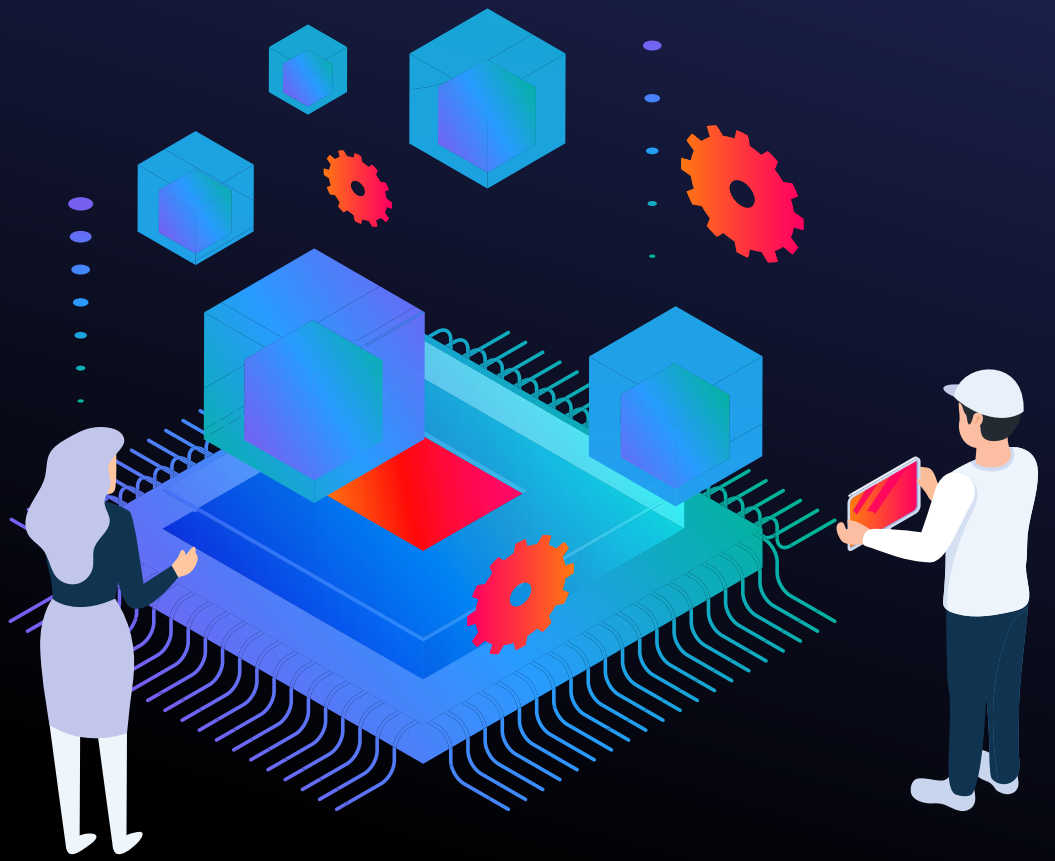
teaming.ai

Human-AI Teaming Platform for Maintaining and Evolving AI Systems in Manufacturing



