European Agency for Safety and Health at Work

Teleworking during the COVID-19 pandemic: risks and prevention strategies

Literature review

European Agency
for Safety and Health
at Work

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1   Introduction

Teleworking has been part of the world of work for a number of decades, as working away from the employer's premises has been made increasingly possible by advances in information technology. At the same time, demand for teleworking arrangements by organisations and individual workers has been rising, because of its perceived benefits for both employers and workers. These benefits fall broadly into the categories of flexibility and cost savings. However, telework also presents potential risks to organisations and workers in terms of possible negative effects on productivity, issues around the sustainability of telework and potential effects on workers' physical and mental health and well-being.

The coronavirus disease 2019 (COVID-19) pandemic and the public health measures implemented from March 2020 as a response to the pandemic have constituted a key driver of telework across Europe and beyond. The number of people working remotely increased massively almost overnight as a result of national governments' advice to work from home wherever possible to try to contain the spread of the virus. As a consequence, large numbers of office workers in the European Union (EU) have been teleworking from their homes for most of the time for more than a year. This has been challenging for organisations and particularly for those that had to ensure, in a relatively short time and on an unprecedented scale, that employees had access to the technological infrastructure to enable them to work remotely on a sustained basis. In addition, organisations have needed to ensure that employees have access to resources, including ergonomic equipment, to keep themselves physically healthy, and access to organisational processes to keep them connected, motivated and productive. This has been even more challenging as teleworking in a pandemic exacerbates isolation and risk of burnout, as individuals often have been unable to leave their homes due to lockdown and curfew rules.

Nevertheless, the learning that organisations will have gained from facing the health and safety challenges during this extended period of teleworking will be beneficial beyond the COVID-19 pandemic. Although it is expected to subside over the coming months, at the time of writing it is clear that its lasting effects will include a permanent shift to a greater incidence of remote working and more flexibility around work organisation and the place of work.

This article sets out the main issues relating to the definition of telework, before looking at the main drivers of telework and examining its incidence around the EU. It then gives an overview of health and safety issues in the workplace, before examining those that are specifically related to teleworking. It also looks at how the COVID-19 pandemic has affected health and safety for teleworkers.

The article then examines the different types and levels of regulation that are relevant for telework. There is also a specific focus on regulation around the right to disconnect. It then looks at some examples of agreements regulating occupational safety and health (OSH) and telework in companies around the EU. Finally, it sets out a number of conclusions in relation to what works in promoting and protecting OSH for teleworkers, the principal remaining challenges and the post-pandemic future.

The appendix contains relevant sources and further reading.

2   Telework: definition, drivers and prevalence

2.1   Definition of telework

To understand the OSH-related issues that are relevant to telework, it is important to define what is meant by teleworking. Although there is no universal definition of telework, the 2002 European cross-sector social partners' framework agreement on telework defines telework as 'a form of organising and/or performing work, using information technology, in the context of an employment contract/relationship, where work, which could also be performed at the employer's premises, is carried out away from those premises, on a regular basis' (European Trade Union Confederation, 2002). This agreement also states that the signatory parties view telework as a way for employers to modernise work organisation and a means for workers to improve their work-life balance, and to achieve greater autonomy in the workplace.

Teleworking has, of course, developed considerably in the two decades since that agreement was concluded. This development has been in line with technological advances, which have subsumed teleworking into new ways of working and, more recently, within the digital economy. This has enabled a wide variety of remote collaboration forms. As a consequence, in the European Commission's 2008 report on the implementation of the 2002 social partners' agreement (European Commission, 2008), it was noted that there was scope for a more extensive definition of telework.

More recently, a 2017 joint research report by Eurofound and the International Labour Organisation (ILO) (Eurofound and the International Labour Office, 2017) added to the debate about definitions by noting that within the practice of teleworking there is a range of ways of working:

- regular home-based teleworkers;
- occasional teleworkers working outside the employer's premises;
- highly mobile teleworkers, working in various places, including working from home.

It is useful to bear in mind these types of definitions and teleworking practices when considering the health and safety needs of teleworkers. It is also useful to expect that the definition of teleworking may further develop in the future, alongside ongoing technological development.

2.2   Drivers of telework

Much of the literature on teleworking describes telework as being linked to working from home, although telework actually only involves working outside the employer's premises using information and communications technology (ICT) (Chung, 2018; Belzunegui-Eraso and Erro-Garcés, 2020). Overall, there are two key drivers. Firstly, teleworking is continuing to evolve in tandem with developments in ICT, which is a key driver of telework. Personal computers allow individuals to work from locations other than the premises of their employer and to communicate regularly with colleagues as needed. The incidence of remote working has gathered pace over the past few years in particular, as virtual private networks (VPNs) and increasingly sophisticated communications mechanisms, including software packages specifically designed for remote and collaborative office work, have become more widespread. An example of this is the recent development and widespread use of videoconferencing, which enables individuals to connect with each other quickly, easily and effectively to share information and documents. Secondly, the pandemic and the public health measures implemented to respond to it have had a major impact on the incidence, regularity and location of teleworking, with working from home being a central feature.

In addition to ICT and the COVID-19 pandemic, increased demand from individuals and organisations, linked to the perceived benefits of telework, are also important drivers. A number of studies have examined the key conditions that enable teleworking, the most comprehensive of which is a study carried out by Baruch and Nicholson (1997), which sets out four factors that underpin teleworking. Firstly, it states that teleworking depends on the type of job and whether it is by its nature suitable for teleworking. For example, roles that require face-to-face customer interaction or other types of physical presence would not be suitable. Building on this, Belzunegui-Eraso and Erro-Garcés (2020) further note how 'white-collar' jobs are more easily adapted to teleworking. Nevertheless, it should also be noted that the COVID-19 pandemic has resulted in a revision of, and increase in, the types of jobs that are suitable to be carried out remotely (Sostero et al., 2020).

Factors driving employee demand for telework centre around the creation of more flexibility in terms of location of work and working time organisation, which helps to improve the work-life balance for all individuals. This is especially important in the case of those with caring responsibilities. Teleworkers also have more discretion over the actual organisation of their working time schedule, giving them extra flexibility during the working day, for example enabling them to run errands. Reduced levels of commuting effectively give workers back several hours a week and can also have a positive impact on health, as commuting can be stressful and tiring. During the COVID-19 pandemic, reduced levels of commuting have the extra advantage of reducing the likelihood of catching the virus or other infectious diseases.

Baruch and Nicholson (1997) note that a second factor influencing employee demand for teleworking is the personality and specific situation of individuals. The extent to which an individual engages in teleworking depends on the extent to which they feel that it would benefit their specific situation. Some people would rather work alongside other colleagues, whereas others are happy to work remotely and may prefer this.

The specific personal and home and family situations of individuals are a third factor, according to Baruch and Nicholson (1997). This can include issues such as the suitability of the home environment for teleworking in terms of a dedicated space and whether or not interruptions can be limited. It also relates to combining other responsibilities, including caring responsibilities. More flexibility could be particularly beneficial to women in countries with more gendered norms regarding domesticity and a resulting disproportionate burden on women in terms of the distribution of informal care responsibilities within the home (Messenger 2019, Eurofound 2018). Teleworking can also facilitate the participation of people with disabilities in the labour market, as it helps to overcome a number of barriers to participation, such as not being obliged to commute to the office (Eurofound, 2020b).

