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AUTOMATION MADE SIMPLE

Coordinated by



**Thimonnier**



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Manipulation Enhancement through Robotic Guidance and Intelligent Novel Grippers



**MERGING,**  
solutions for automating  
non-rigid product  
manufacturing

A European project that aims at creating a robotic platform that can manipulate soft materials in industrial environments, by pioneering new robotic gripper and technologies with application of artificial intelligence

# Innovative technologies

# Three industrial use cases



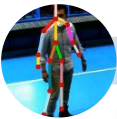
Dexterous grippers



Skill based programming



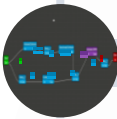
Deformable object perception



Human tracking



Modelling & Model-based comanipulation



Orchestration and execution control tools



Haptics comanipulation



Learning based teaching methods

## An ambitious target

*“The MERGING project aims to provide manufacturers with a **versatile, easy-to-use** and **low-cost** solution to automate or assist the handling of flexible and fragile objects. By addressing challenges such as handling of **soft materials** using robots, developing handling devices which are intelligent and universally dexterous, and making future robots capable of handling soft products while controlling their level of deformation, it will lead to **disruptive innovations in many sectors.**”*

### Food packaging industry

An innovative robotic setup incorporates advanced programming and perception techniques to provide unprecedented automated solutions.



**Thimonnier**



### Composites for automotive industry

Digital modelling, multi-modal sensing and intelligent handling solutions improve operators' well-being while efficiency is enhanced.

**VDL**

### Textiles and garment industry

Enhanced by artificial intelligence, the robot undertakes tedious and repetitive tasks. Pioneer perception solutions empower robotic handling.



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