



Musculoskeletal Health in the Digital Age

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Global Alliance for Musculoskeletal Health





Healthy Workplaces Campaign 2023-25

Safe and healthy work in the digital age

Ensuring effective prevention in the digital world of work



What is it about?

- The world of work is changing
- Digital technologies are rapidly changing how, where and when we work
- For workers and employers in all sectors, digital technology offers increased opportunities but also presents challenges and risks in terms of safety and health



Digitalisation of Work

Digitalisation provides opportunities, challenges and risks for occupational health and safety by transforming the world of work

Advanced Robotics and Artificial Intelligence

- systems that transform how human labour is performed by carrying out actions (either embodied (eg robotics) or non-embodied (eg smart applications)) – with some degree of autonomy to perform either physical or cognitive.

Worker management through artificial intelligence

- management systems and tools that collect real-time data about workers' behaviours from various sources to inform management and support automated or semi-automated decisions based on algorithms or AI.

Digital Platform Work

- paid work provided through, on or mediated by an online platform.

Smart Digital Systems

- monitoring systems aimed to enhance OSH, such as smartphone apps, wearables, mobile monitoring cameras or drones, smart glasses, ICT-based applications and smart Personal Protective Equipment. They can be used to monitor physiological or mental state, posture and body movement, workers' location in dangerous areas, instruct workers, or alert workers' managers or emergency services.

Remote Work

- any type of working arrangement involving the use of digital technologies to work from home or away from the employer's premises.

Facts and figures – use of digital technologies

EU-OSHA, OSH Pulse 2022

EU workers at work use...

- Laptops, tablets, smartphones (73%)
- Wearable devices (11%)
- Machines or robots incorporating AI (5%)
- Robots interacting with the worker (3%)

EU-OSHA, ESENER 2019

- Over 80% of workplaces across Europe use personal computers, laptops, tablets, smartphones and other mobile devices

Facts and figures – home-based telework

EU-OSHA, OSH Pulse 2022

- 17% of workers worked mostly from home in 2022
- 90% of them using laptops, tablets, smartphones
- Home-based remote workers are less likely to report a lack of autonomy, or influence over the work pace or work processes (14.4%) when compared to the total of workers

EU-OSHA, ESENER 2019

- 12% of EU workplaces in 2019 allowed employees to work from home using digital technologies
- 75% of EU workplaces carry out risk assessment on regular basis but only 31% of those allowing home-based telework cover also homes

Facts and figures – Psychosocial risks

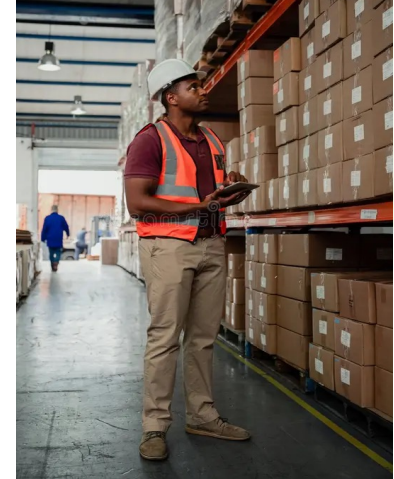
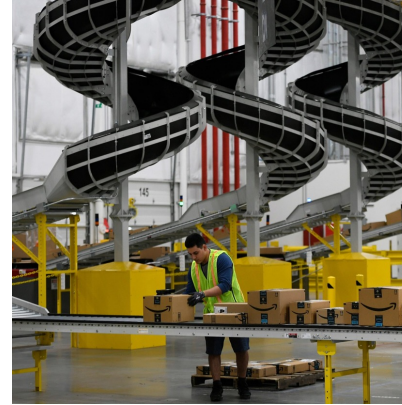
EU-OSHA, ESENER 2019

Psychosocial risks most commonly associated with digital technologies:

- time pressure
- long/irregular working hours
- poor communication/cooperation
- job insecurity

