CMT4ALL
Collaborative Manufacturing Tasks for All Workers

AR | Vision & AI | Cobot | CMT4ALL | NUI

GRENOBLE INP UGA | ADTP | Tekniker MEMBER OF BASQUE RESEARCH & TECHNOLOGY ALLIANCE | ALFA mim-tech metal injection moulding technologies | LMS Laboratory for Manufacturing Systems & Automation | KLEEMANN

PROBLEM/ISSUE ADDRESSED
All persons in society, regardless their profile (including persons with disabilities, aging population, cultural diversity...), have the right to access satisfactory jobs of their choice. However, jobs in manufacturing industries are often very restrictive regarding the worker profile they look for.

SOLUTION
Applying principles of design-for-all for innovative combinations of collaborative technologies (cobots, machine vision with AI, augmented reality, natural interaction), CMT4ALL has developed a modular manufacturing workstation that can benefit workers with any profile.

WHY IT IS IMPORTANT FOR SOCIETY
The modular CMT4ALL workstation supports social sustainability of industrial manufacturing jobs. It reduces the skill barrier to manufacturing jobs, providing access to workers lacking in experience, workers with disabilities, aging workforce.
It also proofs that a user centred integration of new technologies is a powerful tool to supports employability of workers in manufacturing industries, with jobs that provide better work conditions and produce better quality.

eit Manufacturing

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> " Thanks to EIT we were able to develop and integrate modules of the CMT4ALL workstation into a diverse catalogue of real industrial use cases, demonstrate its versatility. "

MAIN RESULTS & INSIGHTS

- Improved ergonomics by partnering with a collaborative robot that takes on the more physically demanding parts of the production task.

- Augmented reality, machine vision and AI lead the worker in executing the process correctly, and check for any possible errors of execution in real time.

- Observable safety—in-action and natural communication channels between worker and workstation improve workers' trust in collaborative manufacturing technologies.

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