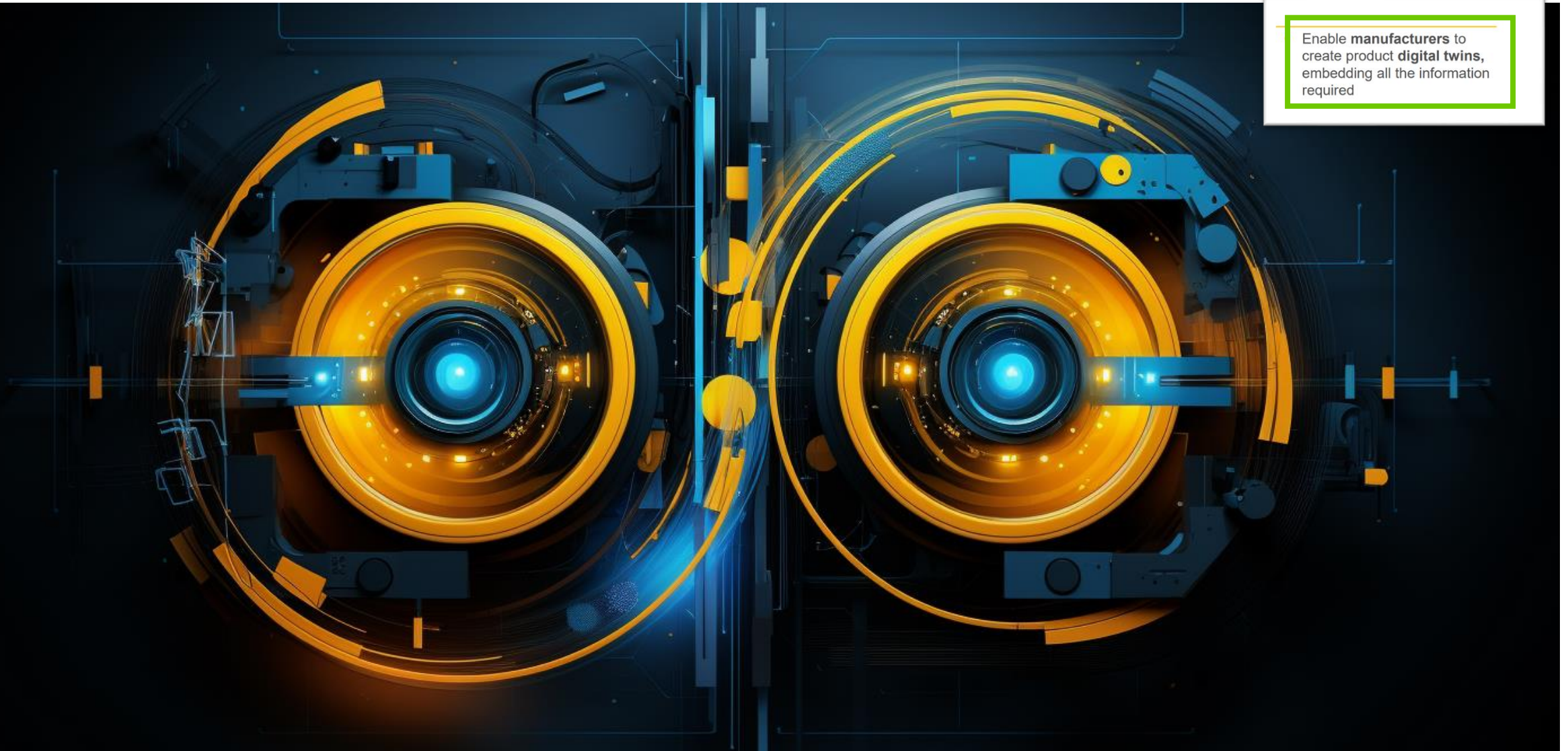
Enable **manufacturers** to create product **digital twins**, embedding all the information required

