

Data Spaces Symposium

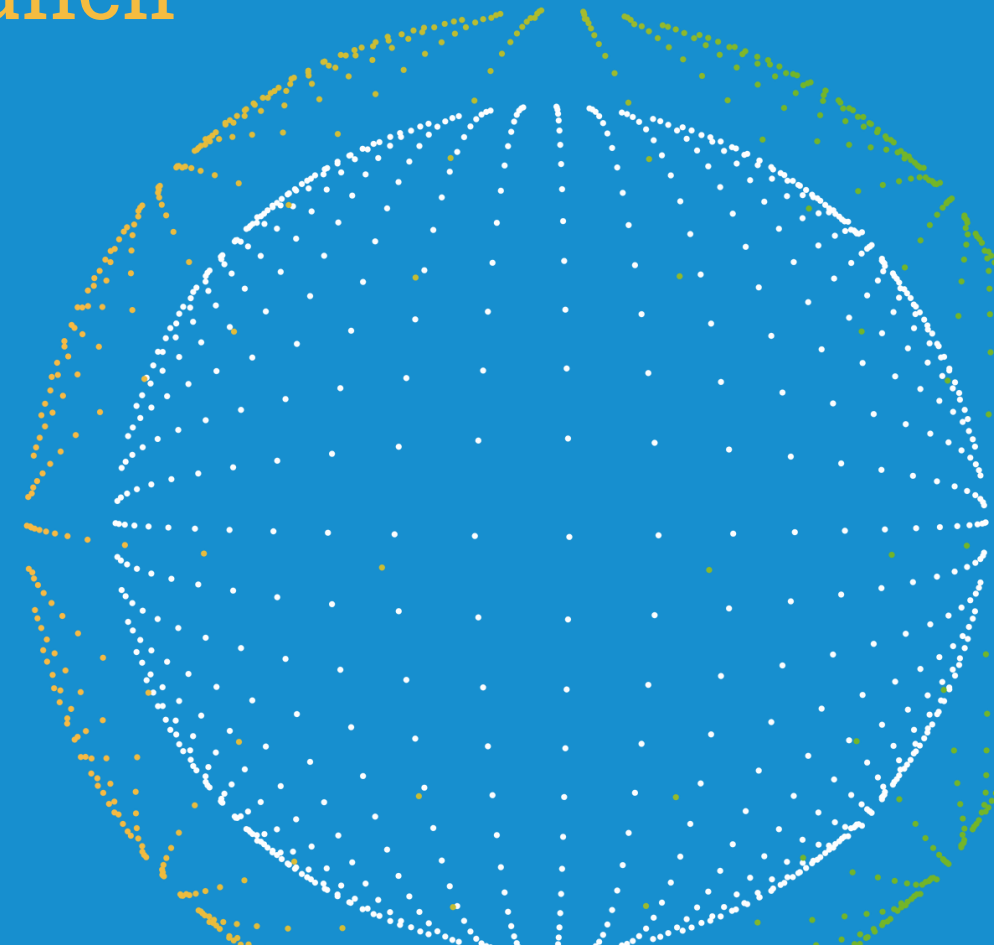
International Manufacturing-X Council
Make Data Work!

March 12, 15:30 - 16:30

Moderator: Davide Dalle Carbonare

Business Developer at Engineering

Board of Directors & Smart Manufacturing Industry at BDVA



Data Spaces Symposium

Unite. Innovate. Adopt.

International Manufacturing-X Council
Make Data Work!

