



HEALTHY WORKPLACES SUMMIT 2025

Safe and healthy work in the digital age

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

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Why AIWM matters?

- AI worker-management (AIWM) = real-time data collection + algorithmic decisions affecting work
- Increasing adoption across sectors; platformisation of work
- Ambivalent impact: can prevent risks or create new ones
- Effects depend heavily on institutional context and worker participation structures

RQ1: Identify psychosocial risks linked to AIWM

RQ2: Analyse obstacles for worker representation

RQ3: Examine regulatory and participatory responses

- Extensive academic and grey literature review
 - 34 key documents
 - Case studies:
 - 3 company cases (mining, manufacturing, cooperatives)
 - 2 regulatory cases (Germany, Spain)
- Combined qualitative, conceptual and exploratory evidence

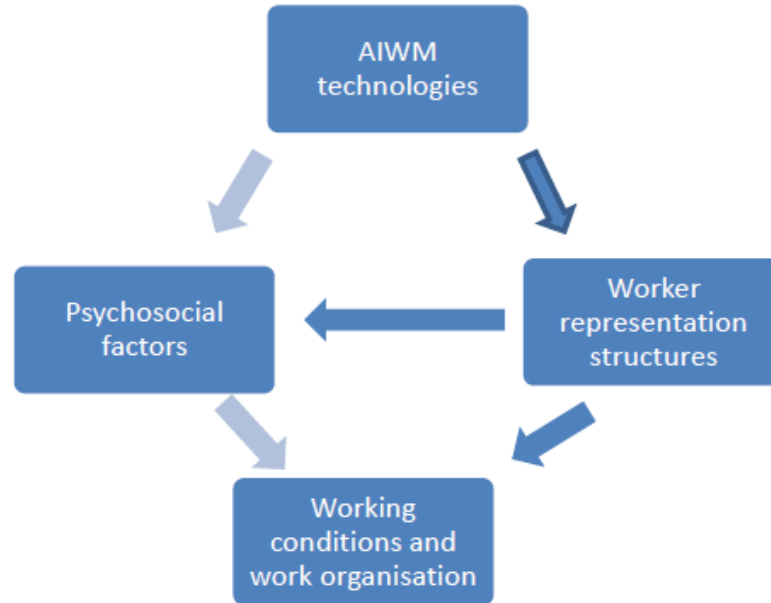
What Is AI-Based Worker Management?

AIWM system that gathers data, often in real time, on the workspace, workers, the work 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)

- Used for:
 - Task allocation
 - Scheduling
 - Performance evaluation
 - Safety monitoring
 - Productivity optimisation

- AIWM increases risks via:
 - Loss of control
 - Increased work intensity
 - Reduced social support
 - Dehumanisation
 - Unfair performance evaluation
 - Blurred work-life boundaries
 - Mistrust due to lack of transparency
- But can also help:
 - Improve task allocation
 - Detect psychosocial risks
 - Reduce physical burdens

Direct and Indirect Effects of AIWM



- **Direct effects:**
surveillance, pressure, work intensity
- **Indirect effects:**
erosion of worker voice
→ weaker capacity to prevent risks
- AIWM increases psychosocial risks especially where institutional voice is weak

- Industrial Democracy refers to all means and institutions that workers' representatives may use to have a say in an employer's decision-making process and, more generally, in the governance of employment relationships.
- Worker representation = essential counterbalance
- Includes: information rights, consultation, collective bargaining, OSH reps
- Determines how AIWM is shaped, implemented and controlled

- Constant surveillance → stress
- Opaque evaluations → distrust
- Unpredictable schedules → anxiety
- Work intensification → burnout
- Bias and discrimination → inequity

Compounded impacts when risks overlap

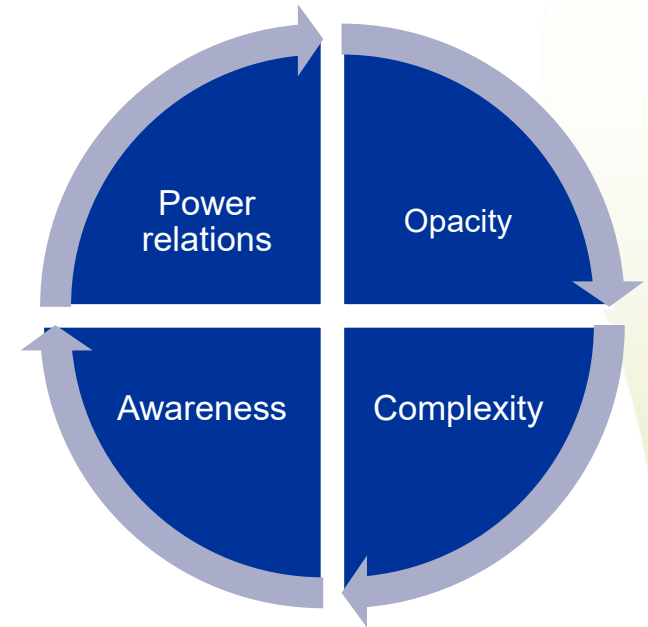
- Better job design
- Burnout prevention (break scheduling, workload balancing)
- Real-time health monitoring (wearables)

