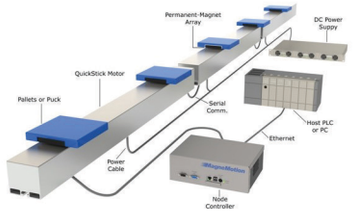
Two Demonstrators

Two demonstrators prove the platform methodology on production lines.

Contact lens automated transport layer



Injection mold industry

Key Facts

Start: 1-6-2017
Total investment: € 17M
Participating organisations: 31
Number of countries: 10
Duration: 36 months

Project Consortium

Acknowledgement

This project has received funding from the Electronic Components Systems for European Leadership Joint Undertaking under grant agreement No 737453. This Joint Undertaking receives support from the European Union's Horizon 2020 research and innovation programme and Netherlands, Czech Republic, Latvia, Spain, Greece, Portugal, Belgium, Italy, France, Ireland".

ECSEL Joint Undertaking
Electronic Components and Systems for European Leadership

Intelligent Motion Control Platform for Smart Mechatronic Systems

AN ECSEL JOINT UNDERTAKING PROJECT

Contact

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I-MECH Smart Mechatronic Solutions
@IMECH_Project

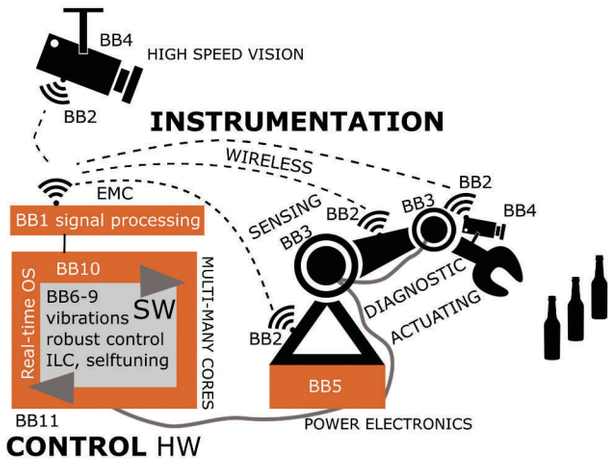
ABOUT THE PROJECT

The I-MECH project aims to design and implement a widely applicable, modular, open motion control platform and related smart components. The high added value of I-MECH platform will be directly verified in five different motion control sectors: high-speed/big CNC machining, additive manufacturing, semicon, highspeed packaging and healthcare robotics. The project outcome will impact on the entire value chain of the production automation market and, through envisioned I-MECH center, create sustainable proposition for future EU smart industry.

I-MECH Building Blocks

The following 11 building blocks will be developed in the first three years of the I-MECH project, afterwards many others may be added:

BB1 Platform for smart sensors with advanced data processing
BB2 Real-time wireless sensors
BB3 Robust condition monitoring and predictive diagnostics
BB4 High speed vision
BB5 High performance servo amplifier
BB6 Self-commissioning velocity and position control loops
BB7 Vibration control module
BB8 Robust model-based multivariable control
BB9 Iterative and repetitive control module
BB10 Control specific multi/many core platform
BB11 RTOS for multi/many core platform

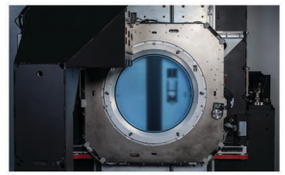


Five Pilots

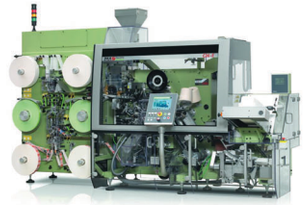
The I-MECH pilots show how the machine builders/producers can innovate their products using I-MECH platform and bring them to higher performance.

Generic substrate carrier (GSC)

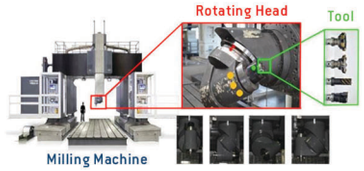
12" Wafer stage



Inline filling & stoppering and tea bag machine



Smart machining tools and milling machines



Medical manipulator

Five Use Cases

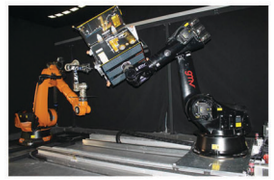
The I-MECH use cases show how to deploy I-MECH solutions to legacy systems, commercial control HW products and third-party robotic systems.

Drive for industrial applications

Compact control + HMI for CNC machines

Programmable automation controller (PAC) based modular hardware

Validation of space GNC systems



Open modular robotic arm