12 March 2024 | 15:30 - 16:30
Darmstadt, Germany



Davide Dalle Carbonare
Engineering



Oscar Lázaro
Innovalia
*Intro on International
Manufacturing-X*



Thomas Hahn
Siemens
Deep Dive on Factory-X



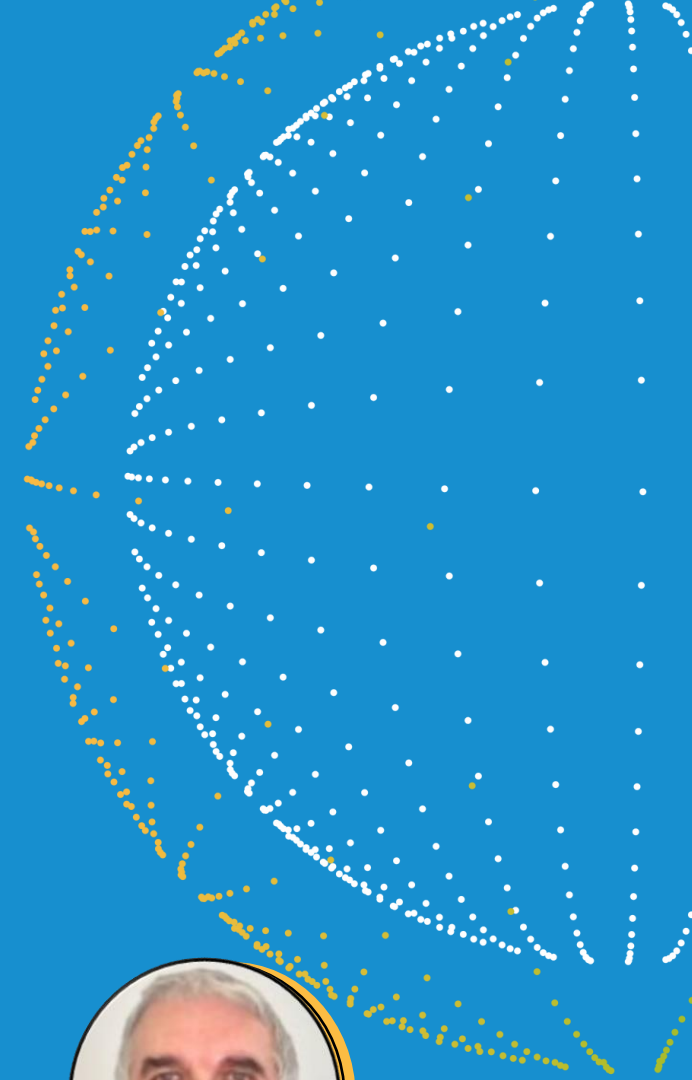
Sicco Lehmann-Brauns
Siemens



Reinhard Heister
VDMA



Sergio Gusmeroli
Politecnico Milano



SM4RTENANCE: Implementing Manufacturing-X Foundational Framework in Italy: the MADE Competence Center and Circularity-X Model

12 March 2024

Sergio Gusmeroli. Politecnico di Milano & MADE Competence Center



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the European Union

SM4RTENANCE GA n. 101123490* in Grant Preparation





Deploying DS for Manufacturing in Italy



Factories & Ecosystems (*Asset Owner Industrial Data, Provider & Ecosystem Onboarding Service Provider*)



Platform & Service Providers (*Asset Management, Application & Maintenance Service Provider*)



