

PREPARING A PROPOSAL FOR

HORIZON-CL4-2027-02-DIGITAL-EMERGING-52

Human-AI collaboration for the manufacturing workforce of the future

An established Korea-EU consortium of eight institutions, seeking two further partners.

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The problem we are addressing

Expertise is leaving the shopfloor

- Decades of manufacturing know-how rest with workers who are now retiring
- Very little of it is documented. It is embodied in how the task is performed
- When these workers leave, quality and throughput decline with them

The workforce is not being replaced

- Fewer newcomers are willing to take on physically demanding, repetitive work
- Those who do enter the sector have different expectations of the workplace
- Conventional on-the-job training takes longer than industry can afford



A manufacturing skills gap that neither further automation nor further training resolves on its own.

What is missing is a means of transferring expertise from those who hold it to those who do not, while keeping the work physically sustainable for both. This is what the call addresses, and it is what our consortium is designed to deliver.

Our approach, at concept level

Two objectives supported by a common three-stage architecture, deliberately shown at a high level.

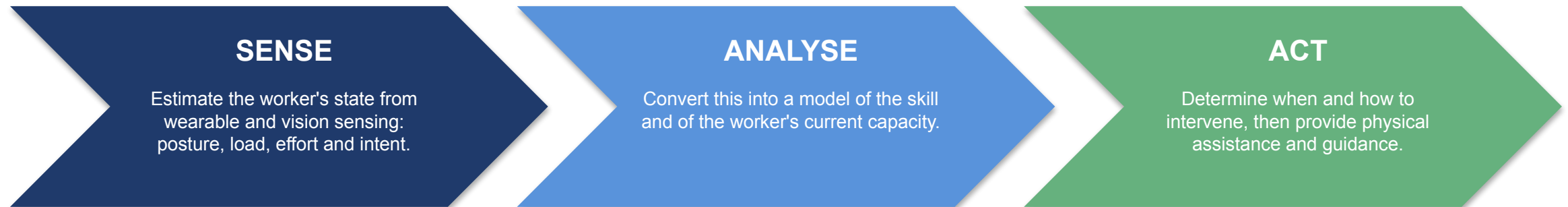
Transfer the expertise

Capture how an expert performs the task, model it, and guide a newcomer through the same task in real time, both physically and cognitively.

Keep the work sustainable

Monitor physical load and fatigue over the course of a shift, and let the robot assume the part of the task that is causing the strain.

Both rely on the same three stages



A detailed technology roadmap sits behind this. We are keeping the slide at concept level because it is published.

We would be glad to present it in full during the consortium sessions.

Where the consortium stands

This is not a group being formed at this forum. It already exists and has already submitted a joint proposal.

8

institutions

6

countries

1

coordinator (EU)

2

partners still needed

Composition

- Six universities, one national research institute and one large industrial partner
- Five European countries and Korea
- Coordinated from the Netherlands
- Partners include principal investigators of ERC and Horizon 2020 projects in closely related fields

Track record together

The consortium prepared and submitted a joint proposal to a Cluster 4 call in 2025. It was evaluated by the Commission and was not selected for funding.

The reviewers were specific about where the proposal fell short, and those are the gaps we are here to close.

Two gaps identified by the reviewers

A concrete exploitation route towards manufacturing SMEs, and a standardisation strategy that goes beyond a statement of intent. Both require partners we do not yet have, which is why we are at this forum.

What we are looking for in Brussels

A manufacturing SME or end user

A partner with a real assembly, handling or maintenance task, and the willingness to host a pilot. This is the part of our impact case that requires a partner rather than further description.

A standardisation partner

A partner already active in robotics or AI safety standardisation, who can make a standardisation work package credible rather than aspirational.

Two questions for the consulting session

- How much of the impact and exploitation case belongs in a ten page first stage proposal?
- What makes a standardisation contribution credible to evaluators in a Research and Innovation Action?

Timeline

22 Sept 2026

Call opens

Q4 2026

Concept note with all partners

2 Feb 2027

First stage submission

2 Sept 2027

Second stage

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