

LEONARDO

Learning & Experimentation Open-Access factoRy for inDustrial wOrkforce 5.0

Horizontal Priority: Addressing digital transformation through development of digital readiness, resilience and capacity

HE priorities:

- ❑ Stimulating innovative learning and teaching practices through the development of student-centred curricula and micro courses
- ❑ fostering innovation and entrepreneurial skills of students by giving the opportunity to develop and test ideas with the LEAF

Key topics

- ❑ New learning and teaching methods and approaches
- ❑ Key competences development
- ❑ Initial and continuous training for teachers, trainers and other education staff

Duration: 24 months

Project coordinator



Partners



Motivation and Needs

1. HEIs wish to stay competitive in the international academic arena in line with the Industry 5.0 paradigm
2. Students wish to expand their skill set to prepare themselves for the future job market and reduce their skill gap
3. Students wish to practise IEM concepts in a real-world environment or replica of a production system, thus learning-by-doing (i.e. Teaching Factories)
4. Faculty needs to create attractive courses on human-centric smart factories

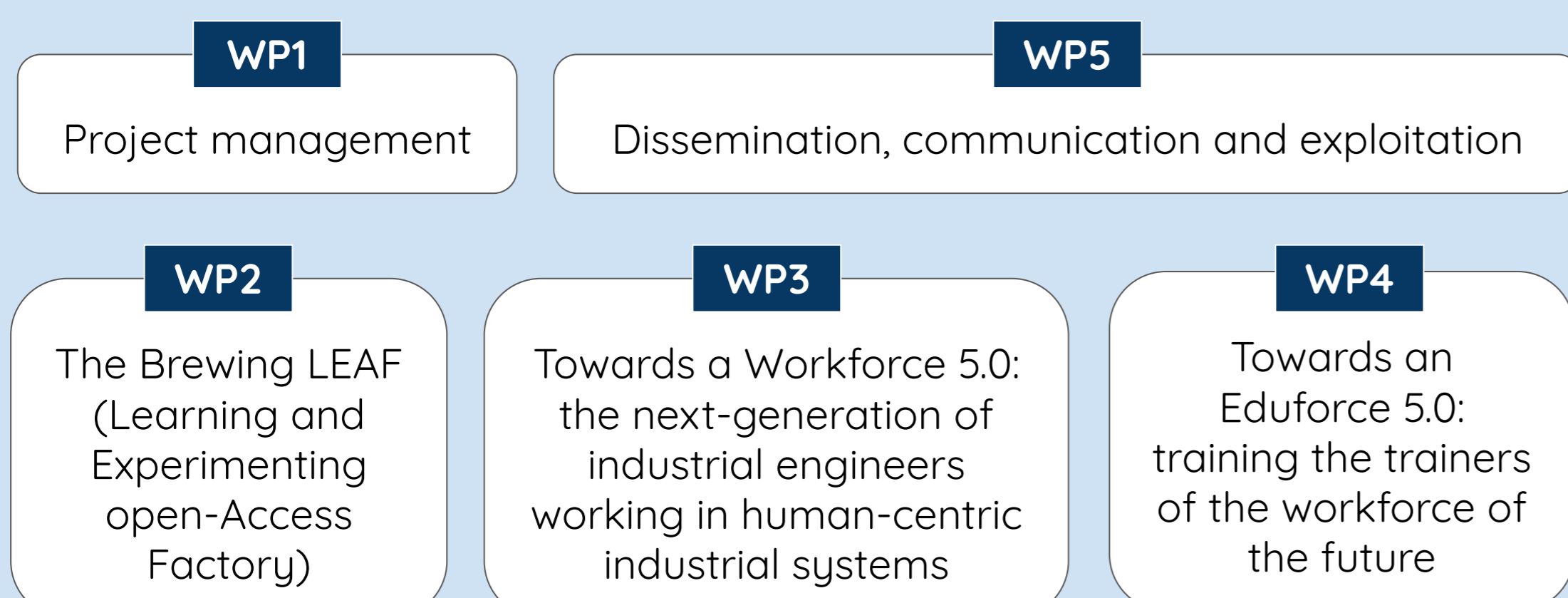
Side needs

- ❑ Companies need better-skilled talent prepared to work in human-centric workplaces
- ❑ European HEIs wish to adapt their educational offer in the light of Industry 5.0
- ❑ European IEM students and adults wish to practise IEM 5.0 learning chunks remotely, thus improving accessibility of teaching laboratories
- ❑ policymakers and stakeholders wish to understand how to shape the future of work and the industrial engineer/manager of the future