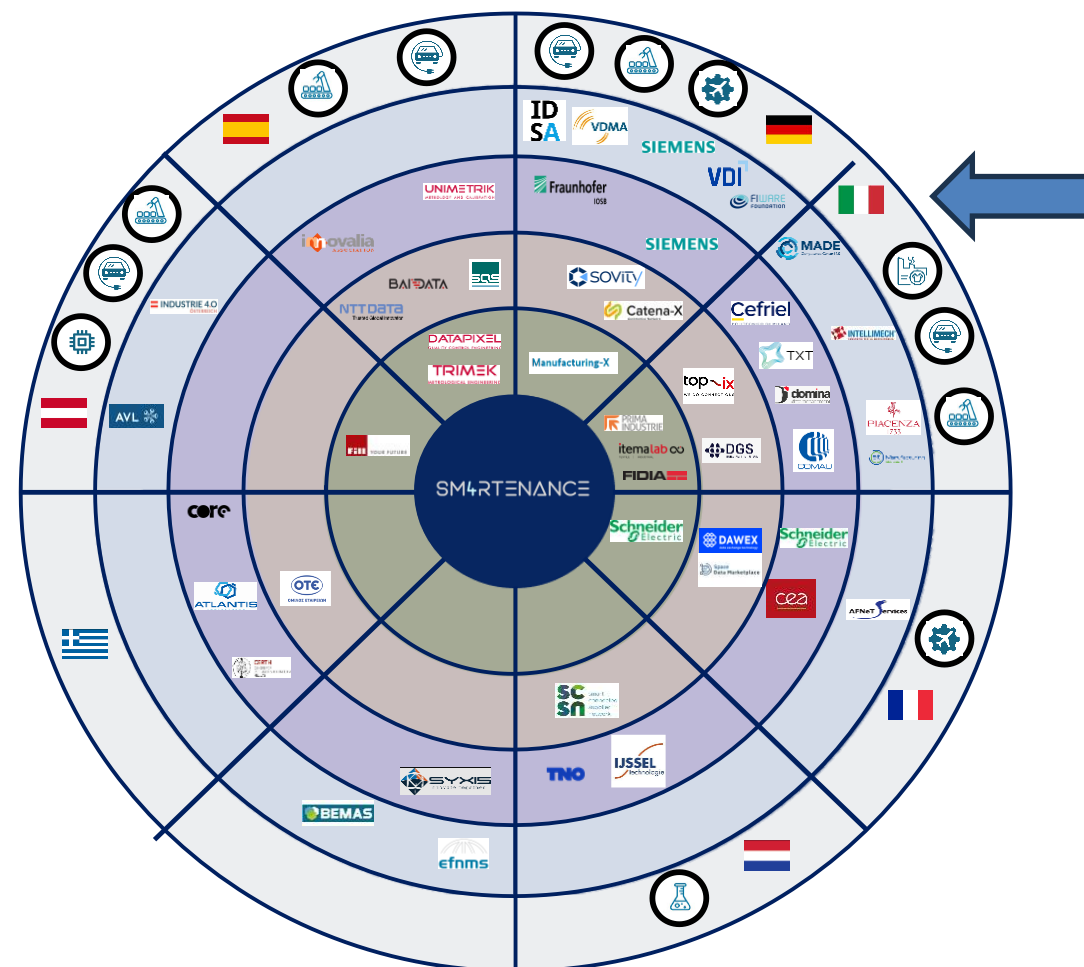
Data Space Operators (*Core Data Space Service, Provider & Data Space Enabling Service Provider*)



Manufacturing Assets & Automation System OEMs (*Asset OEM Industrial Data Consumer*)



SM4RTENANCE



Motivation & Big Picture

Foundational Framework for IM-X

A common guideline for IM-X activities and international stakeholders.

Strategic Goals

International Manufacturing-X develops the foundations for a resilient and competitive industry in a sustainable society.

Resilience

Sustainability

Competitiveness

Business Models

International Manufacturing-X enables innovative business models based on a interoperable data-ecosystems

Digital Products and Services

Everything as a Service

Exemplary Cross-Industry Use Cases

International Manufacturing-X addresses cross-industry use cases based on a collaborative use of data with high economic and ecological impact.

Product Innovation, Collaboration & Product Optimization

Autonomous Factory

Supply Chain, Transparency & resilience

Energy & GHG/CO2 Management

...

...

...

Capabilities

International Manufacturing-X enables development and deployment of fundamental services driving the federated data ecosystem.

Foundation

International Manufacturing-X defines global standards and runs a basic technical infrastructure to guarantee interoperability and sovereignty.

