Asset Administration Shells (AAS) based Digital Twin pipelines

INDUSTRY4.0 *lab*

INDUSTRY 4.0 LAB IN A NUTSHELL

Founded: 1836
Location: Milano, Italy
Technology: Digital Twin
Industry: Manufacturing
Website:
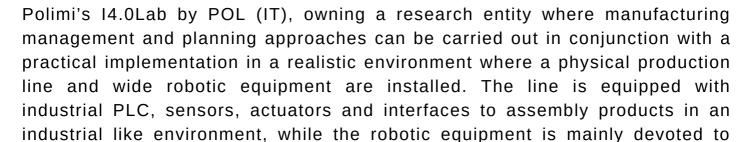**https://www.industry40lab.org/**

ABOUT INDUSTRY 4.0 LAB ⌄

The Manufacturing Group of Department of Management, Economics and Industrial Engineering of Politecnico di Milano created a tangible physical entity where the research activity in the innovative manufacturing management and planning approaches can be carried out in conjunction with a practical implementation in a "real-like" environment: the Industry 4.0 Lab (I4.0 LAB). The manufacturing ecosystem includes three major components to consider: the human factor, the product, and the process/plant. All these three factors need to be considered in a holistic way, to adequately build engineering and management competences. I4.0LAB addresses these three aspects in a flexible and scalable environment.
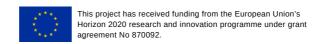
INDUSTRY 4.0 LAB PILOT LINE ⌄

Polimi's I4.0Lab by POL (IT), owning a research entity where manufacturing management and planning approaches can be carried out in conjunction with a practical implementation in a realistic environment where a physical production line and wide robotic equipment are installed. The line is equipped with industrial PLC, sensors, actuators and interfaces to assembly products in an industrial like environment, while the robotic equipment is mainly devoted to serve the line in terms of material handling.

The integration of existing assets into Digital Twins is a traditionally long-lasting activities, which requires several days of interviews and investigation. Thanks to the introduction of AAS in the digital portfolio of the line, this time has been decreased by an order of magnitude, complementing the wide availability of data for production scheduling, control and analysis.

SERVICES OFFERED

1 **AAS assessment**

Compliance verification to the latest standards

2 **AAS modeling/connection**

AAS packages and pipelines development

3 **AAS training courses**

Various level of courses about AAS (from general knowledge to mastering-level)

BENEFITS

Digitalisation of all the production processes performed by machines on the shopfloor of manufacturing companies.

VALUE PER SERVICE

- **AAS assessment - Starting from 5000€, depending on the number of assets**
- **AAS modeling/connection - Starting from 10000€, depending on the number of assets**
- **AAS training courses - Depending on the training offer where to be included and on the expected number of attendees**