- Provide **public authorities and policy makers** with reliable information, enabling links between **incentives** and **sustainability performance**
- Allows **citizens** to have access to **relevant and verified information** on products they own or are considering to buy/rent (e.g. using apps able to read the identifier)

Eco-Design Requirements for Sustainable Product Regulation (ESPR) | Roadmap



Enable **manufacturers** to create product **digital twins**, embedding all the information required



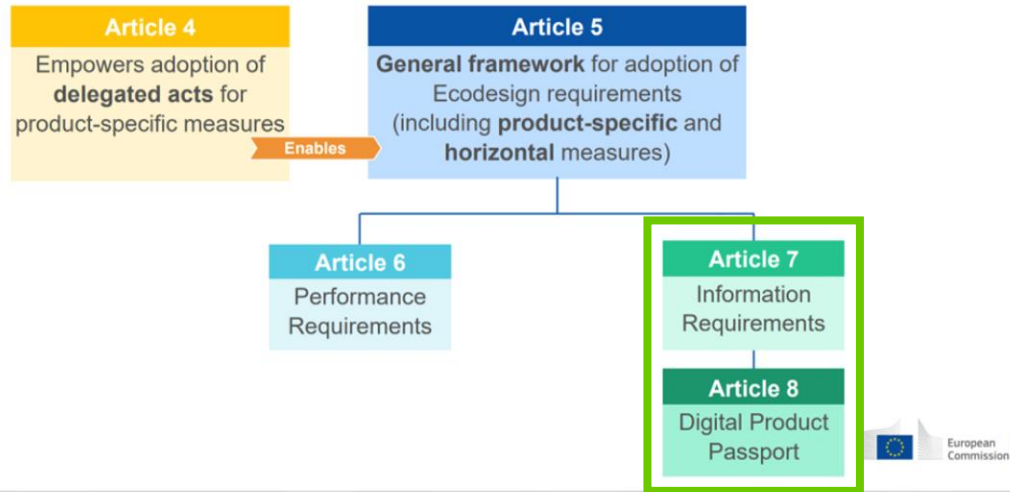
Eco-Design Requirements for Sustainable Product Regulation (ESPR) | Roadmap



Enable **manufacturers** to create product **digital twins**, embedding all the information required

Eco-Design Requirements for Sustainable Product Regulation (ESPR)

Proposed ESPR



The DPP business case



Article 9 .1(d)

„All information included in the product passport shall be based on open, standards, developed with an inter-operable format and shall be machinereadable, structured, and searchable.“

