



Occupational safety and health in Europe: state and trends 2023

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Foreword by Nicolas Schmit, European Commissioner for Jobs and Social Rights



Occupational safety and health (OSH) has been at the heart of the European project since the very beginning. OSH concerns all European citizens whether they work in a factory, in an office, sell goods in a shop or take care of patients in a hospital. Health and safety at work is an essential part of any organisation's operations.

This is why EU policy and legislation on OSH, based on both scientific and technical evidence and data, is a vital policy area for EU society and all of its citizens.

"Occupational safety and health in Europe – state and trends 2023" is a very important contribution from the European Agency for Safety and Health at Work (EU-OSHA). The Agency's analysis is also particularly timely, as the EU takes stock of progress made under the 2021-2027 EU Strategic framework on health and safety at work.

This publication originates from a European Commission initiative, supported by its tripartite Advisory Committee on Health and Safety at Work, to create a comprehensive EU OSH Information System. Work in this area started in 2015 and the project was later transferred to EU-OSHA which together with the Commission put the information system online under the title of "EU OSH Barometer".

This particularly useful tool, notably for the stakeholders in this policy area, provides, on a permanent basis, graphical information for significant OSH indicators at EU and national level, drawing on statistics, surveys and public data. This first analytical report combines the quantitative data of the EU OSH information system with explanatory and analytical descriptions of trends that reach back between 10 and 25 years. The intention is to repeat this exercise on a regular basis, so that it can provide knowledge and insights for safer and healthier work, in an ever-changing world of work, to wider audiences.

Changes at the workplace, caused by the COVID crisis, the green, digital and demographic transitions, as well as by scientific and technological progress, led the Commission to adopt, in June 2021, a new 2021-2027 EU Strategic framework on health and safety at work.

The Framework is part of the Commission's commitment to building a strong social European Union that protects. This is the foundation of all the initiatives that we are proposing. Every action we take in social policy comes under the umbrella of the European Pillar of Social Rights Action Plan that we presented in March 2021. The protection of workers' health and safety, enshrined in the EU Treaties and in the Charter of Fundamental Rights, is one of the key elements of an EU economy that works for people. In particular, the right to a healthy and safe workplace is reflected in principle 10 of the European Pillar of Social Rights, and is fundamental for reaching the United Nations' sustainable development goals. Our determined action to improve occupational safety and health and to consolidate a culture of prevention represents a substantial contribution to the objectives of the abovementioned Pillar.

The work of EU-OSHA is essential in this respect and this publication is a good example of the strong commitment shown by EU governments – and also employer and trade union organisations - to continuously improve OSH in Europe.



Nicolas Schmit

Acknowledgements

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Find more up-to-date information and data on occupational safety and health in Europe in the **OSH Barometer data visualisation tool**: <https://visualisation.osha.europa.eu/osh-barometer/>

The tool informs on a large range of OSH indicators, such as work-related accidents, diseases and wellbeing as well as working conditions and prevention. It also presents the national OSH authorities and strategies, economic and sector information, and enforcement capacity.

You can visualise and compare country data, generate graphics and download a report of all data per country. The OSH Barometer is updated regularly with new indicators, data, publications and features.

1. Setting the scene

The ethical and economic importance of safe and healthy working conditions was the root cause for the development of a strong legal framework and comprehensive policy actions targeting EU workplaces. The objective of all related measures is to reduce the avoidable burden for individuals and society, that is annually more than 3,000 fatal accidents at work, and more than 230,000 severe accidents at work, and an estimated 180,000 deaths from work-related illness.

During the last 50 years, we have witnessed **significant progress** in the field of occupational safety and health (OSH) in EU Member States. Milestones along the way provide evidence that a preventive, proactive and often participative approach has become mainstream in policies and many businesses. The number of work accidents that Eurostat registers has decreased significantly in the period between 1994 and 2020. The EU stabilised and promoted this development, particularly in the 1990s, by adopting the overarching OSH Framework Directive and 24 specific OSH directives. OSH strategies and strategic frameworks at EU and Member State levels have contributed to streamlined approaches in priority areas. Higher safety and health standards, better preventive technologies and OSH management, improved training and education of OSH professionals, and scientific, technical and medical progress have contributed considerably to improving safety and health at work. Member States, the EU and international organisations have been providing comprehensive and manifold guidance and support for enterprises, covering virtually every kind of OSH-related issue and proposing practical preventive measures. Broad and extensive research at national institutes and universities and by EU institutions has considerably improved the level of evidence and knowledge on OSH.

Looking at the challenging and weaker aspects of the last 30 years, we still **observe deficits** concerning the level of compliance and enforcement of OSH legislation, particularly in some sectors, types of work (e.g. mobile or domestic work), types of enterprises (e.g., micro and small enterprises¹), and in less secure and irregular forms of work.² During the COVID-19 pandemic in 2020 and 2021, quite a few media reported on insufficient safety and health measures in irregular, informal, insecure and illegal forms of work, for example, in several types of seasonal or subcontracted work. Permanent and seemingly accelerating changes in economic and social policies, technologies and forms of work, the demographic composition of the workforce and the climate influence on working conditions challenge all stakeholders in the field of OSH to keep pace with all these developments. In addition, the EU and consequently also OSH in the EU is increasingly and significantly influenced by the globalisation of product and service chains and the internationalisation of its workforce.

This summary of the state and trends report paints a mostly **quantitative picture** of the current OSH status in the EU. It uses data from European surveys and statistics that were compiled in



the frame of the European Agency for Safety and Health at Work (EU-OSHA) activity 'EU OSH Information System' and combines quantitative data with explanatory and analytical descriptions. The report covers trends that reach back between 10 and 25 years — depending on data availability and methodological issues. It also takes into account relevant context factors, be it economy, workforce and demography, industrial relations or technological developments.

Intentionally, the report is kept short. The reason is to cover as many indicators, trends and context developments as possible. Short overviews and summaries form the character and shape of this report, not detailed descriptions. This is slightly compensated by extensive referencing to literature, particularly the OSH Barometer data visualisation tool, reports by EU-OSHA and other EU agencies (e.g. Eurofound), and other EU institutions and international agencies.

The analytical distinctions were mostly made according to work and workplace-related criteria, like occupation, type of work, different contractual conditions and, in some cases, emphasising differences between EU Member States; it presents fewer data on characteristics of different worker groups, like age, sex and origin. For all the above, more information is available in the main report.

2. How can the 'state of OSH' in the EU be assessed?

The report describes the **state of OSH in the EU**, and accordingly the **trends and the developments**, that is, the changes in state over time. A description of the state of such a complex system like OSH cannot follow a school-level grading system of A, B, C or 1, 2, 3 ; it is based on a broad set of OSH indicators.

The main data sources **comprise a large variety of quantitative data** sets, for example, Eurostat statistics and EU-wide surveys (e.g. EU-OSHA's European Survey of Enterprises on New and Emerging Risks³ (ESENER), Eurofound's European Working Conditions Survey⁴ (EWCS), Eurostat's Labour Force Survey (LFS) and its ad hoc modules,⁵ and the Flash Eurobarometer,⁶ detailed background reports on risks, groups of workers, OSH systems and infrastructures (e.g. by EU-OSHA, Eurofound, the Fundamental Rights Agency,⁷ etc.), and evaluations and assessments of the level of implementation of OSH directives (e.g. by DG EMPLOYMENT (DG EMPL) or the Senior Labour Inspectors Committee surveys facilitated by the National Labour Inspectorates⁸).

Please note that Eurostat employment data were retrieved in January and February 2023. Current Eurostat figures might slightly deviate due to updates and corrections.

Regarding the description of developments beyond the EU, data were taken from the International Labour Organization

(ILO), the World Health Organization (WHO), the International Social Security Association (ISSA), the United Nations (UN), the Organisation for Economic Co-operation and Development, the International Commission on Occupational Health (ICOH) and the International Association of Labour Inspection (IALI). For data interpretation and qualitative analysis, reports or articles in scientific journals were included.

Two criteria were crucial for the selection of these indicators: availability of reliable data and the relevance of the indicators.

An ideal and complete set of indicators would cover even more indicators than presented in this report but major limits were set by the availability of reliable data.

If a **rating or judgement of the status** is provided, like 'good' or 'sufficient', the criteria for this assessment were derived by comparison. Comparisons are made between sectors, occupations, groups and countries, or between different time periods. In some cases, the current state is valued against an unambiguously desired state (e.g., zero work accidents). The report refers to different periods in time, mostly to the situation between 2005 - after the substantive enlargement of the EU in 2004 - and 2019; if the use of earlier or more recent start or endpoints was reasonable and data were available, a different time frame was applied.



3. Working conditions – developments

3.1 Risk factors at work

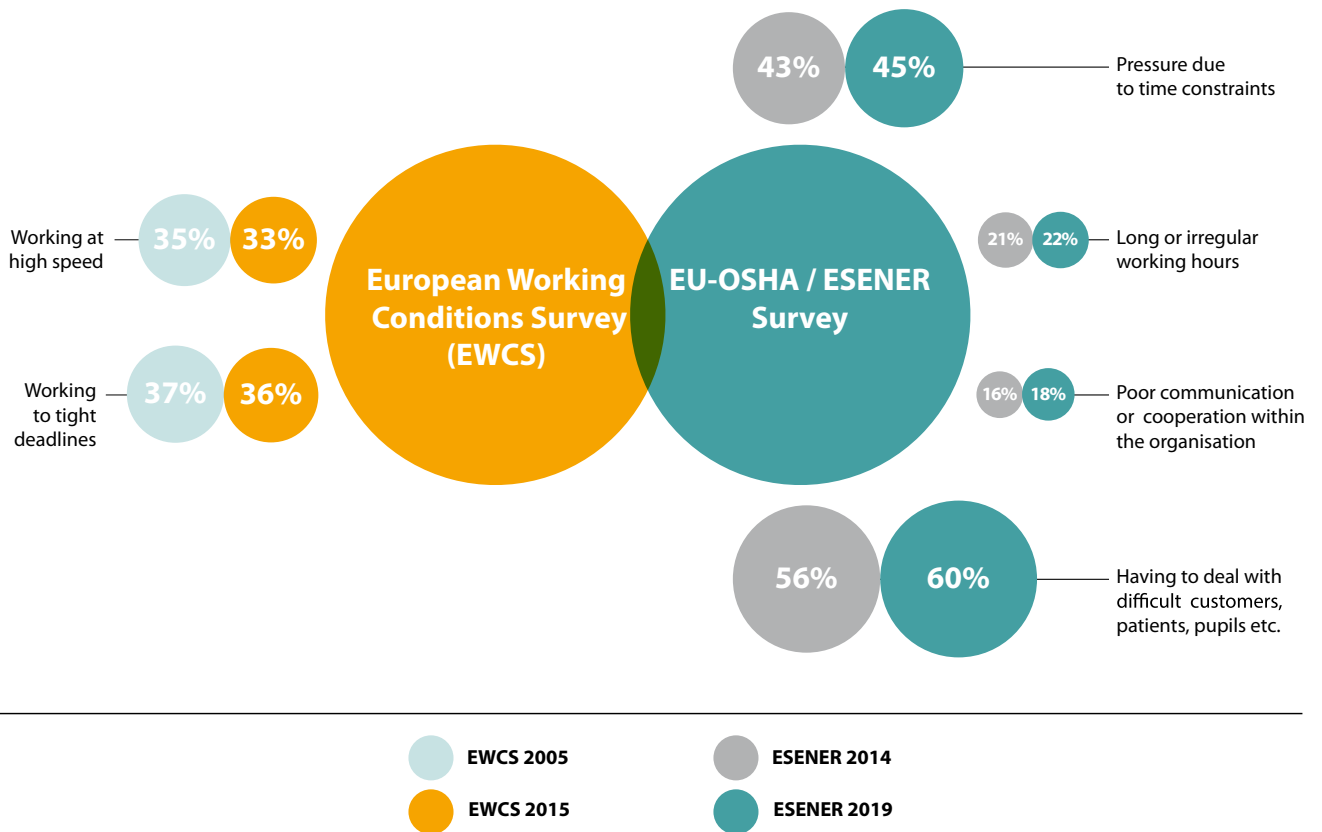
Shifts in work tasks and workforce between sectors, technological progress and the development of higher skill levels have led to less work in manual occupations and more work in administrative (clerical, professional, managerial, etc.) occupations⁹ as well as in client-oriented and communicative occupations.

Consequently, these developments caused a **shift of risks to psychosocial and emotional challenges** and lower physical activity. This can be documented by the growing percentage of workers¹⁰ who report difficult clients, long working hours and poor communication in the organisation, and also from the increase in the share of workers spending hours sitting. The OSH risks for these occupations — gradually but also significantly — shifted from safety risks to health risks. The psychosocial risks for mental health and the emotional challenges increased; they clearly correlate with more work

in emotionally demanding and/or client-oriented sectors. The three aspects 'Difficult clients', 'Poor communication' and 'Long working hours' are much more present in sectors with a high level of customer and client-oriented work, be it in tourism, entertainment or education, public transport, social work, or health and care. Difficult clients seem to be the most widespread psychosocial burden.



