

# SM4RTENANCE

European Deployment of Smart Manufacturing Asset 4.0 Multilateral Data Sharing Spaces for an Autonomous Operation of Collaborative Maintenance and Circular Services

Trusted Data Sharing for Manufacturing Equipment Industry

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# SM4RTENANCE Project



Duration: **3 years**    Start Date: **1st October 2023**



Call: **DIGITAL-2022-CLOUD-AI-03**



Project Coordinator: **INNOVALIA (ES)**



EC Contribution: **8M€**    Total Budget **14M€**



Consortium: **42 full partners**  
**4 associated partners, distributed across 11 EU countries**



Project Website: [SM4RTENANCE.EU](https://SM4RTENANCE.EU)

# Partners



# European Data Strategy for Manufacturing Data Spaces

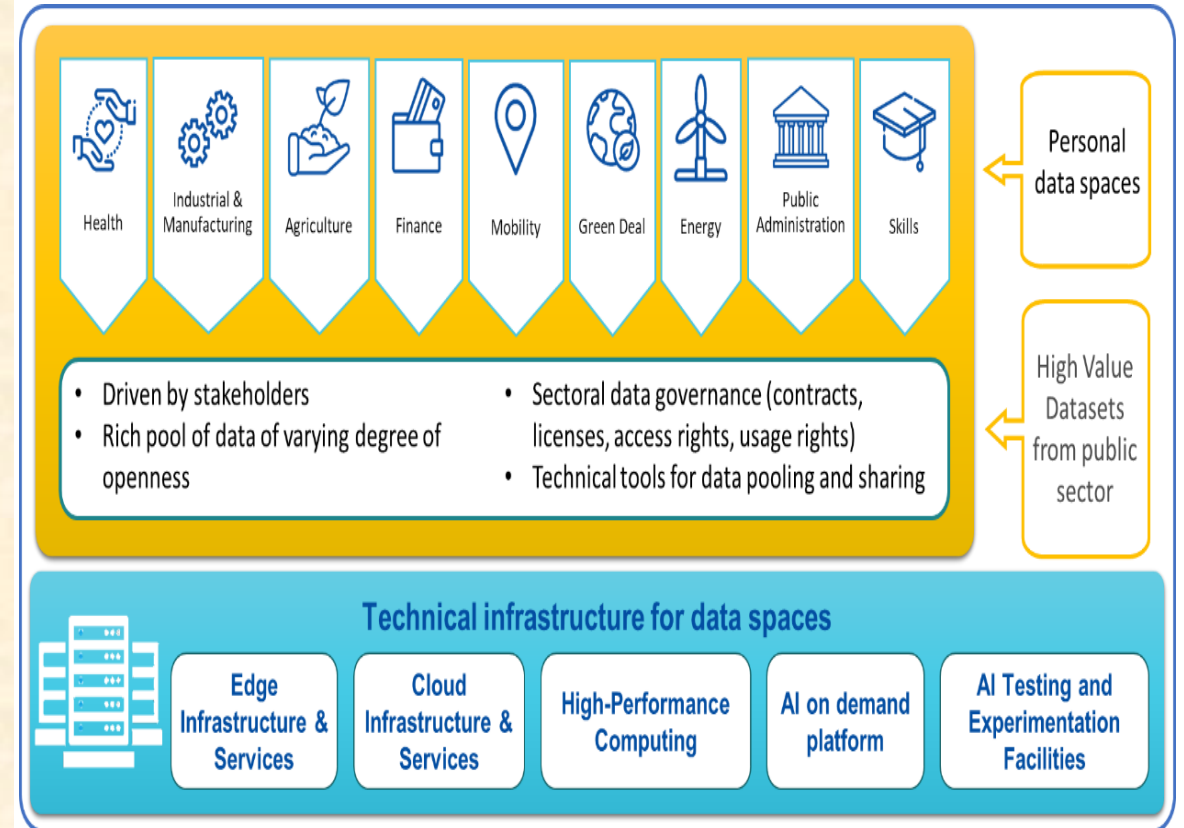
The objective of the European data strategy is to create a genuine unified marketplace for data, ensuring the security of both personal and non-personal data, including sensitive business data.

It aims to provide businesses with easy access to an extensive volume of high-quality data, enhancing growth and generating value, while reducing the ecological impact on humans and the environment.

Data spaces implementation in the manufacturing industry will facilitate increased data sharing between manufacturing companies and service providers.

Exchanging industrial data can be used to improve business operations through supply chains and to leverage the potential of deep industrial data in production environments.

