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# GOODMAN

AGENT ORIENTED ZERO DEFECT  
MULTI-STAGE MANUFACTURING



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The **quality of products** is a key factor for success in **manufacturing industry** along with the reduction of material waste, re-works, rejects and stocks, leading to a demand for the development of **zero-defect manufacturing** (ZDM) strategies at system level.

GOOD MAN project constitutes a real world implementation of the **Industry 4.0** paradigm, through the integration and convergence of technologies for **measurement and quality control**, for **data analysis and management**, at single process and at factory level. The ultimate goal is to develop a **multi-stage** production strategy that can guarantee **high quality of products** without interfering, actually improving, the **production efficiency** of the entire system.

In a context of a ZDM strategy, the use of innovative approaches is proposed to **early detect anomalies** and properly implement mitigation actions for **preventing the defect** generation and propagation to downstream stages and to reduce waste.

GOOD MAN will allow:

- **Real-time analysis and knowledge extraction** from the big data gathered from the shop floor to provide real time detection of anomalies or deviations, at a single and multiple stage.
- **Online inspection tools** of the evolution of the product quality along the production process.
- **Adjustment of upstream and downstream** stages operation parameters through multi-agent architecture.

## The objectives

ZDM STRATEGIES

DATA-DRIVEN APPROACH

AGENT-BASED CPS ARCHITECTURE

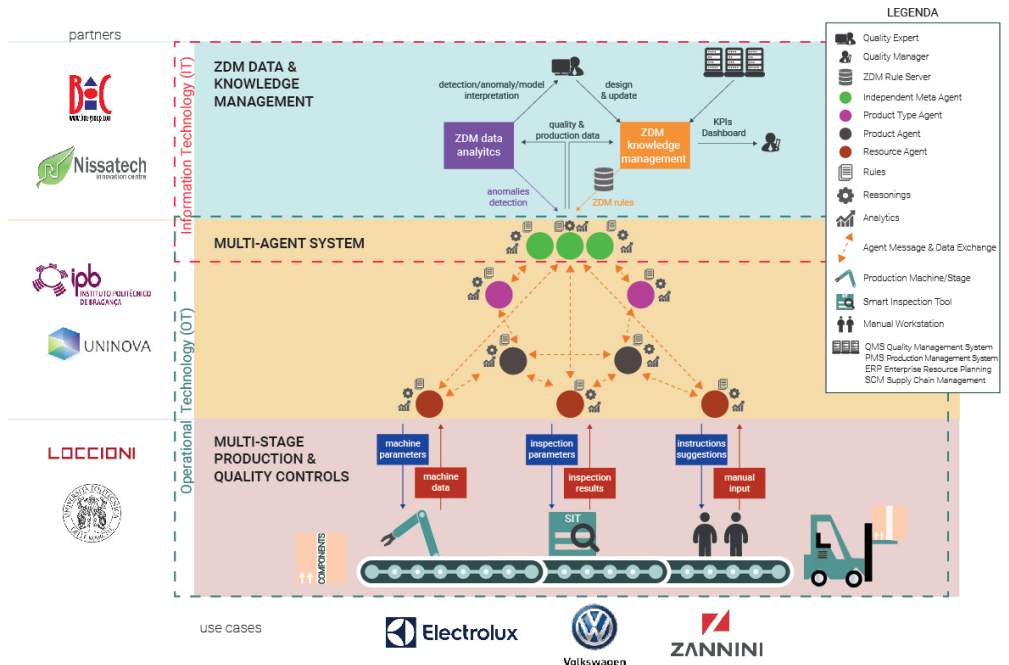
KNOWLEDGE MANAGEMENT

SMART INSPECTION TOOLS

DEMONSTRATION ON 3 USE CASES

# GOODMAN Architecture

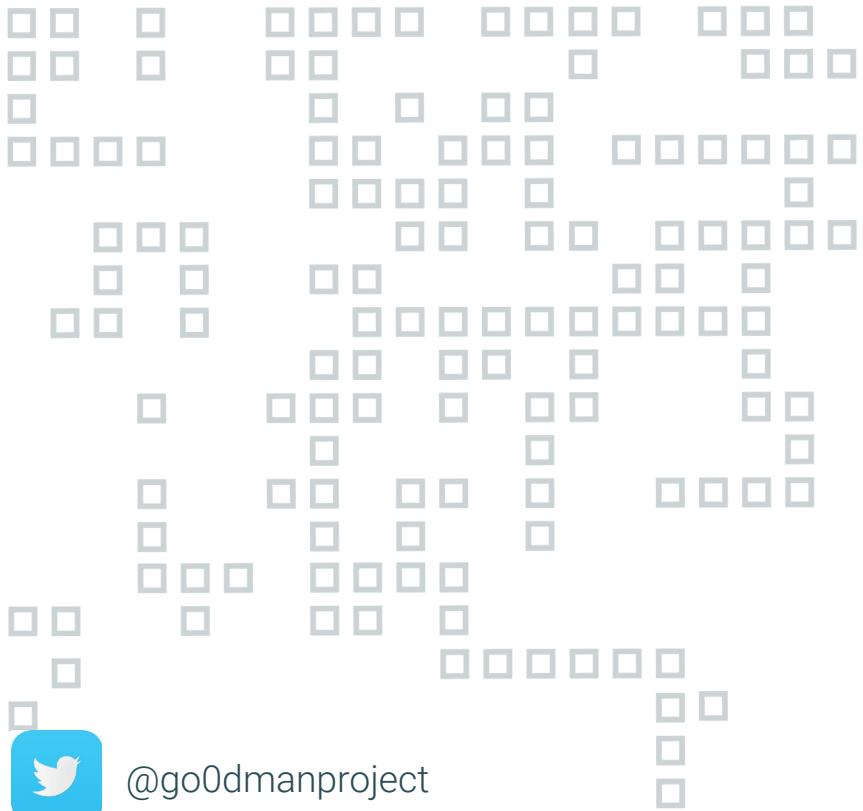
## Distributed system architecture for ZDM



## Use cases

	Electrolux Professional	Volkswagen Autoeuropa	Zannini Poland
Industrial Sector	Household appliances Professional kitchen equipment (i.e. ovens)	Automotive OEM	Automotive Metal part of hydraulic electro valves
Production process	Customized production Highly flexible multi stage manual and semi-automatic assembly.	Serial production Multi stage manual and semi-automatic assembly.	Batch production High precision multi stage machining operations.

# go0dman-project.eu



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**Project Coordinator** Cristina Cristalli, Loccioni \_ c.cristalli@loccioni.com \_ +39 0731 816280