



HORIZON-CL4-2022-TWIN-TRANSITION-01-04: Intelligent work piece handling in a full production line (Made in Europe Partnership) (RIA) Specific conditions

Ideas for the project:

- Unique sensors design and development
- Automation and diagnostics in production process
- Numerical simulation of logistics operations and procedures on virtual model of production line
- Development and integration of tools for processes digitization and quality evaluation systems of continuously manufactured products
- Centralization of data from the production line
- Development of new sensors for additional data acquisition
- Datamining processes with usage of AI
- Use of AI in quality control process
- Sensitivity analysis for finding relevant interlinks in the production process

Infrastructure offered:

- o More than 200 m² of relevant laboratories
- o Workstations for long term simulations
- o Laboratories for electronic circuit development and testing
- o Infrastructure for numerical and physical simulations

Recent projects solved, related to the issue:

- o CZ.01.1.02/0.0/0.0/20_321/0023812 → Development and verification of new technology of industrial automation and digitization of the production process of zinc pigments, obtained by recycling and utilization of waste
- o CZ.01.1.02/0.0/0.0/20_321/0025077 → Advanced diagnostics and adaptive autonomous control and measurement systems at robotic production sites
- o CK01000190 → Sensor measurement of pedestrian roads in the urban environment to support the mobility of people with disabilities
- o CZ.01.1.02/0.0/0.0/20_321/0024458 → Development of test and application equipment for HMI (Human Machine Interface) devices
- o CZ.01.1.02/0.0/0.0/20_321/0025266 → Advanced devices for autonomous mobile machines

Active participation in relevant associations:

- o Cluster WASTen
- o Automotive Industry Association
- o Czech Society for Mechanics

Digital Innovation Hubs:

- o South Bohemian Science and Technology Park

Partners in previous research projects:

University of Hradec Králové, VSB-Technical University of Ostrava

Contacts with industrial partners:

MOTOR JIKOV Strojírenská a.s., COREZINC s.r.o., KERN s.r.o., MULTICORE s.r.o., TŘINECKÉ ŽELEZÁRNY, a. s., PKS servis spol. s r.o., T.W.I. spol. s r.o., AUFEER DESIGN, s.r.o., AJKA - SOLUTION s.r.o., Campus energy spol. s r.o., ITB Engineering & Production s.r.o.

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