Source: European Commission

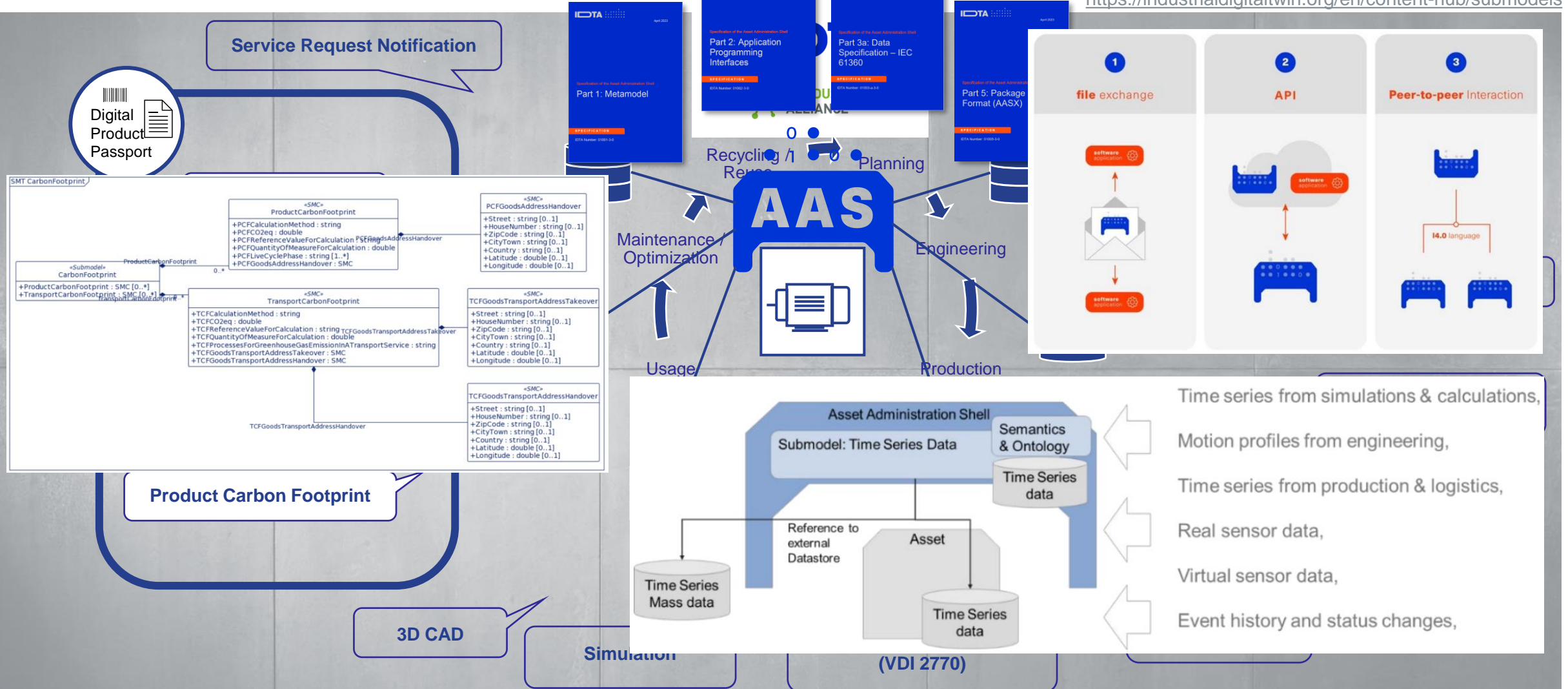


IDTA – working together to promote the Digital Twin
... we make the technology accessible to every company and set industry standards

