

# MADE IN EUROPE 2026

## ONLINE PITCHING

Presenter:  
Armand BABOLI, Full Professor, INSA Lyon, LIRIS laboratory

23 Jun 2026

## Laboratoire d'InfoRmatique en Image et Systèmes d'information

### INSA Lyon (National Institute for Applied Sciences)

- Leading public engineering school in France created in 1957.
- 9 engineering departments:  
Biosciences; Civil Engineering & Urban Planning; Computer Science; Electrical Engineering; Energy & Environmental Engineering; Industrial Engineering; Mechanical Engineering; Materials Science & Engineering; Telecommunications.
- 22 research laboratories with 613 PhD students.
- 1,373 staff, including 715 Prof. & researchers.
- Around 6000 students.
- Nearly 1000 annual industrial contracts (15M€ turnover).

- **LIRIS** is a joint research unit: CNRS, INSA Lyon, Claude Bernard University Lyon 1, Lumière University Lyon 2 and Ecole Centrale de Lyon.
- Core expertise area in **Computer Science** and, more broadly, **Information and Digital Technologies**.
- 360 researchers (170 permanent).
- Structured into 14 research teams across 6 areas, and different research and innovation teams
- Our team (**HICODE Lab**): Hybrid Intelligence and Cognitive Decision Engineering Lab

# Who We Are?



## HICODE

### Hybrid Intelligence and Cognitive Decision Engineering team

Designing the Next Generation of Intelligent Decision Support Systems for Industry



**Our Mission:** Interdisciplinary research at the intersection of Computer Science and Industrial Engineering; Cognitive AI; Applied Operations Research; Supply Chain Management; Production Planning and Scheduling; Intelligent Planning and Scheduling

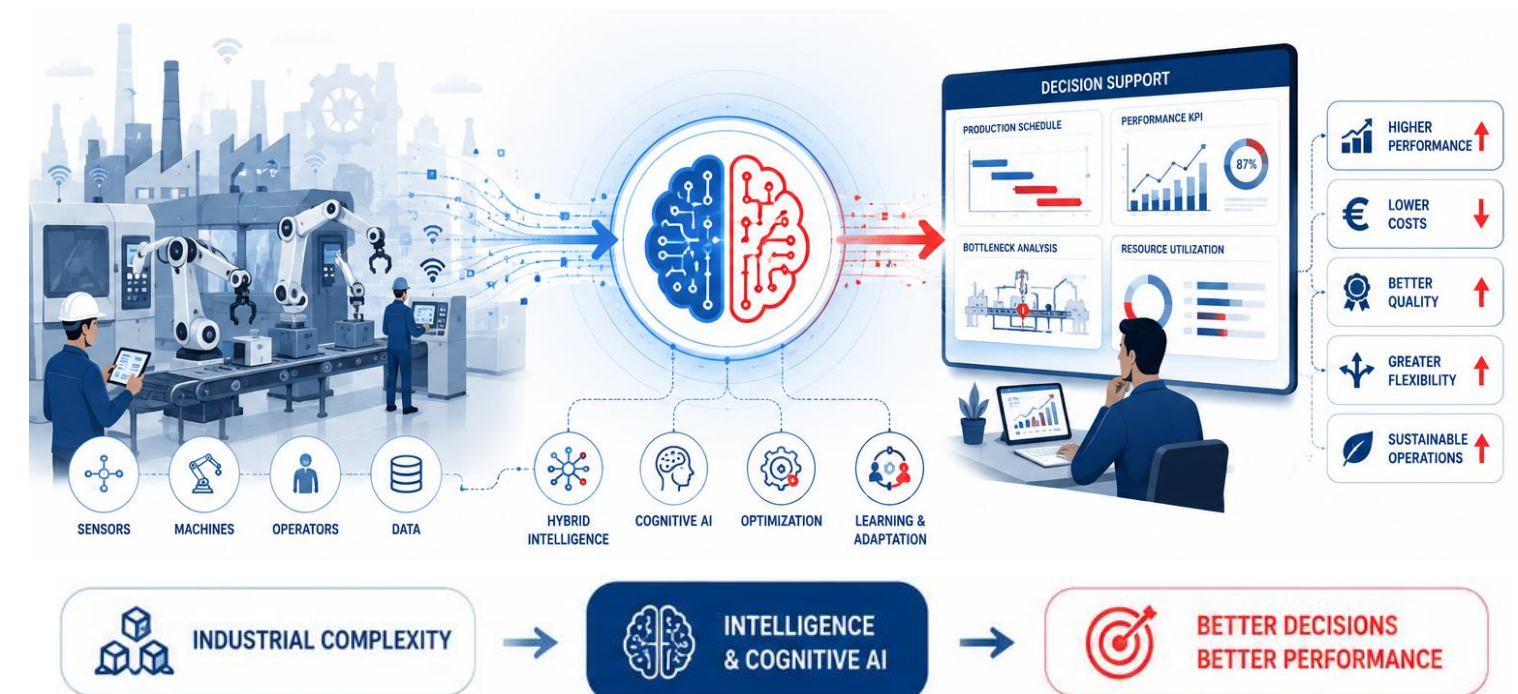
We research, design, and develop intelligent software systems, mainly for manufacturing industries, that help organizations make better decisions in complex industrial environments.

