Healthy Workplaces Campaign 2023-25
Safe and healthy work in the digital age

Ensuring effective prevention in the digital world of work

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Brussels, 20 September 2023
EU-OSHA and Digitalisation: from the OSH Overview to the HWC Campaign

OSH overview Digitalisation and OSH (2021-2023):

Campaign Safe and healthy work (2023-2025):
www.healthy-workplaces.eu

“Safe and healthy work in the digital age”
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 – use of digital technologies

EU-OŠHA, OSH Pulse 2022

Would you say that the use of digital technologies in your workplace…?

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determine the speed or pace of your work</td>
<td>52</td>
<td>54</td>
<td>2</td>
</tr>
<tr>
<td>Results in you working alone</td>
<td>44</td>
<td>54</td>
<td>2</td>
</tr>
<tr>
<td>Increase surveillance of you at work</td>
<td>37</td>
<td>60</td>
<td>3</td>
</tr>
<tr>
<td>Increase your workload</td>
<td>33</td>
<td>65</td>
<td>2</td>
</tr>
<tr>
<td>Reduce your autonomy at work</td>
<td>19</td>
<td>78</td>
<td>3</td>
</tr>
</tbody>
</table>

Base: all respondents, EU27 (n=25 683)
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 workspace 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
Psychosocial risks most commonly associated with digital technologies:

- time pressure
- long/irregular working hours
- poor communication/cooperation
- job insecurity
Facts and figures – psychosocial risks

EU-OSHA, ESENER 2019
Workplaces reporting psychosocial risks by presence of digital technology, EU27

<table>
<thead>
<tr>
<th>Digital Technology</th>
<th>Not present</th>
<th>Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal computers at fixed workplaces</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Time pressure</td>
<td>14,9</td>
<td>38,2</td>
</tr>
<tr>
<td>- Poor communication or cooperation</td>
<td>9,9</td>
<td>24,2</td>
</tr>
<tr>
<td>- Job insecurity</td>
<td>11,2</td>
<td>21,0</td>
</tr>
<tr>
<td>- Long or irregular working hours</td>
<td>18,3</td>
<td>45,9</td>
</tr>
<tr>
<td>Laptops, tablets, smartphones or other mobile computer devices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Time pressure</td>
<td>12,4</td>
<td>33,1</td>
</tr>
<tr>
<td>- Poor communication or cooperation</td>
<td>8,1</td>
<td>11,9</td>
</tr>
<tr>
<td>- Job insecurity</td>
<td>17,6</td>
<td>48,5</td>
</tr>
<tr>
<td>- Long or irregular working hours</td>
<td>19,5</td>
<td>23,0</td>
</tr>
<tr>
<td>Robots interacting with workers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Time pressure</td>
<td>17,6</td>
<td>44,7</td>
</tr>
<tr>
<td>- Poor communication or cooperation</td>
<td>10,8</td>
<td>21,2</td>
</tr>
<tr>
<td>- Job insecurity</td>
<td>22,6</td>
<td>50,8</td>
</tr>
<tr>
<td>- Long or irregular working hours</td>
<td>23,0</td>
<td>27,9</td>
</tr>
<tr>
<td>Machines, systems or computers determining the content or pace of work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Time pressure</td>
<td>17,0</td>
<td>43,6</td>
</tr>
<tr>
<td>- Poor communication or cooperation</td>
<td>10,4</td>
<td>20,8</td>
</tr>
<tr>
<td>- Job insecurity</td>
<td>24,0</td>
<td>54,5</td>
</tr>
<tr>
<td>- Long or irregular working hours</td>
<td>26,1</td>
<td>20,8</td>
</tr>
<tr>
<td>Machines, systems or computers monitoring workers' performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Time pressure</td>
<td>17,1</td>
<td>43,8</td>
</tr>
<tr>
<td>- Poor communication or cooperation</td>
<td>10,3</td>
<td>20,9</td>
</tr>
<tr>
<td>- Job insecurity</td>
<td>26,2</td>
<td>57,1</td>
</tr>
<tr>
<td>- Long or irregular working hours</td>
<td>28,2</td>
<td>28,2</td>
</tr>
<tr>
<td>Wearable devices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Time pressure</td>
<td>17,6</td>
<td>44,2</td>
</tr>
<tr>
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</tr>
<tr>
<td>- Job insecurity</td>
<td>22,4</td>
<td>57,8</td>
</tr>
<tr>
<td>- Long or irregular working hours</td>
<td>31,2</td>
<td>31,2</td>
</tr>
</tbody>
</table>
Campaign objectives