For employers, a workforce that enjoys a better work-life balance is likely to mean that employee engagement and loyalty is increased, which in turn reduces labour turnover and increases productivity and innovation. This has a direct effect on costs in terms of lower levels of recruitment, less management time devoted to recruitment and less time lost while waiting for new employees to get up to speed in their roles. Furthermore, studies have long shown[1] that teleworkers often perform better than their office-based counterparts, based on self-reported and supervisor-rated performance. This means that productivity gains can be linked to teleworking. Teleworking also enables employers to tap into the talent of all types of people, including those with caring responsibilities and those with disabilities, as noted above.

Organisational factors, such as strategy and culture, are the fourth factor and are also important. According to Baruch and Nicholson (1997), attitudes of senior management can strongly influence the level of acceptance of teleworking in the organisation and, crucially, the attitude of line managers, who often have the power to approve or deny access to teleworking for individual employees or teams. However, management as a whole can often resist teleworking, including in those organisations that have teleworking policies in place. Furthermore, line managers can struggle to trust colleagues to carry out their work if they cannot be seen by supervisors in the office and may feel that they are losing management control of colleagues, although this is less of a problem in the case of output-based work.

Actions at company level targeted at changing the company culture and working with line managers can be effective in building trust. It is also crucial to train line managers so that they can deal effectively with issues around teleworking. The significant increase in teleworking during the COVID-19 pandemic has proved that it is possible for employees to work productively and efficiently from their homes. Employers are now realising this and may, in the post-pandemic world, opt for a different work organisation framework, in which teleworking is more common (European Commission Joint Research Centre (JRC), 2020). In this way, employers would be able to reduce costs significantly, cutting down on office space or possibly dispensing altogether with their offices. Employers in the post-pandemic world may also choose to reduce the number of face-to-face meetings to reduce travel costs. The extent and capabilities of technology in an organisation are also an important driver.

Belzunegui-Eraso and Erro-Garcés (2020) recently added a fifth factor to the framework developed by Baruch and Nicholson (1997), relating to the environmental impact of teleworking in terms of lower levels of commuting and safety considerations in the face of terrorist attacks, natural disasters or health alerts, in that teleworking enables workers to carry on working. Figure 1 below shows the factors contributing to teleworking.

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[1] For example, Baruch, Y. (2020) 'Teleworking: benefits and pitfalls as perceived by professionals and managers', *New Technology, Work and Employment*, 15, pp. 34-49.

Figure 1: The factors contributing to telework
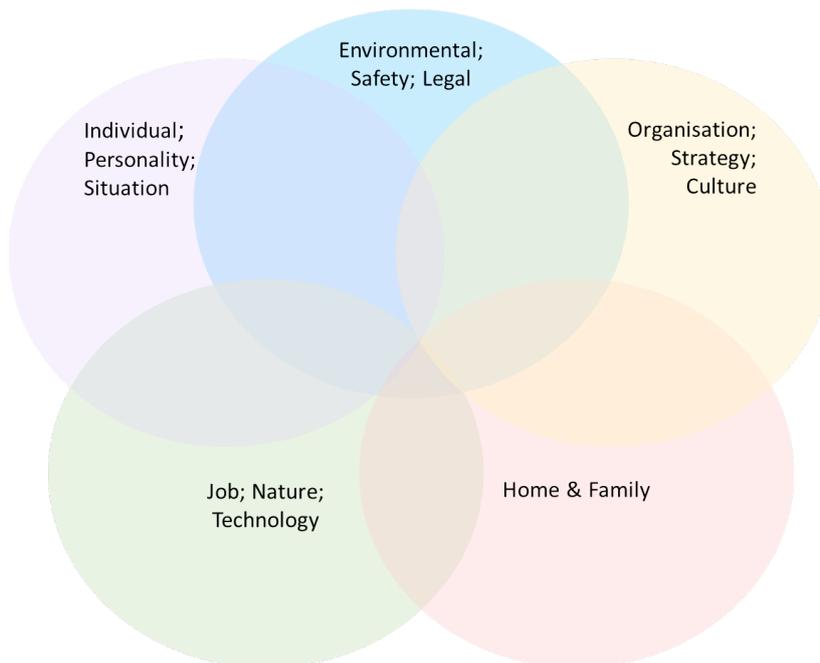
Source: Adapted from Belzunegui-Eraso and Erro-Garcés (2020), licensed under CC BY 4.0 (https://creativecommons.org/licenses/by/4.0/). The original figure is based on Baruch and Nicholson (1997).

2.3 Prevalence of telework

Teleworking originated in the 1970s with the development of new ICTs and has expanded over the following five decades (Messenger, 2019). The incidence of teleworking varies between countries, but it is substantial in some EU Member States, particularly in the Nordic countries and the Netherlands, as well as in Japan and the USA (Messenger, 2019) . In the EU overall, according to European Labour Force Survey data, in 2019, 3.1 % of employees aged 15-64 years usually worked from home.

Figure 2 below gives details of the percentage of establishments with home-based teleworking in place in individual EU Member States. It is based on data from EU-OSHA's European Survey of Enterprises on New and Emerging Risks (ESENER) and shows the arrangements that were in place in 2019, before the pandemic hit. The figure clearly shows the wide variation in the incidence of home-based teleworking, ranging from 31 % in the Netherlands, 26.6 % in Belgium and 23.8 % in Denmark to 1.9 % in Italy, 3.5 % in Bulgaria and 4.2 % in Greece. The EU average was 11.6%. It should be noted that the European Agency for Safety and Health at Work (EU-OSHA) is carrying out ongoing research to provide a picture of telework in Europe, based on analysis of ESENER data (EU-OSHA, 2021).

Figure 2: Establishments with home-based teleworking in place, by country, 2019 (%)