Shared Services

Shared Technological Base Layer

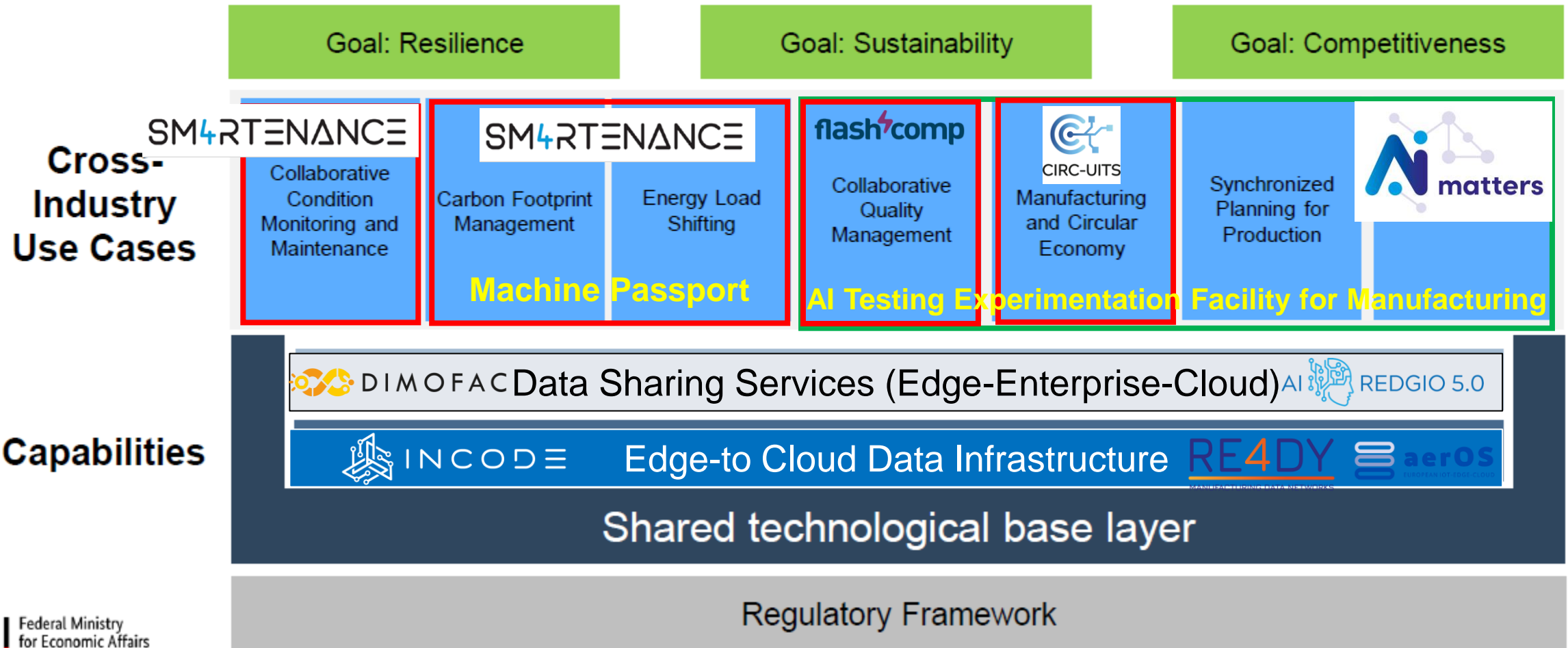
Regulatory Framework and Standards

Requirements

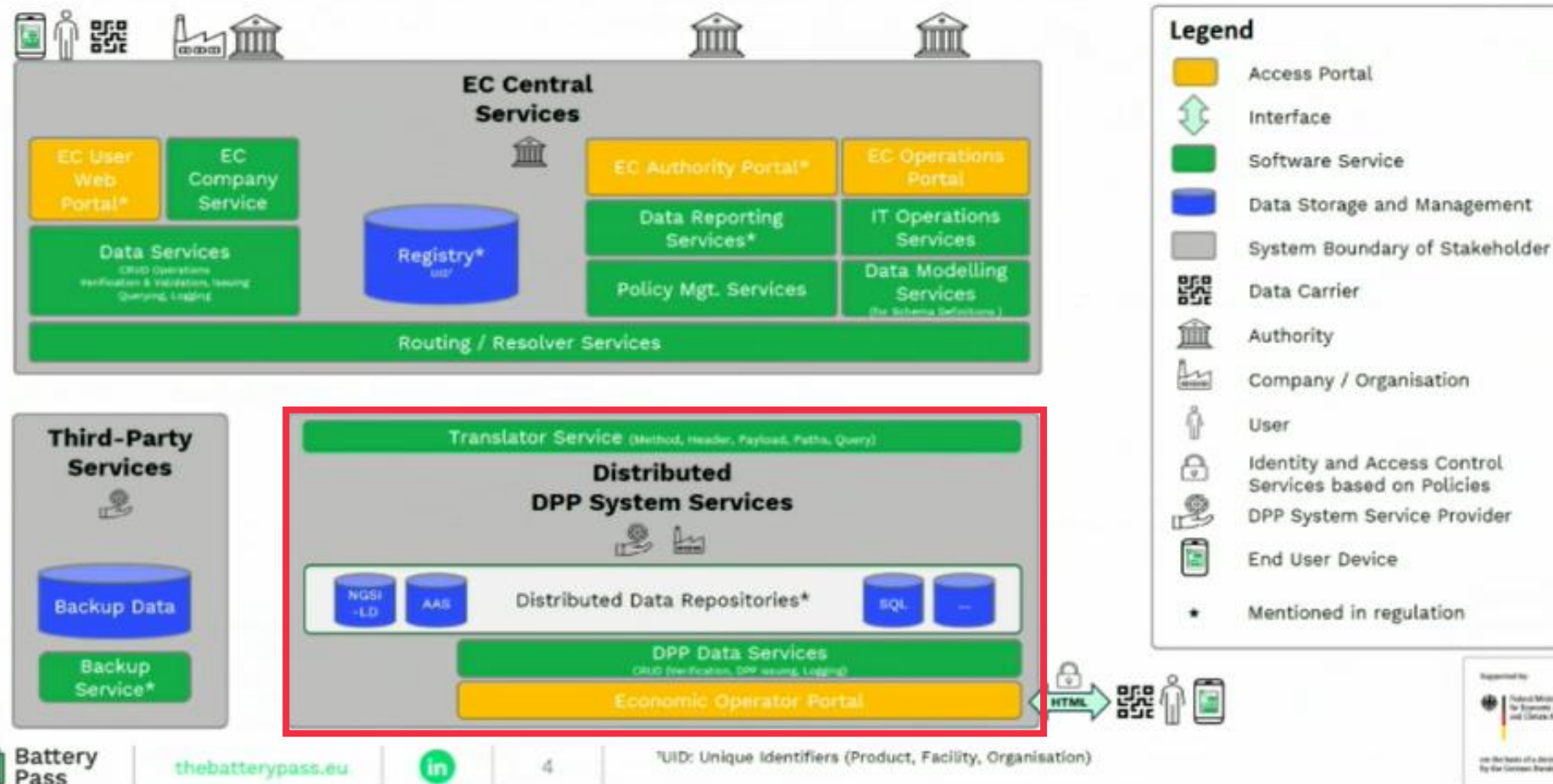
International Manufacturing-X builds on a common technical, organizational and legal framework and contributes to the future development in cooperation with international law.

INDUSTRIA-X at the MADE Competence Center

Manufacturing-X aims to implement important cross-industrial use cases on a common framework.