Figure 1: Risk factors that can adversely affect mental wellbeing – EWCS¹¹ and ESENER¹²



A major difference between ESENER and the EWCS is the sample. In ESENER, those persons who are most familiar with OSH or responsible for OSH in an enterprise were asked whether a certain risk factor exists in the enterprise; in the EWCS, workers were asked whether they are exposed to a risk factor.

The trend towards more psychosocial and emotional challenges at work does not mean that ‘classical’ exposures or ergonomically burdensome work has disappeared. There is a large number of workers in all sectors — between 40% and 75% in ESENER and the EWCS — who report **classical ergonomic risks**. These are, for example, repetitive hand and arm movements in industry and service occupations, where a particularly high percentage is reported by low-skilled manual workers; moving heavy loads in craft occupations, or patients in health and care occupations, where a particularly high percentage is reported by high-skilled manual workers; and tiring and painful positions, where again the highest level is reported by high-skilled manual workers.

Still a quite constant share of workers reports exposure to **physical risks** like noise, vibrations, high or low temperatures and to chemical and biological agents; depending on occupation and sector, between 15% and 30% of workers are exposed to such risks (EWCS). No or very minor decreases in these risks can be seen during the past 15 years. The LFS ad hoc module ‘Accidents at work and other work-related health problems’¹³ shows much lower values — between 3% and 10% — due to a different



methodological approach (the interviewees had to determine one risk factor that they regarded as the most important out of 11 risk factors¹⁴).

In several occupations, **classical safety risks often add to the above-mentioned exposures**, that is, slips, trips and falls, risks related to moving parts of machinery, moving vehicles, exposure to hot, cold, hazardous materials, loud noise, chemical or biological substances, and in general physically exhaustive work.

A certain **ergonomic risk** of many administrative and supervisory jobs is **physical inactivity**, in practice meaning sitting most of the working time in front of digital equipment, sitting to make phone calls or sitting in meetings. Not only administrative tasks but also many occupations in transport and industry require prolonged sitting (transport, cashiers, parts assembly, etc.).

In the 10-year period before 2005, EU-wide surveys found a significant increase in work intensity. Major differences in work intensity and working time patterns can be seen between occupations, forms of work, sectors and enterprise size, for example, **there is more time pressure in larger enterprises than in small ones**.

The length of the daily or weekly working time and its allocation with the 24 hours of a day or at night are important factors for health and wellbeing. The statistical data (Eurostat) show a slight decrease **in the average weekly working time for full-time employees** (15-64 years) from 40.2 to 39.9 hours between 2006 and 2019.¹⁸ The data also document slight increases or decreases of work during atypical times (response option for frequency: 'Usual').¹⁹ Between 2006 and 2019, the following percentages of

Figure 2: Exposure to physical risks – ESENER¹⁵, EWCS¹⁶ and LFS¹⁷

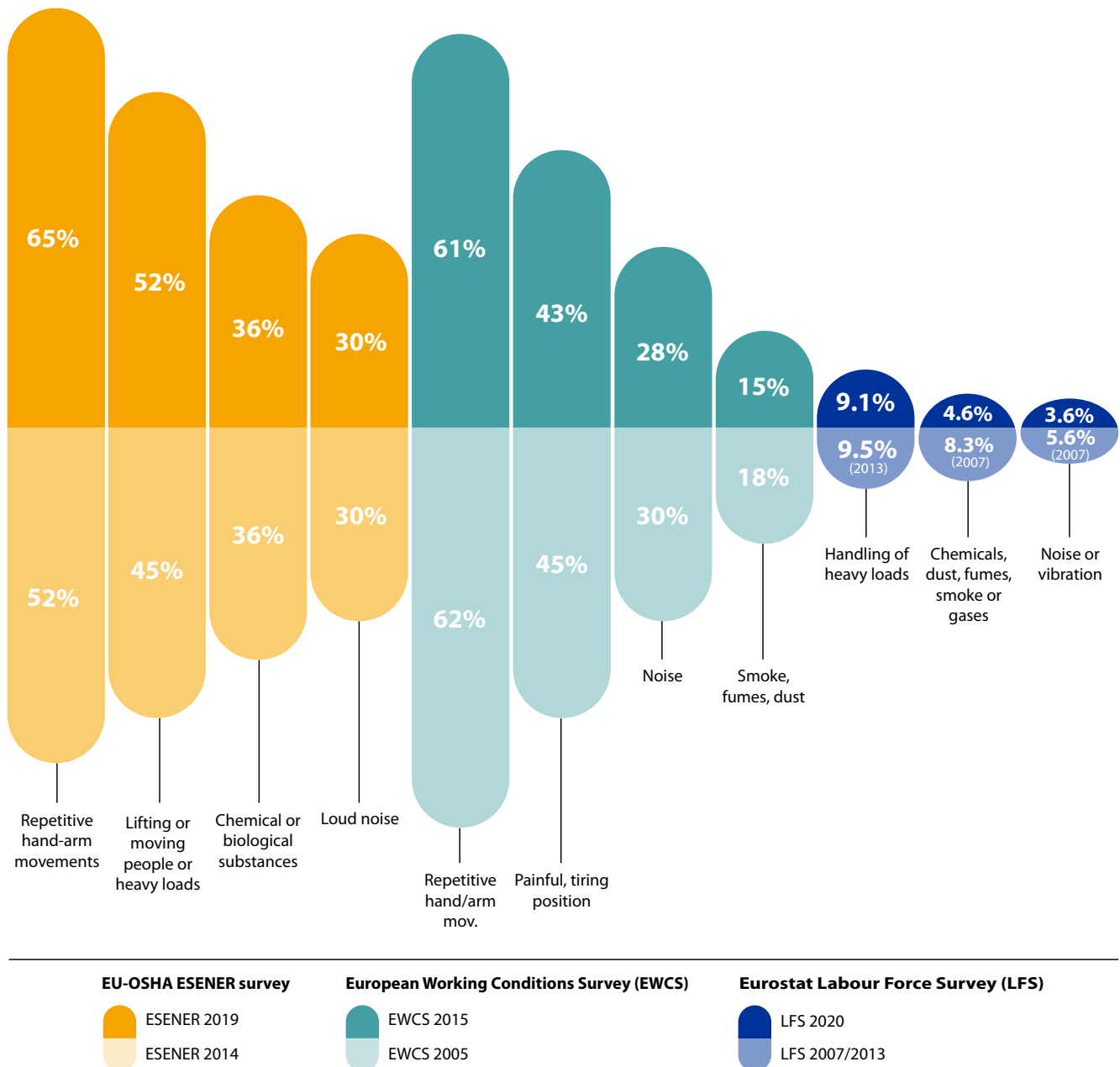
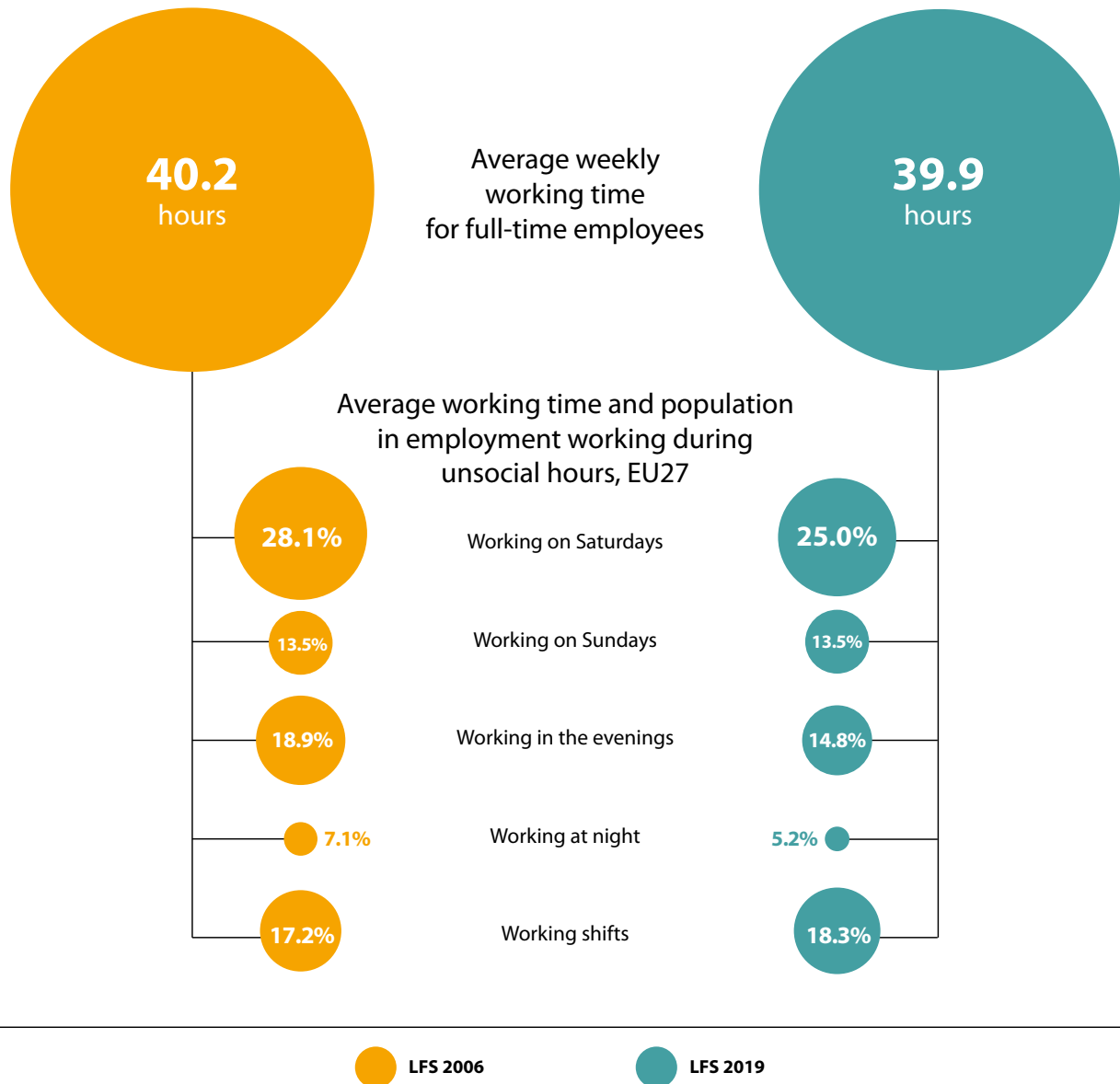


Figure 3: Working time developments and work during unsocial hours – LFS²⁰



all employed persons worked at atypical times: on Saturdays the percentage decreased from 28% to 25%, working in the evenings decreased from 19% to 15%, working on Sundays remained stable at around 13.5%, work at night fell from 7% to 5%, and shift work increased slightly from 17% to 18%.

Two country examples might illustrate these developments (all data 2019): Slovakia, a country with a high share of ‘permanent process’ industries, reports that 15.0% of its workforce is working at night and 29% in shifts, while for the EU27 these rates are 5.2% and 18.3%, respectively.²¹ Regarding work on Sundays, three countries top the EU27 chart: Ireland, Spain and the Netherlands; they report between 18% and 21% (EU27 average = 13.5%). All three countries have an above-average share of sectors like transport, tourism and agriculture.²²

Eurostat reports for all types of ‘employment at atypical working time’ a minor decrease between 2011 and 2019, from 38.8% to

37.2% (EU27 average), for all employed workforce and all types of such atypical time.²³ Some **groups of self-employed** show a higher rate of atypical working times, but also for most of these groups the rates decreased during the period 2011 to 2019. The picture is also quite different for several employment groups; in 2019, 37% of all employed persons reported to work at atypical times. For **high-managerial self-employed**, this rate is 43.2% in this period and for **low-managerial self-employed** 64.5%.

Significant differences also exist between eastern/southern and central/northern/western European countries. More physical and ergonomic risks (except inactivity) are reported from eastern and southern EU Member States but more emotional demands (e.g. difficult clients, poor communication and long working hours) in northern and central European countries. One of the major reasons might be the reallocation of industrial production to Eastern countries after the EU extension to 24 and later to 27 Member States.