SM4RTENANCE Data Space will address predictive/prescriptive maintenance and dynamic asset management, enabling third-party value-added service providers to access deep industrial data improving production line operations.



Common European data spaces

EU Data Strategy: <https://digital-strategy.ec.europa.eu/en/library/building-data-economy-brochure>

# SM4RTENANCE Challenges

**Trust barrier:** Shared or traded data can be copied or misused. Although being in a trustworthy partnership, data can be misused within the company

**Limited control:** Contracts are today's means to prevent data misuse but missing trust can be partially overcome by contracts

**Low interoperability:** A lack of agreed standards and formats for data exchange prevent data sharing in broader scale

**Data barred as company's asset:** Sensitive information remains internally as benefits and the worthiness are unknown and the risk of losing information is too high

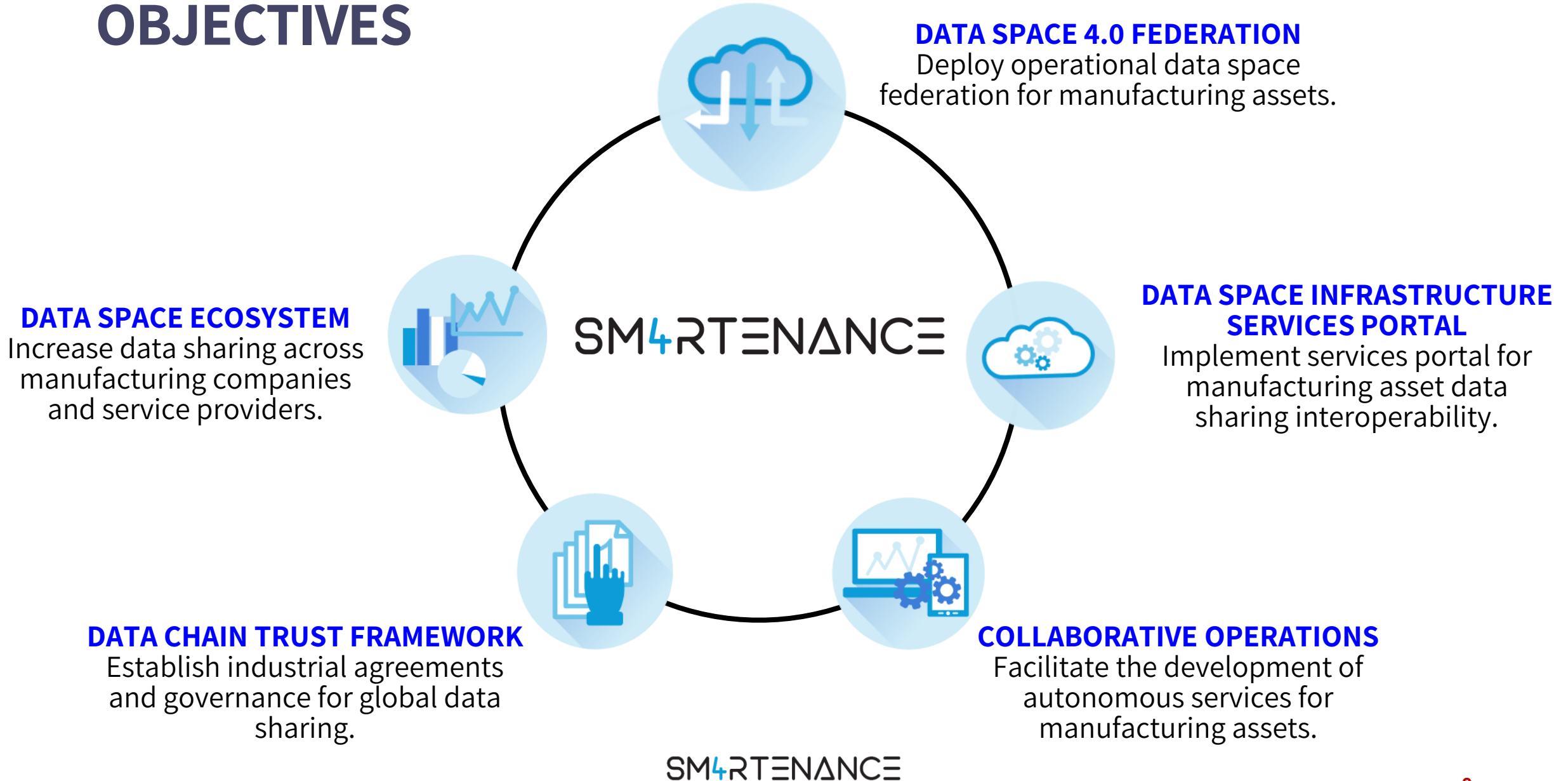
# SM4RTENANCE vision

**SM4RTENANCE will enable the creation of a neutral cross-sectorial data space for the manufacturing industry** by connecting key ecosystems, standards, experimentation facilities and data space development building blocks.