Country	%
Italy	1.9%
Bulgaria	3.5%
Greece	4.2%
Portugal	4.6%
Romania	5.2%
Slovenia	5.3%
Cyprus	5.4%
Poland	5.5%
Spain	6.0%
Croatia	6.9%
Hungary	8.7%
France	10.0%
Slovakia	10.6%
EU-27	11.6%
Luxembourg	12.1%
Ireland	12.5%
Latvia	13.0%
Lithuania	13.6%
Austria	15.3%
Estonia	15.4%
Czechia	16.2%
Malta	16.5%
Finland	16.8%
Germany	17.7%
Sweden	21.5%
Denmark	23.8%
Belgium	26.6%
Netherlands	31.0%
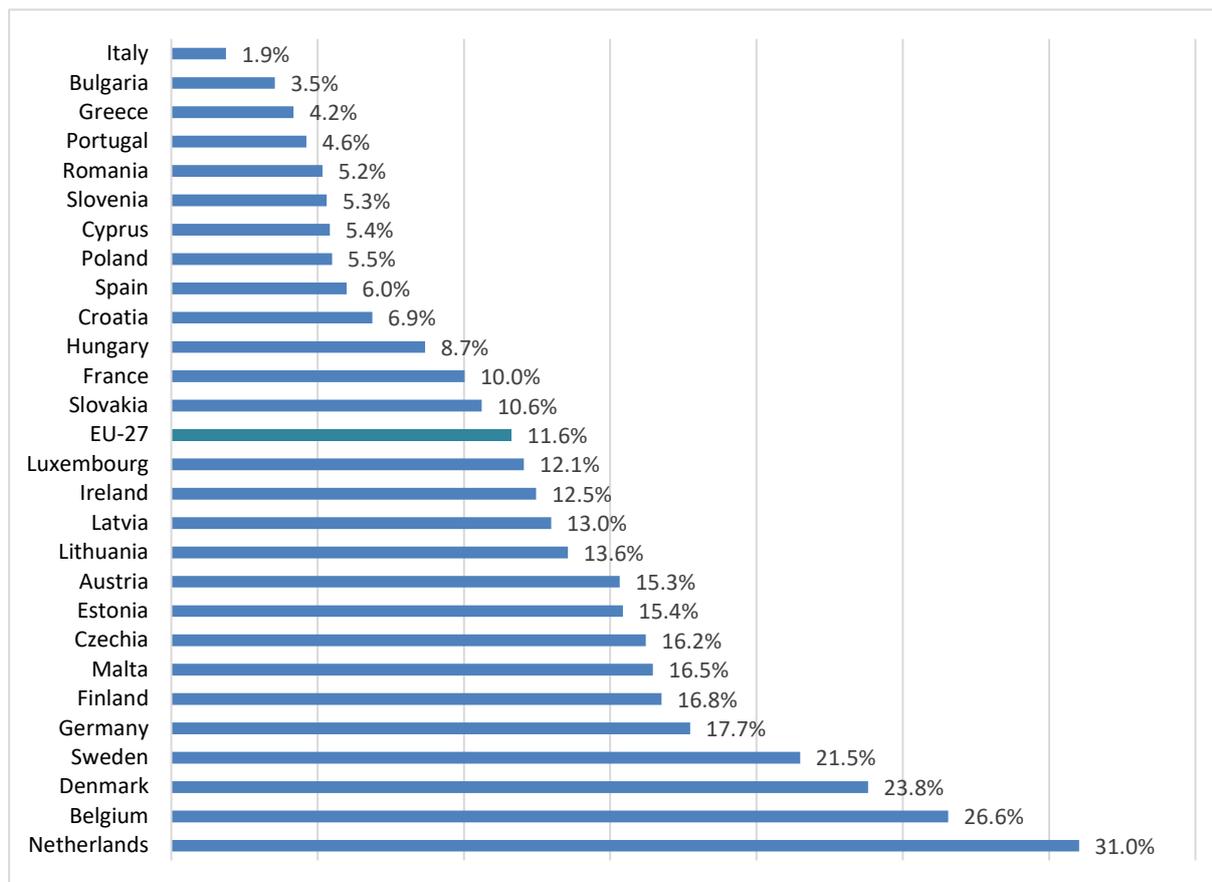
Source: European Survey of New and Emerging Risks (ESENER), 2019.

Overall, the incidence of teleworking varies owing to a combination of factors, including the presence of particular technologies in a country, the availability and quality of its technological infrastructure, individual employees' needs for flexibility — in terms of both work location and working time — to balance work demands with family commitments and other personal responsibilities, differences in a country's industrial and occupational structures, and the organisation of work, its regulation and the management culture in organisations. According to Eurostat European Labour Force Survey data, however, there is no significant difference between the proportion of male and female employees working usually or sometimes from home (10.5 % in the case of men and 11.6 % in the case of women in 2019).

It should be noted that work is only 'teleworkable' in some sectors and occupations, and therefore not all workers will benefit from teleworking arrangements. In the EU, the service sector has historically been dominant in terms of teleworking, and particularly in occupations linked to information and communications, finance and insurance, professional, scientific and technical (PST) activities, and public administration (European Commission Joint Research Centre (JRC), 2020). Teleworkable employment is estimated to vary between 33 % and 44 % in all but five EU Member States.

The restrictions on movement and social interaction put into place as a reaction to the COVID-19 pandemic that began in Europe in March 2020 have resulted in a substantial increase in teleworking. This may have also expanded the divide between those who can and those who cannot work remotely, because the growth of teleworking during 2020 is strongly skewed towards white-collar employment at all levels. In terms of the future, COVID-19 is likely to leave a permanent mark on teleworking in Europe, although the full impacts of this are still to be seen. Research is now beginning to emerge on the specific impact of the pandemic on the incidence of teleworking. The European Commission Joint Research Centre (JRC) estimates that, in 2020, around 25 % of employment was remote in teleworkable sectors

in the EU as a whole. It notes that this will be a significant policy challenge: 'Considering that before the outbreak just 15 % of the employed in the EU had teleworked, large numbers of workers and employers alike are, in all probability, facing challenges in dealing with the sudden shift to telework. The extent of these difficulties, however, is likely to vary considerably, depending among other factors on the level of prior experience with telework' (European Commission Joint Research Centre (JRC), 2020).

Early estimates from Eurofound (Eurofound, 2020c), based on an e-survey carried out in the summer of 2020, show that, in July 2020, nearly half of respondents classified as 'employees' (48 %) worked at home at least some of the time during the COVID-19 pandemic. Of these, over one third (34 %) reported working exclusively from home. Overall, this study estimates that 39.6 % of paid work by dependent employees was carried out at home during the pandemic.

3 Health and safety in the workplace

3.1 Overview

Good management of OSH can clearly make a significant contribution to employee well-being, and this is the basis for OSH in relation to teleworkers. The issues covered in this section are of great relevance for teleworkers, whose health and safety cannot be overseen on a day-to-day basis, in contrast to the situation for office-based workers. Overall, the relationship between physical health, mental health and well-being is increasingly perceived as complex, with boundaries that can be artificial. For example, pain and poor physical health can be detrimental to mental health. Arthritis — one of the 150 musculoskeletal conditions affecting the locomotor system — affects an individual's life far beyond the physical symptoms and can have a negative impact on mental health. Conversely, poor mental health may worsen physical health outcomes. For example, the chemical and biological processes linked to short- and long-term stress responses may facilitate or compound physical strains, as is the case for back, neck, and shoulder pain (Roquelaure, 2018). Based on this, there is an increasing view that there is an interrelationship between musculoskeletal disorders (MSDs) and organisational and psychosocial factors at work. For example, if there is work intensification resulting from poor work organisation, this can lead to physical difficulties, resulting in MSDs, and to psychological stress, resulting in psychosocial risks. Accordingly, any risk prevention initiatives should be based on both psychosocial and biomechanical considerations to devise holistic and integrated interventions (Roquelaure, 2018).