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3.2 Conditions of employment and workforce development

The conditions of employment have changed towards a higher share of several types of ‘non-standard work’. Typical characteristics of non-standard work are part-time work, temporary (or fixed term) work, seasonal work, casual work, home-based work, telework, self-employment and family work.²⁴

During the past decades and at faster pace after 1990, a **greater variety of non-standard contractual relations** has emerged. Currently, high public awareness is directed to those types of non-standard work that are connected either to **new forms of contracts** (voucher, platform, zero-hours, portfolio etc.),²⁵ or increasing **types of work not bound to the premises of the employer** (mobile, at home, at client’s home), mostly made possible by the increased use of modern information and communication technologies (ICT). These forms of work often have as an additional major characteristic a **less clear employer-worker relationship**.

However, in 2019 the conventional employment contract still accounted for around 86% of the workforce (EU27), 9% are ‘own-account’ workers, that is, self-employed without employees. The remaining 4% were self-employed with employees (employers) and less than 1% were contributing family workers. Of all employed workers, 17.3% worked part-time and 11.4% had temporary contracts.

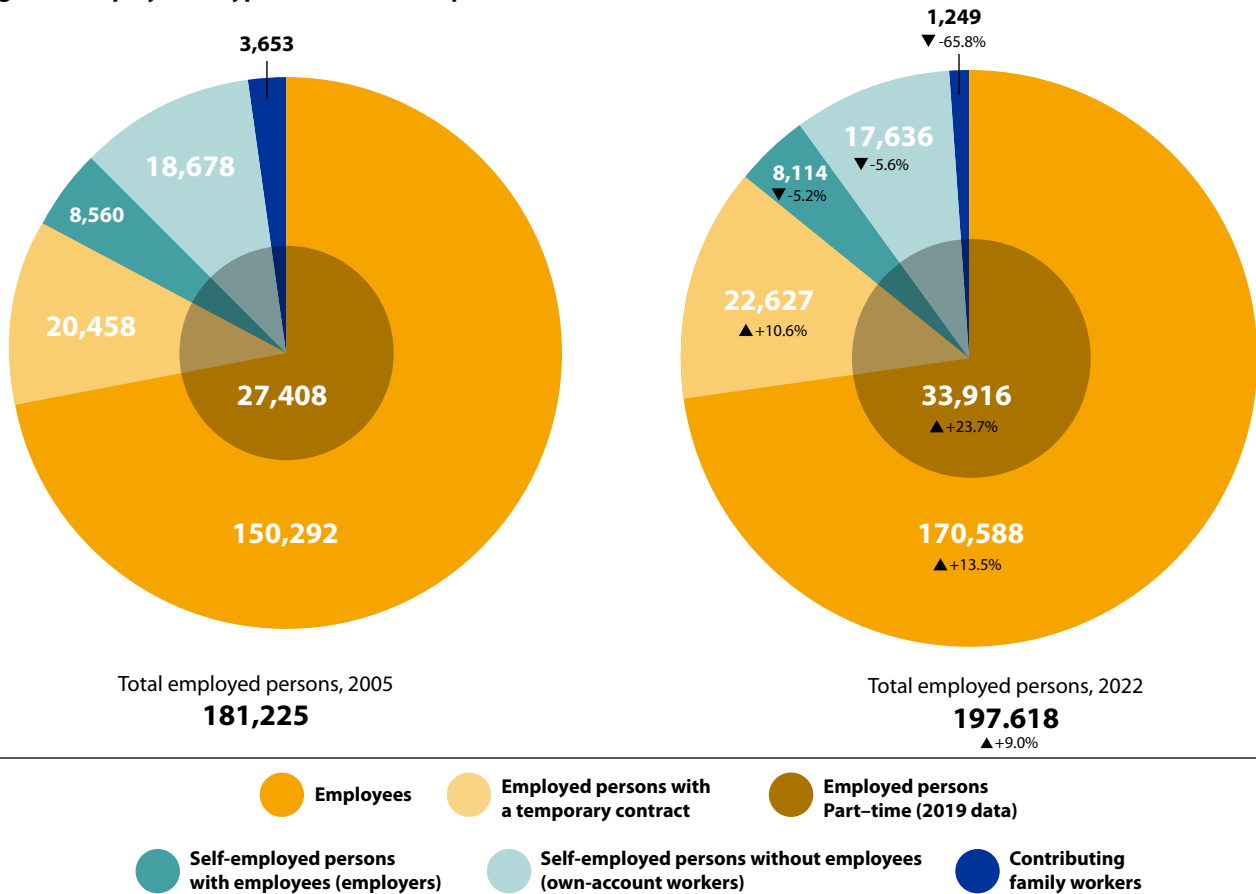
Non-standard types of work that are characterised by the circumstance that **the work is not taking place at the premises of the employer** are mobile and home-based work, domestic work, care work and long-term domestic care work, seasonal work

In 2019, approximately 77% worked at the employer’s premises, 5% at home, 9% at the clients’ places and 8% at non-fixed workplaces. With the onset of the COVID-19 pandemic in 2020, the share of work at home more than doubled; in the EU27 it increased from 5.4% in 2019 to 13.4% in 2021.

and online platform work. In 2019, approximately 77% worked at the employer’s premises, 5% at home, 9% at the clients’ places and 8% at non-fixed workplaces (see Figure 7). With the onset of the COVID-19 pandemic in 2020, the share of work at home more than doubled; in the EU27 it increased from 5.4% in 2019 to 13.4% in 2021.²⁸

Compared to work at the premises of the employer, such non-standard workplaces often miss basic OSH facilities (Minimum requirements at workplaces directive), availability and suitability of equipment (Work equipment directive and Personal protective equipment directive), or provision of adequate digital and mobile tools (Display screen equipment directive).

Figure 4: Employment types in EU27, development 2005 to 2022 – Eurostat^{26, 27}



The minor deviation of the sum of the different types of employment to the 100% 'Employed persons' is due to 'No response' answers. The data of part-time employees and of employees with a temporary contract are for the full year 2019, not for Q4.

Figure 5: Employees working mostly from home (in % of employed persons) – Eurostat²⁹

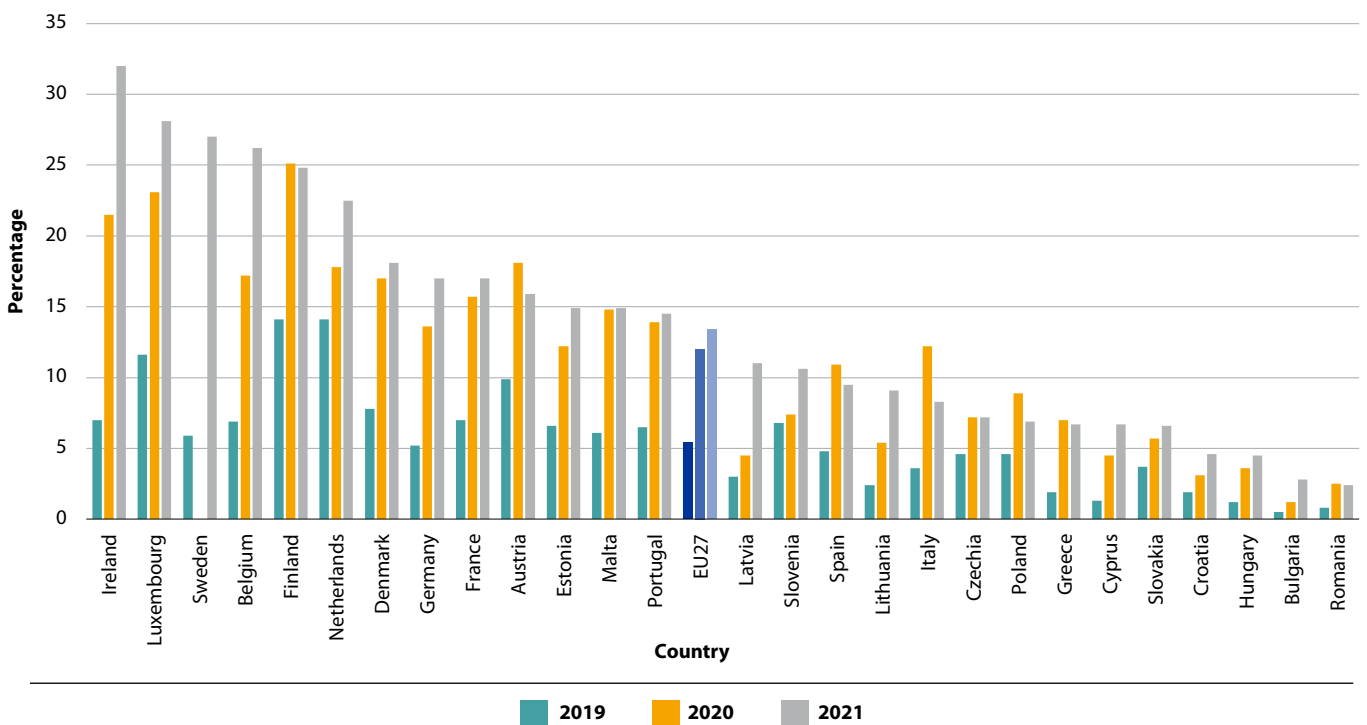
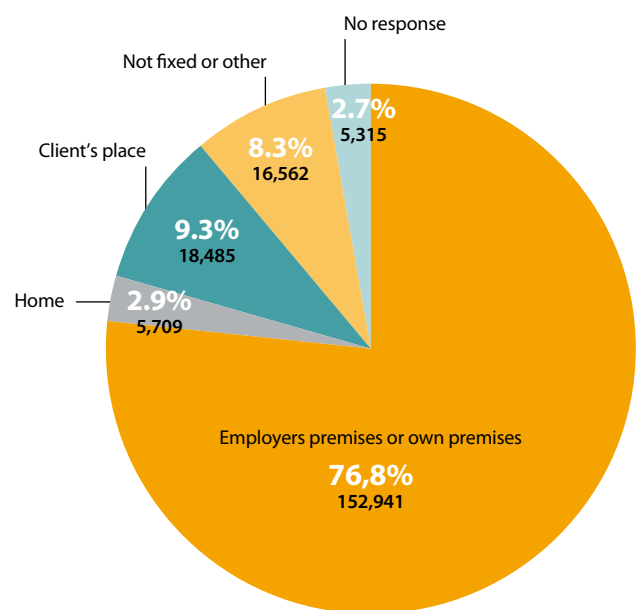




Figure 6: Employed persons by main place of work – Eurostat³⁰



Total workforce
199,014

Employed persons by main place of work, frequency of working at other locations and working from EU27, 2019 LFS ad hoc module (in thousands)

The small discrepancies in the total number of employed persons between Figures 4, 6 and 7 are due to the different approach in the LFS ad hoc module 2019 compared to the regular LFS.

The **workforce structure** also significantly changed during the past 15 years, requiring new or adapted prevention solutions, organisationally and technically.

Statistics show a growing share of **employment rates of female workers**; between 2005 and 2019, the employment (activity) rate of women expanded from 61.2% to 67.9%.³¹ In 2005, approximately 80 million women and 101 million men were employed in the EU. In 2005, this made the share of the female workforce 44.1%, and in 2019 this rate went up to 46.1%, that is, 90.2 million women and 105.6 million men, together totalling 195.8 million.³²

The share of older workers — between 55 and 64 years old — increased significantly, from 11.1% (2005) to 18.4% (2019).³³ This corresponds to a growth from 20.1 million to 35.9 million employed persons, or of 79%.

