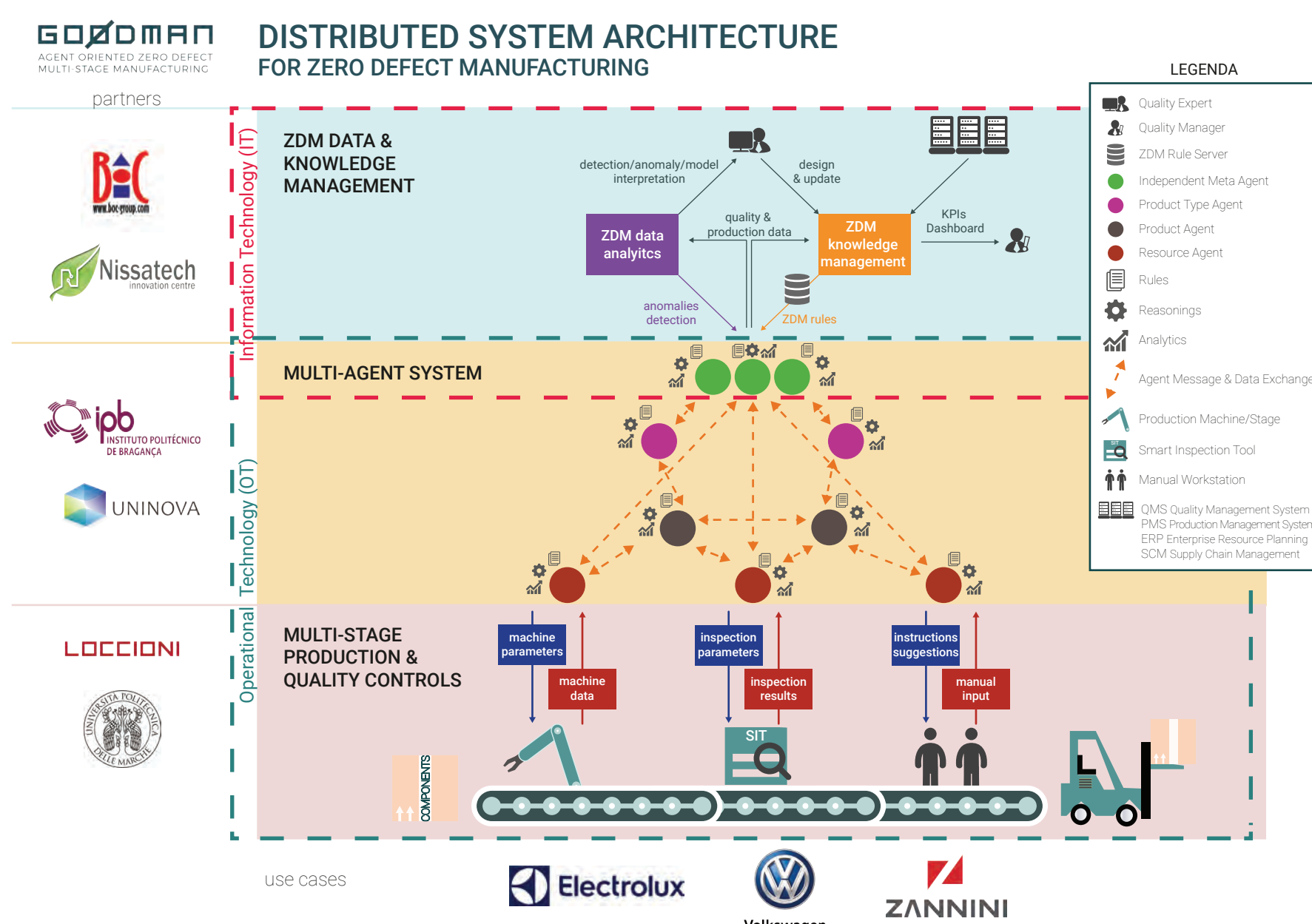


A smart portable laser scanner for Gap&Flush measurement

E. Minnetti¹, P. Castellini¹, P. Chiariotti¹, L. Violini¹, M. Fitti¹, G. Garcia², H. Vicente², N. Paone¹

¹*Dipartimento di Ingegneria Industriale e Scienze Matematiche,
Univeristà Politecnica delle Marche, Ancona, Italy*

²Volkswagen Autoeuropa, Palmela, Portugal



The goal of the GOODMAN project is to develop a **multi-stage production management methodology** and **system architecture** that can guarantee **high quality of products** without interfering, actually improving, the **production efficiency** of the entire system.

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 knowledge management**, at single process and at factory level.