Facts and figures – Musculoskeletal risks

- time pressure leading to bad practices and repetitive movements
- poor postures
- sedentary behaviour



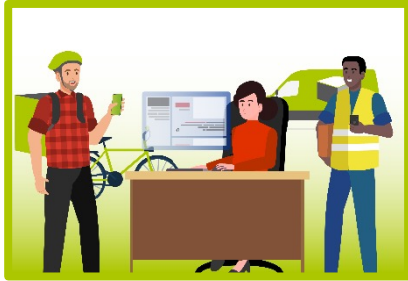
Campaign objectives

The campaign aims to:

- Increase knowledge about the safe and productive use of digital technologies across all sectors
- Raise awareness of digitalisation and its OSH implications
- Inform about emerging risks and opportunities
- Promote risk assessment and the healthy and safe management of digital transformation of work
- Facilitate the exchange of information and good practices



Priority areas



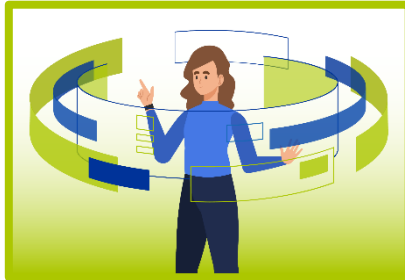
Digital platform work



Automation of tasks



Remote and hybrid work



Worker management through AI



Smart digital systems

Opportunities, risks and challenges to MSK health

OPPORTUNITIES

- How can these innovations prevent MSK conditions
- How can they improve the opportunities for remaining in work despite having impaired musculoskeletal health?

RISKS AND CHALLENGES

- What are the potential risks to MSK health?

Priority areas – Digital platform work



DEFINITION

An online facility or marketplace operating on digital technologies (including the use of mobile apps) that are owned and/or operated by an undertaking, facilitating the matching between the demand for and supply of labour provided by a platform worker.

OPPORTUNITIES

- Worker autonomy
- Flexible working hours
- Improved access to the labour market for disadvantaged workers

RISKS AND CHALLENGES

- Professional isolation
- Long/irregular working hours
- Algorithmic management
- Digital monitoring/surveillance
- Limited OSH regulations

Priority areas – Automation of tasks



DEFINITION

Use of systems or technical procedures to allow a device or system to execute (partially or fully) a function that was previously, or conceivably could be, carried out (partially or fully) by a human.

OPPORTUNITIES

- Automation of high-risk or repetitive work tasks
- Increased time for worker learning/creativity
- Reduced exposure to hazardous environments

RISKS AND CHALLENGES

- Loss of human situation awareness
- Over-reliance
- Possible loss of specific skills of workers

Priority areas – Remote and hybrid work



DEFINITION

Remote work can be defined as any type of working arrangement involving the use of digital technologies (e.g. personal computers, smartphones, laptops, software packages and the Internet) to work from home or, more generally, away from the employer's premises for most or part of the working time. The combination of remote work with work at the employer's premises is also referred to as **hybrid work**. **Telework** is a common way to define home-based remote work.

OPPORTUNITIES

- Increased autonomy and flexibility
- Better work-life balance
- Improved motivation and productivity
- Reduced commute time
- Safety from high-risk environments

RISKS AND CHALLENGES

- Isolation and lone working
- Work intensification
- Long/irregular working hours
- Conflicts between private and working life
- Inadequate equipment
- Poor behaviours – postures, sedentary

Priority areas – Worker management through AI



DEFINITION

Refers to a worker management system that gathers data, often in real time, on the workspace, workers and the work they do, 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.

OPPORTUNITIES

- Improved scheduling and task allocation
- Optimised work organisation
- Information to identify OSH issues

RISKS AND CHALLENGES

- Reduced worker autonomy and control
- Increased pressure to work faster
- Invasion of privacy

Priority areas – Smart digital systems



DEFINITION

Digital systems for monitoring and enhancing workers' safety and health including smart Personal Protective Equipment (PPE) - that can identify levels of gases, toxins, noise levels and high-risk temperatures, wearables - able to interact with workers, with sensors that may be embedded in hardhats or safety glasses, mobile or static systems that use cameras and sensors - e.g. drones that effectively reach and monitor dangerous areas of work sites avoiding to put humans in danger in the construction and the mining industries.

