



PROJECT IN A NUTSHELL

HARTU is an industry-led research project addressing the main challenges of part handling in the manufacturing lines, including gripping, assembly and placement, using innovative and Al-enhanced technical approaches.

The project will apply innovative techniques in industrial case studies to develop tools capable of handling a wide range of products in terms of shape, material and size, enhancing the flexibility, reconfigurability and efficiency of production lines.

OBJECTIVES



Techno-industrial: **Automated grasping**



Techno-industrial: Contact-rich assembly



Techno-industrial: Al-based visual handling



Techno-industrial: **Electro-active soft** grippers



Techno-industrial: **Optimised handling** systems



CHALLENGES AND NEEDS

CONTACT-RICH ASSEMBLY SKILLS

COLLECTING REQUIREMENTS

ADAPTING THE WORK PROCESSES TO NEW TASKS AND

> **MAPPING** SKILLS REQUIRED TO **OPERATE WITH NEW**

USER NEEDS AND

PROCEDURES

COMPETENCIES AND SYSTEMS





USER-RELATED STUDIES

SOLUTIONS

GRASP/RELEASE **OPERATION AND PLANNING**

> VISUAL **PERCEPTION**

HUMAN-AI TEAMING MODEL



SOFT GRIPPERS WITH **ELECTRO-ACTIVE FINGERTIPS**

TACTILE/FORCE **PERCEPTION**

PROGRAMMING-BY-**DEMONSTRATION**

INDUSTRIAL APPLICATIONS





















OMNIGRASP

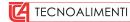
















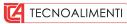


















Funded by the Europea Union

This project has received funding from the European Union's research and innovation programme Horizon Europe under the grant agreement No. 101092100.

CONTACT US

Project Coordinator: Iñaki Maurtua inaki.maurtua@tekniker.es

Dissemination Manager: Marta Cecconi marta.cecconi@dblue.it

FOLLOW US









Produced in October 2023