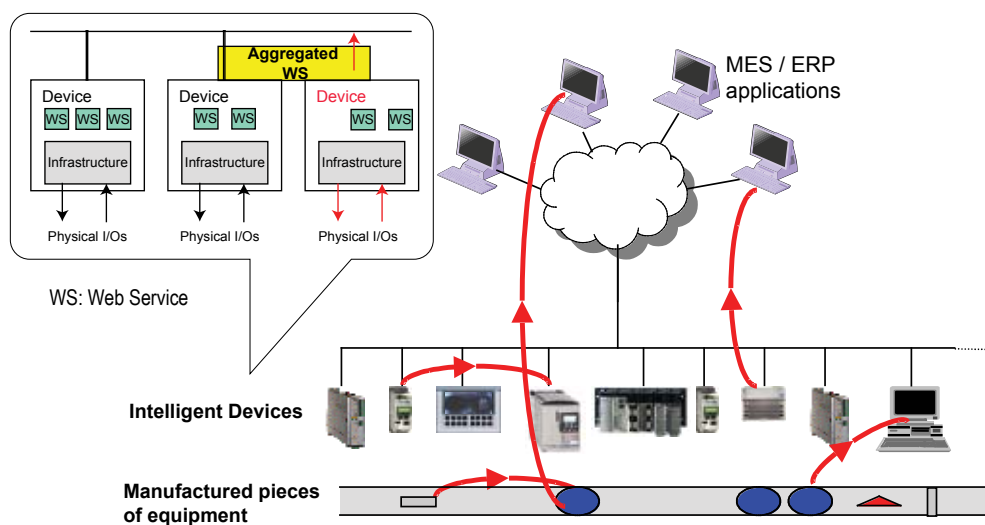


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Service-Oriented Cross-layer infRAstructure for Distributed smart Embedded devices

Major R&D Challenge:

Decentralized, non-hierarchical, Cross-layer application



A three year project with 15 partners

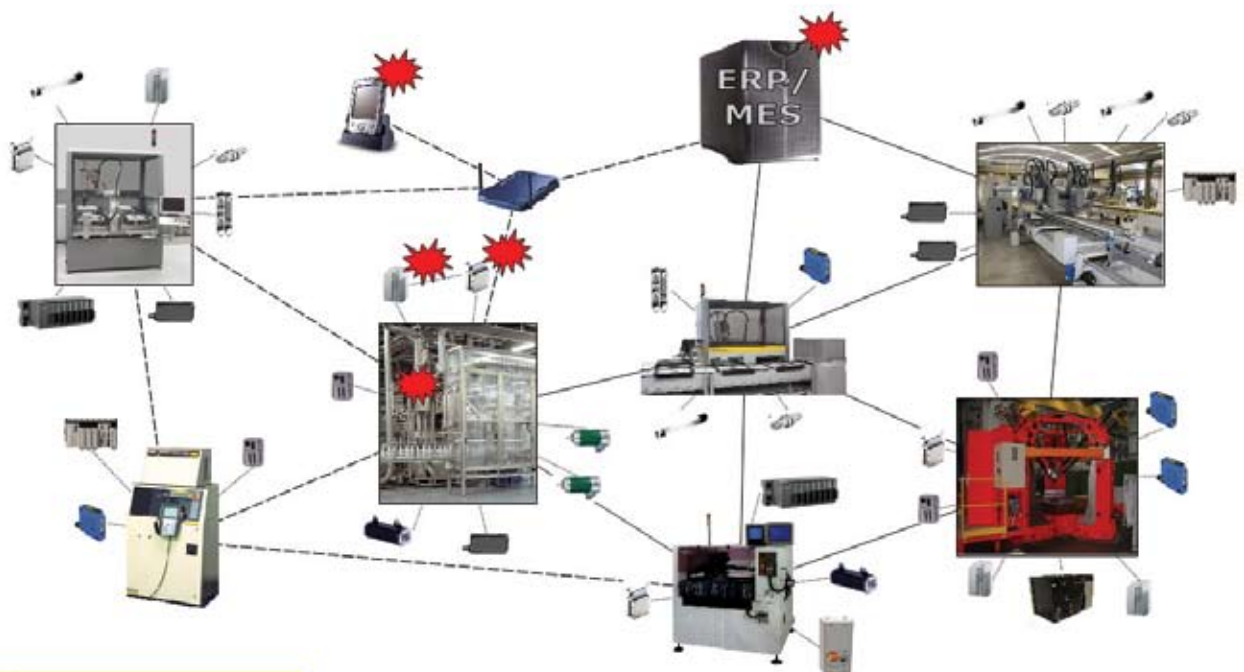
Participant name	Country
Schneider Electric (CO*)	France
ABB	Sweden
APS GmbH	Germany
Boliden AB	Sweden
FlexLink Automation Oy.	Finland
Ifak	Germany
Kungliga Tekniska Högskolan	Sweden
Loughborough University	United Kingdom
Luleå University of Technology	Sweden
Politecnico di Milano	Italy
SAP AG	Germany
Siemens AG	Germany
Tampere University of Technology	Finland
Jaguar Cars Ltd.	United Kingdom
ARM Ltd.	United Kingdom