OPPORTUNITIES

- Prevent and minimise harm to workers
- Improved OSH compliance
- Informed decision-making
- Effective enforcement
- More training opportunities in virtual environment

RISKS AND CHALLENGES

- Data inaccuracies or misinterpretation
- Overreliance on technology
- Loss of control over work tasks

HWC media and promotion

- **New priority area approach** since HWC 2020-22
- In order to keep the momentum each campaign is split into various priority areas (PAs) with their corresponding **campaign information session and promotion pack**

- **Main elements:**

- Special section on the HWC website
- Virtual HWC info sessions: 2 weeks before each PA launch
- Campaign info sheets, PPTs and infographics
- Data and research products from the OSH Overview Digitalisation
- Multilingual HWC homepage banners
- Multilingual highlights (corporate and HWC website)
- News articles (HWC news section) – in English
- Campaign newsletter: PA to be partially the focus of each newsletter
- Social media kit and visuals



1. Digital platform work (February – May 2024)
2. Automation of tasks (June – September 2024)
3. Remote and hybrid work (October 2024 – January 2025)
4. Worker management through artificial intelligence (February – May 2025)
5. Smart digital systems (June – September 2025)

1st PRIORITY AREA: 'Digital platform work'

 An official website of the European Union How do you know? ▾

Our websites: EU-OSHA Healthy Workplaces Campaign OSH Barometer OiRA OSHwiki ESENER

 **Safe and healthy work in the digital age 2023-2025**

 European Agency for Safety and Health at Work



English ▾



Home About the topic ▾ Tools & Publications ▾ Get Involved ▾ Campaign partners ▾ Media Centre ▾ Previous Campaigns ▾

22/02/2024

Everything there is to know about digital platform work, the first priority area of the 'Safe and healthy work in the digital age' campaign



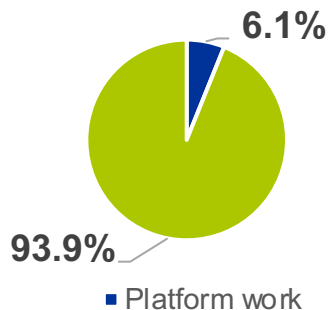
Having food delivered right to your doorstep, building a website programmed remotely by a professional, getting a taxi in minutes through an app or finding a technician online to repair your broken boiler are activities facilitated by digital labour platforms. Over 11 million people in the EU earn part or all of their income this way, a relatively new but exponentially growing way of work that offers many advantages but also presents notable risks and challenges. Platform work is the first priority area of the 2023-25 Healthy Workplaces Campaign and EU-OSHA will dedicate the next months to raising awareness and disseminating resources on the subject.

What is digital platform work?

Digital platform work consists of all paid labour provided through, on or mediated by an online platform, an online space that can be accessed from an app on a mobile phone, computer or other devices with an internet connection. While the tasks executed by the workers are always organised online, they can be performed virtually or in the physical world. These chores are usually managed by algorithms, although the level of control exercised by them varies. Currently, over 500 digital labour platforms are active in the EU.

Facts and figures: workers by type of work and sector

6% of workers in the EU earned most or part of their income through a digital platform



Source: OSH Pulse 2022 - EU-OSHA

Varies from low skilled, onsite, highly controlled work (parcel delivery) to high skilled, online, little controlled work (remote programming)

