

MindBot: a cobot platform to look after workers' mental health

The **workplace environment has a great impact on workers' mental health** and well-being, even more if considering the time people spend at work. A good psychosocial work environment can be very beneficial for workers' mental health, whilst a poor one can have significant negative effects, including experiencing work-related stress, burnout, problems at home, drug and alcohol abuse. The negative effects impact the organizations too, that experience poor overall business performance, increased absenteeism, presenteeism and higher accident and injury rates. This is the second most frequently reported work-related health problem in Europe, after musculoskeletal disorders. In the **context of Industry 4.0**, where robots, sensors and automated work are pervasive, conditions are potentially more harmful for workers' mental health, as they could be exposed either to monotonous and alienating tasks or to very challenging tasks. The progressive adoption of collaborative robots (cobots) in manufacturing SMEs opens the way to a radical organizational and technological transformation, where by design the whole workplace environment could contribute to promote workers' mental health. The aim of our session is to show how an enhanced multi-stakeholder engagement takes into account manifold facets affecting mental health and intervenes on technological, relational and organizational aspects of the cobot-based work, fostering investment in research and innovation and facilitating SME business development. **The objective is to design workplaces where level of challenge and difficulty of job tasks match with the workers' abilities, in order to support their motivation and engagement by interacting with cobots in a flexible and personalized way.** This will facilitate workers' positive attitude, promoting good mental health and preventing negative experiences of anxiety or boredom and apathy that eventually lead to mental illnesses. Expected results are the definition of guidelines for the design of a "mental health friendly" manufacturing workplace and a new generation of cobots, the Mindbots.



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