



CO-ADAPT: Adaptive Environments and Conversational Agent Based approaches for Healthy Ageing and Work Ability

Active ageing along with work ability frameworks contributed mostly to inform policies and development of research methods rather than concrete solutions such as technologies and applications. Ageing citizens face particular difficulties in remaining active if having reduced capabilities due to age-related conditions and challenges posed by knowledge digitalization, the accessibility of digital channels, digital interfaces and digital socialization. CO-ADAPT proposes a framework that provides principles for a two-way adaptation in support of ageing citizens. 1) Human Adaptation Support: CO-ADAPT empowers ageing citizen to adapt to changed conditions through a personalised Artificial Intelligence (AI) conversational agent providing comprehensive change support based on language and physiological analytics. 2) Work Systems Adaptations: CO-ADAPT defines three types of smart adaptations in work systems with different level of technology sophistication to age thresholds in smart shift scheduling tools, to individual capabilities considering cognitive workload in assembly stations, adaptations to work tasks in contextually recommending people, documents and applications for cognitive augmentation. The evaluation approach is focussed on quantifying economical benefits in terms of improved work ability. It includes a comparative trial of the Human Adaptation Support, the personalised conversational agent application, in north and south Europe for investigating cultural applicability. The Work Systems Adaptations are trialled in real environments with an extensive pilot for the smart shift scheduling tools in Finland (N=20 000), and more focused trials with sophisticated prototypes for the assembly station adaptations in Italy and contextual entity recommender in Finland. The consortium includes comprehensively stakeholders and disciplines geared for a participatory design approach, compliance with ethical and data directives, and effective exploitation of results.

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