

Worker participation and representation: the impact on risk prevention of AI worker management systems

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The aim of this study¹ is to analyse the challenges posed by artificial intelligence based worker management (AIWM) systems in relation to psychosocial risks and the role of worker participation structures in identifying, assessing, preventing and mitigating psychosocial risks arising from AIWM.

AIWM is ‘an umbrella term that refers to a worker management system that gathers data, often in real time, on the workspace, workers, the tasks they do, and the (digital) tools they use for their work, which is then fed into an AI-based model that makes automated or semi-automated decisions or provides information for decision-makers on worker management-related questions’ (EU-OSHA, 2022: p.5). In recent years, the increasing reliance on AIWM within workplaces has sparked significant discussion concerning its impact on workers’ occupational safety and health (OSH). On the one hand, AIWM can be used to prevent and mitigate some risks, and to assist managers and health and safety representatives in detecting and managing psychosocial risks at work. On the other hand, AIWM has often led to heightened surveillance, decreased job control, unpredictable work patterns and a perceived lack of fairness.

The ultimate impact of AIWM technologies is contingent on the institutional and organisational context in which it is applied. Among all the factors shaping this impact, forms of industrial democracy, including worker representation structures at workplace level, social dialogue and collective bargaining, should play a key role. Worker participation structures, including health and safety representatives, can help in identifying, preventing and mitigating psychosocial risks derived from the use of digital technologies in general and AIWM in particular. Moreover, collective bargaining could be a mechanism to find shared solutions and regulate the use of these technologies. However, AIWM poses some important challenges for effective worker participation and the capacity of these structures to develop their role.

Through an analysis of the literature and a collection of case examples, this study provides new evidence and analyses the challenges posed by AIWM technologies in relation to psychosocial risks. Second, it analyses the role of worker participation structures and more broadly, industrial democracy (social dialogue and collective bargaining at different levels), in identifying, assessing, preventing and mitigating psychosocial risks arising from AIWM.

The study has shown that AIWM can have both positive and negative psychosocial implications. Research exploring the detrimental psychosocial effects of AIWM shows that AIWM systems may intensify surveillance and erode workers’ autonomy, which in turn leads to high stress levels. AIWM systems can also increase work intensity and the speed of work and lead to unpredictability in work schedules. Moreover, AIWM technologies that are used to monitor and evaluate performance can create performance pressure and are also associated with high stress levels among workers, particularly when they perceive the metrics and processes to be unfair. However, research also shows that psychosocial risks related to AIWM vary according to the type of company or the sector. In this regard, further research is needed to better identify specific sectoral risks associated with AIWM systems, particularly beyond the digital platform sector and in SMEs.

In relation to the opportunities brought by AIWM to prevent psychosocial risks, literature review shows that this is an aspect which requires further research. Existing evidence shows that AIWM systems can improve job design and task allocation or be useful for burnout prevention (for example, by scheduling breaks and adjusting workloads based on relevant worker indicators). Nevertheless, research also shows that this positive use of AIWM may conflict with General Data Protection Regulation (GDPR) rules and lead to unwanted or negative effects on OSH (for example, managers using the same data to monitor performance, etc.).

¹ The full report is available at: <https://osha.europa.eu/en/publications/worker-participation-and-representation-impact-risk-prevention-ai-worker-management-systems>

The study also shows that industrial democracy can contribute to, mitigate or prevent psychosocial risk factors stemming from AIWM, but must overcome several obstacles to do this. For example, AIWM technologies pose challenges to trade unions and workers' representatives to develop their activities due to the opaque and dynamic nature of the technology. Moreover, the power imbalance between workers and the employer, which also tends to vary across sectors and companies, has significant implications. In those sectors and companies where unions and workers' representatives have comparatively weaker power resources, the probability of achieving negotiated solutions to the challenges posed by AIWM is significantly lower.

Cases analysed show a diversity of situations in relation to the psychosocial risks posed by the introduction of AIWM systems. First, the manufacturing and mining sector cases analysed show how worker representative involvement in the design of AIWM systems contribute to the prevention of different risks. Second, the case of the two small riders' cooperatives clearly shows how organisational conditions mediate the perceptions and impact of technology on workers' wellbeing. In particular, management resting on socially cooperative principles has facilitated a worker-friendly implementation of algorithmic management systems under human supervision as well as the inclusion of additional safeguards for riders.

The two regulatory case studies provide relevant insights about how statutory legislation can support workers' representatives in co-regulating AIWM systems. In the case study of the German regulation, it is shown how new laws providing specific rights for workers' representatives regarding AI can favour different types of works council interventions in the introduction of AI technologies. By contrast, the case of Spain shows how statutory regulations and other regulatory instruments may create a favourable environment for social partners at both the sectoral and company level to detect and regulate risks arising out of the implementation of AIWM.

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