



Open-Digital-Industrial and Networking pilot lines
using modular components for scalable production

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PRESS RELEASE: EU project ODIN launches its activities aiming to strengthen production companies' trust in using advanced robotics

The European ODIN project, will introduce a **new production paradigm where smart robotic systems can work autonomously** and act as **assistants to human operators** without the need of physical separation barriers. The target is to boost the productivity and enhance the job quality of human operators of the European factories by exploiting the modern robot capabilities.

Although **robots are considered as a main enabler for optimizing European manufacturing performance**, the high integration and deployment complexity has been constraining their adoption by a wider range of industries. To **strengthen EU production companies' trust** in using advanced robotics, **ODIN's vision is to demonstrate that novel robot-based production systems are not only technically feasible, but also efficient and sustainable for immediate introduction at the shopfloor.**

ODIN will **combine Artificial Intelligence with digital models** to grant robots perception abilities for their environment, their manufacturing task and the human operators intentions. These understanding and prediction abilities will allow the robots to adjust their behavior and autonomously adapt in production changes.

To achieve this vision, **ODIN will implement Large Scale Pilots composed by 4 technical components** (Figure 1), demonstrating the novel robot technologies in three different industrial sectors, automotive, aeronautics and white goods, proving the **solution's cross sectorial applicability.**

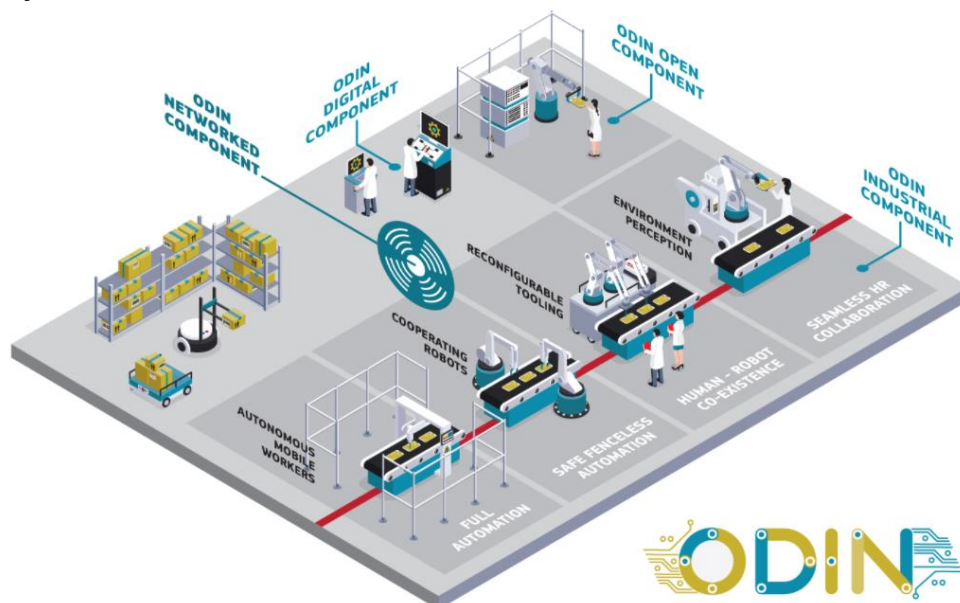


Figure 1: ODIN Large Scale Pilot Paradigm



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Figure 1: ODIN Large Scale Pilot Paradigm

The first phase of the project has been focusing on the definition of the industrial pilot cases as well as the identification of the technical specifications for implementing ODIN respective pilot lines. Currently, following the close cooperation of ODIN industrial end users and ODIN technology providers, the ODIN vision for the real industrial scenarios has been defined:

- **Automotive use case:** Bring together a high payload collaborative robot, a mobile robot worker and a team of human operators to collaborate, performing insertion and screwing tasks, for the multi-model assembly of hybrid engines for passenger vehicles,
- **Aeronautics use case:** Employ a mobile dual arm worker flexible enough to autonomously undertake multiple operations such as drilling, logistics and inspection tasks for the production of fan-cowls which serve as the external housing for the engines of an aircraft,
- **White goods use case:** Deploy digital optimization and validation tools to enable the autonomous and fast reconfiguration of an Human Robot Collaborative assembly cell which produces transformers for microwaves.

The project kicked off in January 2021 and will be completed by December 2024, lasting 48 months. The project is fully funded by European Commission and falls within the scope of "ICT-46-2020 - Robotics in Application Areas and Coordination & Support" H2020 call topic. ODIN brings together 15 partners from 8 EU countries (Greece, Spain, Italy, France, Germany, Sweden, Finland, Luxembourg) under the coordination of LMS-University of Patras towards materializing the project vision.

Contact us

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More information on the ODIN project can be found at www.ODIN-H2020.eu.

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