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Figure 7: Workforce structure, demography – Eurostat

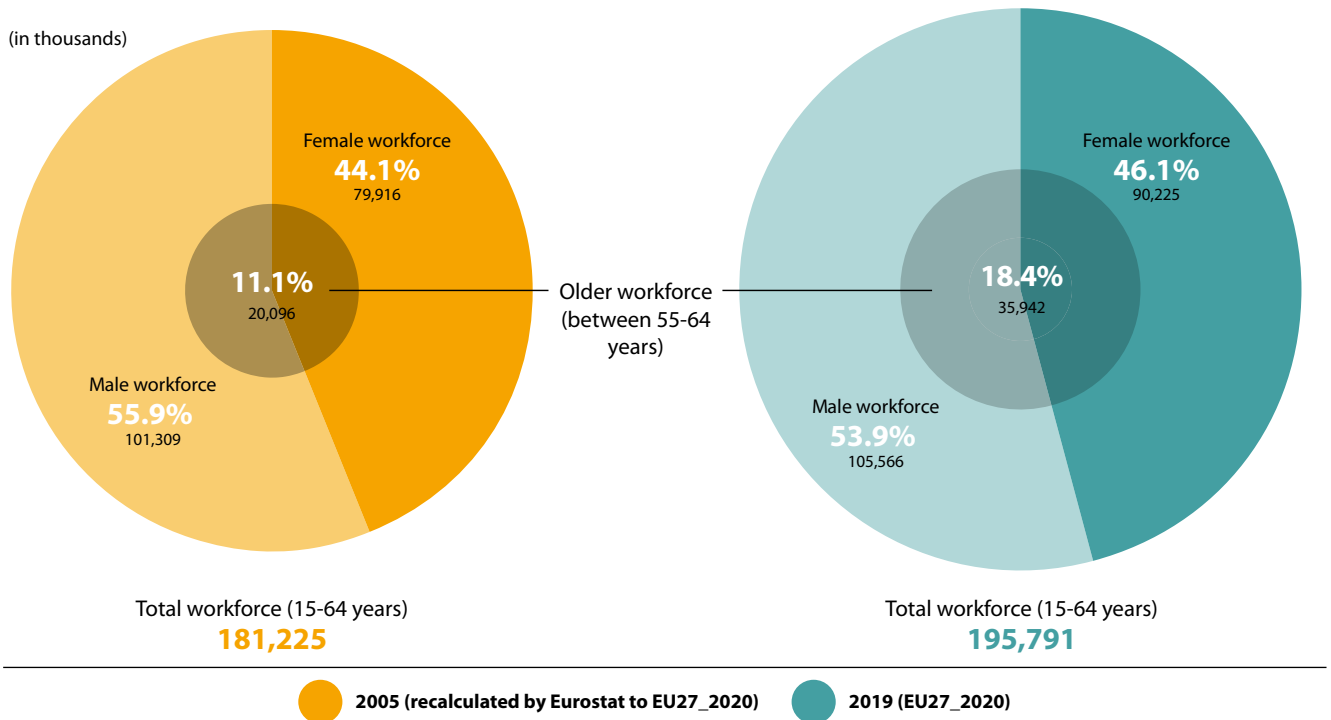
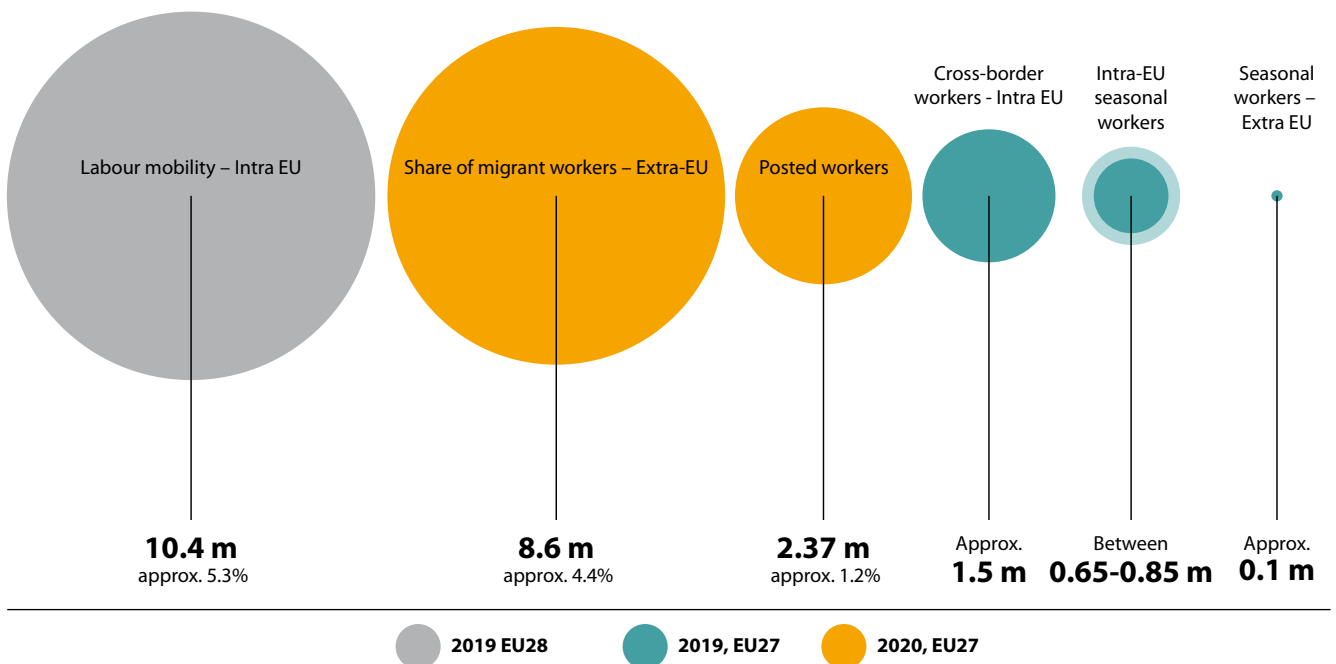


Figure 8: Workforce structure, mobility and migration – European Commission



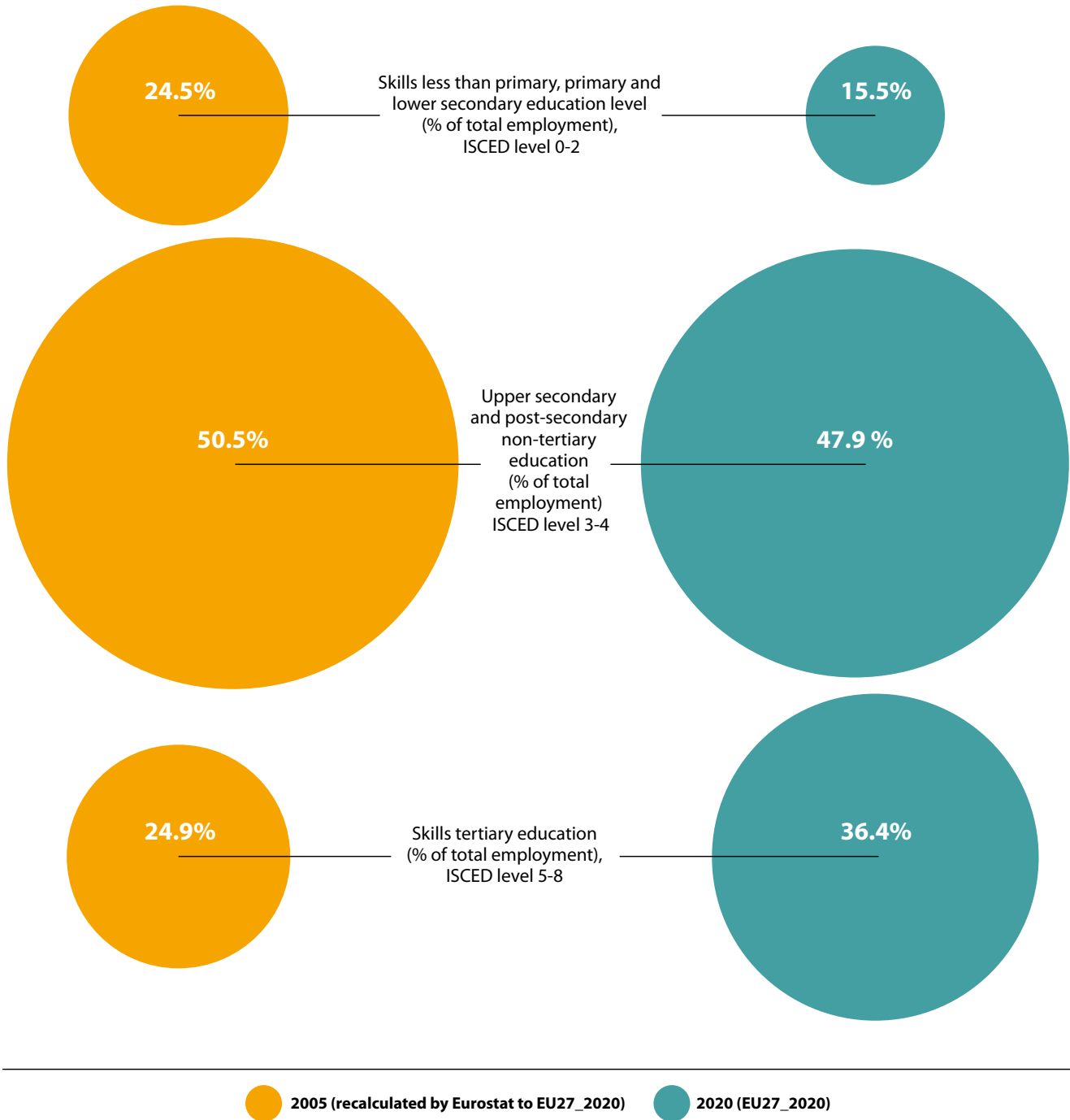
The **migrant workforce** in the EU27 also increased in the past two decades. The majority of migrants are intra-EU, that is, all workers who are born in a Member State other than the one where they currently work and reside; this number is estimated at 10.4 million (2019), based on LFS data.³⁴ Cross-border workers account for another 1.5 million³⁵ and posted workers for 2.4 million.³⁶ In 2020, 8.6 million extra-EU citizens (born outside the EU) were employed in the EU labour market, out of 196 million persons aged from 20 to 64 years, corresponding to 5.3% of the total.³⁷ The sum of all

different categories of mobile extra- and intra-EU workers is roughly 23 million, or about 12% of the EU workforce.

When comparing 2005 with 2020, for most occupations **higher skills** are required. In this period, the share of occupations requiring the three lowest education levels fell from 24.5% to 15.5%; the share of occupations that require a tertiary education grew from 24.9% to 36.4%.

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Figure 9: Workforce structure, skill levels – Eurostat³⁸



4. Outcomes – accidents at work, work-related diseases, wellbeing



4.1 Most common indicator – work accidents

Accidents at work are the most common indicator regarding the quality of prevention in an enterprise, a sector or a country. Between 1998 and 2019 (EU level), **the incidence rate of non-fatal work accidents** fell about 58%,³⁹ from 4,089 to 1,713.⁴⁰ Most of this decrease took place in the first half of this decade. Between 1998 and 2008, the incidence rate fell by 54%, and between 2009 and 2019 by 9%.

Between 1998 and 2019, the **incidence rate for fatal accidents** dropped about 57% from 5.03 to 2.17,⁴¹ almost the same decrease as for non-fatal accidents.

Four major sectors, **agriculture, manufacturing, construction and transport**, employed just under 40% of the workforce (in 1998 as well as in 2019). However, in 1998 nearly 64% of the accidents at work took place in these sectors, thus the reduction of accidents in these sectors was crucial for the overall reduction. In addition, economic developments — sector decline and shift of workforce between sectors — reduced the number of workers exposed to common safety risks in these sectors.

Between 1998 and 2019 (EU level), the incidence rate of non-fatal work accidents fell about 58%, from 4,089 to 1,713. Most of this decrease took place in the first half of this decade. ... Between 1998 and 2019, the incidence rate for fatal accidents dropped about 57% from 5.03 to 2.17, almost the same decrease as for non-fatal accidents.

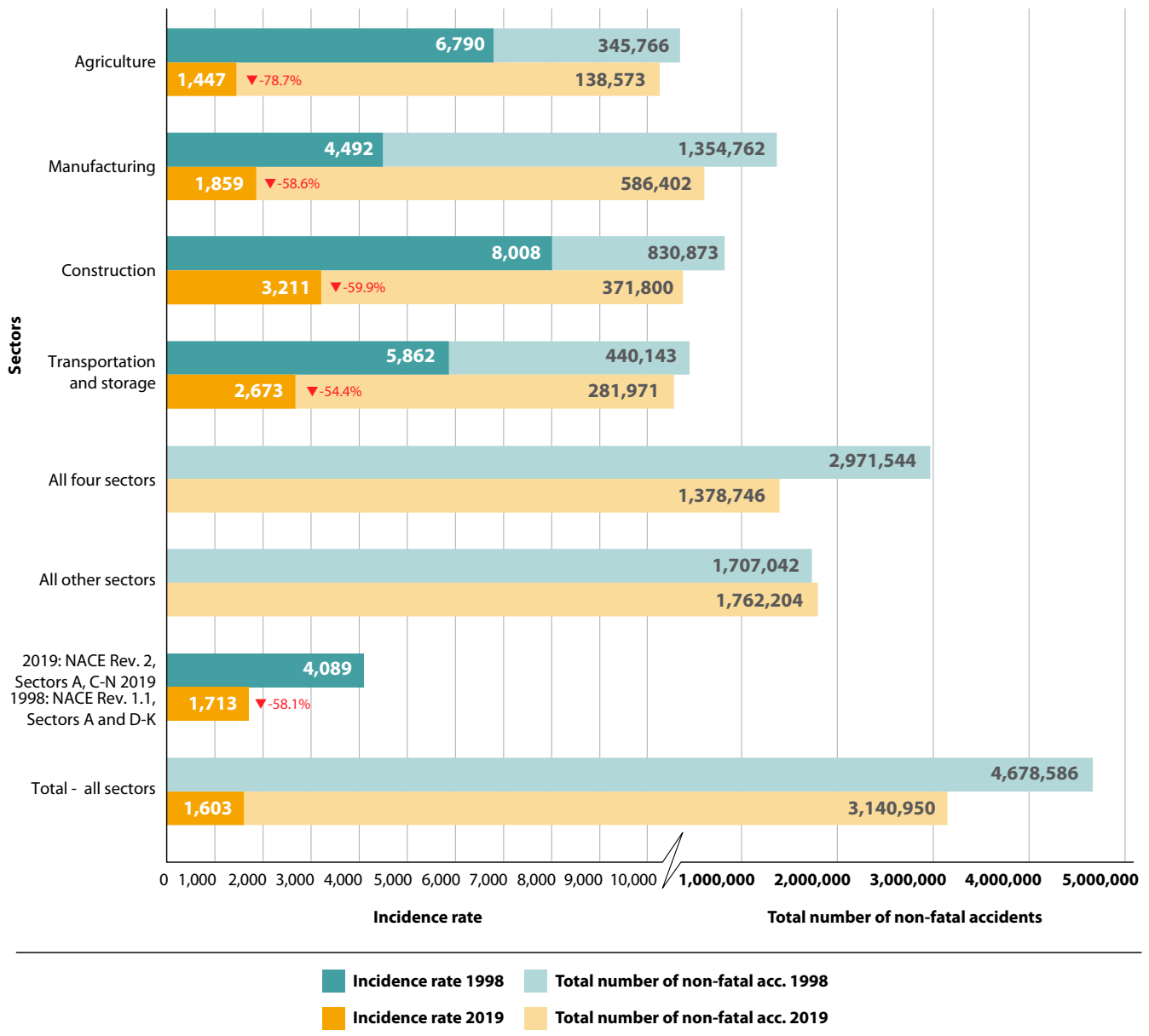
There have always been concerns in national or sectoral case studies⁴² about **underreporting of work accidents** for different reasons: accidents suffered by self-employed who are not obliged to notify or are insured via private or non-occupational public health insurances, work-related traffic accidents that are reported as traffic accidents only, declaration of less severe accidents as private to avoid administrative burden, administrative burden in general. This leads to several approaches to estimate the true