Given the complexity and overlapping nature of physical and mental health, well-being can function as the link between the two: it can foster health and longevity directly and also indirectly (in terms of resulting behaviours), which makes it integral to disease prevention and health promotion. For example, people with high levels of well-being are more likely to have a good diet and engage in physical activity, factors that are health-enhancing, both physically and mentally. Conversely, reductions in life satisfaction may encourage unhealthy habits as a coping mechanism.

Although work is generally considered to be a positive factor in terms of health, this may not, in fact, always be the case, as musculoskeletal conditions and mental health are among the leading causes of disability in Europe. An ageing population and an increasingly fast-paced workplace risks exacerbating the prevalence and impact of these factors over the life course. Risk factors leading to MSDs, such as ergonomic issues, lifting heavy loads and repetitive movements, are a known health and safety risk and account for a high proportion of sickness absence in the EU. According to Eurostat data, European Labour Force Survey – ad-hoc module 2013 - these disorders account for almost 60 % of work-related health problems and are therefore the most common occupational disease in the EU.

Recent research by EU-OSHA (EU-OSHA, 2020b) looked at trends in relation to MSDs, finding that much still remains to be done in the area of risk assessments. Overall, it found that larger organisations were more likely to carry out risk assessments, although there remains some room for improvement. Small and medium-sized enterprises (SMEs) are less likely to have written risk assessments. Furthermore, it found that risk assessments are often carried out as an afterthought, that is, when something goes wrong, rather than at the design stage of the work process. It also found that risk assessments generally tend to give little consideration to diversity (gender or age, for example).

The main risk factors affecting mental health are job-related stress, heavy mental loads, lack of decision-making autonomy, lack of support from line managers, lack of support from colleagues and lack of recognition for work carried out. Recent studies, including a report on psychosocial risks in Europe (Eurofound and EU-OSHA, 2014), show that around one quarter of workers are subject to stress during all or most of their time at work, with a similar proportion of workers claiming that their job has a negative impact on their health. Table 1 gives an overview of the main psychosocial risk factors at work.

Table 1: Work-related stress and psychosocial factors at work

Work-related issue	Risk factors
Environment and equipment	Inadequate reliability, availability, suitability, maintenance or repair of equipment and installations
Job content	Lack of variety or short work cycles, fragmented or meaningless work, exploitation
Workload and work pace	Work overload or underload, machine pacing, continually subject to deadlines
Management of working time	Management of working time
Culture and purpose of the organisation	Poor communication, lack of support for problem-solving and development
Role in the organisation	Role ambiguity, role conflict and responsibility for people
Career development	Career stagnation and uncertainty, underpromotion or overpromotion, poor pay
Decision-making autonomy/control	Low participation in decision-making, lack of control over work (control, particularly in the form of involvement, is also a problem in terms of context and organisation)
Interpersonal relationships at work	Social or physical isolation, poor relationships with superiors, interpersonal conflicts, lack of social support
Home-work interface	Conflicting demands of work and home, lack of support at home, dual career problems

Source: Roquelaure (2018).

It should also be noted that a range of studies have found that there is also a strong tendency to under-report both MSDs and mental health issues, which can be attributed to lack of awareness, difficulties in dealing with complex administrative procedures related to the reporting process, or a fear of stigma and of losing one's job if issues are reported (Riviere et al., 2014). In the case of MSDs, the European Working Conditions Survey (2015)[2] reveals that the scale of MSDs is much larger than officially reported, with around one in two of the workers surveyed reporting pain in the neck, shoulders or lower back.

Building on this, the next section looks at OSH issues that are specifically relevant to teleworkers.

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[2] Eurofound (2017) Sixth European Working Conditions Survey — Overview report (2017 update). Retrieved from: https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1634en.pdf

3.2   Teleworking and OSH

There are specific OSH risk factors that are associated with teleworking. These include general issues such as temperature, lighting, noise, not being able to work undisturbed, and dangers of slips, trips and falls due to electrical wiring and cables. OSH risks also include ergonomic issues such as eyestrain from visual display unit (VDU) work, for example resulting from glare from the screen, vibration of images or inadequate contrast between the screen and the surrounding area. Other more specific issues include neck pain and tendon pain in the wrists and fingers, which can lead to repetitive strain injury (RSI), resulting from inappropriate setting up of the workstation, which includes the VDU, keyboard, desk and chair.

These issues could be exacerbated by prolonged sitting and use of inadequate equipment. The office environment is usually checked ergonomically and these types of risks are therefore minimised in office-based workstations. However, it is more difficult for employers to check and regularly inspect home workstations, which may not always be suitable in terms of desks, chairs, screens and lighting. Workers may not have a suitable space at home or suitable equipment. For example, working at the kitchen table with a kitchen chair over a sustained period of time may increase the risk of MSDs and RSI.

EU-OSHA's risk assessment guidance for teleworking (EU-OSHA, 2008) notes that, even if employees are working at home, the responsibility for carrying out risk assessment of any workplace remains with the employer. However, it also recognises that it can be difficult for the employer to assess homeworking environments, and even harder for health and safety inspection bodies to carry out inspections in workers' private homes without their consent. The 2002 EU-level social partners' framework agreement on telework does attempt to clarify this aspect, noting that teleworkers are covered by all the general protection offered to workers and that the employer, workers' representatives and/or relevant authorities should have access to the place of teleworking to check that health and safety provisions are correctly applied in the home context, albeit within the limits of national legislation and collective agreements. Furthermore, the teleworker has the right to request inspection visits from health and safety inspection bodies.

In terms of psychosocial risks, existing evidence shows that there is a risk of isolation if an individual is working away from their team. It is clear that, if employees are working remotely, they will not be engaging in formal communication, such as physical meetings (although the development of videoconferencing has provided a workable replacement). Furthermore, although technology enables regular communication with colleagues, it does not replace the more informal 'water cooler' or kitchen chats that form the basis of casual social interactions in the workplace and that make individuals feel connected to their workplace and their colleagues. Again, the development of videoconferencing has enabled some informal contact to take place, although arguably less spontaneously than is the case when employees are physically present in an office and can 'bump into' each other.

The blurring of the boundaries between work and private lives might also become more of an issue for teleworkers who work regularly at home, exacerbated by responsibilities for the care of children or other family members. This might apply to the location, in that individuals may not have a dedicated space from which to work at home, and so their work intrudes into their personal life because it is carried out in the centre of the home (in the kitchen or living room, for example). It might also apply in terms of working time, as it is easier to carry on working into the evening or at weekends in the home environment (Messenger, 2019). The blurring of these spatial boundaries may also lead to work-family conflicts, based on work being more present in the home. If other family members are not happy about the teleworking arrangements, this can also lead to stress and conflicts within the family.

Work intensification may also be a risk for teleworkers, which may then lead to increased levels of stress (Eurofound and the International Labour Office, 2017). With fewer distractions and no spatial separation, it is easier to work more intensively and to take fewer breaks. Teleworkers may also be more likely to work when they are unwell, as they do not have to leave the house and commute to the office.

3.3   COVID-19: teleworking and OSH

The COVID-19 pandemic has meant that workers all over Europe have been obliged to work at home for many months. Although many workers are used to working at home for some of the time, most are not used to teleworking all the time. There is a range of risks associated with full-time teleworking for those who have not planned to organise their working life in this way. These are all related to the known risks of teleworking, in terms of both MSDs and psychosocial risks, as listed above, but many have been exacerbated during the pandemic.