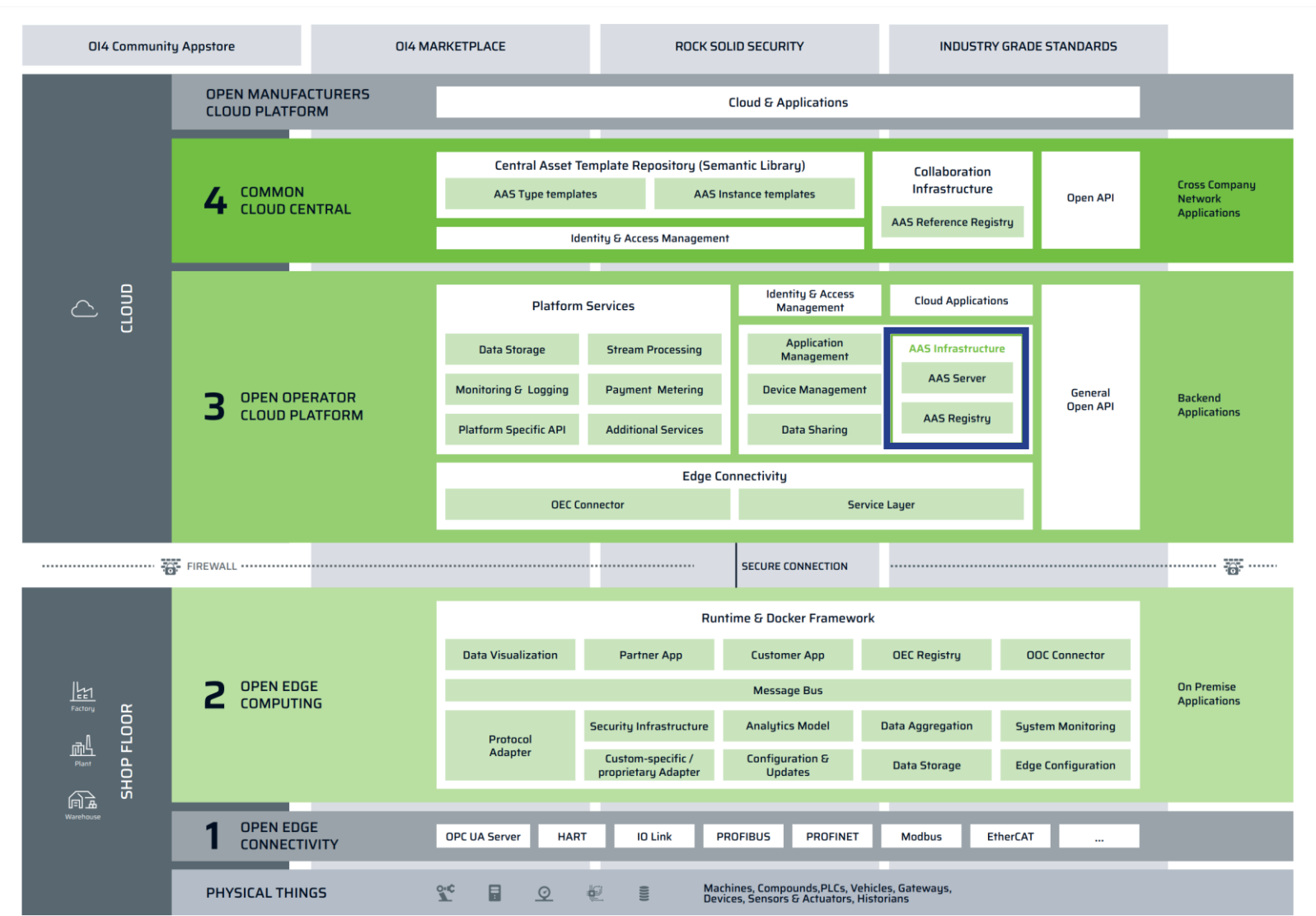
Digital Twin and Asset Administration Shell

Specification of the Asset Administration Shell: The IDTA standard

<https://industrialdigitaltwin.org/en/content-hub/submodels>



Reference Architecture OI 4.0





...

SCADA MES

PLM MOM

PPS MDE

ERP ...

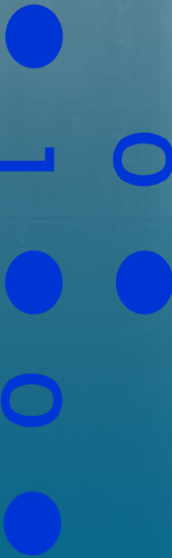
OPC UA MQTT

REST SQL

SOAP TCP

FTP ...

