EnerTEF

TEF IND Satellite

The satellite is based in Greece and is led by LMS, which will act both as a data source provide and as an end user. LMS is responsible for the manufacturing networks used to provide the physical and virtual assets.

LMS
Laboratory for Manufacturing Systems & Automation

Unlock Innovation with Our Energy Services

Designed for SMEs and Startups! ⟶

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Services

01 Sustainable Supply Chain Optimizer

This AI service aims at optimizing the flow of resources within a supply chain network. The sustainability is added on top of more standard attributes, such as time-related metrics, with the help of KPIs such as energy efficiency / consumption and/or CO2 emissions. The input is related to the network structure and the alternatives of the input variables. The output is a good (near optimum) solution for the flow of the resources

02 AI Manufacturing Process X Modeller (Dig. Twin)

With the help of this AI services bundle (X = a specific manufacturing process), the behaviour of a manufacturing process can be modelled. As such, both the operation and the design of a manufacturing line can be facilitated, as optimization scenarios, as well what-if scenarios, can be considered. The input and the output comprises the profiles of the engaged variables in time. Sustainability can thus be optimized either by Energy efficiency directly, or through considering defects reduction workflows.

03 Energy-Efficient Process Planning Optimizer

This is an AI service that can be used optimize the Process Plan of a manufacturing plant. This implies the selection of the processes and their sequence, as well as the process parameters' values. The input comprises of the part-related information, the machines availability and their attributes. The output is the process plan for a given plant and a given part. Energy efficiency will be one of the criteria used in decision making, along-side other manufacturing attributes, such as time, cost and quality.

04 AI-Assisted Scheduling of Production Towards Energy Efficiency Increase

This service utilizes AI to optimize the scheduling of a production in manufacturing. The input comprises the orders, the machines available and their data. The output envelopes the schedule plan of the manufacturing itself. Energy efficiency will be one of the criteria used in decision making, along-side time-related criteria. Real-time data on the orders could potentially be used to extend this service towards being an adaptive scheduler.

Co-funded by the European Union

This project has received funding from European Union's Horizon Europe Research and Innovation programme under the Grant Agreement No 101172887