



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



15
partners



8
countries



5,7M€
EU Funding



36
Months

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 human centred AI collaboration.



Trustful
Human-AI Teaming



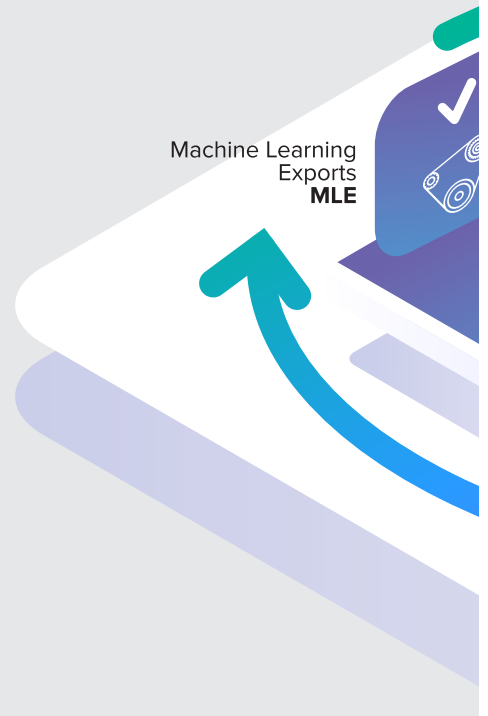
Situation Awareness in
Production Processes



