SM4RTENANCE

Trusted Data Sharing for Manufacturing Equipment Industry

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Project Coordinator

Deployment of a cross-sectorial data space infrastructure within manufacturing

01 **Share data** along the complete manufacturing asset lifecycle.

02 Implement **predictive maintenance (PdM) services**.

03 **Circular and sustainable** manufacturing asset management services.

Data reuse and sharing **challenges** >

Trust
No trust when sharing data.

Interoperability
Communication difficulties at technical and infrastructure level.

Economic barriers
Data is not valid as a company asset.

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OBJECTIVES

DATA SPACE 4.0 FEDERATION
Deploy operational data space federation for manufacturing assets.

DATA SPACE INFRASTRUCTURE SERVICES PORTAL
Implement services portal for manufacturing asset data sharing interoperability.

DATA SPACE ECOSYSTEM
Increase data sharing across manufacturing companies and service providers.

DATA CHAIN TRUST FRAMEWORK
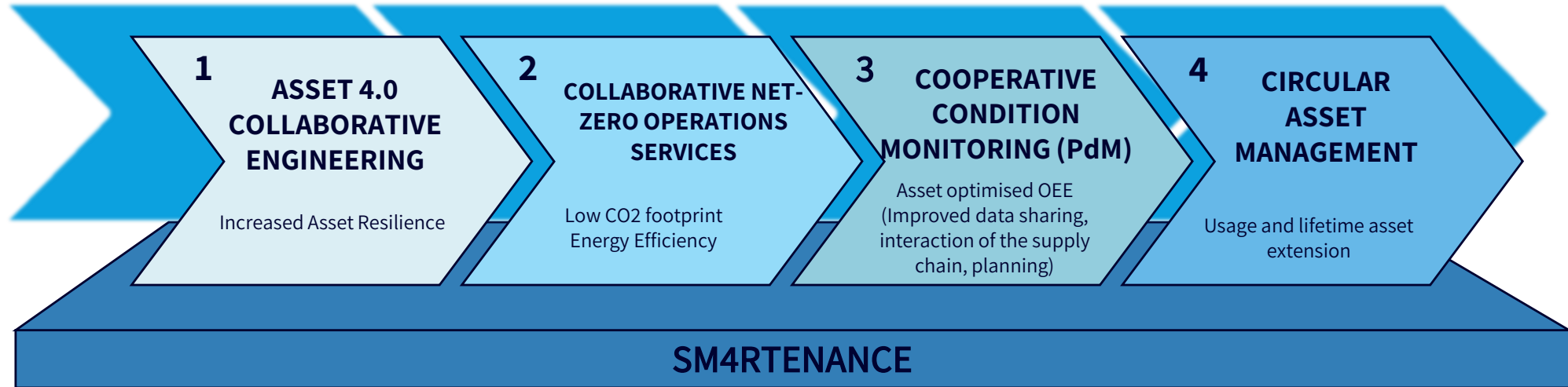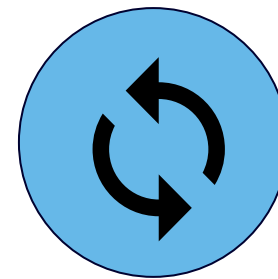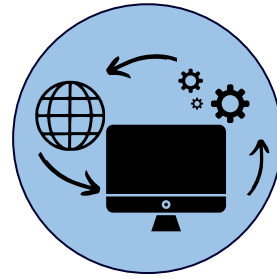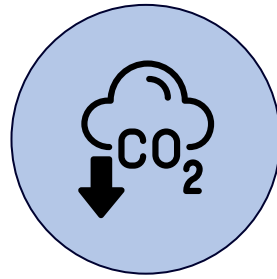Establish industrial agreements and governance for global data sharing.

COLLABORATIVE OPERATIONS
Facilitate the development of autonomous services for manufacturing assets.

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BUSINESS APPLICATIONS

1 ASSET 4.0 COLLABORATIVE ENGINEERING

Increased Asset Resilience

2 COLLABORATIVE NET-ZERO OPERATIONS SERVICES

Low CO2 footprint
Energy Efficiency

3 COOPERATIVE CONDITION MONITORING (PdM)

Asset optimised OEE (Improved data sharing, interaction of the supply chain, planning)

4 CIRCULAR ASSET MANAGEMENT

Usage and lifetime asset extension

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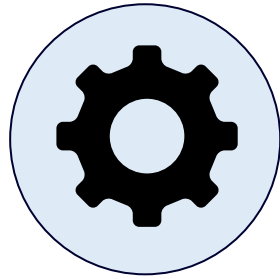
Pilot **Projects** in diverse industries

