

Top trends for occupational safety and health: information from the Risk Observatory's trend portal

What trends will have the greatest impact on the world of work in the near future? As part of the research conducted by the German Social Accident Insurance's Risk Observatory, experts from the fields of research and prevention assessed 117 trends in the spring of 2023 in order to answer this question. 39 trends were identified as top trends for occupational safety and health.

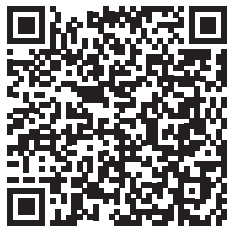


The trend portal in the Risk Observatory

The trend portal provides information on each of the top trends. For each top trend in turn, a "trend description" is created based on the answers to the questions below. The answers are summarized in the trend description.

- › What is the subject of the trend?
What is its objective?
- › What is accelerating the trend, and what is slowing it down? What mutual influences exist with other trends?
- › Which sectors/groups are particularly affected by the trend?
- › What do these developments mean for workers' safety and health? (Opportunities and risks)
- › What observations have been made for occupational safety and health, and what is the outlook?

IFA technical information:
Risk Observatory – trend portal (dguv.de)



Top Trends for OSH

A total of 39 top trends were identified. Identification was the result of several steps:

First, the researchers at the Risk Observatory identify and record current trends. When the surveys were launched in the spring of 2023, the collection comprised 117 trends, assigned to ten different trend categories:

- › Digital transformation and connectivity
- › New technologies
- › Globalization
- › The economy
- › New work
- › Climate change, nature and resource conservation, the low-carbon economy
- › Mobility
- › Infrastructure
- › Demographic developments and diversity
- › Social affairs and health

The trends collected in this way were then evaluated by experts in two forms of survey: the future relevance surveys and the sectoral relevance survey.

Ten different future relevance surveys – corresponding in number to the trend categories – were conducted to assess the influence of the trends in each category on the world of work. 1,332 selected experts from the research community, together with prevention experts from the social accident insurance system, were asked for their opinions. The response rate was 16.4%. Statistical analyses were then used to identify top trends.

In the sectoral relevance survey, 252 industry experts from the social accident insurance system evaluated all 117 trends for their respective sector, i.e. they estimated the influence of each trend on the occupational safety and health of insured persons in the sector. The survey covered 57 sectors in total. The top trends in this survey were determined numerically. Where a trend had a major influence in at least 30 percent of all sectors, it was considered to be of high sectoral relevance, and thus a top trend.

The Risk Observatory then performed extensive searches to analyse the impacts of the identified top trends on occupational safety and health. The researchers in the Risk Observatory summarized the results of the top trend analyses in trend descriptions.

Digital transformation and connectivity

- › Artificial intelligence
- › Networked automations
- › Cloud computing
- › Robotization
- › Big Data
- › Cybercrime

New technologies

- › Digital models for visualization
- › New battery types (rechargeable and non-rechargeable)
- › Sensors and (ultra-sensitive) detectors
- › Lightweight construction

Globalization

- › Global migration
- › Changing world order and international relations
- › National self-interest and protectionism in Europe

The economy

- › Monopolization
- › Platform economy
- › Logistics and delivery services

New Work

- › Flexibilization of working hours and place of work
- › New office concepts

Climate change

- › Renewable energies
- › Energy efficiency
- › Sustainability
- › Recycling and the circular economy
- › Climate change
- › Natural disasters and extreme weather
- › Alternative fuels

Infrastructure

- › Insecurity of supply
- › Expansion of the communication network
- › Upgrading and expansion of the electricity grids
- › Modernization, renovation, maintenance and refurbishment backlogs

Mobility

- › Sustainable mobility
- › Networked mobility
- › Driver assistance systems
- › Modified or innovative means of transport, including autonomous transport

Demographic developments and diversity

- › Shortage of personnel and skilled workers
- › Demographic change and imbalanced age structure

Social affairs and health

- › Physical inactivity
- › Unhealthy diet
- › Self-optimization
- › New pharmaceuticals, vaccines and therapies

39 top trends (ranked by trend category): results of the surveys on future relevance and sectoral relevance.

Significance of formatting:

Top trend = from the future relevance surveys

Top trend = only from the sectoral relevance survey

Top trend = from the future relevance surveys and the sectoral relevance survey

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The top trends reflect, on the one hand, geopolitical and climate change policy developments associated with a changing world order and international relations, national self-interest and protectionism, global migration, cybercrime and insecurity of supply; and on the other, climate change and trends accompanying the shift to a low-carbon economy (renewable sources of energy, upgrading and expansion of electricity grids, energy efficiency, recycling and the circular economy, alternative fuels, sustainable mobility). Some of the technical developments are also related to the low-carbon economy (new battery types, lightweight construction). Sensors and detectors support networking, self-driving vehicles and robotization, for example. Artificial intelligence is a megatrend in the sphere of the digital transformation and connectivity, and is thus also included among the top trends. Some of the top trends are related to the recent corona pandemic: flexibilization of working hours and place of work, new pharmaceuticals, vaccines and therapies, and logistics and delivery services. Top trends in the business sector include monopolization (for example by the major IT companies) and

the platform economy. The trends characterizing the working population in Germany are the shortage of personnel and skilled workers, demographic change and an imbalanced age structure. These trends have been of key importance in trend research conducted by the Risk Observatory since its launch in 2011. The modernization, renovation, maintenance and furnishing backlog is also a trend clearly applicable to Germany. Trends at a personal level can be found in the social affairs and health trend category, examples being physical inactivity, an unhealthy diet and self-optimization.

At this point in time, the Risk Observatory's trend portal already provides information on how almost half of the 39 top trends are impacting upon worker safety and health. The occupational safety and health community can use this information to counter risks proactively and exploit opportunities to the full. ●

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