15

8
countries

5,7M€

36

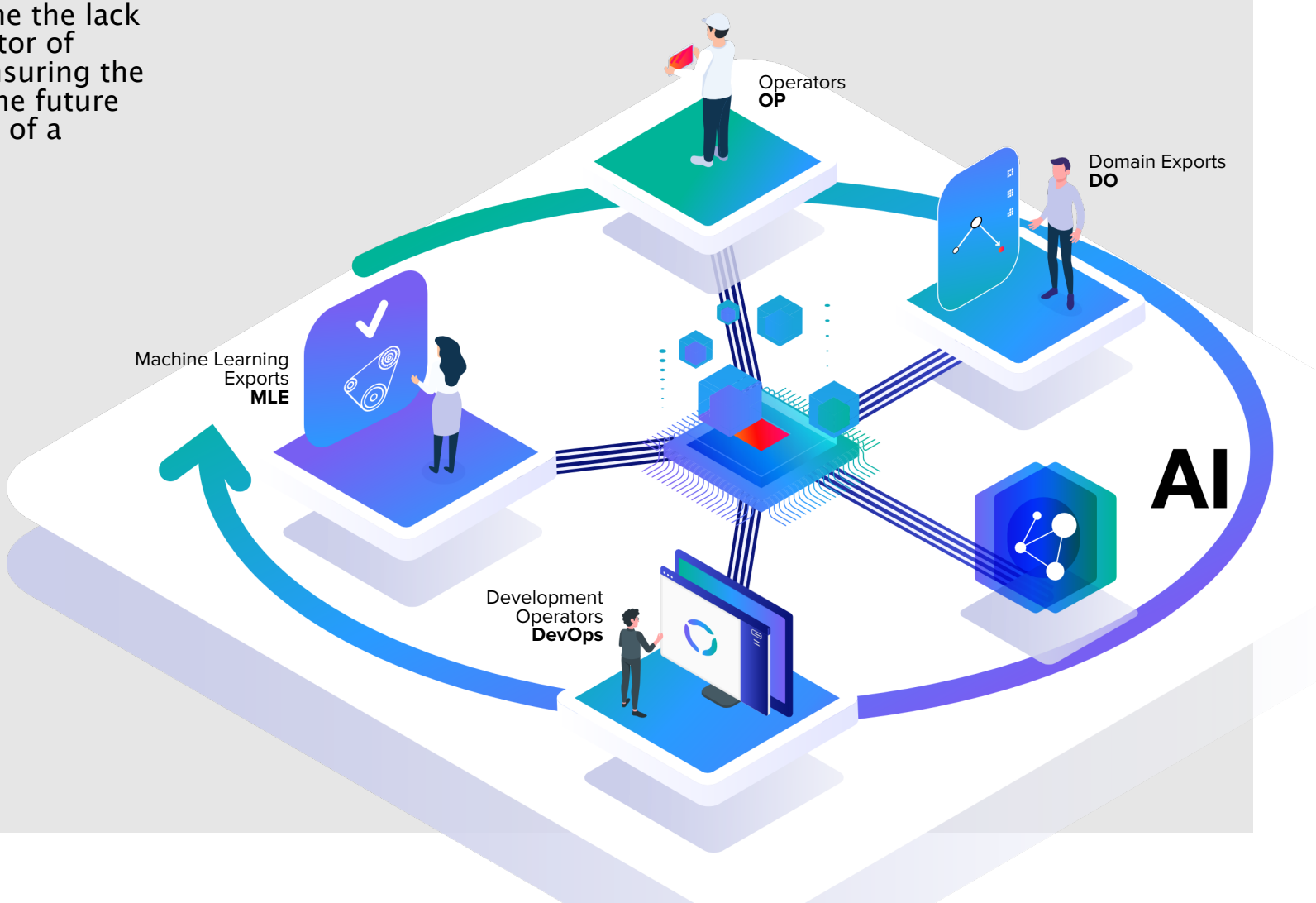
The Project

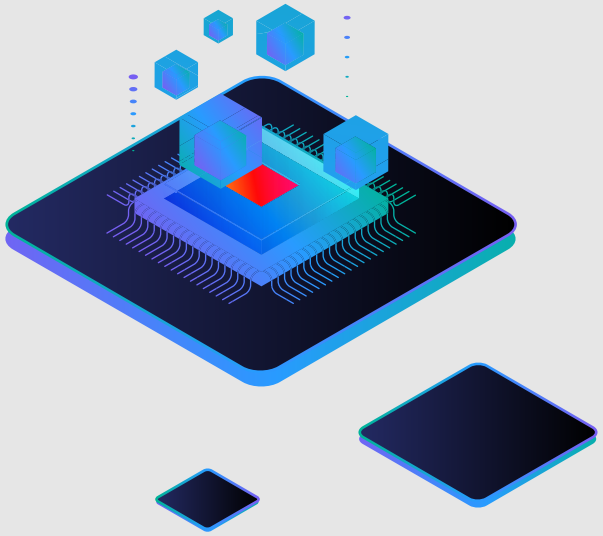
TEAMING.AI aims to overcome the lack of flexibility as a limiting factor of current Industry 4.0 while ensuring the role of the human being in the future industrial scenario by means of a

TEAMING.AI project aims to make a breakthrough in **smart manufacturing** by introducing greater customisation and personalisation of products and services in AI technologies.