Machine tool & automation
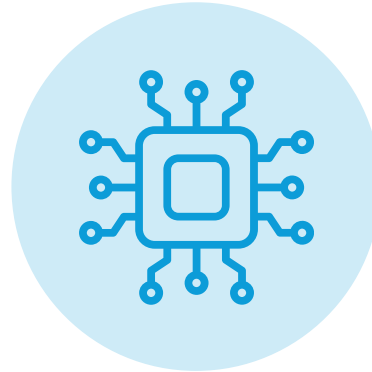
Electronics /e-battery

Automotive

Process

Textile

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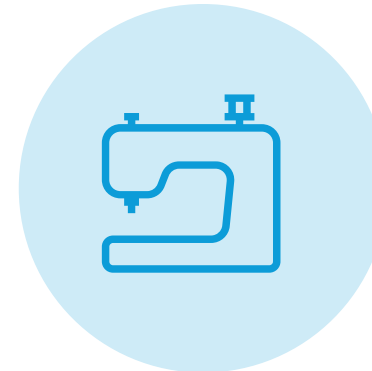
Business Applications

ASSET 4.0 COLLABORATIVE ENGINEERING.
Collaborative connected product/production ecosystem to support engineering and virtual commissioning (digital twin) aiming for resilience and autonomous production.
Zero defect, zero accident, zero errors, zero time to market.

COLLABORATIVE NET-ZERO OPERATIONS.
Collaborative services focused on improving machine tool operations, reducing scrap, energy consumption, manufacturing errors and optimal use of manufacturing asset consumables.
Zero defect manufacturing, zero raw material use, zero net energy.

COOPERATIVE CONDITION MONITORING (PdM).
Collect data, predict health status, and plan maintenance operations and consequently reduce operations costs, improve safety, and avoid environmental harm and human casualties.
Zero stocks, zero break downs, zero supply network breaks, zero reconfiguration time.

