



Adaptive Automation in Assembly For BLUE collar workers satisfaction in Evolvable context

THE PROJECT

The main objective of this 3-year project is the development and evaluation of a new generation of sustainable and adaptive workplaces dealing with the evolving requirements of manufacturing processes and human variability.

A4BLUE will introduce adaptive automation mechanisms for an efficient and flexible execution of tasks, ensuring a constant and safe human-machine interaction as well as advanced and personalised worker assistance systems including virtual/augmented reality and knowledge management capabilities to support them in the assembly and training related activities.

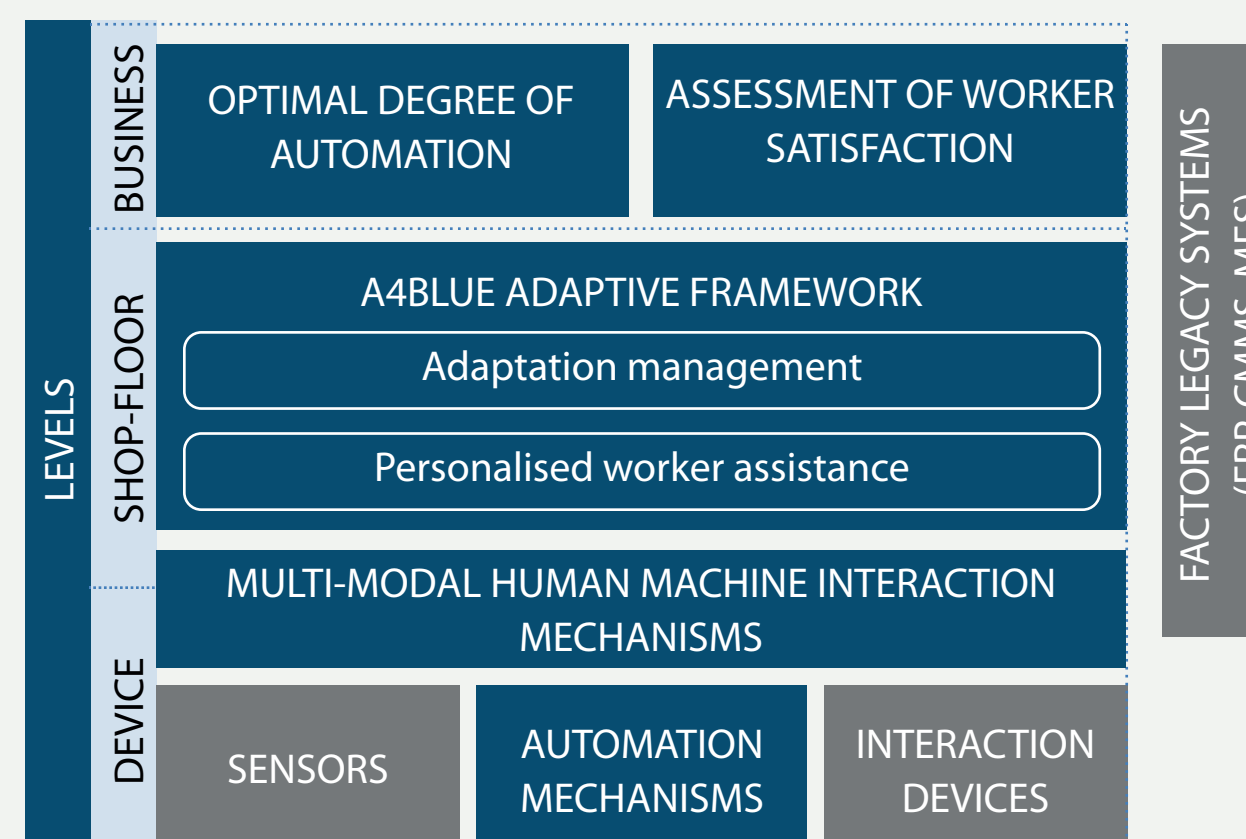
Furthermore, A4BLUE will provide methods and tools to determine the optimal degree of automation of the new assembly processes by combining and balancing social and economic criteria to maximize long term worker satisfaction and overall process performance.

AIMS & GOALS

✔ **adaptability** by providing an open, secure, configurable, scalable and interoperable adaptation management and assistance system;

✔ **interaction** by providing a set of safe, easy to use, intuitive, personalized and context aware multimodal human-automation interaction mechanisms;

✔ **sustainability** by providing methods and tools to determine the optimal degree of automation of the new assembly processes that combine and balance social and economic criteria to maximize long term worker satisfaction and overall performance.



PROJECT BENEFITS

20% increase in adaptability, e.g. product customisation capability.

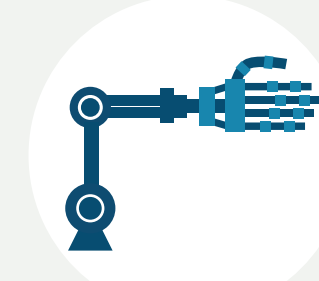
10% quality increase in human and automation performance, e.g. quality or productivity.

Wide adoption of the new developments in advanced manufacturing systems.

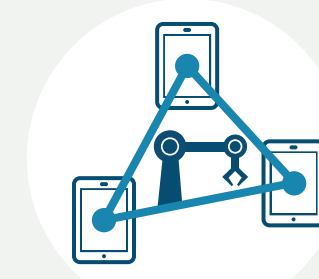
SECTORS



Aerospace



Automation



Industry 4.0

FIRST YEAR PROJECT RESULTS

The A4BLUE solution will be instantiated and validated in two real industrial scenarios (AIRBUS and CESA) and in two lab scenarios (IK4-TEKNIKER and RWTH Aachen). During the first year, the consortium focused on analysis of user- and high-level requirements and on the definition of the four use case scenarios to gather information about the current state and requirements of candidate processes. On the other hand, the technical partners worked on the Reference Architecture (RA) for the A4BLUE Platform, paving the way to further implementation activities and the validation of the technical solution in the four identified business cases. Finally, a methodology for socio-economically sustainable design of optimal automation levels is being developed in order to connect economic and technical factors with usability and worker satisfaction to evaluate the optimum for adaptive and sustainable workplaces of the future.

www.a4blue.eu