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DELIVERABLE

D6.3 – User centric Human-Machine Collaboration – Final Version

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Executive Summary

This deliverable, D6.3, presents the progress and results of the development of the WP6 modules for smart Human-Machine Collaboration in the time period from M31 to M36. WP6 has the following goals:

- Ensure human safety by design of the interactive scenarios and online monitoring.
- Enable flexible interaction with the operator during execution through interfaces.
- Allow the operator to teach new tasks, and the robot to continue to improve on these tasks after they are taught.

To achieve these goals WP6 develops several technical modules:

The **Design Safety Concepts (DSC)** is responsible for the execution of the risk assessment for each of the pilots of CONVERGING, identifying the main hazards and risks, and implementing risk reduction measures.

The **Safety Assessment and Monitoring (SAM)** module is capable of monitoring the status and behaviors of the safety-related parts of the control system (SRP/CS) of the CONVERGING system.

The **Multi-Actor Contextual Interfaces (MACI)** and **Teaching by Demonstration (TDM)** modules, enable natural language commands, multimodal interaction, and task teaching capabilities.

The **Autonomous Robot Behavior Adjustment (ARBA)** module enable robots to adjust their behaviors autonomously based on sensorial feedback.

With the completion of the activities described in this deliverable, WP6 concludes its objectives within the CONVERGING project. As such, this is the final deliverable of WP6.

Any finetuning of the modules needed, as outcome of the four Open Pilots, will be part of WP7.