number of accidents at work. Currently, these estimates result in figures of around 5.07 million work accidents at EU27 level in 2019 for all economic sectors and all types of employment. That means that the reported 3.14 million accidents represent approximately 62% of all work accidents resulting in more than three days of absence, while 38% are not reported.

The pure distinction between fatal and non-fatal work accidents can conceal the fact that a very large part of the human and financial burden is caused **by severe but not fatal accidents**. In 2019, 232,892 work accidents resulted in an absence of more than three months or caused a permanent disability, compared to 3,008 fatal accidents (NACE Rev. 2 activity A, C-N).⁴³ That is, in addition to every worker who dies, another 77 suffer injuries resulting in at least three months off work or in permanent disability.

The pure distinction between fatal and non-fatal work accidents can conceal the fact that a very large part of the human and financial burden is caused by severe but not fatal accidents. In 2019, 232,892 work accidents resulted in an absence of more than three months or caused a permanent disability, compared to 3,008 fatal accidents. (NACE Rev. 2 activity A, C-N)

Figure 10: Development of the total number of non-fatal accidents at work and incidence rates (accidents per 100,000 workers), 1998 and 2019 – Eurostat⁴⁴





4.2 Work-related deaths and diseases

Work-related health outcomes represent a much higher burden for society than work accidents.⁴⁵ More workers are affected, and the overall costs are much higher. When limiting the scope of analysis to the officially **recognised occupational diseases**, the trend of health outcomes (deaths, illnesses) caused by ‘exposures’ at work decreases similarly to the accident trend.

Eurostat’s new experimental European Occupational Diseases Statistics⁴⁶ indicates a **decrease in some of the major recognised diseases**⁴⁷ due to technical preventive measures and to the shift of workforce to sectors with less ‘classical’ exposures and related recognised occupational diseases.

In 1987, a joint ILO/WHO expert committee on occupational health suggested that **the term work-related diseases** might be used to describe **not only recognised occupational diseases** but also other diseases and disorders to which the work environment and work tasks contribute significantly as one of several causative factors:

Nevertheless, it is not always that easy to designate a disease as being work-related. In fact, there is a wide range of diseases that could be related in one way or another to occupation or working conditions. On the one hand, there are the classical diseases that are occupational in nature, generally related to one causal agent

and relatively easy to identify. On the other hand, there are all sorts of disorders without strong or specific connections to occupation and with numerous possible causal agents.⁴⁸

EU-OSHA has been engaged in several research efforts to estimate the burden of work-related diseases, including their economic impact (this work is being continued by ICOH).⁴⁹ The impact of the two major health consequences (‘Outcomes’) was calculated, that is, **work-related deaths** and **work-related diseases**, measured in DALYs (Disability-adjusted life years, or in other words: **One DALY is one lost year of healthy life**).⁵⁰

In 2021, the WHO and ILO jointly published estimates of the burden of work-related diseases for the period 2000-2016.⁵¹ The WHO/ILO calculate for the EU27 **114,000 work-related deaths in 2016**. When setting the **absolute number of work-related deaths** (114,000) in relation to the EU27 population above 16 years (371 million), this gives a result of approximately **31 deaths per 100,000 population of working age above age 16**. For 2019, ICOH estimates **176,000 deaths** in total; moreover, they refer to the much smaller **labour force** population (201 million) and calculate **88 work-related deaths per 100,000 labour force**. The main reason for these different estimates is the general approach: The WHO/ILO used a different methodological approach and restricted their analysis to selected risk-outcome pairs, for example, long working hours as risk and stroke as outcome, whereas ICOH aspires to cover all work-related diseases.

Work-related health outcomes represent a much higher burden for society than work accidents. More workers are affected, and the overall costs are much higher. When limiting the scope of analysis to the officially recognised occupational diseases, the trend of health outcomes (deaths, illnesses) caused by 'exposures' at work decreases similarly to the accident trend.

Figure 11: Work-related deaths – estimates by WHO/ILO⁵² and ICOH⁵³ for the EU27 (absolute numbers)

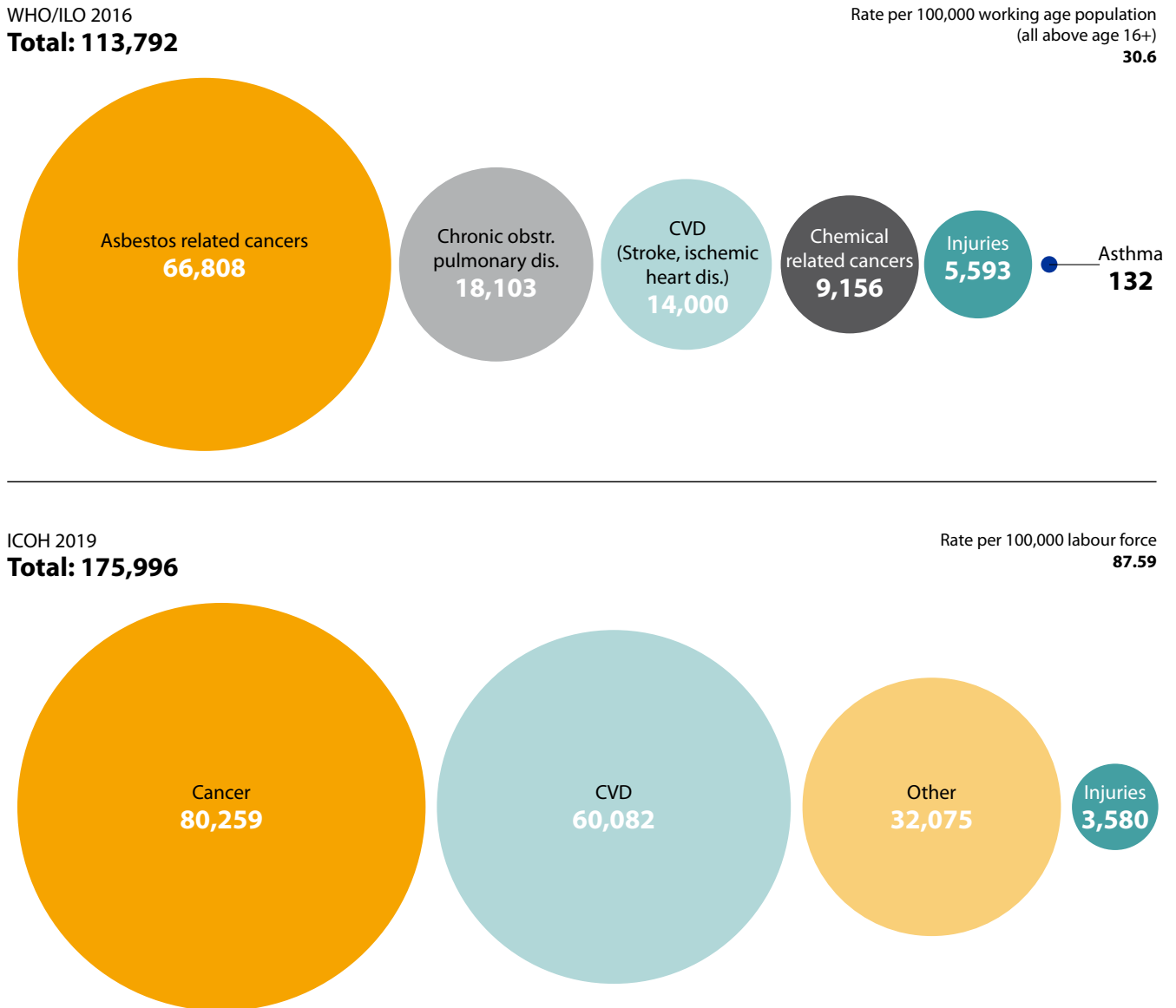


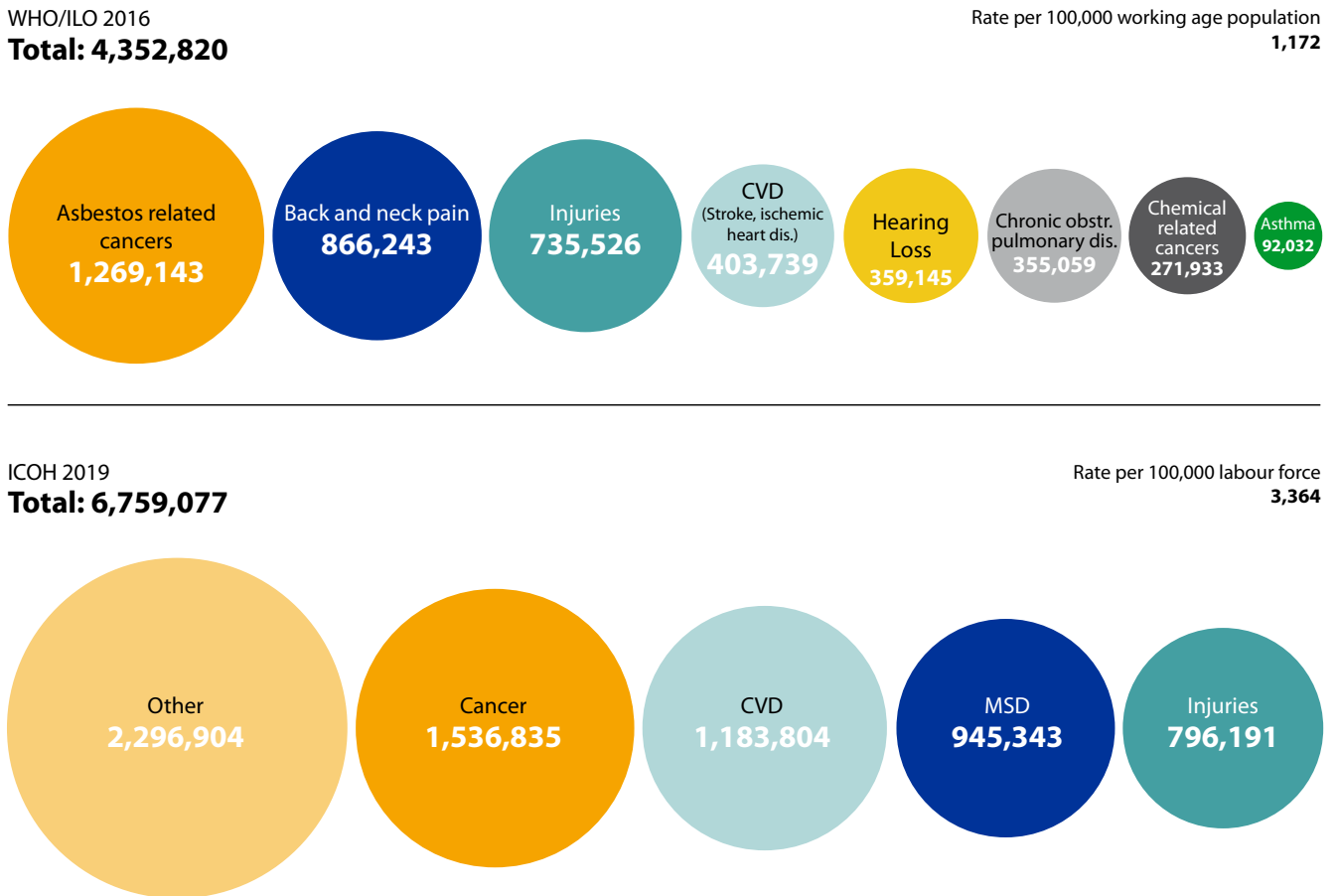
Figure 12 displays the relation between **major risks** and the **health outcome in DALYs**. The DALYs that are attributable to work vary between 4.4 million years (WHO/ILO) and 6.8 million years (ICOH) for the EU27.

