



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

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PRESS RELEASE: ODIN Revolutionizes Robotics for Flexible and Scalable Industrial Production

ODIN project is pleased to announce its successful conclusion, marking a significant step toward the widespread adoption of **advanced robotics in agile production**. Over the course of its implementation, ODIN has tackled key challenges in robotic systems' integration, demonstrating their potential for **efficiency, flexibility and scalability in diverse industrial environments**.

The final phase of the project was centralized on the integration of ODIN pilots at end users' facilities in order to proof their applicability but also evaluate their effectiveness.

Automotive Pilot Line: The installation of ODIN automotive demonstrator was led by LMS and took place during the final period of the project at STELLANTIS Torino plant in Italy. Multiple workshops were held to showcase:

- **Human-robot collaborative assembly** of high payload motor & gearbox
- Mobile manipulators for **screwing while moving**
- Mobile manipulators for **quality inspection** utilizing **AI-based perception**



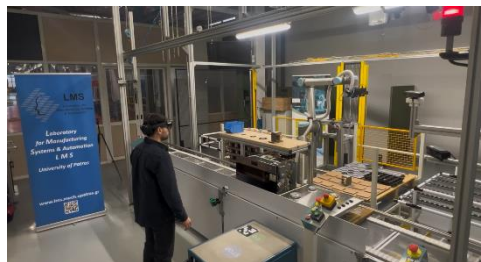
Aeronautics Pilot Line: The integration of ODIN Aeronautics pilot at Cadiz, Spain took place during the 3rd phase of the project. TECNALIA led the integration activities and together with AEROTECNIC organized workshops to demonstrate ODIN's Aeronautics pilot line showcasing:

- **Autonomous transportation** of fan-cowls
- **Template base drilling** by mobile manipulators
- **Quality inspection** of aeronautics parts



White Goods Pilot Line: The White Goods demonstrator has been integrated at BEKO's industrial facility in Biandronno, Italy. Several workshops were organized to present ODIN solution at assembly line's operators and managers but also collect valuable information to evaluate ODIN solution for:

- **Reconfigurable human-robot collaborative assembly** of white goods parts
- **Human-centric interfaces** for **operator support**
- **Digital Twin** for **robust customization** and deployment



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While robotics has long been a cornerstone of mass production, its application in lower-volume and flexible environments has faced considerable hurdles. The complexity of integrating robots into existing systems, particularly for **human-robot collaboration (HRC)**, has slowed **adoption in smaller companies** and industries requiring more **agile production**. ODIN's vision has been clear from the start: *to demonstrate that novel, robot-based production systems can be efficient, sustainable, and ready for immediate introduction on the shop floor*. Through the validation of ODIN pilots at end users' premises, it has been proven that **ODIN solution promotes:**

- ✓ **Easy customization and deploy ability** through the development and validation of **OpenFlow** integration and communication framework enabling the **easy integration** of robotic applications.
- ✓ **Human-Robot Collaboration** by developing a) **AR-based application** to support operators during manufacturing operations' execution, b) **VR-based application** for operators' safety training but also c) **projector-based interfaces** for Human-Robot Interaction (HRI).
- ✓ **Flexible robotic technologies for different production tasks** thanks to the provision of **AI object detection and localization** and **easy robot programming** solutions as well as **reconfigurable robotic grippers**.
- ✓ **Compatibility with existing production processes/systems** thanks to OpenFlow framework's ability to communicate with existing production line MES/SCADA system for data exchange.
- ✓ **Robustness** in production performance thanks to ODIN **process and environment perception** and **autonomous mobile robots** executing a variety of manufacturing tasks (assembly, drilling, transportation, inspection).

A Lasting Impact on European Manufacturing

The ODIN project has proven that robotic systems can be deployed in **modular and reconfigurable** ways, meeting the needs of diverse industries. Its success not only **enhances** the capabilities of **European manufacturing** but also **strengthens the trust** of production companies **in advanced robotics**. The outcomes of ODIN lay the groundwork for future developments in industrial robotics, ensuring that **smaller companies** and flexible production environments **can benefit from cutting-edge technologies**.

Looking Ahead

As ODIN concludes, the research & technology developed will continue to influence **robotics in agile production**. The project's commitment to safety, flexibility, and performance in **human-robot collaboration** will serve as a **blueprint for future industrial applications**.

Contact us

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More information on the ODIN project can be found at www.odin-h2020.eu.
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