* CO = Co-ordinator

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Service-Oriented Cross-layer infRAstructure for Distributed smart Embedded devices

Agent functionality provided by the Web Service technology



 Intelligent Web Service

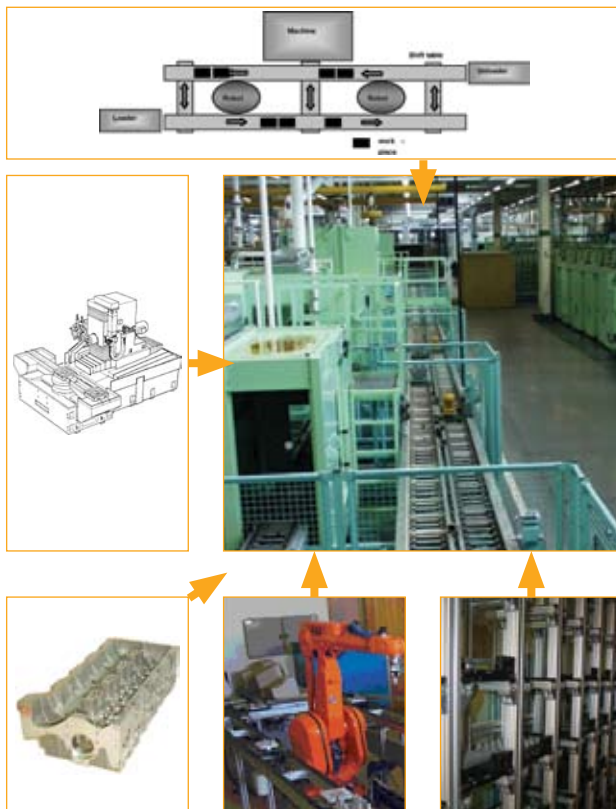
Thanks to DPWS (Device Profile for Web Services)

Source: EU ITEA SIRENA (<http://www.sirena-itea.org>)

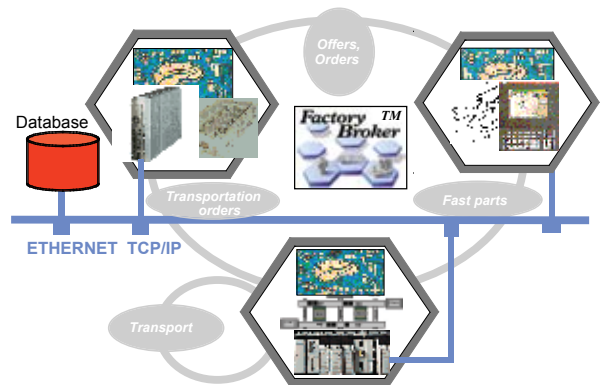
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Industrial Automation applications



Collaborative Production Automation Architecture



Requiring

- Technology providing “agent-based collaboration” capabilities from the shop floor to the upper levels of an enterprise
- Real-time / runtime autonomous and collaborative decision-making capabilities
- Services embedded in low cost smart devices
- Structural and functional plug & play capability of services in cross-layer infrastructures allowing: (re)-configuration, diagnosis, data acquisition, dynamic (re)-scheduling, etc.
- Wired and wireless IP communication