Intelligent-adaptive assistance systems for knowledge and skills in support of INDUSTRIE 4.0

The ever-growing complexity of INDUSTRIE 4.0 manufacturing plants calls for new approaches to transfer expertise about an activity or a process to employees. The collaborative project "APPsist" aims to develop a new generation of mobile, context sensitive, and intelligent-adaptive assistance systems for knowledge and management support in smart manufacturing. Three DFKI research groups are included: CeLTech, Innovative Retail Laboratory (IRL) and the Institute for Information Systems (IWi). CeLTech’s contribution focuses on qualification of the staff and attempts to compensate for any skills that may be lacking. In addition, they develop AI-based learning assistance systems with the aim of facilitating continuing education for the staff. This support includes the setup, the initial acceptance, and operation of a manufacturing unit in the production process, as well as the preventive maintenance, maintenance, and troubleshooting.

The continuous expansion of staff expertise is made possible through the acquisition of knowledge and skills in relation to production, product, and process. The aim is to promote the professional development of the staff so that they can gradually start to perform more demanding tasks and serve as a counterbalance to the demographic change and the shortage of skilled workers.

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