These risks can include longer periods of sitting down: workers are no longer forced to commute between their homes and the office and so can easily spend the whole day at their desks at home. This is tied to lower levels of physical exercise overall, especially during the colder and darker winter months, when there is less incentive to leave the house, if this is permitted at all by lockdown rules.

As mentioned above, isolation is an issue that is a common risk for teleworking, but the high levels of homeworking resulting from the pandemic, coupled with lockdowns and restrictions on social activities, could increase isolation levels significantly, especially for those who live on their own or in shared accommodation with those who are not part of their family or circle of friends.

The blurring of the boundaries between home and work lives may also be exacerbated by the COVID-19 pandemic: as there are reduced opportunities for socialising or being entertained outside the home, work can expand to fill the vacuum. In addition, caring responsibilities, particularly for children, have become much more of a burden during the pandemic, as a result of the requirement for home-schooling. There is evidence that this burden has disproportionately fallen on women[3].

Overall, levels of anxiety are likely to be higher during the pandemic, linked to the wider health, social and economic implications of the crisis. Anxiety can be increased by poor management of teleworkers in terms of a lack of clarity regarding their roles and responsibilities, objectives and workload. This can increase stress levels in the wider context of unpredictability and the lack of ability to plan. Anxiety can be further exacerbated in the case of those needing to self-isolate or quarantine. According to a literature review in *The Lancet* medical journal (Brooks et al., 2020), studies that surveyed those who had been quarantined during the pandemic reported depression, stress, low mood, irritability, insomnia, post-traumatic stress disorder symptoms, anger and emotional exhaustion as a result of being isolated or quarantined. Low mood and irritability stand out as being particularly prevalent. Other issues that can increase stress and anxiety include slow or intermittent broadband connection (which can increase frustration and irritability), and technical issues that cannot be solved immediately by IT support, which is more likely to be the case than when employees are office based.

Some studies published recently deal with the effects of COVID-19 on OSH risks in relation to telework. A recent study by Belzunegui-Eraso and Erro-Garcés (2020), for example, notes that governments in most EU Member States made recommendations from early 2020 that companies should facilitate teleworking to safeguard employees' health and to stop employees gathering together in the same place. This resulted in very large numbers of employees working at home full-time and for a prolonged period. At the time of writing, this is still the case and is expected to continue to be so well into 2021.

Furthermore, Eurofound (2020c) carried out a survey of employees in the summer of 2020, asking about workers' OSH-related fears in the context of the pandemic. The results point to a range of increased psychosocial risks, such as the fact that there is often no physical separation between work and living spaces, which could contribute to the blurring of the boundaries between work and home lives, and is in contrast to going out to work. There may also be issues around increased intensity of work, with respondents to the Eurofound survey stating that they were much more likely to work regularly (every day or every other day) in their free time (24 % of teleworkers reported working during their free time, compared with 6 % of those who worked only at the employer's premises or at locations outside the home).

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[3] See, for example, Eurydice (2020) 'Is home-schooling during the pandemic exacerbating gender inequalities?'. Retrieved from: https://eacea.ec.europa.eu/national-policies/eurydice/content/focus-home-schooling-during-pandemic-exacerbating-gender-inequalities_en

4 Types and levels of regulation

There are many levels of regulation in Europe that govern areas relevant to teleworking, including place of work, working time, work-life balance, OSH risk prevention in relation to teleworking and the right to disconnect. These levels range from EU directives and EU cross-sector social partner agreements to national legislation, often implementing EU directives, national and sectoral collective agreements, and agreements and arrangements at the level of individual organisations.

General OSH protection for workers is provided by the European Framework Directive on Safety and Health at Work (Directive 89/391/EEC) adopted in 1989, which guarantees minimum health and safety requirements throughout Europe. This Directive also provides the framework for a number of directives on specific issues, such as work equipment, personal protective equipment, manual handling of loads, and display screen equipment. In 2017, the European Commission reported on the practical implementation of these directives, concluding that EU legislation in this area had contributed to instilling a culture of prevention throughout the EU, as well as to rationalising and simplifying national legislative systems and highlighting a number of flaws in the application of the legislation that were holding back achievement of its full potential (European Commission, 2017).

In addition, the following directives are also relevant to OSH protection for workers in the EU: Directive 89/654/EEC on workplace requirements (under review), Directive 90/270/EEC on display screen equipment (also under review) and Directive 2003/88/EC on working time.

The most relevant piece of EU-level regulation to OSH and telework is the social partners' framework agreement on telework, concluded in 2002. This agreement was negotiated and implemented by the EU-level cross-sector social partners: European Trade Union Confederation (ETUC), Union of Industrial and Employers' Confederations of Europe (UNICE, now BusinessEurope), European Union of Craft and Small and Medium-Sized Enterprises (UEAPME, now SMEunited) and European Centre of Employers and Enterprises providing Public Services and Services of general interest (CEEP). The agreement defines telework and sets out a general framework at European level for teleworkers' working conditions. It recognises the general principle that teleworkers are afforded the general protection granted to workers based on the employer's premises and highlights key areas where the specificities of telework need to be taken into account. This agreement is implemented nationally by the national member organisations of the signatory social partners.

National legislation in EU Member States varies according to the type of regulatory approach of individual countries to the issue of teleworking. Eurofound (2020d) gives an overview of the different approaches around Europe and the extent to which legislation or collective bargaining is relied on to regulate teleworking and promote work-life balance, according to factors such as national tradition and preferred approach. Eurofound notes that there is a wide variety of approaches, with some countries, such as Belgium, Spain, France, Italy, Poland and Portugal, relying on a mixture of legislation and collective agreements, whereas the approach in the Nordic countries and Austria, Czechia, Germany, Greece, the Netherlands and the Nordic countries is based on agreements at varying levels. The countries relying on company-level agreements only include the United Kingdom, Bulgaria, Croatia, Estonia, Ireland, Latvia, Romania, Slovenia and the United Kingdom (Eurofound, 2020d).

The philosophy underpinning national legislation also influences national approaches to the regulation of teleworking. Some countries, such as Belgium and France, have adopted an approach that is balanced in terms of promoting teleworking and protecting those engaged in telework. Other countries focus mainly on the promotion of telework: these include Germany, Lithuania, Poland, Portugal and Romania. By contrast, the Nordic countries generally adopt a regulatory approach that does not make the connection between promoting telework and protecting teleworkers.

In the next section, we look specifically at the right to disconnect, as debate around this issue has been brought into sharp focus during the pandemic. This has resulted in a substantial amount of legislation being passed on this topic recently, which in some countries needs to be implemented through agreements between employers and workers' representatives. For this reason, the right to disconnect is the focus of many company agreements and practices, as detailed in Chapter 5 of this article.