Putting the absolute numbers of the WHO/ILO – 4.4 million DALYs – in relation to the EU27_2020 population above 16 years results in approximately **1,172 DALYs per 100,000 working-age population** (WHO/ILO). ICOH calculates in absolute numbers 6.76

million DALYs for the labour force population, resulting in **3,364 DALYs per 100,000 labour force**.

It can be concluded that despite methodological differences, the estimates **do not vary that much if the same reference population** is used in the calculation. Future research will contribute to a better attribution of the impact of work on these diseases., Additionally, the impact of work on the prevalence of mental diseases will be incorporated in future estimates.

Figure 12: Work-related DALYs – estimates by WHO/ILO and ICOH for the EU27



4.3 Wellbeing and health

Existing concepts of **wellbeing** cover more aspects of work than working conditions or safety and health at work. Eurofound mentions as the most relevant components: *income, working time arrangements, possibilities for skills development and career advancement, and the degree of individual control over work.*⁵⁴

ILO defines wellbeing at work under the term ‘Workplace Wellbeing’: *Workplace Wellbeing relates to all aspects of working life, from the quality and safety of the physical environment, to how workers feel about their work, their working environment, the climate at work and work organization. The aim of measures for workplace well-being is to complement OSH measures to make sure workers are safe, healthy, satisfied and engaged at work.*⁵⁵

A common methodology to collect data on **health status and wellbeing** is **self-reporting and self-assessment** of risks at work, health risks and health problems, absence, job satisfaction and working life perspectives from a health point of view. This allows insight into the subjective assessment of health risks at work and wellbeing.

Indicators on **wellbeing** and satisfaction at work show similar patterns to health and work accidents. Sectors with high physical demands and high customer and client orientation and occupations with a lower skill level report lower wellbeing and satisfaction levels; they report a good health status but fewer expectations to be able to work in this occupation until the age of 60. Concerning the levels of **self-reported ‘Health at risk’**, the LFS ad hoc module on ‘Accidents at work and other work-related health problems’ suggests that the situation has improved. According to the LFS, in 2007 14.6% of employed persons reported a work-related health

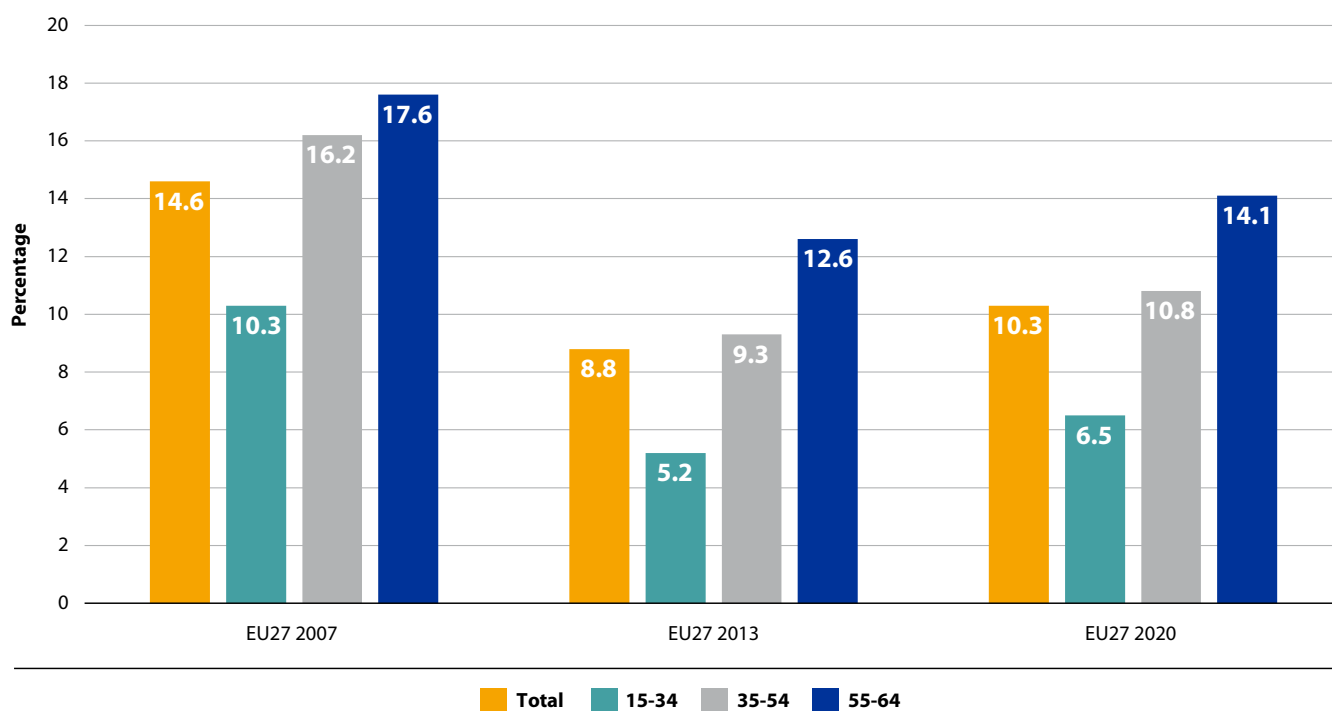
problem; this figure decreased in 2013 to 8.8% and went slightly up again — during the pandemic — to 10.3% in 2020 (EU27 level).⁵⁶

The Figure 14 overview on the responses to five questions in three different surveys reveals consistent and contradictory results per country. There are countries that have a consistent outcome across all questions, while others show a mixed or contradictory picture.

Czechia, Denmark, Italy and Luxembourg are the countries over or at average for every item. Some countries are mostly at average, or have a negative result for one item, often the period off work or low satisfaction (e.g. Austria, Cyprus, Germany, Greece, Hungary, Ireland, the Netherlands, Portugal and Slovakia). The one negative item might also be work-related health problems (e.g. for Finland and Sweden).

‘Indicators on wellbeing and satisfaction at work show similar patterns to health and work accidents. Sectors with high physical demands and high customer and client orientation and occupations with a lower skill level report lower wellbeing and satisfaction levels; they report a good health status but fewer expectations to be able to work in this occupation until the age of 60.’

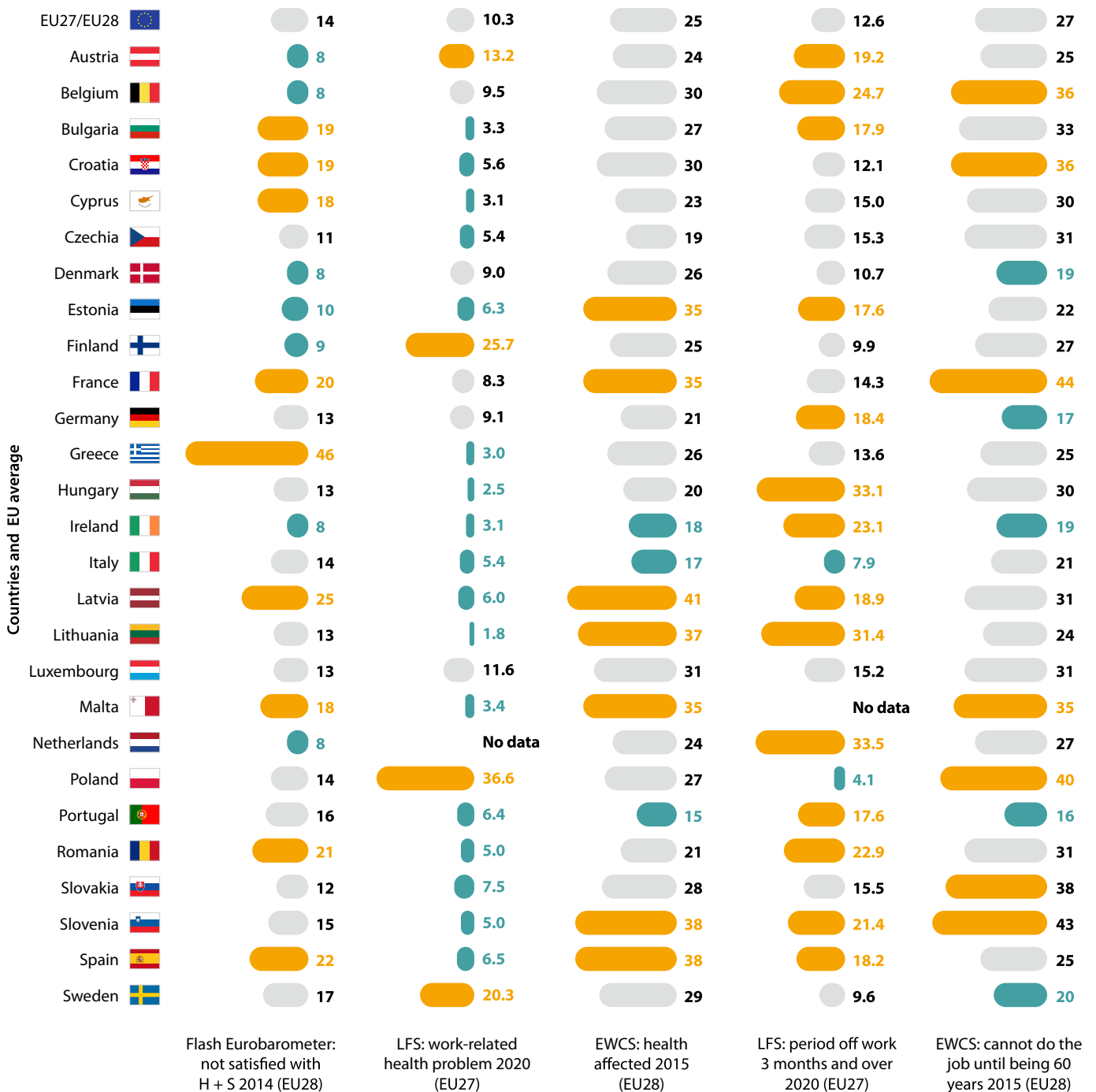
Figure 13: Age classes and work-related health problems in 2007, 2013 and 2020 – LFS ad hoc module



Most countries show more extreme contradictions, that is, being in some aspects better and in others worse than average, like Bulgaria, Estonia, Lithuania, Poland, Portugal, Slovenia and Spain. Many of these countries have very low figures for work-related

health problems. Contradictory but mostly negative responses (two or three fields with values under average) are found for Austria, Belgium, Croatia, France, Latvia, Lithuania, Malta, Poland, Romania, Slovenia and Spain.

Figure 14: Comparison of responses to self-rated work satisfaction, health risks and working life perspectives⁵⁷ – Flash Eurobarometer, LFS and EWCS



Worse than EU average. Better than EU average.

Values better than 25% of EU average are marked in aquamarine, and values worse than 25% of EU average in orange. Other values are not marked.

5. Major OSH and context developments



5.1 Safer and healthier technologies and organisation

To support the **practical implementation of preventive safety and health measures**, numerous actors (e.g. organisations of OSH professionals and practitioners, and standardisation institutes such as the European Committee for Standardisation and the International Organisation for Standardisation) issued safety and health guidance or standards, or developed new and advanced OSH management systems, the engineering sciences worked on better technical preventive technologies, on measuring and monitoring technologies, the medical sciences introduced better medical diagnosis and treatment of work-related diseases, the social sciences contributed with better knowledge on the legal and economic determinants of OSH, or analysed the characteristics of awareness raising, knowledge development and healthy work organisation.