Through a new **human and AI teaming framework**, manufacturing processes will be optimised: the greatest strengths of both these elements can be maximised

- Trustful Human-AI Teaming
- Situation Awareness in Production Processes
- Auditable Ethics
- Agile AI System Engineering





Use Cases

TEAMING.AI framework will be tested in three industrial use case scenarios selected to represent different levels and aspects of human involvement:

quality control (Use Case 1) and **machine and process diagnostics** (Use Case 2). The third one (Use Case 3)

Use Case 1

Transfer learning based robust **quality inspection** (for plastic injection sector)

AI/ML systems in plastic industry usually rely on machine vision techniques based on smart cameras and neuronal networks as classifiers to detect mentioned common faults. Stability problems during **quality control process** increases setup and maintenance time and “out of tolerance” products always have a risk to be used by customer which negatively

FAR/Turkey

Use Case 2

Machine diagnostics for plastic injection sector to improve quality and reduce waste

This use case focuses on machine and process diagnostics rather than checking the **quality at the end of the production** of an injection moulding process starting with the pre-processing (insert preheating, testing of raw materials, dyeing and dry), the actual process of injection (temperature, pressure, moulding cycle time) and the post-processing (annealing, humidity).

IAL/Spain

Use Case 3

Ergonomics and risk prevention in large part manufacturing

Workers have to **manipulate and manually clamp large-sized and heavy parts in highprecision manufacturing machines** for grinding or milling operations with high quality. This process takes an important part of the total cycle time of a working order and workers are exposed to occupational risks.

