MAS4AI

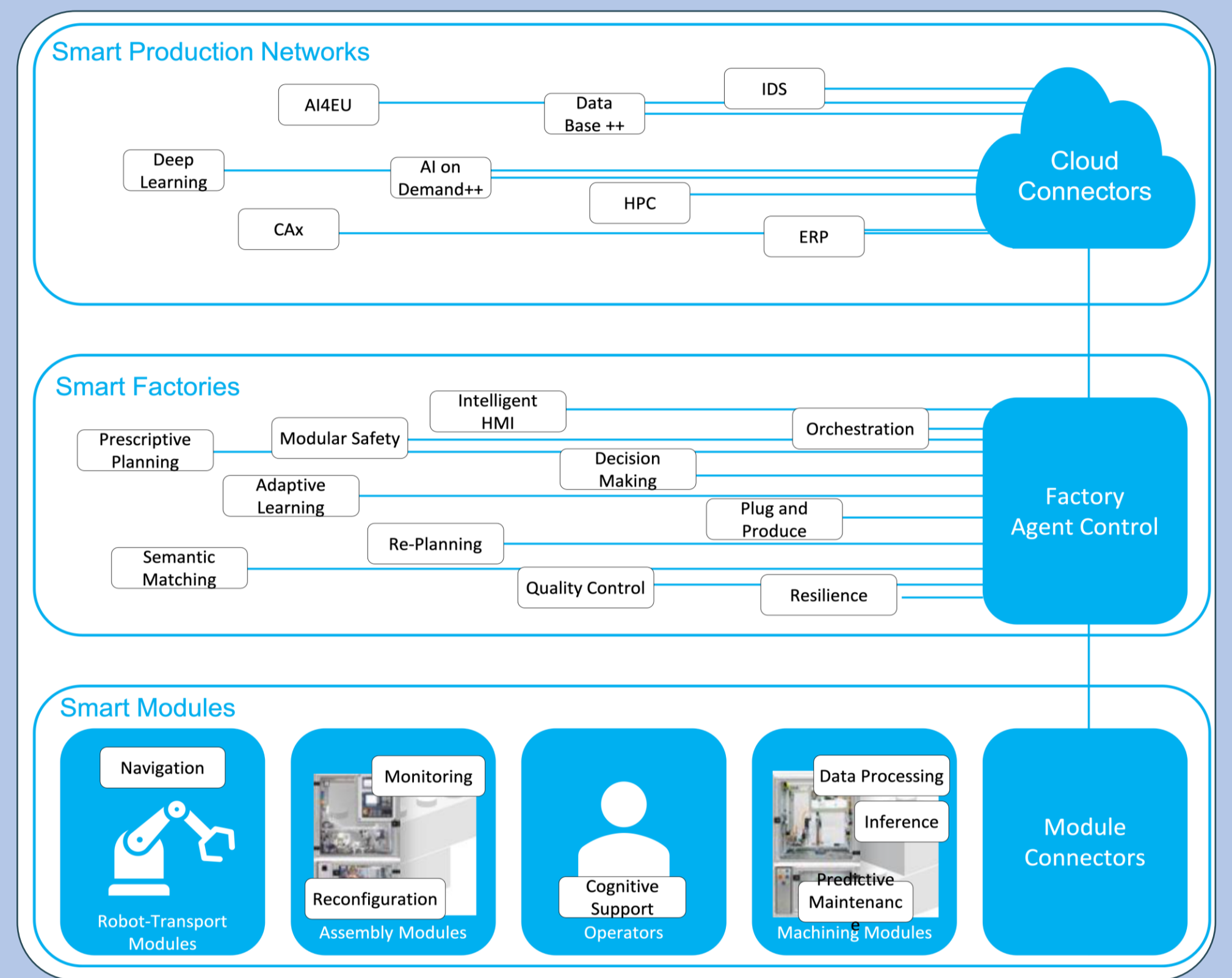**Multi-Agent Systems for Pervasive Artificial Intelligence for assisting Humans in Modular Production**