**SM4RTENANCE will provide the digital infrastructure and data space service portal** for manufacturing equipment industry stakeholders to exchange data in a trusted manner across data platforms and sectors.

**SM4RTENANCE will adopt the latest manufacturing and digital standards for better interoperability, interworking and federation of data** improving manufacturing asset management and predictive maintenance services.

# OBJECTIVES



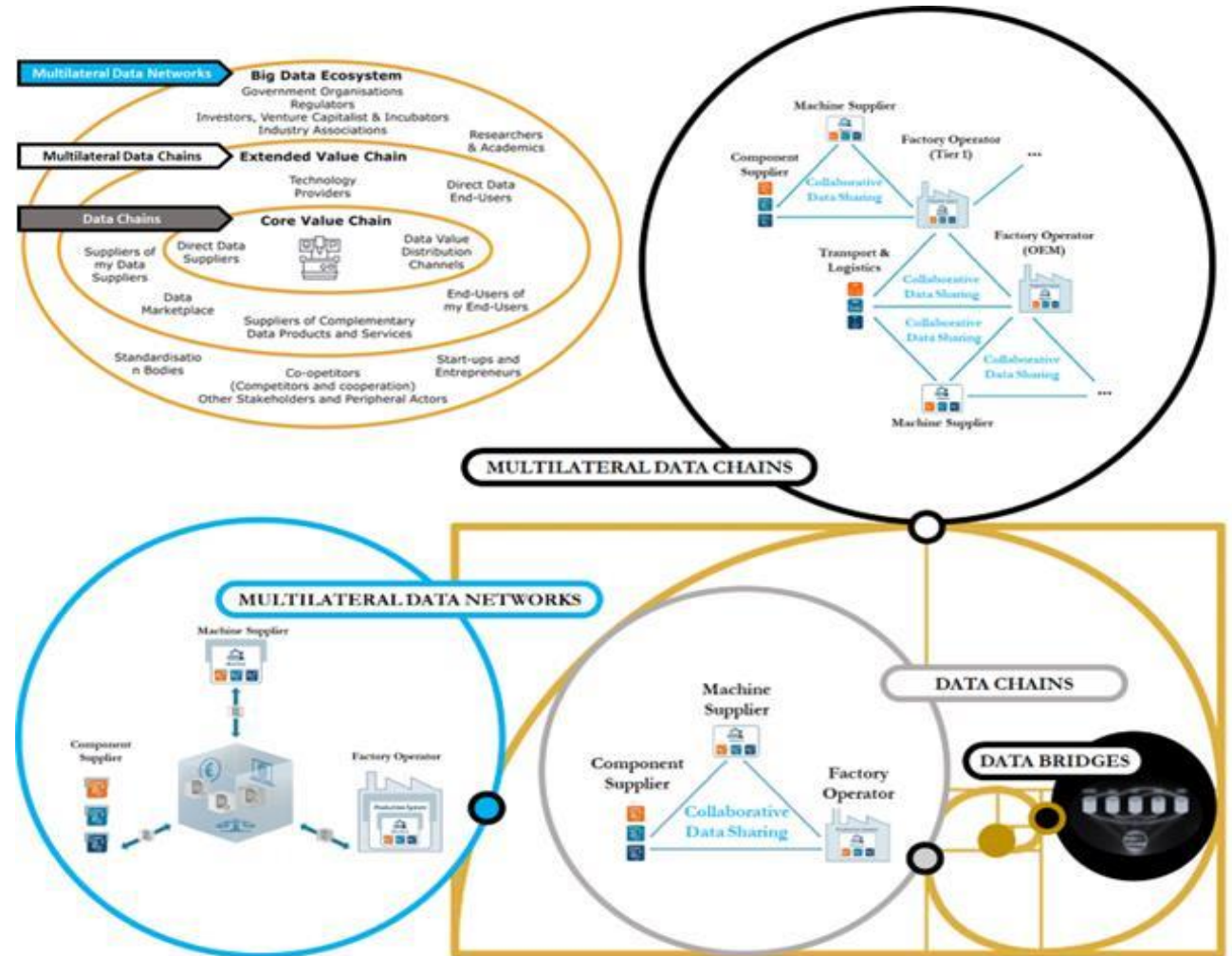


# Multilateral Manufacturing Data Chains and Networks

Advanced Industry 4.0 digitization projects have the capacity to consistently and efficiently construct "Data Bridges" across factory data silos

