

## Open Robotics and Physical AI: Powering the next generation of industry-ready talent

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Universities of applied sciences are increasingly expected to act as talent engines for industry, translating applied research into the skills and competences that modern workplaces require. The Erasmus+ project Accessible Robotics and AI Supporting Education (ARAISE) demonstrates how applied research in open robotics and physical AI can directly contribute to the development of industry-ready digital and engineering skills, while also supporting teachers and widening participation in STEM.

The project is built on applied research around the open-source Robotont educational robot, focusing on removing the technical, cognitive and accessibility barriers that prevent many schools and learners from engaging with advanced digital technologies. Through iterative co-design with teachers and classroom pilots, ARAISE has developed industry-relevant human-robot interaction solutions, including visual programming, gesture-based control and a web-based setup environment. These tools allow learners to work with physical AI systems in ways that mirror real industrial workflows, without requiring advanced prior technical expertise.

Beyond technology development, ARAISE applies research-based pedagogical and training models to equip teachers with the competences needed to deliver robotics and physical AI education aligned with labour-market needs. Through structured professional development, ready-to-use learning materials and an international teacher community, educators are empowered to embed robotics into their curricula as a pathway to digital, problem-solving and engineering skills demanded by industry.

The project shows how applied research can generate systemic impact: transforming research outputs into classroom-ready tools, strengthening institutional capacity, and creating scalable learning pathways that prepare diverse groups of learners for future jobs in digitalised and automated industries. The open-source, multilingual and web-based nature of the solutions ensures that this model of industry-oriented applied research in education is transferable and sustainable across different regions and education systems.