



SMART

advanced manufacturing

ORGANISATION PROFILE

Irish Manufacturing Research is a non-for-profit RTO that helps Irish manufacturing companies to innovate. IMR has 100 employees of which 75 are researchers, working in Data Analytics, IIoT, Energy efficiency, Robotics, Circular Economy and Software Engineering.



**IRISH
MANUFACTURING
RESEARCH**



Workforce optimisation

Improving the performance
of manufacturing teams

PROPOSAL INTRODUCTION (I)

Vision: As we advance into the era of Industry 5.0, the intersection of automation, AI, and human labor becomes increasingly crucial. This project aims to harmonize these elements to make manufacturing jobs more attractive, diverse, and fulfilling.

There is a need to make jobs of humans working in the manufacturing sector more attractive for a diverse population of workers. Operator allocation to workstations needs to be tied to resource optimization and training, skills and certification.

Our vision is to create an environment where human-centered AI assists in optimizing operator allocation to workstations, aligning with resource optimization and individual capabilities like training, skills, and certifications. We intend to make jobs in manufacturing more appealing and sustainable, fostering a versatile and motivated workforce.

Motivation: By enhancing team performance, well-being, and motivation, we expect a domino effect of improvements in output, efficiency, rework levels, and scrap reduction, which directly impacts the company's bottom line and sustainability metrics.

PROPOSAL INTRODUCTION (II)

Expected outcome: an automated platform to (i) suggest best operator allocation based on quality and output targets to maintain skill level and certification, (ii) make visible where training gaps exist, and (iii) a system that is trusted and progressively improves its performance.

Impacts:

- Increase the motivation and hence performance level of the team;
- Improvement in sustainability KPIs such as rework levels and scrap.
- Optimised skill management and team composition will reduce the impact of workers (un)availability on the realisation of production plans

Schedule: duration 24 months

PARTNERS

Current Consortium:

- IMR will perform Data Analytics and User Experience
- An Irish industrial use case (manufacturing multinational)
- Zwickau university (Germany)
- German manufacturing SME

Partner search:

- Workforce psychology to understand and implement strategies for improved job satisfaction and performance.
- Workforce well-being to integrate health and satisfaction measures into daily workflows.

CONTACT INFO



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