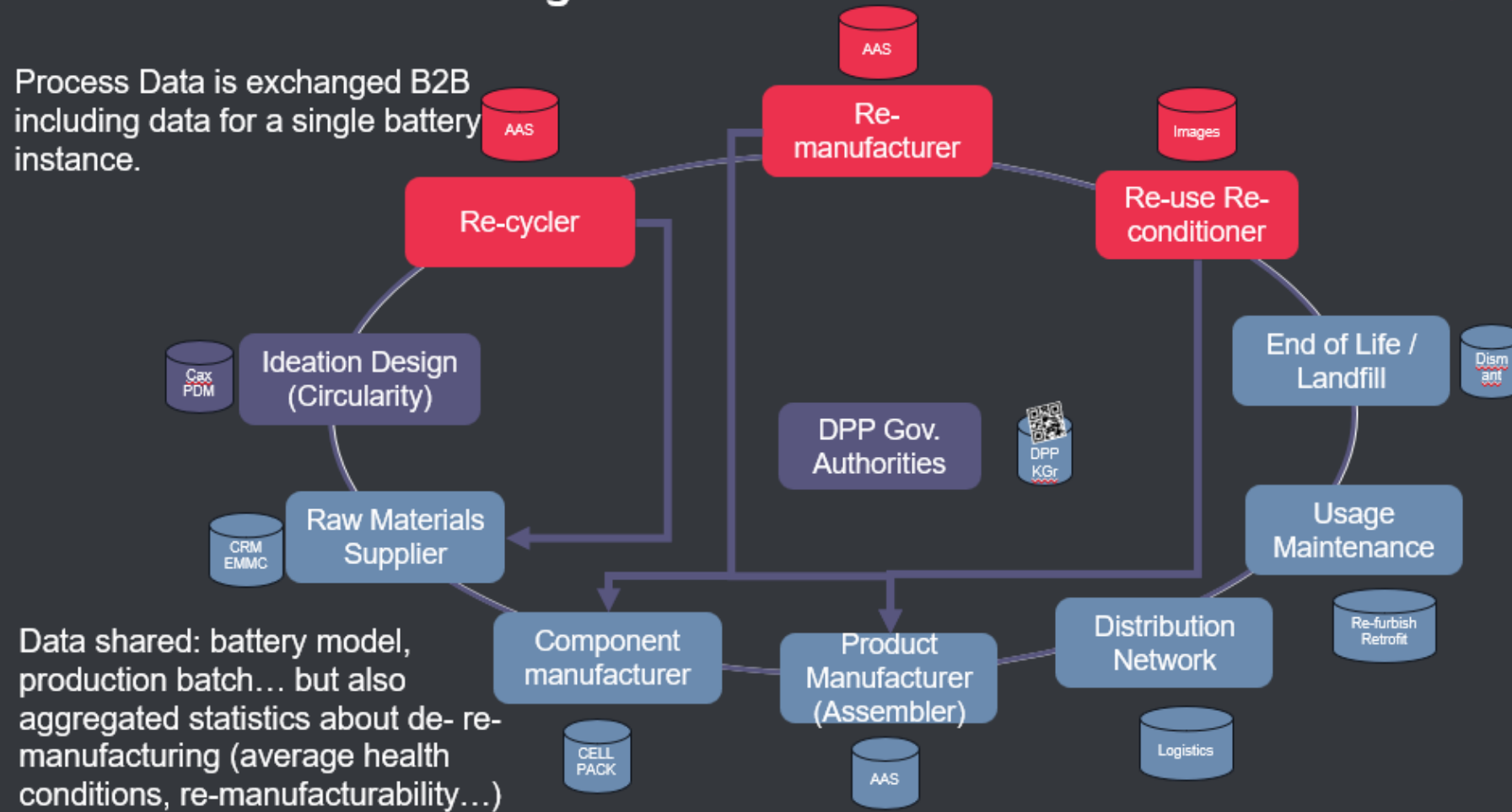
A variety of building blocks beyond the regulation are needed for an operational system



A BATTERY Lifecycle Data Space with Process data sharing flows



Process Data is exchanged B2B including data for a single battery instance.



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CIRCULARITY-X Foundational Framework for BATTERY Circular Data Spaces