Transform to ->



0 1 0

AAS



Implement ->

0 1 0

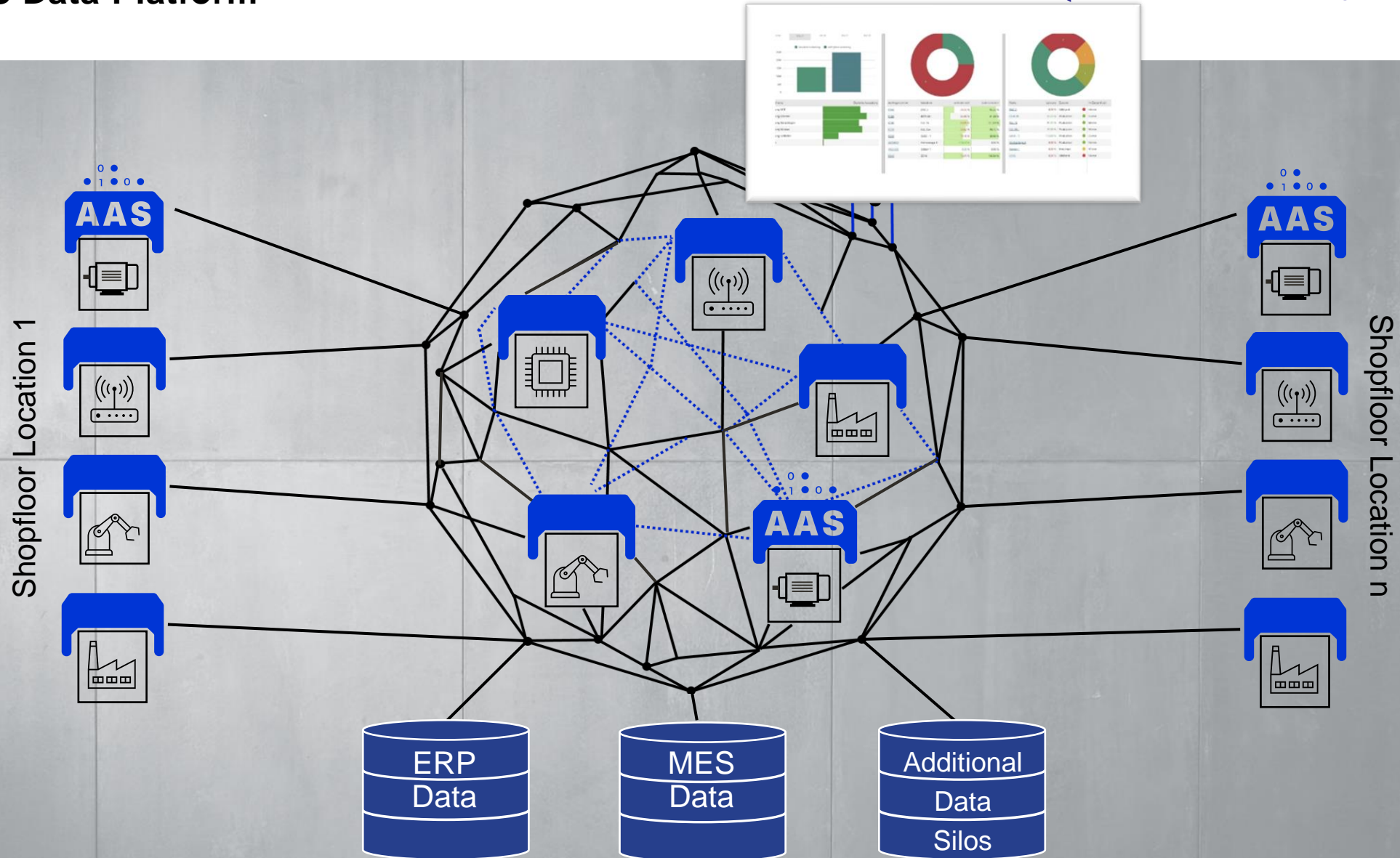
AAS

DPP, ESG
Catena-X
EU-Data-Act
VDI 2770
Analysis, BI
Circularity



We connect and integrate

With IRIS Data Platform



Environmental Data with Digital Twins

Future: Carbon footprint and other environmental data must be traceable along the entire supply chain based on real production data.



Our Offering

to structure and streamline your (sustainability) data



■ Typical Usecases / Submodels

- Digital Nameplate
- Digital Product Passport
- Product Carbon Footprint
- Handover Documentation
- Technical Data
- Condition Monitoring
- Predictive Maintenance
- ...

- AAS on InterSystem IRIS
 - Digital Twin Strategy and Use-Case Prioritization
 - Asset Administration Shell
 - AAS Modelling
 - AAS Frameworks
 - Data Management
 - Connectors and Integration Productions