GOI/Spain

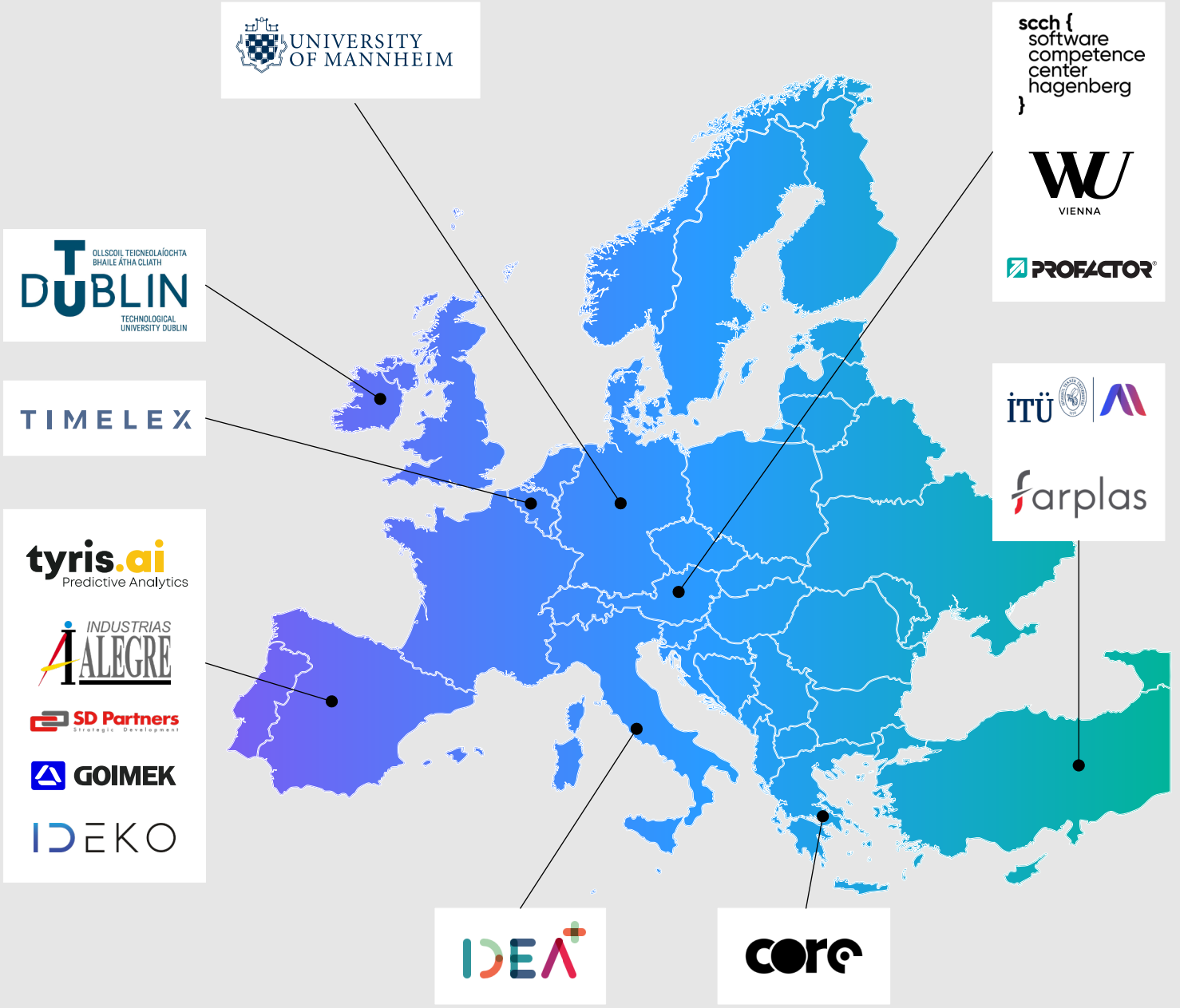
Impact

-2%
reduce of mean time to diagnose

-50%
reduce of work accidents

-50%
reduce in product waste

+20%
productivity increase

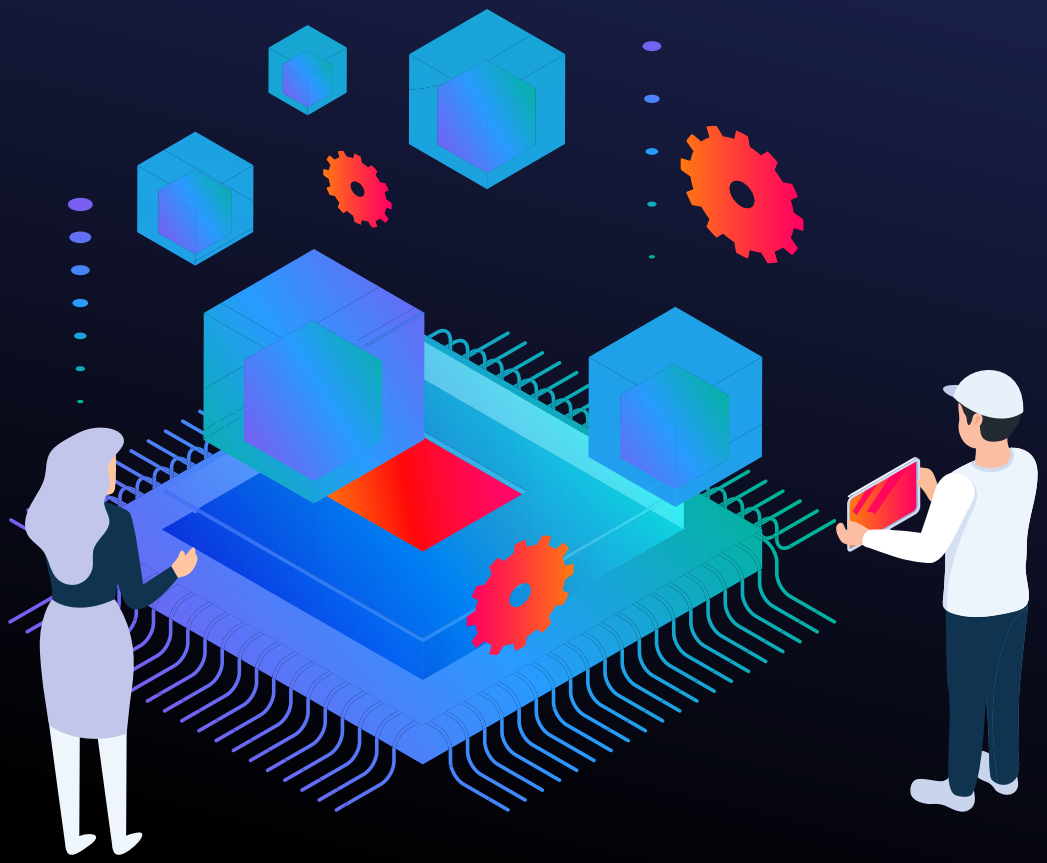


teaming.ai

@TEAMING.AI

TEAMING AI PROJECT

TEAMINGAI-PROJECT.EU



This project receives funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement Number 957402.