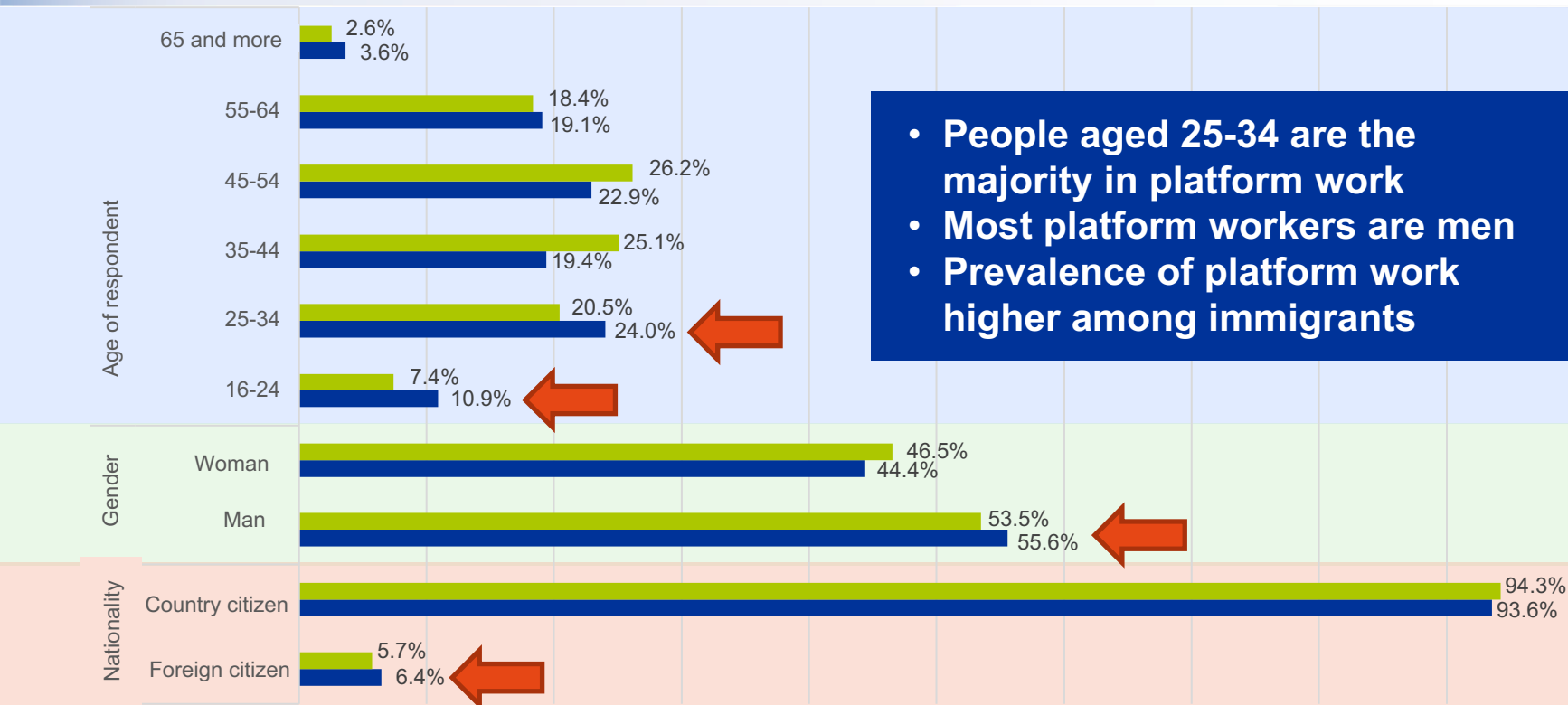
Digital platform work is more present in:

- Information and communication technology, finance, professional, scientific or technical services (19.2%)
- Commerce, transport, accommodation or food services (18.3%)
- Administration and support services, including public administration and defence (15.8%)

OSH Pulse 2022: <https://osha.europa.eu/en/facts-and-figures/osh-pulse-occupational-safety-and-health-post-pandemic-workplaces>

<https://healthy-workplaces.eu>

Facts and figures: workers by type of work and worker characteristics



- People aged 25-34 are the majority in platform work
- Most platform workers are men
- Prevalence of platform work higher among immigrants

