SMART HANDLE

D2.3	Design of human centric and usable intelligent systems for workpiece handling – First Period

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Human-centric design framework, human-centric design guidelines, user-system interaction

Abstract

In the present deliverable named Design of human-centric and usable intelligent systems for workpiece handling – First Period, a human-centric design framework that results in human-centric design guidelines is developed. The content is based on the outcome activities of Task 2.4 'Human Centric production systems - Methods for design, acceptance and usability validation'.

Executive summary

This document contains a multimethod design approach towards developing a human-centric design framework. The human-centric design framework will serve as a foundation for monitoring and providing feedback towards the development of the technical solutions for the three use cases for the accomplishment of the user needs and human-centric design principles. First, we present a literature review considering elements from Work and Organizational Psychology (WOP), work design, and human-technology interaction (HTI) to derive a human-centric framework for the design and implementation of the system. Next, we offer an analysis of the workplace for the three use cases to extract the requirements and specifications for the development of systems. To validate the proposed human-centric design framework, two studies were conducted (i.e., an interview study, and a study in an organizational context). The activities of this task result in design guidelines, and a closed-loop process will guarantee that technical WPs receive feedback from end-users after each prototype release.