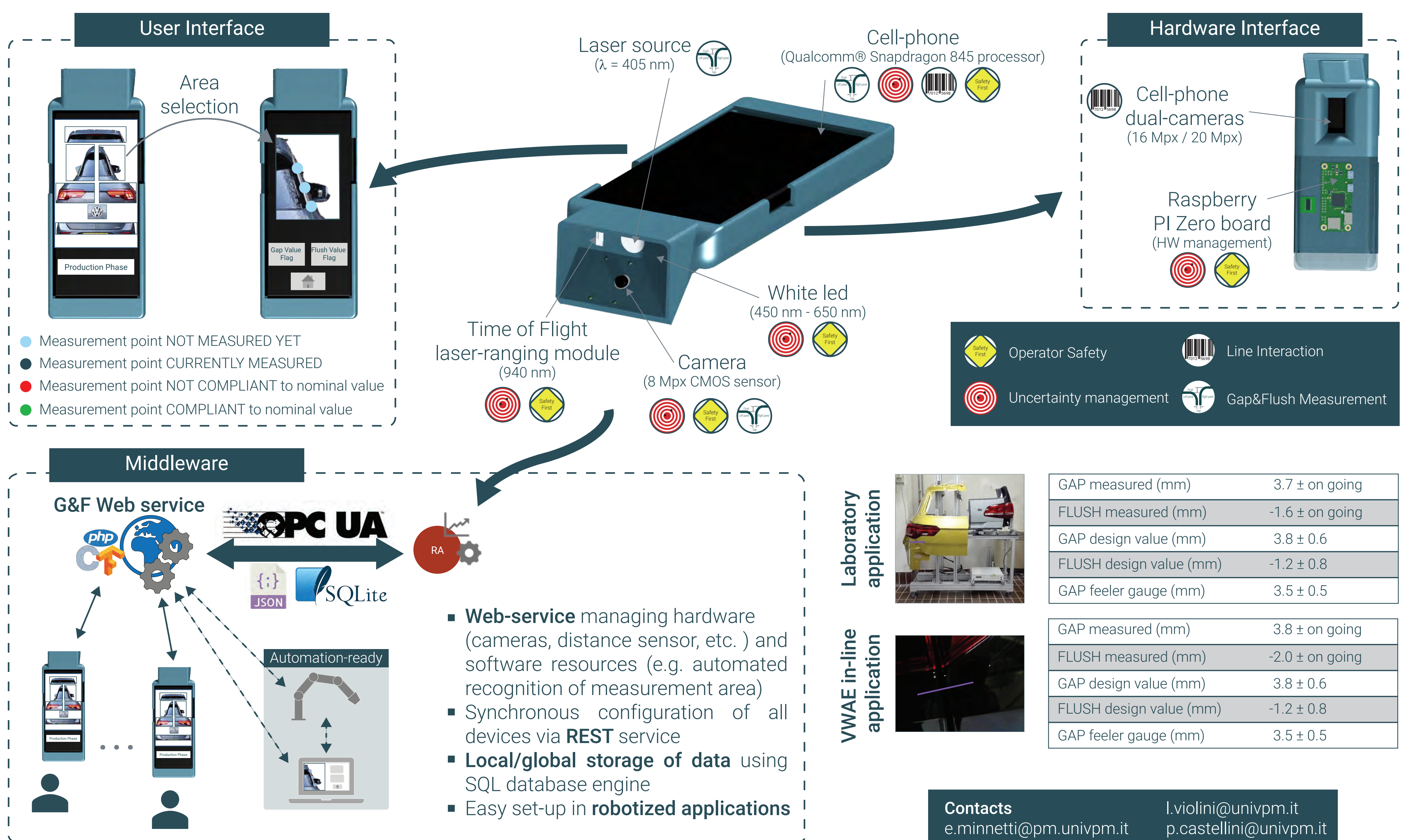


The **target** in the Volkswagen use case is to measure **Gap&Flush** on **T-ROC tailgate** keeping the **operator in the measurement loop**. Two main issues arise:

1. Capability of measuring on different surfaces (metal, plastic, glass, etc.)
2. Device portability (operator safety, uncertainty management, ergonomicity)

From concept to device

- **Cell-phone based optical triangulation device**
- Automated measurement area recognition through **Deep Learning** approaches
- **Conditional switch on/off** of laser source based on target recognition
- **Hybrid contact/non-contact** operating mode (<40mm target-to-device distance)
- **Multi-material** measurement capability (optimized laser wavelength)
- **Feedback to the operator** with respect to measurement accuracy
- **Wifi based** data transmission via **OPC-UA protocol**



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