4.1   The right to disconnect

An economy that is continuously 'on', enabled by digital technology, means that employees can theoretically be reached at all times of the day, through their smartphones, messaging apps or other means of instant contact. This practice became much more acute during 2020 as large numbers of workers moved to full-time teleworking as a result of the COVID-19 pandemic. Recent research by Eurofound on the right to disconnect (Eurofound, 2019) notes that there is no formal conceptualisation of this, but that it can be described as 'the right for workers to switch off their technological devices after work without facing consequences for not replying to emails, phone calls or text messages'.

At European level, in January 2021, the European Parliament passed a resolution on the right to disconnect (European Parliament (2021). At Member State level, to avoid burnout and to promote work-life balance, some countries, such as Belgium, Spain, France and Italy, have passed legislation on individuals' right to disconnect. These legislative provisions typically state that the social partners at sectoral or company level should reach agreements on how to implement this right to disconnect. Italy is unique in that the legislator has assigned the responsibility for reaching such agreements to individual employers and employees, which implies a different power balance between the parties. In France, the right to disconnect must be implemented through agreements between employers and trade unions in all companies with more than 50 employees. In Spain, legislation also leaves the implementation of the right to disconnect to the collective bargaining parties at sector or company level. As of mid-2019 (six months after the law was passed), the right to disconnect was only enshrined in sectoral collective agreements in the manufacturing sector and in a number of company-level collective agreements (for some examples of this, see below).

There is also debate on the right to disconnect in some other EU Member States, such as Ireland, where the government has signalled its intention to legislate on this issue. Debate is less prominent in the Nordic countries, as it tends to be part of collective bargaining at sectoral level on work-life balance.

Of course, there are structural issues underlying the practice of working all hours (enabled by technology), and these are linked to organisational factors such as workload. Workers who cannot finish all of their work during normal working hours often have no choice but to carry on working during evenings, weekends and public holidays to manage their workload. If this is happening on a regular basis, the employer needs to ensure that the workload is manageable and usually can be carried out within contractual working hours. Another structural issue may be pressure from managers to be digitally present. In a guide to teleworking, the global union UNI notes that, 'A right to disconnect naturally cannot fix all organizational issues, but introducing the right without regard to its context is likely to have only a marginal positive effect, if at all'(UNI Global Union Professionals and Managers, 2019) . In the current COVID-19 situation, this is highly relevant, as the sudden switch to homeworking on a full-time basis risks exacerbating any existing issues in organisations. For example, if there was already an issue around a company culture that requires workers to be digitally present or to work long hours, this is likely to be a more significant problem in the context of large numbers of workers working at home on a full-time basis. This can therefore increase the risk of stress, burnout and other mental health issues.

Several high-profile company-level agreements are already in place in relation to the right to disconnect. Although this is relevant for all workers, in the context of COVID-19, where larger numbers of workers are working remotely and there can be difficulties around the blurring of work-life boundaries, these types of agreements are, at present, particularly relevant and may help to prevent long working hours and potential burnout. For example, an agreement at BMW [4] states that employees may agree with their manager the fixed hours during which they are available, and work done on mobile devices outside normal working hours is credited to their working hours account. At the same time, employees have the right not to be available during holidays, weekends and after work.

Box 1 gives details of the agreement at the German car maker Volkswagen on the right to disconnect, which was one of the first agreements on this issue. It was concluded by management and worker representatives in the company's works council.

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[4] https://www.welt.de/wirtschaft/article124924707/Bei-BMW-gibt-es-jetzt-ein-Recht-auf-Feierabend.html

Box 1: Company-level agreement on the right to disconnect at Volkswagen, Germany

VW was one of the first companies in Germany to negotiate an agreement that contains provisions on the right to disconnect. The impetus for the agreement was a significant increase in the use of smart devices, both at home and in the workplace. Workers representatives felt that, although the new opportunities such devices offer for communication have advantages for employers and workers, they also carry risks related to constant accessibility and an expansion of working hours. In 2011, an agreement was therefore reached on the use of these devices at VW. There is no specific reference to teleworking, but the agreement covers all workers and is therefore relevant to teleworkers, specifically in the context of the current switch to homeworking for all those who can work from home.

The agreement stipulates that managers and senior technical experts can use smartphones at any time, whereas for other workers the connection between the server and the smartphone is disabled between 18.15 and 07.00. Workers can use the phone function but cannot receive emails, text messages or video calls. Exceptions can be made for specific projects, but this needs the prior agreement of the works council. This could be relevant, for instance, to workers engaged on transnational projects in which colleagues working in different time zones may be involved.

The distribution between managerial and high-level expert staff and other workers at VW implies that the right to disconnect applies to around 80 % of the workforce.

Assessments show that the majority of employees appreciate the regulation, but some would prefer more flexibility and control over their working hours. However, the works council preferred a hard 'shut-down' to avoid workers worrying that, if they requested the right to disconnect, they may be considered not 'ambitious'. Surveys show high levels of satisfaction and low stress levels among those covered by the collective agreement. Time spent on telephone calls outside working hours is not automatically registered as working time. There is a trust-based working time system in place that requires workers to notify management of additional hours worked. Addressing unpaid overtime was another motivation behind the agreement and this went hand in hand with many activities trying to reduce workload and align it to the ability to disconnect.

Source: European Commission and Eurofound Webinar on the right to disconnect (June 2020). Eurofound (2019).

5 Examples of company practices on OSH and teleworking

There are several examples of company practices that deal with issues around teleworking and OSH implications, in terms of both MSDs and psychosocial risks. Many of these specifically focus on the right to disconnect, which aims to promote well-being and reduce the risk of stress and burnout for all workers, including teleworkers. These agreements set out who is covered by the agreement, list the regulations and boundaries around working time, give details of the type of equipment that is necessary to ensure good ergonomic conditions in a teleworking situation, and contain provisions for the assessment of workstations. The examples showcased here come from Germany, Spain, France, Italy, Malta, Portugal, Poland and Romania. Although two of these pre-date the COVID-19 pandemic, most have been implemented since the pandemic hit as a reaction to the sudden switch to full-time and long-term teleworking for employees who are able to do so. Many of these company practices have been drawn up and implemented with the involvement of the social partners, particularly those in Spain and France, where legislation specifies the involvement of social partners in agreements to implement legislation on the right to disconnect. In the case of other practices, such as those in Malta, the initiative has been management led. In Portugal, although trade unions were not originally involved in the implementation of teleworking arrangements, because of the need to put an initiative in place quickly, they were involved in consultation once the state of emergency was lifted.

Table 2 gives an overview of the company agreements considered in this article.

Table 2: Details of company agreements relating to OSH and teleworking

Company	Country	Sector	Level	Social dialogue[5]	Date	Content
Pre-COVID-19 agreements						
France Télécom (Orange)	France	Telecommunications	Company level	Yes	2009, 2016	Work-life balance; equipment and ergonomics; inspection (on teleworker's request) Organisational culture; work-life balance; right to disconnect
Volkswagen[6]	Germany	Automotive	Company level	Yes	2011	Right to disconnect
Agreements reached during the COVID-19 pandemic						
Netguru	Poland	Information technology	Company level	No, management led	March 2020	Equipment and ergonomics; health and well-being
Maltese government and the Ministry for Gozo	Malta	Cross-sectoral	Government led	Unknown	June 2020	Work organisation; work-life balance; financial support
Spanish banking	Spain	Finance	Sector level	Yes	September 2020	Work-life balance; right to disconnect; equipment and ergonomics; gender; financial support

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[5] Social dialogue involved in the formulation or implementation of the agreement.
[6] See Box 1.