Strategic Goals

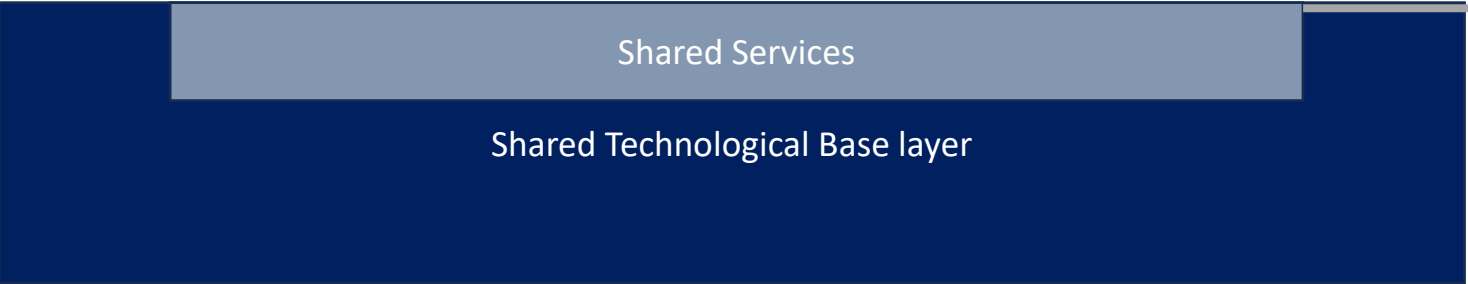
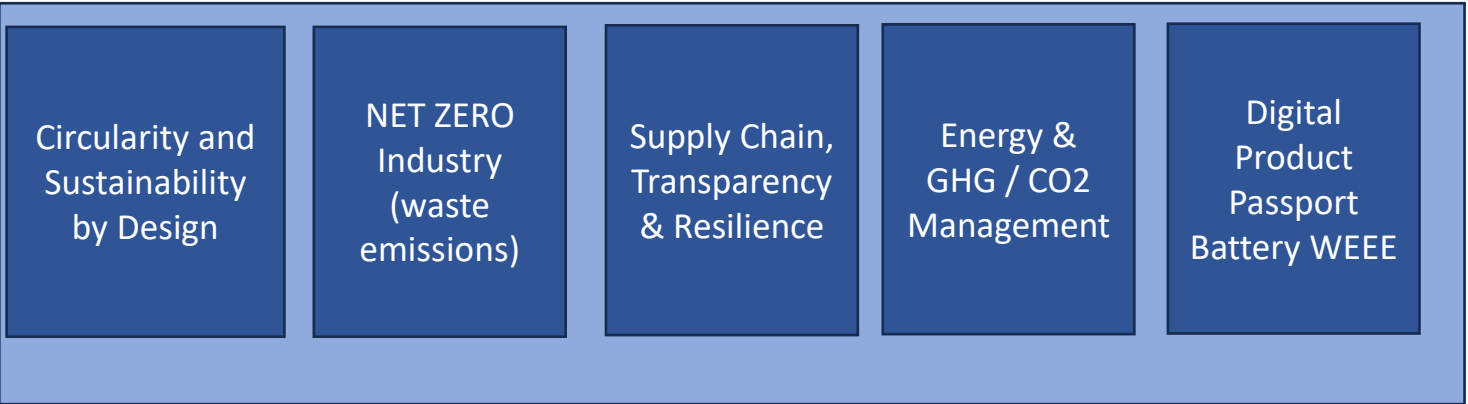
CTW develops the foundations for a circular, resilient, competitive industry in a sustainable society (Battery WEEE industrial pilots)

Exemplary Cross-Industry Use Cases

CTW addresses cross-industry use cases based on a collaborative use of data with high economic and ecological impact (Discrete vs. Process Industry)

Foundation

CTW defines global standards and runs a basic technical infrastructure to guarantee interoperability and sovereignty (GAIA-X CATENA-X inspired)



Business Models

CTW enables innovative business models based on interoperable Data Spaces and B2G B2C interactions

Capabilities

CTW enables development and deployment of fundamental DATA and SOFTWARE services driving the circular data ecosystem

Requirements

CTW builds on a common regulatory legal framework and contributes to the international law (non-EU partners) CIRPASS

SM4RTENANCE: Implementing Manufacturing-X Foundational Framework in Italy: the MADE Competence Center and **Circularity-X** Model

THANK YOU!!!

Sergio Gusmeroli. **Politecnico di Milano** & MADE Competence Center