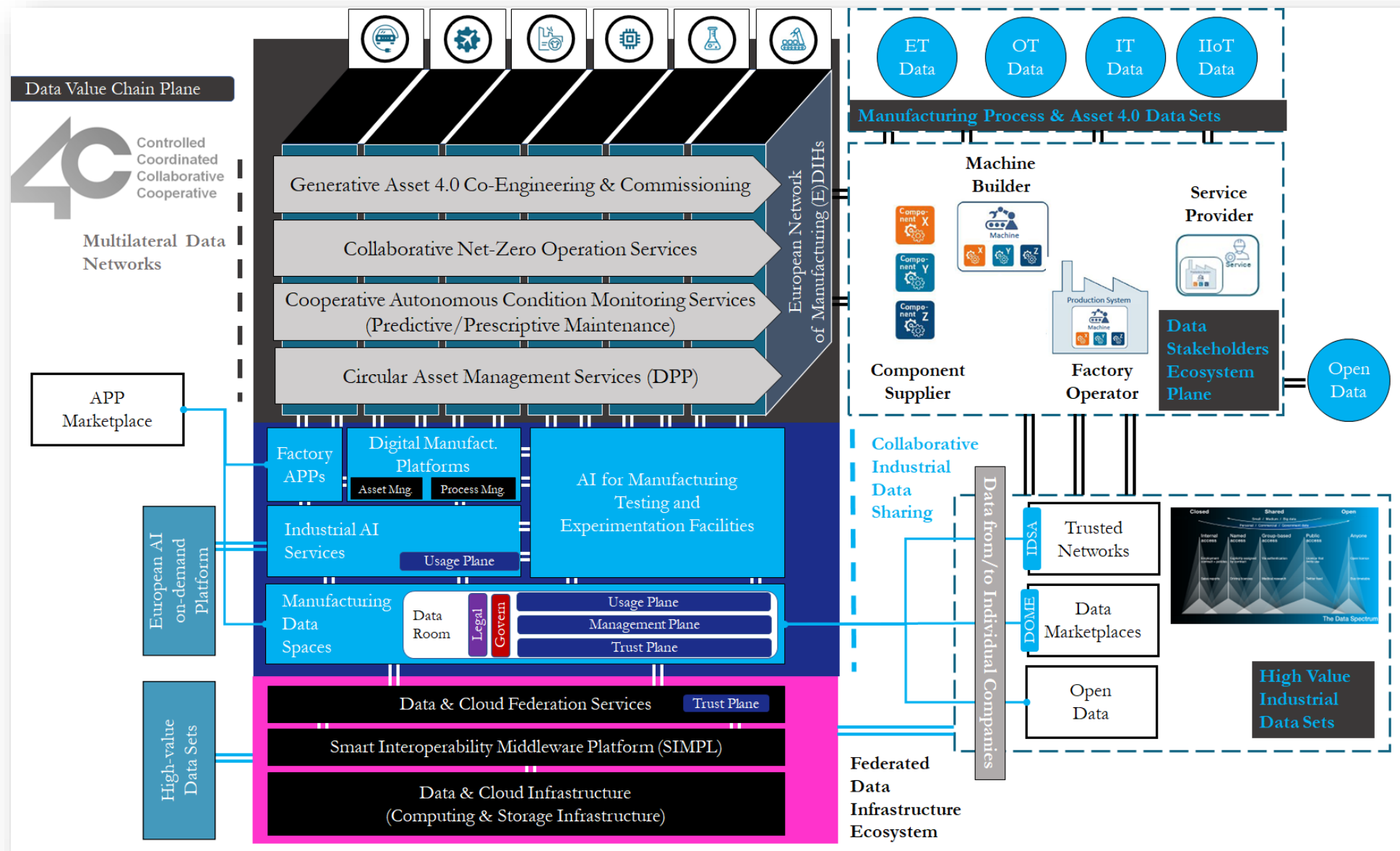
Data spaces are supported by federation and interoperability services and functionalities and by the standardisation of data products

Next-generation collaborative manufacturing and supply chain processes will be used by multilateral data chains

