

## PROBLEM/ISSUE ADDRESSED

Instead of subtracting material (machining) and welding for manufacturing moulds, MOLDAM project proposes a Hybrid approach, combining the addition of material, using Additive Manufacturing technology based on the extrusion of pellets for creating preforms of moulds, and conventional machining. Moulds will be built, inspected, machined and finished in the same cell (2023), assisted by a Digital Twin application.

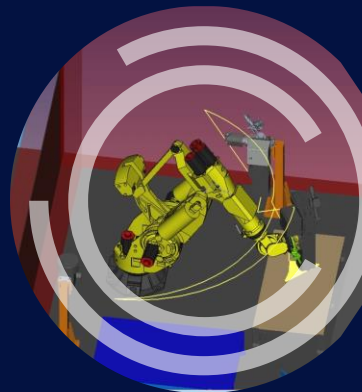
## SOLUTION

Replacement of the currently used moulds, generally in metallic materials such as INVAR, by additive manufactured moulds in a mixture of thermoplastic and composite materials.

## WHY IT IS IMPORTANT FOR SOCIETY

- Reduction of the energy consumption
- Reduction of the lead time
- Reduction of the material amount avoiding waste material
- Reduction of the manufacturing and logistics costs, increasing the productivity

“ Thanks to EIT we will be able to print large mould preforms by means of direct extrusion of reinforced thermoplastics for high performance applications in different sectors ”



## MAIN RESULTS & INSIGHTS



Robotic Hybrid Manufacturing system designed to create big moulds using reinforced thermoplastics, combining already existing Additive Manufacturing (AM) technologies



MOLDAM Knowledge software that gathers information of the process, mould simulations under real conditions and material characterization



Printed preforms, taking into account specific design after FEM simulations, using characterized material behaviour



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### MAIN PRODUCT

MOLDAM project  
**AIM:** Develop a new additive manufacturing technology for creating large moulds for various industrial sectors based on thermoplastics



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