Our focus is on combining:

- Hybrid Intelligence
- Cognitive AI Decision Engineering
- Agentic AI Architectures
- Human-in-the-Loop Collaboration

to solve real-world challenges in production engineering.

**Research Contracts:** 3 industrial chairs with More than 4M€ of research contracts. Volvo Group (8 years), Fiat-Iveco (11 years), Dassault Falcon Jet-USA (7 years), European Horizon project (3 years)



# What is Our Areas of Interest and Expertise?



Turning Data, Knowledge and Human Expertise into Better Industrial Decisions

## Research and Innovation Areas

- End-to-End Supply Chain and Logistics Intelligence
- Sales, Operations, and Capacity Planning
- Production Planning, Scheduling, and Optimization
- Predictive Maintenance and Asset Intelligence
- Inventory and Service-Level Optimization
- Transportation and Distribution Intelligence
- Hybrid AI for Small-Data and Knowledge-Rich Industrial Environments



## 1. Coordination or Leading Partnership

Intending to act as **Coordinator / Lead Partner** for the call: [HORIZON-CL4-2027-01-MAT-PROD-03](#)

**Factory processes and automation for de- and re-manufacturing**

RIA / Deadlines : **02 February 2027**

We are seeking:

- **Industrial partners** with relevant challenges and real-world use cases
- **Academic and technology partners** with complementary expertise



# HORIZON-CL4-2027-01-MAT-PROD-03: Factory processes and automation for de- and re-manufacturing (From TRL 4-5 to TRL 6)



## **Overall Concept:**

Design and develop an advanced AI-enabled De- and Re-Manufacturing Platform that integrates intelligent automation, digital twins, and human expertise to enable adaptive, efficient, and circular manufacturing processes.

The platform will support analysis, disassembly, repair, reuse, and reassembly of products, leveraging AI, robotics, and human-in-the-loop decision-making to retain product value, extend lifecycle, and enable resilient circular production ecosystems.

## **Our Contributions Sought:**

- Integration of human-in-the-loop approaches combining expert knowledge with AI systems
- Development of cognitive AI-driven condition assessment and prescriptive decision models
- Development of intelligent planning tools for dynamic exchanging of re- and De - manufacturing operations

## **Partner/Expertise Request:**

- Development of robotic and AI-assisted de-manufacturing technologies
- Digital twin and simulation experts (CAD integration, lifecycle modelling)
- Software and AI technology developers
- Knowledge Management and Knowledge Graph specialists
- Industrial end-users for pilots and validation activities

**Real-World Use Cases Sought:** Industrial environments characterized by one or more of the following challenges:

- Complex products requiring disassembly and reassembly such as turbines, machinery, electric motors
- Uncertain and variable incoming product conditions, models, and size for re- and De- manufacturing
- Need for efficient sorting, handling, and logistics of returned components and products
- Demand for local/on-site repair or re-manufacturing of high-value assets (e.g., wind turbine and vessels)

## 1. Coordination or Leading Partnership

Intending to act as **Coordinator / Lead Partner** for the call: [HORIZON-CL4-2027-02-DIGITAL-EMERGING-52-TWO-STAGE](#)

**New approaches for Human/AI collaboration for the workforce of the future**

RIA / Deadlines : **02 February 2027** (stage 1) and **02 September 2027** (stage 2)

We are seeking:

- **Industrial partners** with relevant challenges and real-world use cases
- **Academic and technology partners** with complementary expertise



# [HORIZON-CL4-2027-02-DIGITAL-EMERGING-52](#): New approaches for Human/AI collaboration for the workforce of the future (From TRL 4-5 to TRL 6)



## Overall Concept

Design and develop an advanced **Human–AI Co-Evolving Manufacturing Platform** with adaptive and inclusive user interfaces that can **capture, preserve, reason with, and transfer industrial expertise** in **knowledge-rich, data-scarce** manufacturing environments.

## Our Contributions Sought:

- Development of AI-powered decision models and algorithms
- Development of cognitive cooperating production planning

## Partner/Expertise Request:

- Continuous training and workforce upskilling experts
- SSH experts (cognitive reasoning, change management and organizational transformation)
- Human–AI Interaction and Explainable AI researchers
- Software and AI technology developers
- Knowledge Management and Knowledge Graph specialists
- Industrial end-users for pilots and validation activities

**Real-World Use Cases Sought:** Industrial environments characterized by one or more of the following challenges:

- High product customization and demand variability.
- Frequent disruptions and dynamic operating conditions.
- High levels of uncertainty in planning and decision-making.
- Strong dependence on expert knowledge and human decision-making.
- Multicultural and diverse workforces requiring adaptive interaction mechanisms

## 2. Consortium Participation

We are also open to joining existing consortia that could benefit from our expertise in AI-driven decision support and prescriptive analytics.





# THANK YOU

**Contact:**

[armand.baboli@insa-lyon.fr](mailto:armand.baboli@insa-lyon.fr)

27 January 2026