It is obvious that **better technical and organisational prevention at work** contributed to more safety and the evident strong reduction in accidents. **Prominent fields and examples** of such improvements are: technically safer design of moving vehicles (e.g. for fork lifts or heavy trucks and machines, light and noise warning signals for moving vehicles); safer design of machines like automatic shutdowns or disconnections, two-hand operating of machines (e.g. for pressing and punching), safer cranes including better technologies for communication between co-workers, coverage of moving parts, safer cars (e.g. safety belts and airbags), safer tools (e.g. for drilling or cutting); improved personal protective equipment like air-supplied

breathing apparatus, steel mesh gloves for meat workers, trousers for forest workers that resist a chainsaw; minimum safety requirements for buildings (e.g. forms and size of stairs and handrails, fire exits and fire alarms, safer ladders and scaffolds), emergency equipment like eye wash and emergency showers; better monitoring of acute hazards (e.g. in sewage water systems), exhaust and ventilation technologies to avoid fumes, dusts, chemicals or contact with hazardous biological agents; strong safety obligations for work in confined spaces, or for work at height and work in trenches; introduction of explosion zones and of non-sparking tools, a comprehensive system of warning signals, warning signals for slippery floors and unsafe grounds, better warning systems and equipment in particularly dangerous work environments like road maintenance, combined with better organisational measures; quality systems that promote continuous repair and maintenance of tools; regular instructions by safety representatives and safety coordinators, and guarantee of minimum safety standards of machines and products by European standards like CE ('European Conformity').

It is obvious that better technical and organisational prevention at work contributed to more safety and the evident strong reduction in accidents.

5.2 Major technological developments

The **widespread introduction of new or advanced technologies** — automation, digitalisation/ICT, green technologies, new material technologies and so on — results in substantial changes in work organisation and work processes, and replacement of (traditional) materials (screws by glues, metal and wood by plastics, nanomaterials). For OSH regulators and practitioners, it is a constant challenge to assess these changes regarding their impact on risks for health and safety and to develop adequate risk prevention and mitigation measures.

Foresight studies (e.g. by EU-OSHA) have shown that such a technological change can help improve working conditions, for example, by taking over heavy, dangerous or routine work (automation, robotisation, exoskeletons), or by better communication and remote control via ICT tools. At the same time, they can also pose new risks, creating rigid work processes without much decision latitude, along with technical options for extreme surveillance and control (e.g. by constant geo location), or pose new safety risks like working at height (renewable energies) or by exposure to materials with widely unknown health effects (e.g. nano).

EU-OSHA has **published several foresight studies** to emphasise possible safety and health concerns. Examples are the reports and factsheets about new safety risks in green jobs (green buildings, solar energy, wind energy) published more than 10 years ago. Since 2015, EU-OSHA has been publishing reviews and discussion papers on emerging risks and foresight topics. This work covers topics like robotics, performance-enhancing drugs, 3D printing,

monitoring technologies, developments in the e-retail sector,⁵⁸ artificial intelligence, platform work, Long COVID, exoskeletons and so on.⁵⁹ In 2018, the Agency published a foresight report on new and emerging OSH risks associated with digitalisation.⁶⁰

A well-known example of such changes in work processes causing new OSH challenges is the **growing number of workers outside the premises of the employer**, that is, at non-stationary or mobile workplaces or at home. This refers to the increasing amount of mobile work in transport, traffic and distribution and the increased number of workers doing their job in private homes (home care, domestic work, etc.), plus the rapid spread of remote office work in 2020 due to the COVID-19 pandemic. One major difficulty for risk prevention is to determine how far safety and health at these workplaces might deviate from the OSH requirements of a conventional workplace in an office building, or an industrial plant, regarding topics like ergonomic and safe equipment, space, ventilation, daylight, electrical and fire safety, emergency procedures and so on.

5.3 Globalisation

Over the last decades, production and services have become less and less solely based on national (pre-)products or service suppliers and instead on international supply chains.⁶¹ **International supply chains** require logistics connections between countries and continents, harmonised technical standards, and, as far as possible, common legal rules and agreements, be they for services or materials and products. The development of such supply chains divides the necessary work



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When looking at the work of global institutions during the past two to three decades, many important agreements, conventions, government actions and global business programmes have been negotiated, agreed and issued. The objectives and necessary measures at a global level have been made much more concrete by these efforts. OSH and working conditions are on the agenda of these organisations, and general and concrete targets and indicators have been set. The task is the implementation of these principles and programmes in every region and country of the world in a way that it reaches all workplaces.

related to a product or a service in parts, which might also mean **that OSH risks might not be shared in a fair or equal way.**

Digitalisation facilitates the **globalisation of services** that do not require personal presence. In industry, a relevant part of outsourcing to less-developed countries **took place in sectors with high OSH risks:** mining, metallurgic processes, treatment of hazardous waste, basic chemicals and textiles. At the same time, EU enterprises 'import' risks by producing goods for export (e.g. vehicles, machines, food, specialty chemicals). A full assessment of the division of OSH risks would require a case-by-case description.

When looking at the work of global institutions during the past two to three decades, many important **agreements, conventions, government actions and global business programmes** have been negotiated, agreed and issued. The objectives and necessary measures at a global level have been made much more concrete by these efforts. OSH and working conditions are on the agenda of these organisations, and general and concrete targets and indicators have been set. **The task is the implementation of these principles and programmes** in every region and country of the world in a way that it reaches all workplaces.



5.4 Consequences of the COVID-19 pandemic

The outbreak of the **COVID-19 pandemic** in 2020 required exceptional measures and quick reactions on many unanticipated challenges for OSH. The infrastructures — staff, material, measures — were to a large extent not available or prepared to cope with an acute pandemic of that size.⁶² EU-OSHA reacted with several guidance documents for employers and workers, that is, the 'COVID-19: Guidance for the workplace'⁶³ and the guidance 'COVID-19: Back to the workplace - Adapting workplaces and protecting workers'⁶⁴.

In the **EU OSH Strategic Framework 2021 to 2027**,⁶⁵ the impact of a pandemic or similar threat was addressed by one overall objective, namely 'Increasing preparedness – responding rapidly to threats'. The strategy aims at employing the preventive experience gathered during the pandemic to prepare for potential future similar threats. Enterprises, sector organisations and health institutions have **developed proven workplace and sector-specific risk assessments and prevention measures**; there is experience with test procedures and timelines for quarantine and return-to-work and use of personal protective equipment. A major indirect impact on working conditions is the strongly increased share of remote work from home. This remote office work involves the extensive use of ICT, a situation that requires a large extension of information and regulations regarding preventive OSH measures in private settings.

In this policy area, important decisions have been made that are relevant for potential future pandemics of a similar kind, for example, the definition of essential work that needs to be continued despite a high infection risk, and safety and hygiene measures for work in education, care or public transport.

6. OSH legislation and infrastructures – how the EU and Member States react and respond

6.1 Legal and regulatory

OSH is a **shared EU and national responsibility**. Over the last 35 years, the EU developed a comprehensive legal framework that covers and regulates OSH risks. It changed the focus from prescription of obligatory prevention measures for certain predominantly safety risks towards a general preventive and participative approach. That is, all OSH risks have to be assessed, consultation between employers and workers is required, and OSH training, expertise and preventive capacities are required for every enterprise. All EU OSH directives have to be transposed into national law. In parallel, national, regional and local legislation and policies concretise the minimum conditions set by EU law and adapt to the risks in the specific context.

New directives or revisions and updates of directives were introduced for several reasons, that is, coverage of new technologies like artificial optical radiation (use of laser, etc.); after 2017, the Carcinogens and mutagens directive was amended several times towards the current status (Carcinogens,

mutagens or reprotoxic substances directive). The revision of the Display screen equipment and workplaces directive — mainly to adapt it to the significant technological developments since their introduction — is one of the actions under the EU OSH Strategic Framework 2021 to 2027. In light of the changes of working conditions towards **physical inactivity and repetitive work and the higher psychosocial and emotional demands**, there have been calls from many stakeholders and experts regarding a stronger legal framework to be necessary.⁶⁶

Although the **EU OSH legislation guarantees a strong legislative frame**, evaluations of the practical implementation at workplaces observe certain **difficulties in implementation** (see DG EMPL evaluations⁶⁷ or EU-OSHA reports in the frame of its research on supporting compliance⁶⁸). Studies and evaluations found that full compliance might be challenging for micro and small companies (EU-OSHA has published several reports on safety and health in micro and small enterprises⁶⁹). It also seems not to be standard practice to apply the hierarchy of preventive measures, that is, technical and organisational solutions of risk reduction first, and individual solutions as a last

Table 1: EU OSH and related directives

Year of introduction or major revision	EU Directives on occupational safety and health in chronological order (see full list in the main report)	
Before 1989	Several action programmes and directives, e.g. Council Directive 80/1107/EEC of 27 November 1980, on the protection of workers from the risks related to exposure to chemical, physical and biological agents at work	
1989	Council Directive 89/391/EEC on the introduction of measures to encourage improvements in the safety and health of workers at work (Framework Directive)	
1989-2000	<ul style="list-style-type: none"> • 89/654/EEC Workplace directive • 89/656/EEC Personal protective equipment directive • 2009/104/EC Work equipment directive • 90/269/EEC Manual handling directive • 90/270/EEC Display screen equipment directive • 91/383/EEC Temporary workers directive; • 92/29/EEC Medical treatment on board vessels directive 	<ul style="list-style-type: none"> • 92/57/EEC Construction directive • 92/58/EEC OSH signs directive • 92/85/EEC Pregnant/breastfeeding workers directive • 94/33/EC Young people at work directive • 98/24/EC Chemical agents directive • 1999/92/EC ATEX directive • 2000/54/EC Biological agents directive
After 2000	<ul style="list-style-type: none"> • 2002/44/EC Vibration directive • 2003/10/EC Noise directive • 2004/37/EC Carcinogens, mutagens or reprotoxic substances directive (continuous amendment) 	<ul style="list-style-type: none"> • 2004/40/EC Electromagnetic fields (EMF Directive) repealed and replaced by Directive 2013/35/EU • 2006/25/EC Artificial optical radiation (AOR Directive)



resort. As mentioned, it is also a challenge to swiftly cope with technological changes and developments.

Moreover, there are difficulties to apply the **same level of protection to types of work with weakened or eroded or non-existing employer–worker relations**, for example, temporary and subcontracted work, involuntary self-employed, seasonal work, platform work, domestic work and all types of irregular work. These forms of work often have as one major characteristic a less clear employer–worker relationship, while the main structural element of the EU OSH legislation is the dual role of employers and workers in OSH.⁷⁰

6.2 OSH infrastructures

There exists a **diverse and rich OSH infrastructure** in most EU Member States, that is, labour inspection and other supervising authorities, governmental OSH institutes, prevention and research centres, knowledge centres, OSH training and education centres, and occupational health clinics. The social partners and professional organisations often contribute to this infrastructure, either in an advisory way or even as an integral part of such institutions. These institutions are responsible for supervision and control of compliance, they train OSH practitioners, produce guidance material, engage in improvement actions and projects, and contribute to more awareness and better knowledge. In many cases they help in adapting general legislation to sector- or workplace-specific regulations.

EU Member States apply very diverse regulations regarding the **number and required qualification of OSH staff in enterprises, and for external protective and preventive services (PPS)**. In very diverse ways, the Member States prescribe topics like

necessary qualifications and certificates, depending on sector and work tasks, time granted for preventive work and training, and obligatory or voluntary use of external PPS by enterprises, while some of these PPS offer technical support and others also medical monitoring and advice. In some countries such support is granted for free in certain sectors or for certain types of enterprises. The role and power of all actors in these systems varies substantially, defining such roles specifically for employers, workers' representatives and safety representatives.

During the last two decades, nearly all EU Member States have developed strategic approaches, mostly called '**National OSH Strategies**' or '**National OSH Plans**'. In most cases, these strategies have helped to identify and mitigate recognised structural weaknesses of the national OSH system, for example, low levels of implementation of existing legislation, insufficient reporting and monitoring tools, or specific sector or risk-related actions, and finally also regulatory improvements. The EU OSH strategies and OSH strategic frameworks have often been used as orientation for objectives and actions of national strategies; the first started in 2002 ('Communication from the Commission - Adapting to change in work and society: a new Community strategy on health and safety at work 2002-2006'). The latest **EU Strategic Framework on Health and Safety at Work 2021-2027** puts the focus on changes; it is titled 'Occupational safety and health in a changing world of work'⁷¹ and focuses on three key objectives for the coming years:

- *anticipating and managing change in the new world of work brought about by the green, digital and demographic transitions;*
- *improving prevention of workplace accidents and illnesses; and*
- *increasing preparedness for any potential future health crises.*

7. Conclusions – improvements, stagnation and areas of concern



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7.1 Where did improvements take place?

Improvements took place in major areas: legislation, guidance, instruction, development and use of OSH supporting analogue and digital tools, training of OSH practitioners and professionals, application of OSH management systems, organisational progress in many areas like safety coordination, higher awareness about several topics and aspects like specific risks for certain groups, psychosocial risks and mental health, technical improvements, better technologies to reduce physical health risks like noise or dust, less exposure to and use of highly hazardous chemicals, better medical treatment, financial incentives, and safety and health obligations from insurers.