Company	Country	Sector	Level	Social dialogue[5]	Date	Content
Credito Cooperativo Bank	Italy	Finance	Company level	Yes	September 2020	Work-life balance; right to disconnect; equipment and ergonomics; financial support
Acciai Speciali Terni	Italy	Steel manufacturing	Company level	Yes	September 2020	Work-life balance; right to disconnect; equipment and ergonomics
Applies to all workers in Romania	Romania	Cross-sectoral	Government led	Unknown	January 2021	Financial support
Merck Serono	Italy	Pharmaceutical	Company level	Yes	January 2021	Work organisation; work-life balance; right to disconnect; equipment and ergonomics
Malta Enterprise	Malta	Cross-sectoral	Government led	Unknown	March 2020	Financial support for companies to support the purchase of equipment for teleworking
Directorate General for Administration and Public Employment	Portugal	Public services	Government led	Not initially but subsequently once the state of emergency was lifted	March 2020	Work organisation in relation to telework, and a focus on the main OSH-related issues associated with telework
Suez	France	Recycling and waste management services	Company level	Yes	November 2020	Voluntary teleworking on average 2 days a week; provision of teleworking equipment; monthly payment and meal vouchers

5.1   Teleworking agreement at Orange (France)

In 2009, the France Télécom (Orange) group signed a telework agreement to follow on from the 2002 cross-industry EU-level framework on telework, the 2005 French national intersectoral agreement (accord national interprofessionnel, ANI) and its 2006 telecommunications sector-level agreement. This company-level development was supported by four trade unions: the French Democratic Confederation of Labour (CFDT), French Confederation of Management-General (CFE-CGC), French Confederation of Christian Workers (CFTC) and General Confederation of Labour and Workers' Force (FO). The agreement included measures related to isolation, work-life balance and work organisation, as well as ergonomics. It established that the worker should be present in the workplace at least 2 days a week to meet colleagues and their line manager on a regular basis. It also recognised that telework should not be a barrier to participating in meetings. It further contained provisions relating to the hours during which employees can be contacted and provided training for telework, in terms of work organisation and information on the equipment that is provided.

Great emphasis was placed on ergonomic aspects, with the company acknowledging its responsibility for the home workstation, including the provision of a laptop, and any malfunctioning of the equipment, as well as extra insurance. Télécom Orange also granted to employees a payment of EUR 150 to cover further workstation expenses. This was both taxable and subject to social security contributions. The workplace health and safety committee (Comité d'hygiène, de sécurité et des conditions de travail, CHSCT) was also given the right to carry out inspections if asked by the teleworker to do so.

In 2016, the Orange group signed a new telework agreement with three trade unions: CFDT, CGT and FO[7]. The goal was to support the company's digital transformation, and it was the first such agreement signed by a company registered on the Paris Stock Exchange. Social dialogue and work-life balance, with a guaranteed right to disconnect (regulated nationally by Article L.2242-17 of the Labour Code), were the two key elements of this agreement. The former aspect related to monitoring the various outcomes of the teleworking agreement. This centred on dialogue at the central works council and at the National Council on Digital Transformations, a new dedicated employer-trade union forum.

The latter aspect focused on changing work organisation to a less top-down approach in favour of a more collaborative and trust-based approach, supported by employee and manager training. This was because a management style that resulted in high levels of workplace stress was considered to be responsible for a number of suicides at Orange, which made the company particularly sensitive to the challenge of work-related stress. It also aimed to improve work-life balance by protecting employees from intrusive out-of-work hours communication (emails, messages, etc.) and establish automatic mechanisms, such as stopping servers, creating pop-ups to remind employees about work-life balance and training employees to respect colleagues. Furthermore, the agreement included giving digital consumption monitoring data to employees, and to health and safety staff, to identify the risks of digital overconsumption, such as difficulties in focusing.

5.2   Remote working and well-being at Netguru (Poland)

Netguru is a software development consultancy in Poland. First established in 2008, it now has nine offices and over 650 employees[8]. Around 40 % of the company's employees started to work from home full-time at the beginning of the pandemic, while 60 % combined working in the office and homeworking.

Led by the management and the innovative ideas and inputs of its employees, the company adapted its teleworking policy to the new circumstances created by the pandemic. It did so by providing equipment for those working from home, involving human resources in the provision of information on online training,

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[7] Eurofound (2017) 'First company-level agreement on digital transformation signed at Orange'. Retrieved from: https://www.eurofound.europa.eu/publications/article/2017/france-first-company-level-agreement-on-digital-transformation-signed-at-orange

[8] Eurofound (2020) 'Netguru: Remote working and well-being at IT company'. Retrieved from: https://static.eurofound.europa.eu/covid19db/cases/PL-2020-12_1774.html?utm_source=externalDashboard&utm_medium=powerbi&utm_campaign=covid-19 https://blog.hellohr.pl/czy-zycie-rekrutera-it-zmienilo-sie-w-czasach-pandemii-

both professional and non-professional, and setting up activities to support physical health, mental health and well-being.

Measures targeted at supporting well-being include Netguru After Hours chats, which focus on a range of non-work-related topics, virtual coffees through an app that pairs colleagues who have not been connected before, and daily morning training sessions (yoga, stretching) led by employees, as well as less regular afternoon sessions led by professionals.

5.3 Gozo Telework Scheme (Malta)

Environmental factors linked to COVID-19 mean that using public transport may constitute a health hazard. With the goal of decreasing commuting between Gozo and Malta without negatively affecting employment levels in Gozo, the Maltese government and the Ministry for Gozo initiated the 'Gozo Telework Scheme'. The scheme also aims to improve work-life balance.

The scheme provides financial support to employees in the form of 75 % reimbursements of the costs of technological equipment — worth up to EUR 850 — and salary reimbursements of up to EUR 10,000 to employees but distributed through employers. The scheme is valid for 3 years and salary reimbursements are made in three instalments: EUR 3,000 in the first and second years and EUR 4,000 in the third and last year.

The scheme is open to organisations registered in Malta that have employees in Gozo. Companies across a range of sectors can apply to join, but there are certain sectors that are excluded, such as those that are already receiving some other form of aid (e.g. companies in fisheries and aquaculture).

One of the Gozo Business Chamber's strategic objectives is the digital transformation of work, and the Chamber has therefore viewed this initiative positively.

5.4 Remote working in the banking sector (Spain)

In September 2020, the Spanish government and the social partners approved Royal Decree 28/2020 to regulate remote work. Trade unions then built on the provisions of this law through sectoral bargaining in the banking sector[9]. This sector-specific agreement was reached by the Spanish Association of Savings Banks (CECA), UNI Europa's Spanish affiliates Comisiones Obreras (CCOO) and Unión de Trabjadores (UGT), and the trade union Federación Fuerza Independencia Empleo (FINE). The agreement will be in force until the end of 2023.

