

CONSORTIUM

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LMS

Laboratory for
Manufacturing Systems
& Automation



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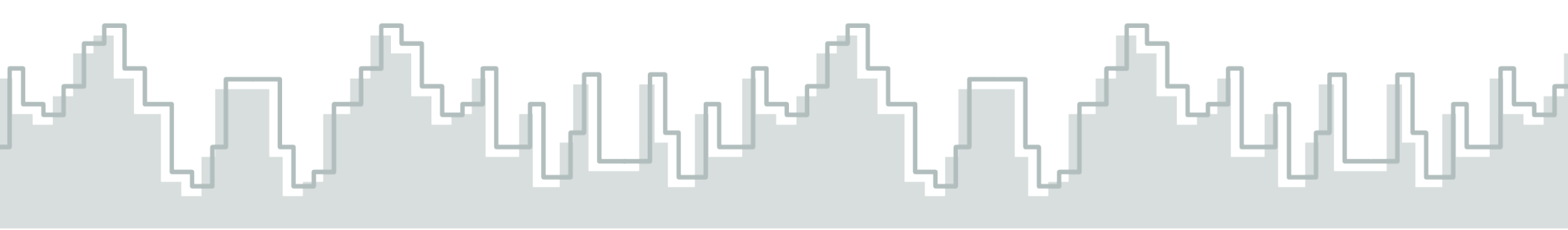
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Edge intelligence
for condition monitoring

Preventive maintenance solution for
manufacturing industry

www.assetup40.eu



Background

- AssetUp4.0 is an EIT manufacturing project that aims to detect impending system-critical malfunctions in harsh industrial environments at an early stage using configurable AI analysis chains.
- The focus relies on a systematic approach, combining the relevant AI algorithms, concepts, and specific solutions into an industrial ecosystem.
- The AssetUp4.0 solution offers asset operational visibility and monitoring of maintenance critical parameters and will be field tested on Aluminium of Greece's plant in the ore processing section for milling.

AssetUp4.0 Benefits:

- Flexible, resilient and scalable platform with unique ease-of-use and applicability to many different use cases.
- Modular sensing and analysis approach ranging from the edge to the cloud.
- Bridging the gaps for the integration of AI between the shop floor operators, and data scientist.
- Lower the entry barrier for companies including SMEs to apply predictive maintenance solutions with its containerised micro-service approach.

AssetUp4.0 Platform

AssetUp4.0 Platform is a holistic platform, ranging from the field via the edge to the cloud.

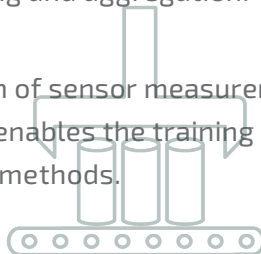
It supports the data acquisition, the data processing, the predictive maintenance and the visualisation capabilities so that employees stay informed and in control.



- The Platform includes IIoT hardware components specifically adapted for the harsh industrial environment.



- IIoT unit integrates enhanced processing capability in order to provide the required edge intelligence and data filtering and aggregation.



- The aggregation of sensor measurements and historical data enables the training and continuous execution of AI methods.
- The AI methods are configurable and the results are shared within the platform.

Key Features

ASSESSMENT OF PRODUCTION STATUS FROM SMART SENSOR

- Edge device for for sensing and assessing asset's status.
- Sensors for vibration, temperature, flow rate, noise.



CONDITION MONITORING AND PREDICTIVE MAINTENANCE

- Web application for predictive maintenance.
- Application of AI methods on heterogeneous streaming data.



SMART SENSING FOR ASSET MANAGEMENT

- Visualisation of production status.
- Visualisation of prediction results.