In public opinion and policy, **the main indicator for safety outcomes** remains the **work accident figure**, that is, fatal and non-fatal accidents at work and traffic accidents in connection with work or during commuting. The overall statistical picture shows a strong decrease since the mid-1990s until 2010; this positive development continued after 2010 but with significantly lower reduction rates. The main cause of this decrease is better organisational and technical prevention, and it is also supported by economic developments like sectoral shifts — for example,

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decrease of workforce in high-risk sectors like mining and agriculture, and technological changes.

When looking at officially recognised occupational diseases — not at the scientifically estimated number of work-related diseases — as an indicator for **health outcomes** of working conditions, these underwent a similar decrease to that for work

The modernisation of the EU OSH legislation from the middle of the 1980s on has created a critical frame for prevention of OSH risks. The EU, Member States, governments and social partners have agreed on this legislation and the Member States have transposed it into their national legislation.

accidents. The outcomes for the main occupational disease groups descended, for example, hearing impairments from noise at work, pulmonary diseases (from exposure to dust and chemicals), very specific musculoskeletal diseases, and diseases related to exposure to hazardous biological or chemical agents. The newest estimates of the **burden of diseases** from the WHO/ILO and ICOH do not show a decline in **work-related diseases**. However, the latest estimates of the burden of diseases from the WHO/ILO and ICOH do not show a decline in work-related diseases. The figures might even considerably increase in future estimates if mental diseases and illnesses from biological agents are incorporated.

Coping with a **more diverse workforce** — higher age, higher skills and longer education, more women and more international workers — is a challenge for OSH practices in enterprises. It is a topic that is tackled in a large and increasing number of preventive information and guidance documents. **Preventive services, external or internal, in a private, state or mixed framework**, are functioning as an important pillar of OSH; they are crucial for the implementation of good and best practices in enterprises.

We can observe **more global efforts** for better OSH. Ethical considerations in supply chains are of increasing importance for enterprises in international trade and many markets. International organisations like the ILO, WHO, ISSA, UN, ICOH and IALI continue to develop not only objectives and observation tools but also more and more action programmes to practically improve the situation globally.

The **modernisation of the EU OSH legislation** from the middle of the 1980s on has created a critical frame for prevention of OSH risks. The EU, Member States, governments and social partners have agreed on this legislation and the Member States have transposed it into their national legislation. The **overall legislative framework** is generally comprehensive. Moreover, the European Commission launched an initiative to agree on the **‘European pillar of social rights’, comprising 20 guiding principles for the work of the EU-institutions in the field of social policy.**⁷² In 2017, the Pillar was agreed by the Member States; in particular, **principle 10 refers to a healthy, safe and well-adapted work environment’.**

7.2 Where do we find stagnation and ambiguous developments?

Stagnation – where favourable trends have plateaued or even reversed – can also be observed in important areas. Since 2005, the share of workers exposed to **traditional safety and health risks** — accidents, noise, vibrations, dust, chemical and biological agents, high or low temperatures, electrical shock and so on — remains at a stable level. Even some increase can be observed due to a higher share of workforce in sectors with such risks, like transport, logistics and distribution, renovation and maintenance, green technologies, and health and care. The national regulations for these risk areas are generally well developed and detailed; a mixture of overall goals and prescriptive details regarding compliance is the major issue. An increasing and difficult challenge will be to keep sufficient safety and health standards for new forms of work and for mobile work, work from home and work at clients’ premises. Also, **ergonomic risks** — repetitive hand-arm movements, tiring and painful positions, lifting and carrying, and prolonged sitting — can pose major health risks, and the statistics show no significant decrease.

There is a shift of **workforce to administrative, communicative, and emotionally demanding and client-oriented sectors**, like the sectors ‘Education, human health and social work activities’ and ‘Trade, transport, food/accommodation and recreation activities’ (more human–human interaction, less human–machine interaction). Consequently, this development caused an overall **shift of risks to psychosocial and emotional challenges** and — mostly but by far not always — less physical activity. Some health risks worsen in such types of work, like work with difficult clients or long working hours. Many approaches and pilot projects have been developed to

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mitigate these workloads, but the implementation seems to be limited to a minority of workplaces with high awareness of work-related health issues. Also, since 2005, statistics and surveys find a stagnation (practically no increase and no decrease) concerning the development of **working time, time pressure and high workload** for workers.

When looking at the **overall relationship between work and some major diseases** in the adult population (cardiovascular diseases, cancer, musculoskeletal disorders, pulmonary diseases, hearing loss), there is a clear connection to socioeconomic status that is a major cause of low life expectancy and high morbidity. In public health morbidity and mortality studies, a more precise analysis of the impact of working conditions on health, as a very important factor of socioeconomic status, is very rare. This would require more detailed knowledge and analysis of the health impacts of occupations and work tasks and of the preventive measures at work, as well as an improvement in the detection capacities of preventive and monitoring health systems. Identification of the approximate **attributable fraction of work to diseases** is still the subject of intense scientific debate, with clearer results for some relations and less clear results for others.

The **level of implementation and enforcement** of compliance with legislation seems to stagnate. The capacities of the OSH infrastructure at national levels show a mixed picture in EU Member States. Across the EU, between 2010 and 2020, the labour inspectorates made on average **two million visits per year**,⁷³ in approximately 22 million businesses in the EU. To enhance the level of implementation in terms of coverage and quality, many

The level of implementation and enforcement of compliance with legislation seems to stagnate. The capacities of the OSH infrastructure at national levels show a mixed picture in EU Member States. ...

Many enterprises and particularly micro and small enterprises (MSEs) and the self-employed very often cannot fully comply with more complex risk prevention tasks (e.g. psychosocial, chemical, biological, optical, electromagnetic) due to lack of resources, expertise and awareness.



labour inspections tried to enhance the effectiveness of common unannounced company inspections by **smart enforcement and supervision concepts**.⁷⁴

There is no measurable progress in the types of **work with eroded employer–worker relations** (subcontracts, involuntary self-employed). The reliability of statistical monitoring fades where the employer–worker relationship is less formative (regarding aspects such as working conditions, work accidents and work-related diseases, and of compliance with legislation).

Many enterprises and particularly micro and small enterprises (MSEs) and the self-employed very often **cannot fully comply with more complex risk prevention tasks** (e.g. psychosocial, chemical, biological, optical, electromagnetic risks) due to lack of resources, expertise and awareness (ESENER data⁷⁵). In general, enforcement authorities can only supervise a small percentage of enterprises, particularly not a substantial portion of MSEs, of self-employed or of non-standard types of work; some Member States included in their strategic approaches the objective to reach these enterprises/self-employed. The reason for the continued levels of intensification of work from 2005 onwards might be that the related tasks were contracted out or put on the shoulders of non-standard workers, for example, self-employed, temporary and seasonal workers.

Some **EU OSH legislation** may be adapted and modernised to cope with the changes in technologies, employment conditions, longer working life, and a growing share of mobile and remote work. Many of these changes in the world of work have caused higher insecurity, less clear employer–worker relations, and a higher burden of psychosocial and ergonomic risks.

7.3 Which are the areas of concern?

Incomplete compliance with OSH regulation is more noticeable in certain sectors and types of work.⁷⁶ Most of these types of work — mobile and home-based, domestic work, care work and long-term domestic care work, seasonal work, platform work, non-voluntary self-employed — are growing in terms of workforce. But many of these work and employment formats are until now not covered in the same way by OSH legislation or OSH practice. The principle

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of employer responsibility for working conditions of workers is undermined or at least blurred in such situations.

Future solutions could focus on several aspects — a **new definition of ‘work’ or of ‘employment’, stronger individual responsibility, or extended state interventions to guarantee OSH** also in such working and employment conditions. There are some examples of such solutions but to date most of them focus on better information, that is, stronger individual responsibility.

Undeclared and illegal employment is scarcely visible in the statistics. Due to the difficult conditions for research, the overall OSH situation in these types of work is generally unknown; in case-study-based investigative studies, the working conditions — including safety and health — for this group are mostly regarded as worse compared to workers with a regular work contract. It seems to be necessary to consider different research and action initiatives for this type of work, also in collaboration with other state supervising authorities.

The health data clearly show an ever-growing **share of work tasks that go along with or even require physical inactivity**. Inactive work is often characterised by permanent sitting combined with high requirements for visual and mental focusing during work, for example, towards digital equipment or to traffic situations. Serious indirect health consequences of such inactivity can be seen in the strong increase in certain widespread diseases or disease-supporting factors, like obesity.

Even 15 years after the enlargement of the EU in 2004, **significant differences between Member States** can still be observed regarding several working conditions. The data demonstrate that the worst status concerning physical risks, wellbeing, expectations to do the job until the age of 60 is almost always present in eastern EU Member States, followed by southern Member States, all compared to the status in central, western and northern Member States. For psychosocial risks, it is just the other way around, these are more often reported in central, western and northern Member States.

Some international organisations complain about an unfair divide of OSH risks in globalised supply chains, be it in mining, metallurgy, textile production, disposal of hazardous waste or

other sectors. The ILO decided in June 2022 to make OSH one of the Fundamental Principles and Rights at Work.⁷⁷ In this context, 10 ILO conventions and instruments are considered now as fundamental, including two OSH conventions: the Occupational Safety and Health Convention, of 1981 (No. 155) and the Promotional Framework for Occupational Safety and Health Convention, of 2006 (No. 187). Ethical, fairness and justice considerations have led to more activities on decent, safe and healthy work in developing countries and a fair share of risks at work in global supply chains. These are important initiatives, but until now they have only slightly changed the overall situation when looking at the global scale of the issue.

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- 9 Whilst the definition of sectors in the EU is statistically unambiguous (NACE Codes), the categories to describe occupations differ between several institutions. ‘Administrative’ and ‘manual’ work is used here as a — quite colloquial — placeholder to characterise the differences between two major types of work; it is only one of several options. International and EU institutions developed categories with several levels of aggregation or granularity that are applied based on context and the objectives of the analysis. Eurostat uses the European Socio-Economic Groups (ESEG) or the ILO International Standard Classification of Occupations (ISCO), and also — like many EU agencies — the UNESCO International Standard Classification of Education (ISCED) that describes not the occupation but the level of skills and education on an aggregated level. These categories are also applied in many international studies and reports.
- 10 In legislation and surveys, the term ‘worker(s)’ is mostly used; Eurostat and other statistical offices use the term ‘employee(s)’. In this document we follow the terminology that is used either in the context or in the source.
- 11 Data for 2015: [Eurofound Fifth European Working Conditions Survey – Data Visualisation](#); Data for 2005: Eurofound: [Fourth European Working Conditions Survey](#), Office for Official Publications of the European Communities, 2007.
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- 13 Eurostat, data of the LFS ad hoc modules 2007, 2013, 2020: [Persons reporting exposure to risk factors that can adversely affect physical health by sex, age and factor](#)
- 14 In the LFS, the respondents had to decide which of 11 possible risk factors is the most ‘serious one’. Quote: ‘*Eurostat proposed to implement the exposure to risk factors for physical health at work by using one question that strictly reflects the variable or twelve questions asking for the presence of any of the eleven risk factors and then ask for the most serious one.*’ In the EWCS and ESENER all reported risk factors were registered.
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- 18 Eurostat Data for 2019: [Average number of usual weekly hours of work in main job, by sex, professional status, full-time/part-time and economic activity \(from 2008 onwards, NACE Rev. 2\)](#); filter: Employees, Full-time, All NACE, EU27 2019 Q4. Data for 2006: [Average number of usual weekly hours of work in main job, by sex, professional status, full-time/part-time and economic activity \(1998-2008, NACE Rev. 1.1\)](#); filter: Employees, Full-time, All NACE, EU27 2006 Q4.
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- percentage of the total employment, by sex, age and professional status (%)
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 - 26 Eurostat: [Employment by sex, age and professional status \(1 000\)](#)
 - 27 Eurostat: [Part time and temporary contracts \(1993 - 2020\) - annual data](#)
 - 28 Eurostat: [Employed persons working from home as a percentage of the total employment, by sex, age and professional status \(%\)](#)
 - 29 Eurostat: [Employed persons working from home as a percentage of the total employment, by sex, age and professional status \(%\)](#)
 - 30 Eurostat: [Employment by main place of work](#)
 - 31 [Employment and activity by sex and age and citizenship - annual data, Filter: 15-64 years\)](#)
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The European Agency for Safety and Health at Work (EU-OSHA)

contributes to making Europe a safer, healthier and more productive place to work. The Agency researches, develops and distributes reliable, balanced and impartial safety and health information and organises pan-European awareness-raising campaigns. Set up by the European Union in 1994 and based in Bilbao, Spain, the Agency brings together representatives from the European Commission, Member State governments and employers' and workers' organisations, as well as leading experts in each of the EU Member States and beyond.

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