

DMAaST

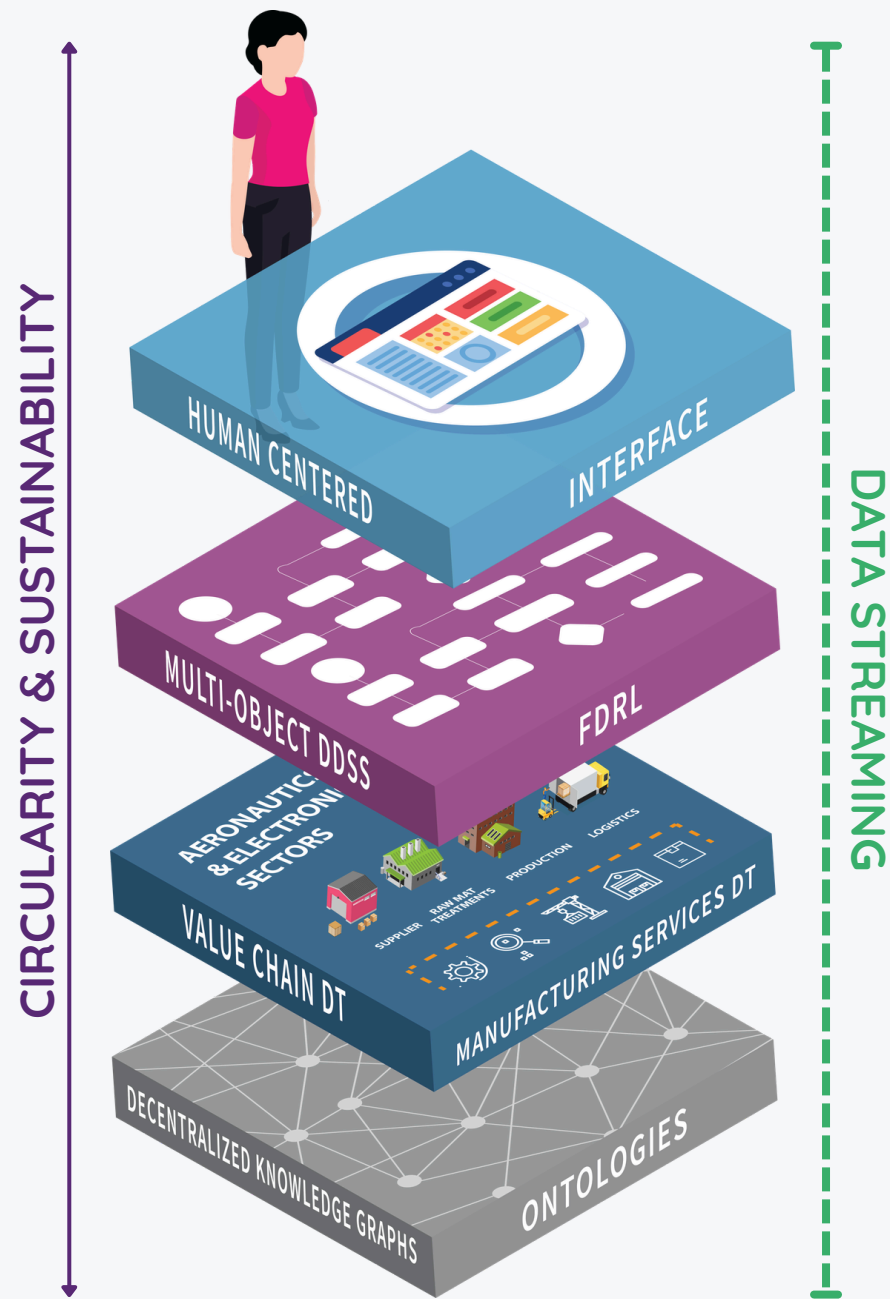
INNOVATIVE MODELLING AND ASSESSMENT CAPABILITIES THROUGH MAAS FOR MANUFACTURING ECOSYSTEM RESILIENCY



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Smart Manufacturing Platform (SMAP)



HUMAN CENTERED INTERFACES

A human-centred approach ensures an intuitive and user-friendly platform, enabling stakeholders to select optimisation targets, monitor system performance and receive timely alerts.

CIRCULARITY & SUSTAINABILITY

DMaaST integrates a dedicated Sustainability and Circularity Assessment Module, enhancing traceability and supporting sustainable production practices, including alignment with the Digital Product Passport.

MULTI-OBJECTIVE DISTRIBUTED DECISION SUPPORT SYSTEM (MO-DDSS)

Our self-adaptable MO-DDSS helps industries efficiently address threats while optimizing production across logistics, customer satisfaction, and business performance, ensuring resilient outputs even under suboptimal conditions.

COGNITIVE DIGITAL TWINS (CDT)

We use CDT to model manufacturing ecosystems in disrupted sectors like aeronautics and electronics, enhancing process reliability and helping industries anticipate and mitigate unforeseen events.

DECENTRALISED KNOWLEDGE GRAPH (DKG)

DMaaST uses DKG to enhance data interoperability, exploitation, and understanding across organizations. Standard-based ontologies enable seamless data integration and secure, real-time sharing through blockchain-based pipelines.

Objectives

- Main objective: To reinforce manufacturing value networks' resilience and enable the transition towards Manufacturing as a Service (Maas).
- Data interoperability and cross-organisation data integration through Decentralised Knowledge Graphs.
- Improve manufacturing industries' ability to anticipate unforeseen events through Cognitive Digital Twins.
- Respond to threats while optimising industrial production through Multi-Objective Decision Support System.
- Improve sustainability and circularity opportunities through Sustainability & Circularity Assessment Module.

Consortium



Two real-world pilots

Aerospace

JPB Système (France)

Leading French aerospace manufacturer specialised in innovative locking solutions for critical aircraft applications, supplying major OEMs and Tier-1 companies worldwide.

Electronics

Kamstrup (Denmark)

Global technology company specialised in intelligent metering solutions, with advanced manufacturing capabilities and a strong focus on digitalisation and sustainability.

OUTCOMES FROM DMAAST USE CASES



dmaast.eu

DMaaST EU Project



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