BUT:

- Conflicts with GDPR
- Risk of managerial misuse of same data

Obstacles for Worker Participation

1. Invisibility / Awareness of AIWM → workers unaware of risks
2. Opacity → black box algorithms; limited access
3. Complexity → requires technical skills
4. Power asymmetry → weak or absent representation, esp. SMEs and platforms



Two main approaches

- **Protective standards** (more focused on the *individual* dimension): rights, transparency, safeguards
- **Participatory standards** (more focused on the *collective* dimension): reinforce worker participation mechanisms
- EU-level frameworks more on protective standards:
 - OSH Framework Directive
 - GDPR
 - AI Act: high-risk systems incl. AIWM → mandatory safeguards

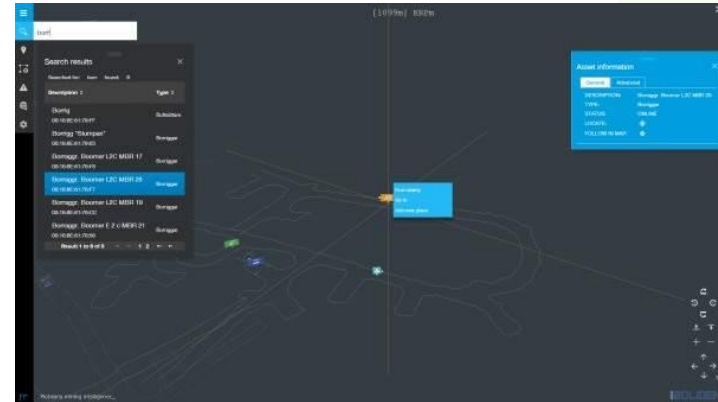
AIWM tools:

- Wi-Fi based worker-positioning system → safety
- Semi-autonomous vehicles



Outcomes:

- Workers negotiated anonymisation
- Human-only access to deanonymisation
- Trust-based governance prevents misuse



Key lesson: strong unions + co-determination enable safe AI implementation.

Danish manufacturing company



AIWM technologies:

- Smartwatches, tablets
- Cobots

Worker participation:

- Early involvement in design, testing
- Gradual roll-out based on worker feedback
- OSH committees shaped implementation



Result: reduced stress, adjusted deployment, improved wellbeing.

AIWM through cooperative-designed tools
(CoopCycle):

- Non-punitive, transparent algorithm
- Human dispatcher oversight
- No penalties for delays or rejected tasks

OSH impacts:

- Fair distribution of workload
- Limits on shift length
- Safer equipment
- Emergency button for women workers

Key lesson: democratic governance reduces psychosocial risks dramatically.



New 2021 Works Council Act rights:

- Right to expert assistance
- Information rights on AI innovations
- Co-determination on HR decisions involving AI

Company examples (IBM, Airbus, Merck):

- Transparency principles
- Joint steering committees
- Ethical oversight

Lesson: strong statutory rights + workplace structures = effective mediation.

Riders' Law + transparency obligation:
Companies must disclose:

- Purpose of algorithms
- Variables and weighting
- Data sources and training sets
- Human oversight level
- Possible discrimination risks

Key lesson: transparency is precondition for risk prevention and worker voice



- AIWM has ambivalent effects: can prevent or create risks
- Psychosocial risks likely when:
 - Weak worker voice
 - Lack of transparency
 - Strong surveillance and performance pressure
 - Worker participation is the decisive factor shaping outcomes

- Strengthen information and consultation rights (Participatory standards)
- Build worker and union technical capacity
- Ensure transparency and audibility of algorithms
- Promote collective bargaining on digitalisation
- Include OSH reps early in design and roll-out
- Regulate dynamic, evolving AI → continuous oversight, not one-off checks