Auditable Ethics

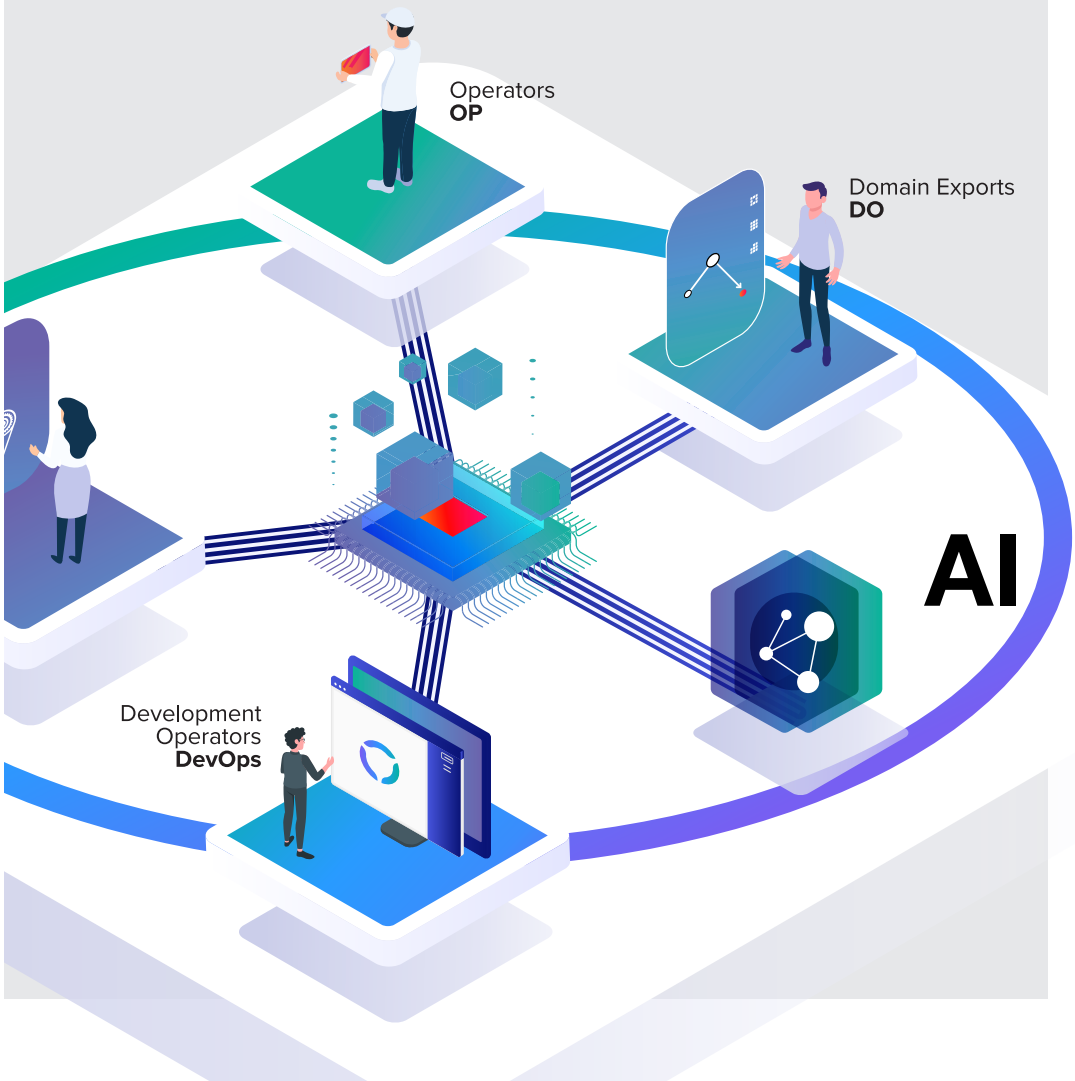


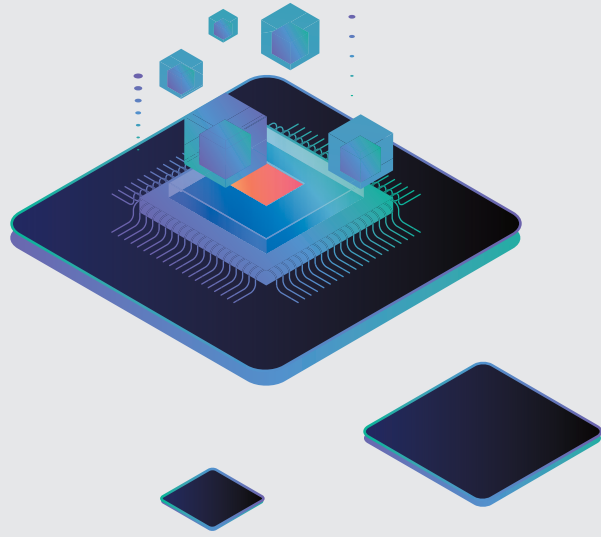
Agile AI
System Engineering



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 while safety and ethical compliance guidelines are examined and maintained.





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) focusses on **harm prevention** in dynamic production environments.

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 affect **production efficiency**.

📍 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



Impacts



Certifiable AI for human autonomy



Improved adoption and acceptance of AI



Reduced setup time and maintenance cost



More flexible production processes



FOR MAINTAINING AND EVOLVING AI SYSTEMS IN MANUFACTURING

SITY
NHEIM

scch {
software
competence
center
hagenberg
}

WU
VIENNA

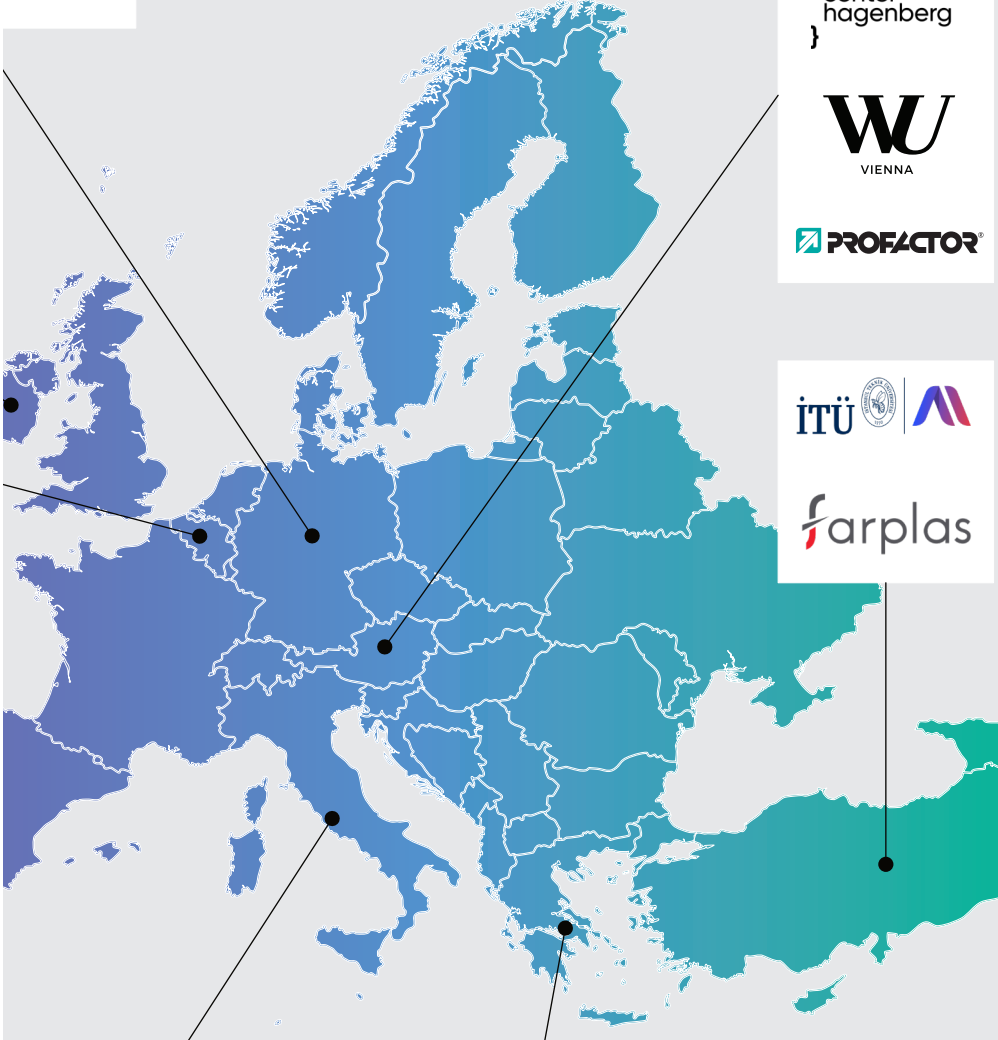
PROFACTOR

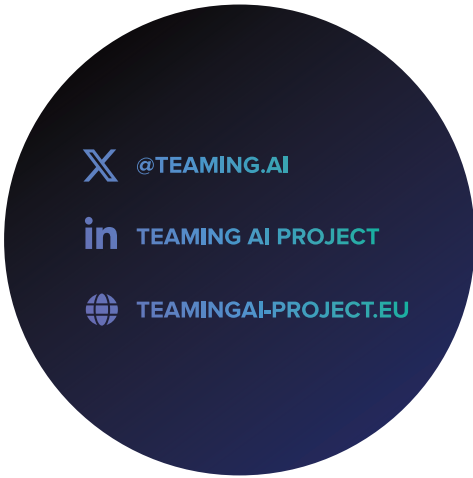
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