

## H2020 FAR-EDGE: Factory Automation Edge Computing Operating System Reference Implementation

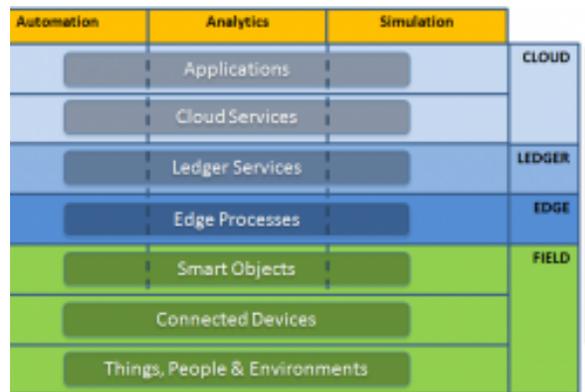
**Program/Call Reference, Strategic Priority, Grant Agreement Number, Project Type**

**H2020-FOF-11 a-2016-DigitalAutomation RIA**, Grant agreement no: 723094

### Project Summary

The FAR-EDGE (<http://www.far-edge.eu>) H2020 project (GA No. 723094) is a joint effort of leaders in industrial automation, cyber-physical systems (CPS) for manufacturing and the Industrial Internet-of-Things (IIoT) towards providing a novel edge computing solution for the virtualization of the factory automation pyramid.

FAR-EDGE researches and explores the application of the edge computing paradigm in factory automation, through designing and implementing reference implementations in-line with recent standards for edge computing in industrial automation applications. The FAR-EDGE architecture is aligned to the Reference Architecture (RA) of the Industrial Internet Consortium (IIC), while exploiting concepts from other RAs and standards such as the OpenFog RA and RAMI 4.0 (Reference Architecture Model Industrie 4.0). The project will be providing one of the world's first reference implementation of edge computing for factory automation, similar to IIC's edge intelligence testbed and the EdgeX foundry. Note however, that FAR-EDGE will be exclusively focused on factory automation, rather than being



inspired from a broader set of industrial use cases, as is the case with the rest reference implementations.

Beyond its functional uniqueness, FAR-EDGE is also unique from a research perspective. In particular, the project will research the applicability of disruptive distributed computing technologies for IIoT (i.e. the blockchain) as a means of configuring and deploying edge analytics and automation functionalities in a scalable and secure way. In particular, FAR-EDGE will provide a proof-of-concept implementation of a blockchain mechanism for sharing state and

reconfiguring analytics rules and automation workflows in factories. This is among the project's unique research contributions, which essentially sets it apart from other edge computing efforts worldwide.

### Project Starting Date and Duration / Total Cost – Total EU Contribution

1/10/2016, 36 months / 4.490.194 € - 3.992.631 €

### AIT's Role / Principal Investigator/ AIT's, EC Funding

Project Partner/ Prof. John Soldatos ([jsol@ait.gr](mailto:jsol@ait.gr)) (Technical Manager) / 323.195 €

### Consortium Partners

ENGINEERING - INGEGNERIA INFORMATICA SPA, SIEMENS AKTIENGESELLSCHAFT, Volvo Lastvagnar AB, Whirlpool Europe srl, The Open Group, Politecnico di Milano, Scuola Universitaria Professionale della Svizzera, Luleå University of Technology, SENSAP AE (SME), Unparallel Innovation, Lda (SME), Technologie Initiative SmartFactoryKL e.V. (SME).