

HUMAN-CENTERED INDUSTRY: INTEGRATING INDUSTRY 5.0 PRINCIPLES AND INCLUSIVE DESIGN FOR SUSTAINABLE INNOVATION

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The EU-funded EARASHI (EMBODIED AI/ROBOTICS APPLICATIONS FOR A SAFE, HUMAN-ORIENTED INDUSTRY, <https://earashi.eu/>) project responds to the pressing need for a human-centered approach in the evolving landscape of Industry 5.0, aligning with the European Commission's strategic framework for Health and Safety at Work (HSW). Despite advancements, work-related accidents and illnesses still impose a significant economic burden on the EU, necessitating innovative solutions for safer and more human-oriented industries.

The context of the project is set by the alarming statistics of work-related accidents and their economic impact. EARASHI acknowledges the transformative potential of digital transitions, including robotics, and AI, but also recognizes the emerging challenges such as cognitive overload and 'techno-stress.' EARASHI explores the shift from Industry 4.0 to Industry 5.0, emphasizing the importance of human-centric approaches in manufacturing. It delves into Operator 4.0, stressing the optimization of human-machine interaction for success. As a result, EARASHI comprehends this industry shift into a public report focusing on technology acceptance, human factors, and human-robot interaction, asserting their vital role in creating safe and efficient workplaces. As Industry 5.0 envisions collaboration between technology and humanity, EARASHI aims to guide this evolution by prioritizing human-centric approaches, enhancing job satisfaction and performance, ensuring equitable technology access, and addressing the digital divide.

Another public report from EARASHI, titled as "Tailored guidelines for inclusive design and Ethics in industry," provides a comprehensive guide to fostering inclusivity and accessibility. It addresses the impact of an ageing population on design, legislation challenges, and the significance of diversity and intersectionality in product and service design. The document offers insights into methods, tools, and equipment for Inclusive Design and showcases successful case studies. Importantly, it provides guidelines for accessibility and ethics applied to robotics, aligning with EARASHI's mission to ensure ethical and inclusive practices in the development and integration of advanced technologies.

Based on the two mentioned reports, EARASHI will then support the deployment of the human-centric approach in the Start-ups and SMEs granted through Financial Support to Third Parties to uptake advanced digital eco-responsible technologies (in particular AI, Data and Robotics) in their technology development.

EARASHI's commitment to a human-centered industry is evident in its approach to supporting businesses in adopting advanced technologies, enhancing work conditions, and fostering worker trust. The project access to leading-edge technologies and collaboration with industrial partners underscore its dedication to improving safety, health, and well-being. By investing early in competitive emerging technologies, EARASHI aims to contribute significantly to a sustainable and human-oriented industry, addressing the challenges posed by the digital transition while maximizing its benefits for workers and businesses alike.

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