CIRCULAR ASSET MANAGEMENT.
Development of regenerative asset systems aiming to increase resilience, reduce global supply chain reliance, and foster strategic, local, and regional capabilities while meeting sustainability targets and 9R processes.
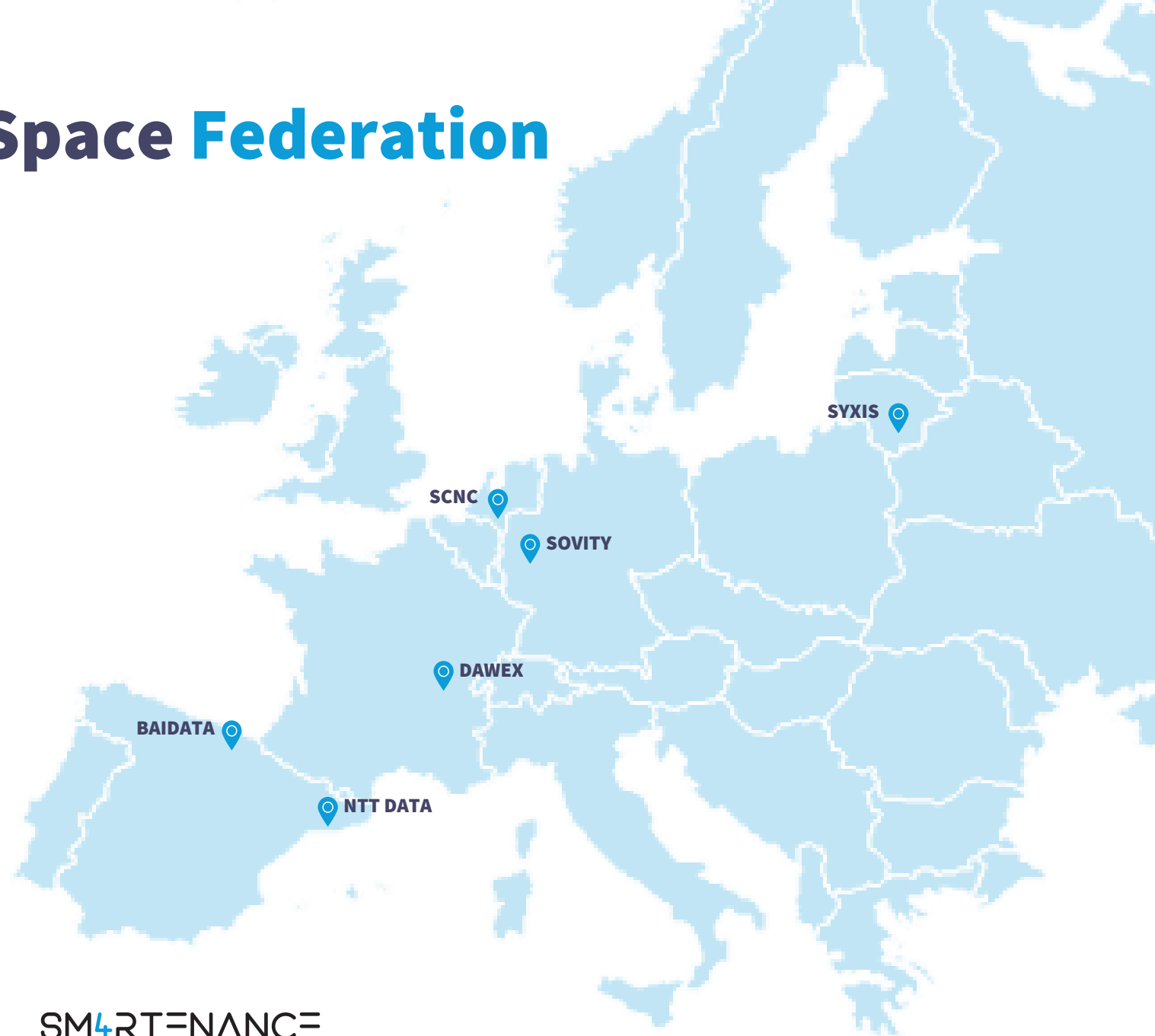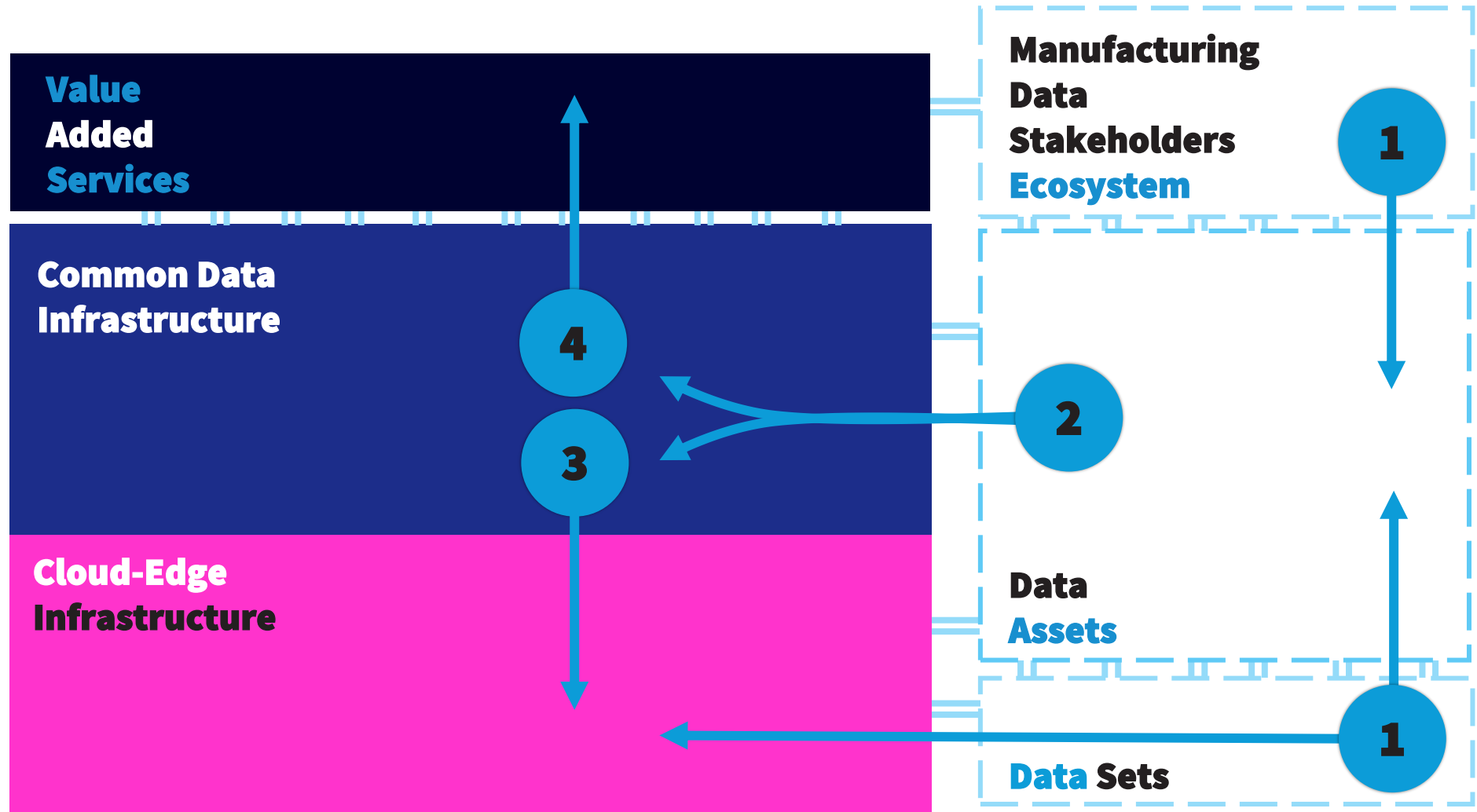**Zero waste.**

