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CONVERGING

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DELIVERABLE

D6.1 – CONVERGING distributed safety & interaction – Design

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Executive Summary

This deliverable, D6.1, presents the progress and results of the development of the WP6 modules for smart Human-Machine Collaboration over the past six months. The work carried out in this period has been instrumental in advancing the objectives of the CONVERGING project.

The **Design Risk Assessment (DRA)** module 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.

Significant strides have been made in the development of the **Multi-Actor Contextual Interfaces (MACI**) and **Teaching by Demonstration (TDM)** modules, enabling natural language commands, multimodal interaction, and task teaching capabilities. The first prototype of the **Autonomous Robot Behavior Adjustment (ARBA)** module has been developed to enable robots to adjust their behaviors autonomously based on feedback.

Apart from the development of the first version of the modules, preliminary integration has also been done for a number of them, in the open pilots of CONVERGING, aiming to kick start earlier the relevant activities.

The work carried out in WP6 over the past six months has laid a strong foundation for the next phase of the project. Looking ahead, the first prototypes developed within the last 6 months will be evolved, to comply with all of the use case requirements and technology specifications defined in D2.1 and D2.2 respectively.

In conclusion, the progress made in WP6 represents a significant step towards achieving smart Human-Machine Collaboration through the CONVERGING project. We look forward to continuing this momentum in the next phase of the project.