

**Project closing note****Project title: “Concept of integration of ambient intelligence solutions for safety and health towards smart factories”**

Starting in 2013, researchers from a number of research institutions, active in occupational health and safety, came together to discuss joint research activities in the emerging fields of smart factories, ambient intelligence and Industry 4.0. This potential collaboration was facilitated by the recent ubiquity of digital technologies for the workplace. These technologies, ranging from IT support of common production tasks, to smart factories, offer the possibility of decreasing the sensory and cognitive effort for production state detection and data processing by persons involved. At the same time, a risk of discomfort, fatigue or physical or psychological stress caused by the amount and speed of data presented by ambient intelligence systems may arise in smart factory settings. It was envisioned to research both aspects in a common project idea.

The aim of the activities surrounding the project loosely titled “Concept of integration of ambient intelligence solutions for safety and health towards smart factories” was to identify the factors of ambient intelligence technologies that are of interest in the context of occupational safety in smart factories. As a first step, it was decided to encourage potential participants and to find topics for a common research objective in the field of ambient intelligence, which then could lead to an application for a joint research project.

The project start was promising, with an interesting meeting in Dortmund, Germany, in 2014. It was anticipated to develop a project application to be submitted within the EU framework programme for research and innovation “HORIZON 2020”, including partners outside of PEROSH institutions (e.g., small and medium-sized enterprises).

After the initial meeting, two working meetings with participation by member organisations from Poland (CIOP), The Netherlands (TNO), Denmark (NRCWE) and Germany (BAuA) took place throughout 2015 (June: Copenhagen, October: Warsaw). Each member organisation presented their research activities and goals. During the meetings, interesting discussions of the approaches were observed. However, it turned out that each member organization focussed on different fields of work, among them:

- Robotics in health care (NRCWE)
- eHealth or mobile health, apps and applications for health monitoring and feedback in the workplace (TNO)
- robotics and VR development for various industries (CIOP)
- plant and machinery safety, industrial control systems (“Industrie 4.0”, BAuA)

Other PEROSH member organizations voiced their interest in monitoring the project development, especially DGUV and AUVA. Due to the diverse nature of these fields and the very fast development pace of digital technologies in the workplace, it was not possible to identify a common research goal on health and safety for a joint research project in the field of smart factories or workplace digitalisation, or to describe possible joint research activities in this field. Therefore BAuA proposed to make a cut and to close the project titled “Concept of integration of ambient intelligence solutions for safety and health towards smart factories.” After a very fruitful cooperation where many incentives for single research paths were given and creative researcher were brought together, the way was paved to continue to exchange the fields of activities between the member organization on an informal basis.