IJSSEL

SCHNEIDER

FILL

AVL

PIACENZA

COMAU   ITEMA

TRIMEK

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Data Space Federation

Federated decentralised data sharing space striving for interoperability for manufacturing equipment industry.

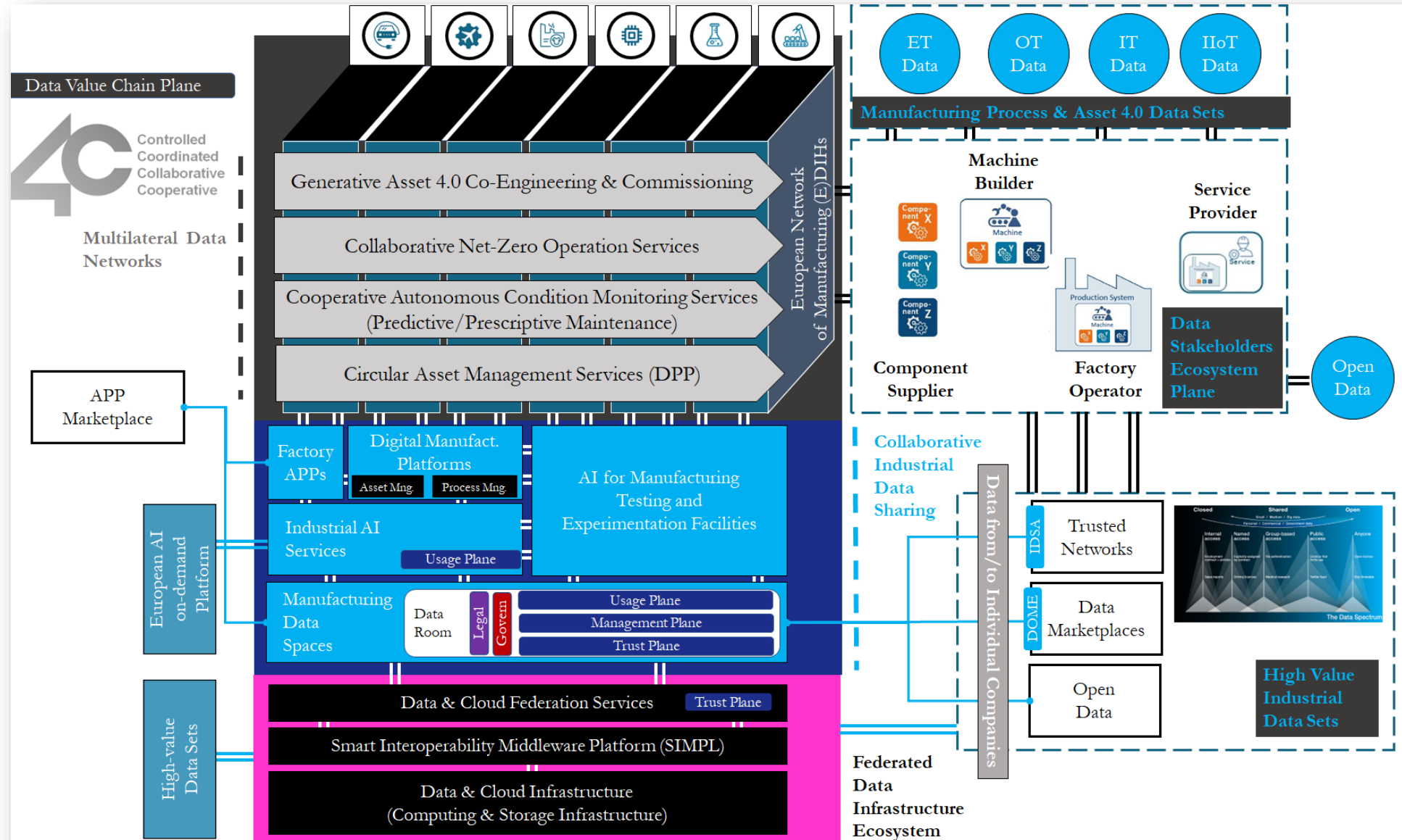BAI-DATA | INTERNATIONAL DATA SPACES ASSOCIATION
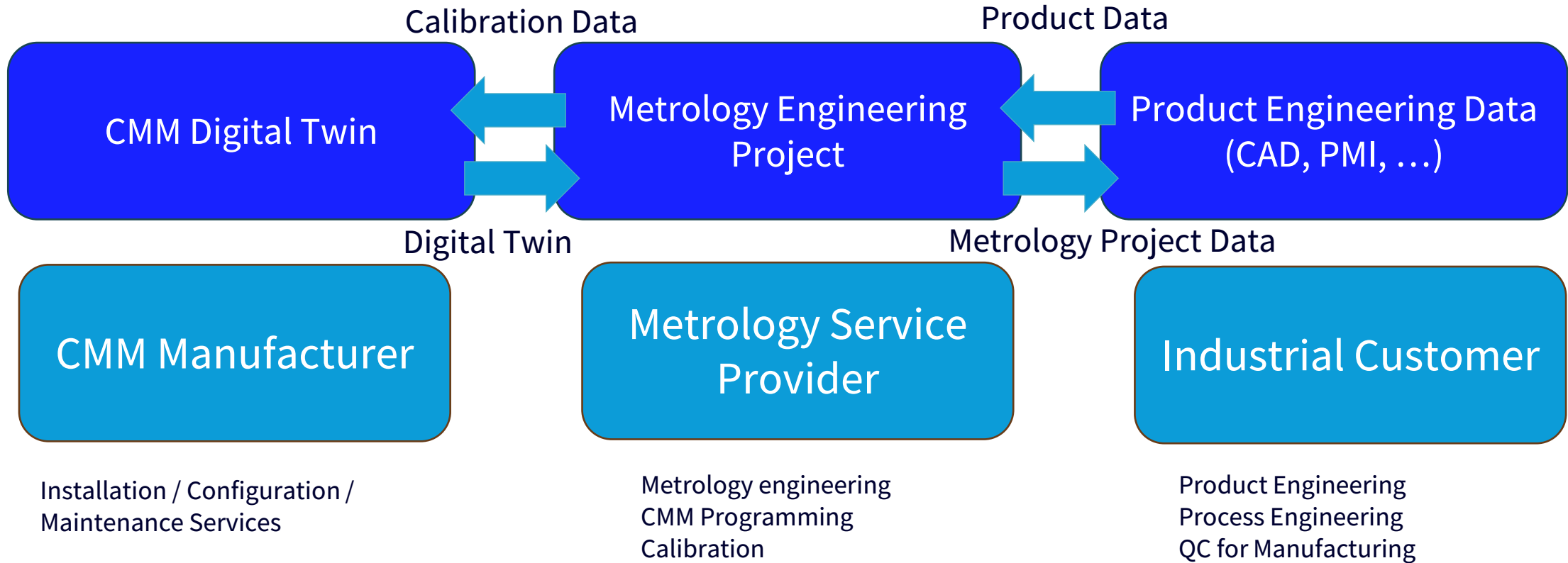
SCSN | smart connected supplier network

SYXIS innovate together

SOVITY

DAWEX data exchange technology

NTT DATA

SYXIS

SCNC

SOVITY

DAWEX

BAIDATA

NTT DATA

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EU MANUFACTURING DATA SPACE REFERENCE MODEL

Closed loop ZDM Data Space

Calibration Data

Product Data

| CMM Digital Twin | ← → | Metrology Engineering Project | ← → | Product Engineering Data (CAD, PMI, …) |

Digital Twin

Metrology Project Data

CMM Manufacturer

Metrology Service Provider

Industrial Customer

Installation / Configuration / Maintenance Services

Metrology engineering
CMM Programming
Calibration

Product Engineering
Process Engineering
QC for Manufacturing

TRIMEK
METROLOGICAL ENGINEERING

UNIMETRIK
METROLOGY AND CALIBRATION

DATAPIXEL
QUALITY CONTROL ENGINEERING

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From internal Operational Excellence to Collaborative Operation

FILL YOUR FUTURE

Value contribution in Ecosystem-based value creation

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Partners

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Thank you!

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innovalia ASSOCIATION

DFA TRANSFORMING MANUFACTURING TOGETHER

European Commission