Project

MAS4AI aims at developing and testing a distributed and interoperable AI architecture based on multi-agent technology that contributes to hyper-agility of European factories though modular and flexible production while at the same time keeps the humans in control of the AI technology and creating impact by spreading the technology over large groups of European manufacturing companies.
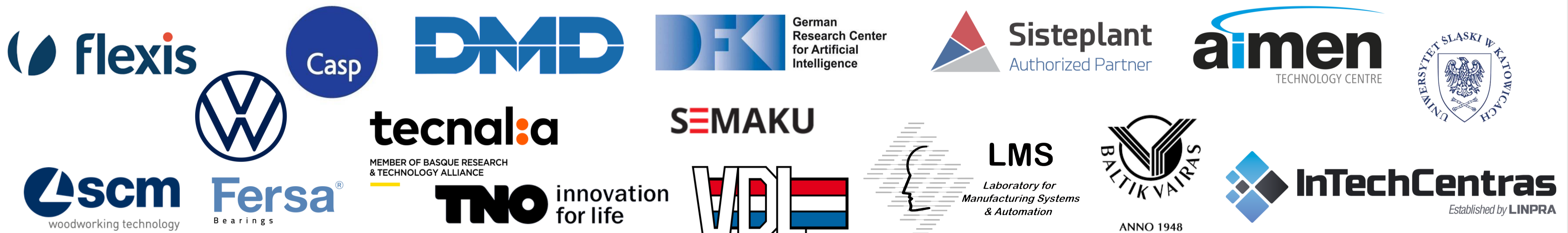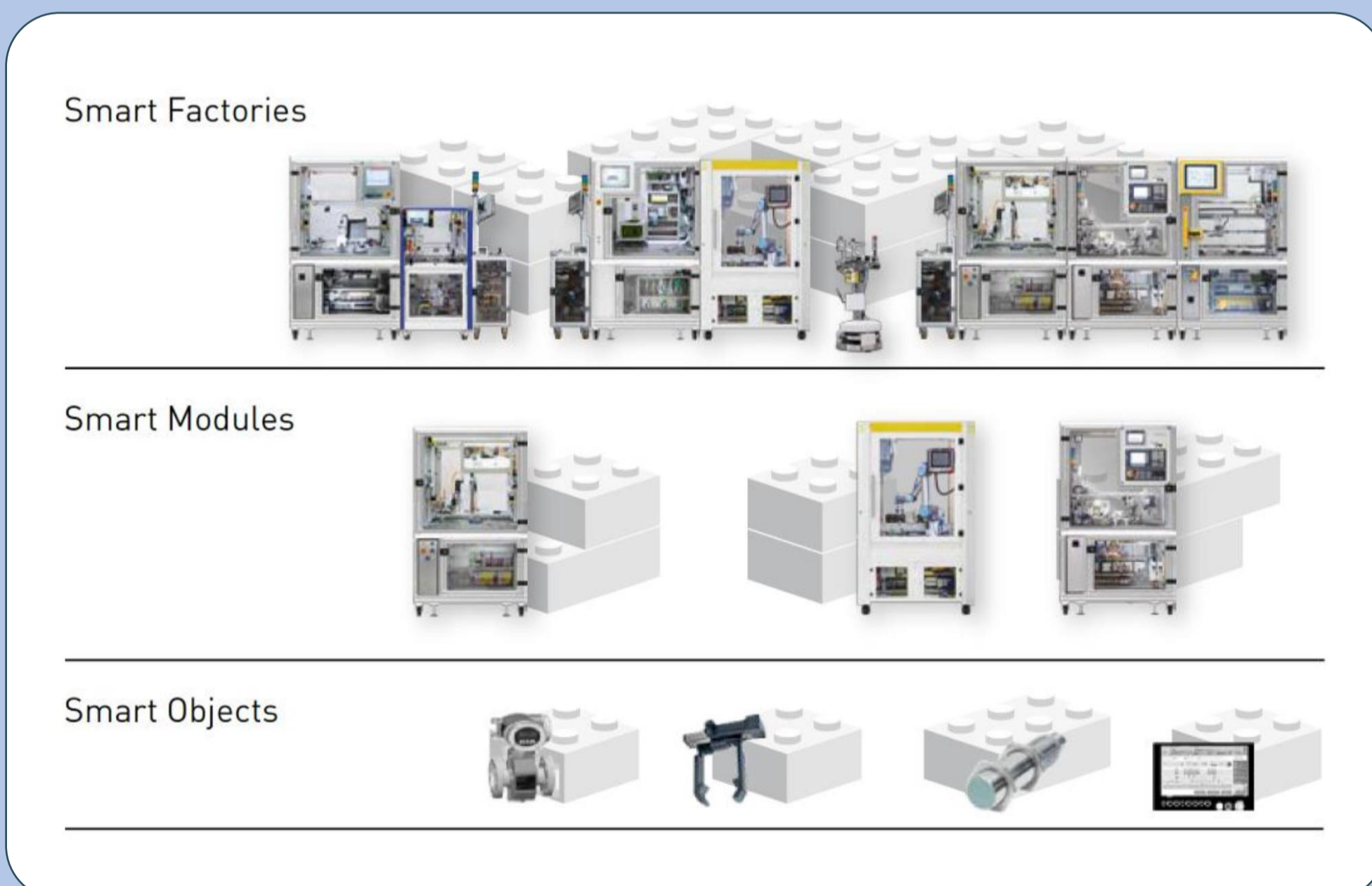
Concept

MAS4AI concept is based on ready to use technologies in the area of industrial Artificial Intelligence (AI) and Industry 4.0. AI core techniques based on:

❖ Symbolic modelling

❖ Machine learning

❖ Combination of AI methods

Smart Production Networks: AI4EU, Data Base ++, IDS, Deep Learning, AI on Demand++, HPC, CAx, ERP, Cloud Connectors

Smart Factories: Prescriptive Planning, Modular Safety, Intelligent HMI, Orchestration, Adaptive Learning, Decision Making, Plug and Produce, Semantic Matching, Re-Planning, Quality Control, Resilience, Factory Agent Control

Smart Modules: Navigation, Monitoring, Data Processing, Inference, Robot-Transport Modules, Reconfiguration, Assembly Modules, Cognitive Support Operators, Predictive Maintenance, Machining Modules, Module Connectors

Smart Factories

Smart Modules

Smart Objects

Architecture

❖ Control logic decentralization enables the modularization of production and shortens the reconfiguration time for new products.

❖ Integrated networks use common language for machine-to-machine communication.

❖ Clear specification of interfaces to realize the Plug & Produce concept and the future development of smart factories.

Contact

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