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DELIVERABLE

D5.1 – Social industrial environment – Initial version

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Executive Summary

This document is the first out of the three deliverables of WP5, as suggested by its title “Social industrial environment – Initial version”. D5.1 is a summary of the work completed in WP5 focusing on four main areas: 1) operator training programmes, 2) user experience and ergonomics integration to human-robot collaboration, 3) multi actor user interfaces, and the 4) inclusive workplace development. In particular, D5.1 presents the first round of outcomes of WP5 that derive from the activities of tasks T5.1 “Operators training for seamless, trustworthy and safe integration in HRC environment”, T5.2 “Automated real time user experience and ergonomics evaluation”, T5.3 “Multi actor contextual interfaces - dynamically shaped to individuals”, and T5.4 “Human centric design for inclusive workplaces-a social industrial environment”.

Therefore, the D5.1 provides a presentation of the design of training, and the method for human centric-workspaces design, as well as the initial prototypes of the virtual reality applications, and user interfaces and real time user experience evaluation. Furthermore, it proposes an innovative approach integrating computational models into robot controllers to enhance motion planning, aiming to make collaborative human-robot workplaces more accessible and adaptable to individual physical limitations. The multi actor adaptive interfaces initial design and functionality development as well as operator engagement and feedback towards the future user interface iterations is included. The final task focused on operator engagement with the developing technology solutions and capturing the needs and required changes to ensure greater acceptance and engagement with the technology.

The following deliverables of WP5, namely D5.2 and D5.3, will present more mature prototypes, the completed training programme, and standalone demonstrators as well as the final versions of the workspace design method and the adaptive interfaces.