The campaign aims to:

- Raise **awareness** of digitalisation and its OSH implications
- Increase **knowledge** about the safe and productive use of digital technologies across all sectors
- 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

https://healthy-workplaces.eu
Priority areas – Digital platform work

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

“Digital platform work frequently involves jobs in occupations and sectors that are at high risk and associated with poorer working conditions.”
Priority areas – Automation of tasks

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

“Using digital technologies for automation processes comes with a number of opportunities, but also potential risks and challenges, such as the loss of human situation awareness, over-reliance, or possible loss of specific skills of workers.”
### TAXONOMY - automation

<table>
<thead>
<tr>
<th>Cognitive tasks</th>
<th>Physical tasks (semi-) automated by advanced robotics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Object-related tasks</strong></td>
<td></td>
</tr>
<tr>
<td>▪ Routine tasks</td>
<td><strong>Object-related tasks</strong></td>
</tr>
<tr>
<td>▪ Driving (e.g. driving takeovers, or cruise control with the specific focus on collision prevention)</td>
<td>▪ Wall construction</td>
</tr>
<tr>
<td></td>
<td>▪ Pick &amp; place</td>
</tr>
<tr>
<td></td>
<td>▪ Object holding</td>
</tr>
<tr>
<td></td>
<td>▪ Lifting parts</td>
</tr>
<tr>
<td></td>
<td>▪ Transportation of objects (medicine, packages)</td>
</tr>
<tr>
<td></td>
<td>▪ Welding</td>
</tr>
<tr>
<td>▪ Non-routine tasks</td>
<td><strong>Information-related tasks</strong></td>
</tr>
<tr>
<td>▪ Organisational decision-making processes</td>
<td>▪ Person-related tasks</td>
</tr>
<tr>
<td></td>
<td>▪ Surgical tasks (e.g. suturing, biopsy, prostate surgery)</td>
</tr>
<tr>
<td></td>
<td>▪ Medical procedures (intravenous catheterization, blood extraction)</td>
</tr>
<tr>
<td></td>
<td>▪ Eating assistance</td>
</tr>
<tr>
<td></td>
<td>▪ Patient lifting</td>
</tr>
<tr>
<td><strong>Information-related tasks</strong></td>
<td></td>
</tr>
<tr>
<td>▪ Routine tasks</td>
<td><strong>Person-related tasks</strong></td>
</tr>
<tr>
<td>▪ Health monitoring</td>
<td>▪ Learning</td>
</tr>
<tr>
<td>▪ Decision-making / diagnosis</td>
<td>▪ Creation of motivation &amp; creativity</td>
</tr>
<tr>
<td>▪ Personal finance advice</td>
<td>▪ Creation of positive emotions in elder care</td>
</tr>
<tr>
<td>▪ Data classification</td>
<td>▪ Supporting therapy engagement</td>
</tr>
<tr>
<td>▪ Software development / code generation</td>
<td>▪ Nursing support (reminding functions, cognitive stimulation exercises)</td>
</tr>
<tr>
<td>▪ Automated text generation</td>
<td></td>
</tr>
<tr>
<td><strong>Person-related tasks</strong></td>
<td></td>
</tr>
<tr>
<td>▪ Routine tasks</td>
<td></td>
</tr>
<tr>
<td>▪ Customer support</td>
<td></td>
</tr>
<tr>
<td>▪ Teaching</td>
<td></td>
</tr>
<tr>
<td>▪ Assessment and supervision</td>
<td></td>
</tr>
<tr>
<td>▪ Non-routine tasks</td>
<td></td>
</tr>
<tr>
<td>▪ Care work</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Note:**
- **Routine tasks** are those that are frequently performed and can be automated.
- **Non-routine tasks** are those that are complex and require human expertise and judgment.
- **Physical tasks (semi-) automated by advanced robotics** refer to tasks that can be partially automated with the use of advanced robotics technology.