■ No platform work ■ Platform work

Source: OSH Pulse 2022 - EU-OSHA

Facts and figures: workforce diversity

Migrants and ethnic minorities

- Overrepresented in lower-skilled on-location and online digital platform work
- Motivations: earning an income, escaping informal work, part of 'migration pathway'

Women

- Digital platform work is becoming less gender-segregated

Persons with disability, chronic illness or condition

- Involvement depends on nature of condition and task



Opportunities

- ✓ Promotes labour market (re)entry and participation
- ✓ Includes vulnerable and marginalised groups
- ✓ Attractive income source
- ✓ Develops skills
- ✓ Provides experience to find better jobs
- ✓ Enables choice of work environment
- ✓ Reduces risks of violence and harassment



OSH risks and challenges

- ✓ Concentrated in occupations that are more dangerous
- ✓ Often involves additional work
- ✓ Its nature and work conditions aggravate OSH challenges and risks
- ✓ Workers encounter physical and psychological health and safety risks, which are insufficiently prevented and managed



Factors aggravating OSH risks and challenges

- Unclear employment status and contract
- Algorithmic management
- Isolation and lack of social support
- Work transience and boundaryless careers

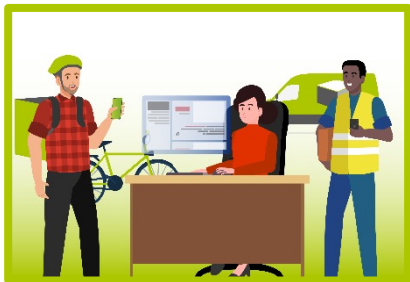
Policies and practices

European Commission's proposal for a directive to improve the working conditions of digital labour platforms

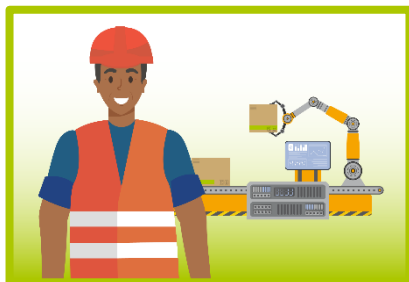


- ✓ **Clarification of the legal employment status**
- ✓ **Transparency in algorithmic management**
- ✓ **Better enforcement and higher traceability**
- ✓ **Addresses topics related to OSH**
- ✓ **Fills a gap left by regulation within the EU**

Priority areas



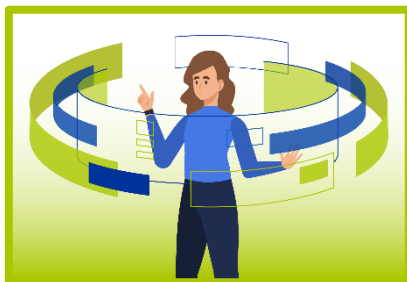
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EU-OSHA and campaign partners



Campaign resources



Publications



Campaign materials



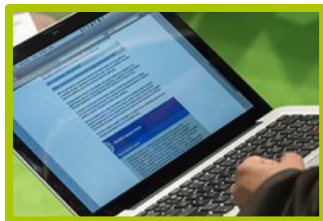
Campaign toolkit



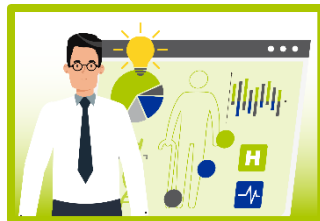
Social media kit



Napo films



OSHwiki



Case studies



Legislation and regulations



Infographics

Join us beyond the bits and bytes!

- Find out more on the campaign website:

www.healthy-workplaces.eu

- Subscribe to our campaign newsletter:

<https://healthy-workplaces.osha.europa.eu/en/media-centre/newsletter>

- Keep up to date with activities and events through social media:



#EUhealthyworkplaces

- Find out about events in your country from your national focal point:

<https://healthy-workplaces.osha.europa.eu/en/campaign-partners/national-focal-points>