Planned activities

 Transnational project meetings	 Research and development	 Multiplier events
 Learning teaching training activity	 Intellectual output generation	

Project structure



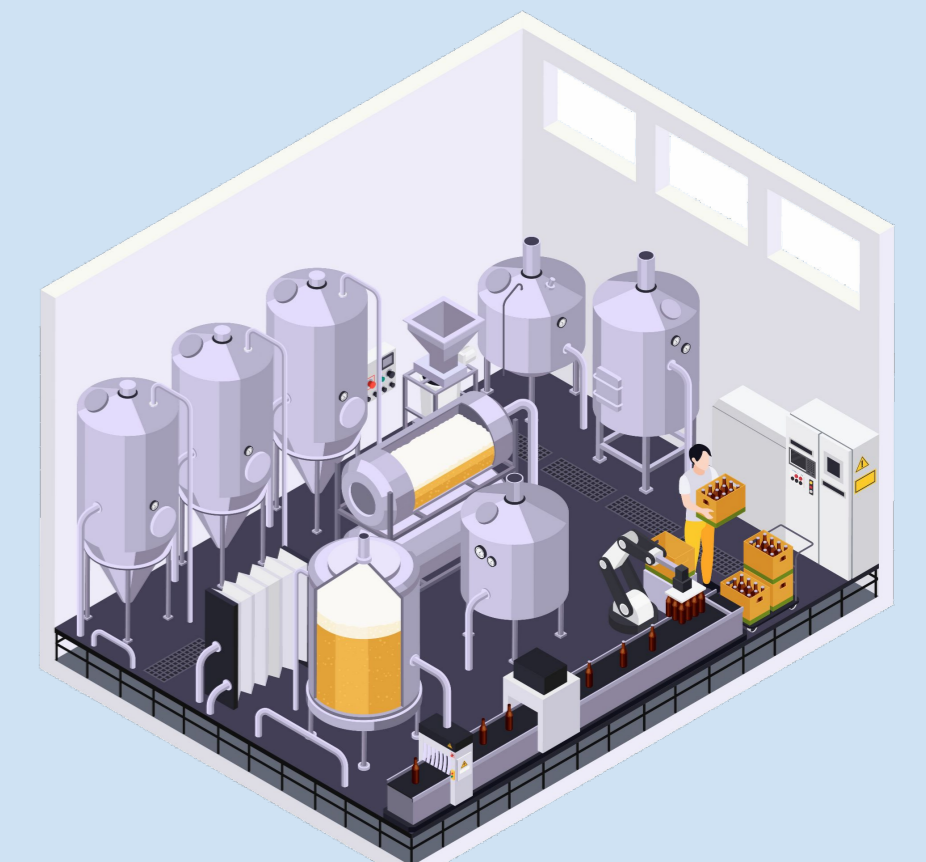
Main Objective and Specific Aims

LEONARDO aims to devise, develop and test innovative teaching methods, materials and tools for human-centric industrial engineering and management (H-IEM) in the light of the emerging Industry 5.0 paradigm.

- 1 To design, install, and “5.0-tize” a small-scale replica of a brewing system (called LEAF, Learning and Experimenting open-Access Factory) that will serve as a hands-on learning environment and as an incubator for human-centric student’s ideas

Expected results

- ❑ Brewing pilot system installation
- ❑ Digitalization, sensorization and automatization of the brewing system
- ❑ LEAF backend architecture and AI-based data analytics
- ❑ LEAF simulation-based digital twin
- ❑ LEAF augmented reality tool



- 2 To shape the future of H-IEM Education & Training and equip individuals with the skills, knowledge and tools they need to thrive in an ever-evolving industrial environment



Expected results

- ❑ skill set for human-centric factory workers
- ❑ open educational resources and H-IEM curriculum
- ❑ LEAF-as-a-Service student education toolkit
- ❑ first generation of trained H-IEM students

- 3 To nurture a European community of faculty and HEI staff committed to reinforce the education & training systems and trigger a modernisation of IEM education in the light of human-centricity in Industry 5.0

Expected results

- ❑ Gap analysis of H-IEM educational offer
- ❑ Skill profile for H-IEM educators
- ❑ Classroom resource kit for H-IEM trainers
- ❑ Toolset of training and upskilling the trainers
- ❑ First generation of trained H-IEM educators



Contact us

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