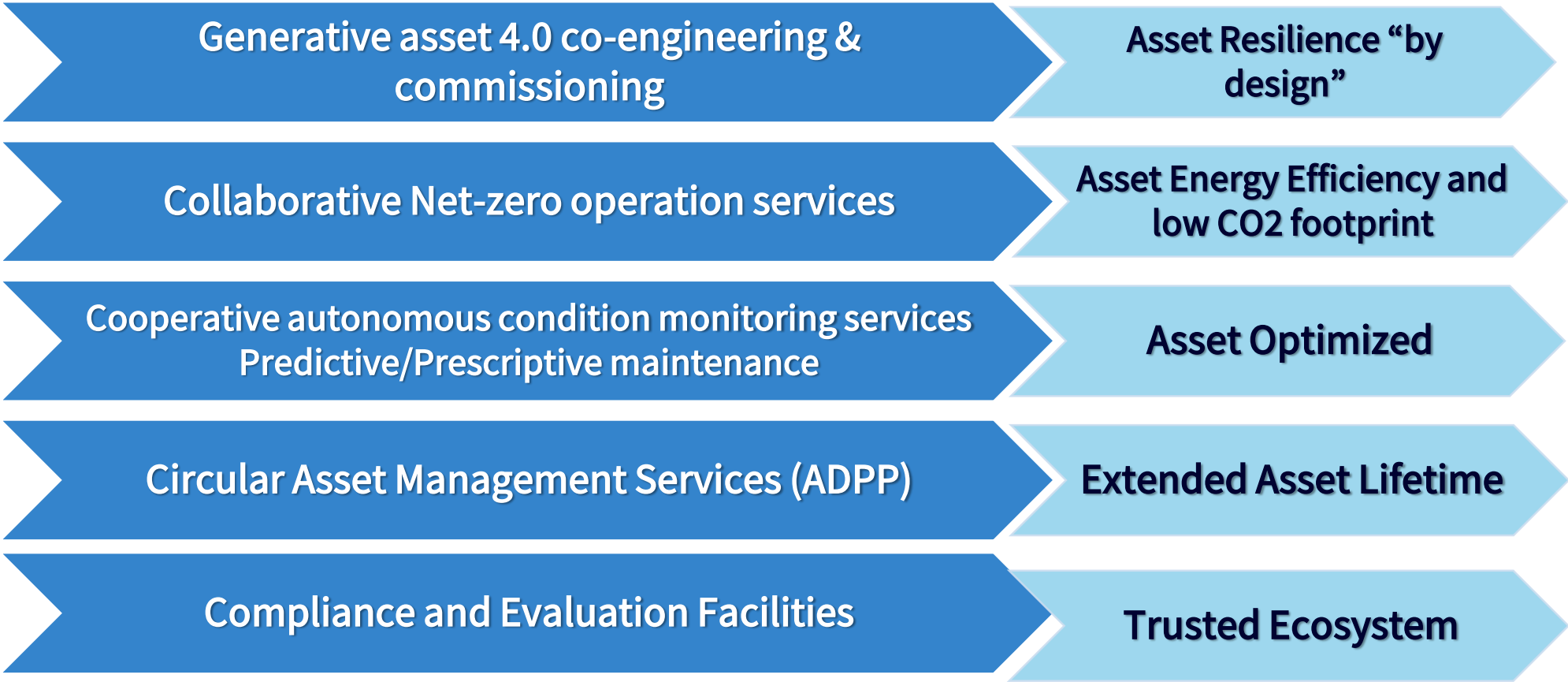


# SM4RTENANCE Reference Model

## 4C Controlled, Coordinated, Collaborative, Cooperative



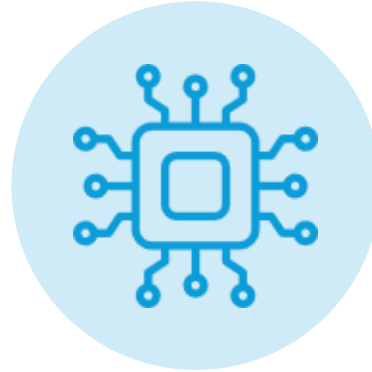
# SM4RTENANCE Asset Resilience



# SM4RTENANCE Pilots in 5 industry sectors



**Machine tool & automation**



**Electronics /e-battery**



**Automotive**



**Process**



**Textile**

# MANUFACTURING APPLICATIONS TRIALS

**PILOT 1** - Overall predictive maintenance through Trusted Data Sharing

**PILOT 2** - Machine tool Predictive Maintenance

**PILOT 3** - Closed loop Zero Defect Manufacturing Data Space

**PILOT 4** - Life Cycle Assessment through Energy Monitoring

**PILOT 5** - Improving health and performance of (e)-vehicles

**PILOT 6** - Optimization of the production performance through DPP

**PILOT 7** - Collaborative Asset Monitoring at a large scale via the existing data space Smart Connected Supplier Network

# SM4RTENANCE

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Thank you!

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