

# GUIDANCE FOR ASSEMBLY PROCESSES

## Cognitive Worker and Tool Guidance for Assembly Processes



Pro<sup>2</sup>Future

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### MOTIVATION & GOALS

- Recognition of **micro activities** e.g., Screwing detection in industrial processes
- Workflow detection and **Human Activity Recognition** for industrial scenarios
- Sensor driven recording of the **working environment** and human factors
- **Quality Control** of the manufacturing operation by providing guidance and support to novice workers in distracting or vague situations
- **Adaptive Model** based on personalized data (Retraining/Online)
- Omission of the necessity for labelling data

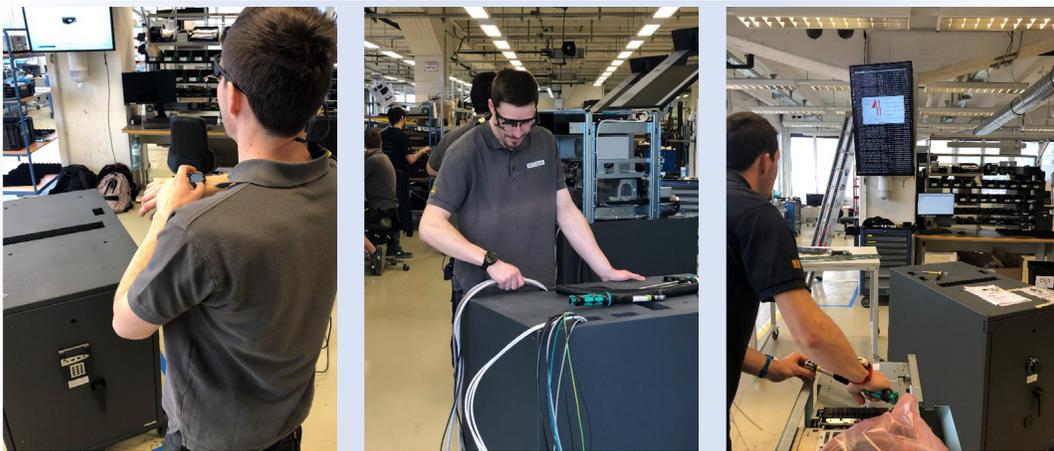
#### Project FactBox

Project Name GAP  
Project ID MFP II 1.2  
Duration 12 Months

Area 1  
Perception and Aware Systems

Project Lead  
DI Michael Haslgrübler

### SYSTEM UTILIZATION



### CONTRIBUTION

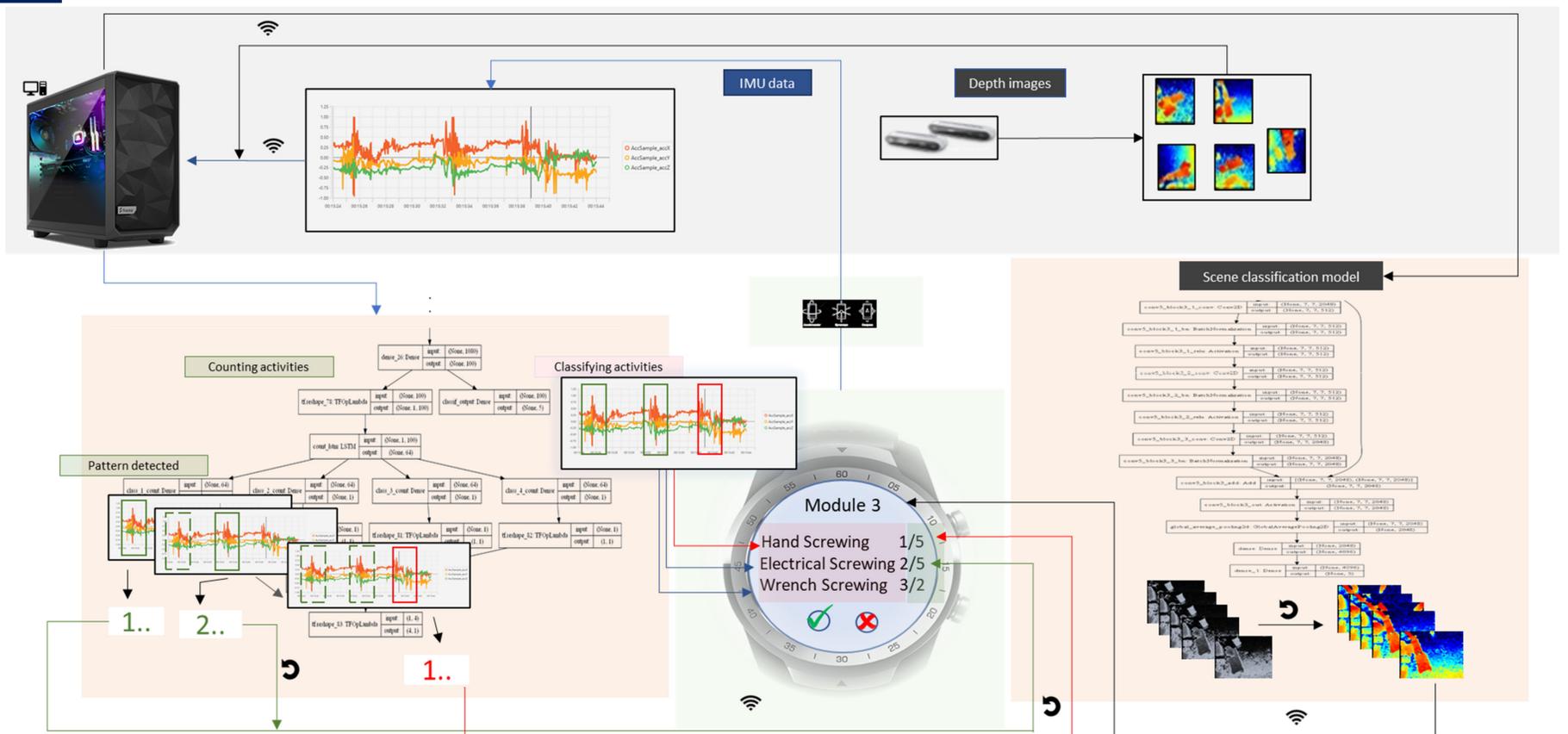
#### Scientific contribution

Development of a privacy preserving system that identifies macro/micro-activities. IMUs and depth camera sensors are integrated in our system for human activity recognition and workflow detection.

#### Economic contribution

- Reduce training time for novice workers
- Reduce the cost of rework for the companies
- Reduce the error detection time

### APPROACH



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