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Automation of tasks through AI & advanced robotics

Main OSH opportunities and risks

- DECREASED COGNITIVE LOAD
- REDUCED MONOTONY
- WELLBEING
- COGNITIVE OVERLOAD
- FEAR OF JOB LOSS
- FEAR OF INJURY
- PERFORMANCE PRESSURE
- TIME CONTROL
- WORKLOAD CONTROL
- LOSS OF AUTONOMY
- DEPERSONALISATION
- MOTIVATION
- PERFORMANCE
- DISTRESS
- NEGATIVE ATTITUDE
- PERSONAL DATA
- UPSKILLING
- RESKILLING
- TASK VARIETY
- DESKILLING
- DECREASED TASK COMPLETENESS
- LOSS OF JOB CONTROL
- MONOTONY
- REDUCED WORKLOAD
- ERGONOMIC WORKSPACE
- DECREASED ACCIDENTS
- STRAIN / LONG-TERM INJURY PREVENTION
- (RESIDUAL) PHYSICAL RISKS: COLLISIONS, RISKS FROM THE ROBOT’S EQUIPMENT
- HUMAN-MACHINE INTERFACE
- UNPREDICTABILITY
- BLACK BOX
- RISK ASSESSMENT
- INCLUSION
- COMMUNICATION PROBLEMS
- REDUCED INTERACTION WITH PEERS
Case study example
Case study example

AUTOMOTIVE & INDUSTRIAL SUPPLIER

OSH IMPACT

CHALLENGES
FEAR OF JOB LOSS
DECREASED PHYSICAL STRAIN

OPPORTUNITIES
MORE TASK SWITCHING
DECREASED ENERGIE Efficiency

https://healthy-workplaces.eu
Priority areas – Remote and hybrid 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

“Remote work must be included in the employer’s mandatory risk assessment.”

https://healthy-workplaces.eu
Napo movie on teleworking: https://youtu.be/TB_d6kfkWgM
Priority areas – Worker management through AI

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

“It is essential to build trust in these systems by informing, consulting and allowing workers to participate in their design and implementation.”
Up-take and perception of new forms of managing workers

- 71% of international companies consider people analytics a high priority (Deloitte, 2017)

- Demand for worker monitoring software increased by 87% in April 2020 compared to pre-pandemic (Top10VPN, 2020)

- Across the economy
  - Transportation, delivery and logistics, manufacturing, retail, professional cleaning workers, service sectors, as well as white collar workers

- Mixed perception:
  - 4 out of 5 senior executives would not be comfortable with an intelligent system managing them (Pega and Marketforce).
  - 25% workers feel monitoring has more benefits than downsides, 38% disagree, 35% are uncertain (TUC report)
  - Many workers not aware of their rights or feel unable to challenge employers’ use of surveillance

- ESENER-3: “Increased work intensity or time pressure” particularly discussed by those reporting the “use of workers’ performance monitoring technologies”.

Organizational analytics – ‘helping organizations understand how their teams interact in order to increase performance’ (Humanyze)
Priority areas – Smart digital systems

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

These new systems use digital technologies to collect and analyse data or signals in order to identify and assess OSH risks, thereby preventing or minimising harm and promoting OSH.”
Wearables, sensors, smart systems with real-time assessment, generating warnings, for example:

- **Smartphone apps** that are used for nudging workers towards a healthier behaviour

- **Smart glasses**, or **drones** in the construction and the mining industries, to effectively reach and monitor dangerous areas of work site avoiding to put humans in danger.

- **E-textile technologies** able to interact with workers, with sensors that may be embedded in **hardhats or safety glasses**

- **Smart watches** that enable the gathering of physiological, emotional data of people via IoT

- **VR/AR tools** used for training, as an interface providing monitoring data.

- **Wearable devices** that can identify levels of gases, toxins, noise levels and high-risk temperatures

- **Smartphone apps** to allow easy reporting and/or task assistance in the event of accidents at work.
Risk prevention

• Human-centred approach

• Equal access to information of all stakeholders

• Worker consultation/participation in the development, implementation and use of digital technologies and systems

• Transparency about the way a digital tool operates

• Holistic approach to evaluating the impact of digital technologies and systems on OSH
Campaign resources

- Publications
- Campaign materials
- Campaign toolkit
- Social media kit
- Napo films

- OSHwiki
- Case studies
- Legislation and regulations
- Infographics

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EU-OSHA and campaign partners

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OSHVET PARTNERS

EU INSTITUTIONS

MEDIA PARTNERS

EU-OSHA NATIONAL FOCAL POINTS

ENTERPRISE EUROPE NETWORK

EU AGENCIES

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How to get involved

European Week
Campaign partnership
Good Practice Awards
Campaign toolkit
Campaign materials
Social media kit
Events
Certificate of participation

https://healthy-workplaces.eu
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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