All dimensions covered by the Royal Decree are included in the agreement, which includes the provision of equipment and reimbursement of expenses by the employer. For those who telework more than 30 % of their overall time, the company is committed to providing a computer, a mobile phone and an ergonomic chair. Employees are also given EUR 130 to buy equipment not provided by the company and EUR 55 to cover overheads.

In terms of work-life balance, the agreement regulates employees' right to digitally disconnect at the end of working hours and mandates disconnection between 19.00 and 08.00. The head of UNI Finance, Angelo Di Cristo, stated that the agreement has resulted in substantial gains in terms of addressing the blurring of work-life boundaries during the COVID-19 pandemic and the massive roll-out of teleworking and the equipment and costs related to that.

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[9] Elplural.com (2020) 'Los sindicatos firman el primer acuerdo social que regula el teletrabajo con las Cajas de Ahorros'. Retrieved from: https://www.elplural.com/economia/sindicatos-firman-acuerdo-social-regula-teletrabajo-cajas-ahorros_249631102. UGT (2021) 'UGT emplaza a negociar en las empresas ya la aplicación de la ley de teletrabajo'. Retrieved from: https://www.ugt.es/ugt-emplaza-negociar-en-las-empresas-ya-la-aplicacion-de-la-ley-de-teletrabajo

5.5   Teleworking during the pandemic at Credito Cooperativo Bank (Italy)

Since the start of the pandemic, up to 90 % of employees at Credito Cooperativo Bank (CCB) in Italy have been working remotely. CCB concluded a company agreement on teleworking in September 2020[10],[11],[12], which applies to the 77 branches of the CCB group, employing around 11,000 people.

The agreement acknowledges the importance of both work-life balance and the right to disconnect, as well as ergonomic issues, and applies to employees with all kinds of contracts on a voluntary basis. Management has a right to refuse requests for teleworking to make sure that demand is compatible with work organisation, although the final objective is to have only 10 % of employees on site.

The agreement commits the company to supporting employees with all the equipment necessary to perform work remotely. It also guarantees training on safety and behavioural risks and covers insurance for OSH, notably accidents at work. Costs are covered by the company, including any malfunctioning and maintenance of equipment and loss or theft.

It was signed by the holding company and the trade unions FABI (the Autonomous Federation of Italian Bankers), the banking federations affiliated to the three main Italian trade union confederations, FIRST-CISL, FISAC-CGIL, SINCRA UGL, and the Italian insurance workers' and tax collectors' union UILCA, which are signatory parties of the national collective agreement in the banking sector. This company-level agreement runs until March 2021, with potential for renewal/extension. According to Alberto Giordano of CISL, the agreement helps to develop key rules for dignity and health in the workplace, even if the workplace is remote, while guaranteeing efficiency and productivity[13].

5.6   Teleworking at Acciai Speciali Terni (Italy)

A company-level agreement on teleworking was signed by the steel manufacturing company, Acciai Speciali Terni, and worker representatives on 14 September 2020[14]. The agreement was to run until 14 March 2021 and its scope was limited to the local workforce of the company's steel factory. The company listed the tasks and jobs that could be performed remotely, and all the personnel involved in these activities on open-ended and fixed-term contracts, full-time and part-time, could apply to work remotely.

Work-life balance and the right to disconnect are explicitly mentioned in the agreement. Teleworking hours are set to be between 08.00 and 20.00, with a 12.30-14.00 lunch break. However, employees need to be online only during core hours between 09.00 and 12.30 and between 14.00 and 16.30, permitting a flexible working schedule that is adaptable to individual circumstances.

The agreement also states that equipment that is both functioning and safe is provided by the company and that employees should use it appropriately, based on national and company laws and regulations on health and safety. The company is obliged to provide information and training to its employees as appropriate. Rules for employees' use of equipment also include elements related to the company's needs, such as intellectual property, privacy and information technology (IT) security. This means that

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[10] https://www.firstcisl.it/creditocooperativo/2020/09/22/gruppo-cassa-centrale-banca-accordo-in-materia-di-lavoro-agile/;

[11] https://www.fisac-cgil.it/101619/ccb-firmato-laccordo-per-le-societa-del-gruppo-cassa-centrale-banca

[12] ADAPT bulletin (2020) 'Storie di azione e contrattazione collettiva — Accordo in materia di lavoro agile siglato dalla Capogruppo Cassa Centrale Banca-Credito Cooperativo Italiano'. Retrieved from: http://www.bollettinoadapt.it/storie-di-azione-e-contrattazione-collettiva-accordo-in-materia-di-lavoro-agile-siglato-dalla-capogruppo-cassa-centrale-banca-credito-cooperativo-italiano/

[13] https://www.firstcisl.it/creditocooperativo/2020/09/22/gruppo-cassa-centrale-banca-accordo-in-materia-di-lavoro-agile/

[14] Eurofound (2020) 'Acciai Speciali Terni company agreement of smart working'. Retrieved from: https://static.eurofound.europa.eu/covid19db/cases/IT-2020-38_1453.html?utm_source=externalDashboard&utm_medium=powerbi&utm_campaign=covid-19. https://static.eurofound.europa.eu/covid19db/cases/IT-2020-38_1453.html?utm_source=externalDashboard&utm_medium=powerbi&utm_campaign=covid-19
ADAPT bulletin (2020) 'Storie di azione e contrattazione collettiva — Acciai Speciali Terni'. Retrieved from: ihttp://www.bollettinoadapt.it/storie-di-azione-e-contrattazione-collettiva-acciai-speciali-terni-siglato-laccordo-di-sperimentazione-del-lavoro-agile-in-azienda/

employees are restricted to working in a private place, which should also be calm and safe, thereby balancing the company's and employees' needs.

5.7 Financial support for teleworkers (Romania)

In 2020, the Romanian Parliament adopted Law 296/2020, which allows companies to reimburse employees for extra costs incurred on utilities, such as heating and electricity, due to working at home[15]. This law came into force in January 2021 and allows companies to reimburse employees working from home for payments up to EUR 80 (RON 400) related to heating, electricity, internet service, furniture and technical equipment.

According to Eurofound, 8 % of employees in Romania are working from home as a result of the COVID-19 pandemic. It should be noted, however, that this measure is optional — companies are not obliged to make these payments — so it is not possible to estimate how many employees working from home are benefiting from this measure.

5.8 Boosting productivity and well-being at Merck Serono (Italy)

Merck Serono is a pharmaceutical company with 900 employees in Italy. Teleworking practices adopted during the COVID-19 pandemic were considered successful in terms of productivity and well-being. For this reason, Merck Serono negotiated a company-level agreement in October 2020 to make teleworking a normal work arrangement, which applies to all parts of the workforce that can perform their work remotely[16]. Teleworking is on a voluntary basis and the specific arrangements must be negotiated with the head of each unit.

The company commits itself to providing the necessary equipment for teleworking, such as laptops and ICT equipment. The definition of working hours and hourly flexibility is delegated to collective bargaining at individual establishment level.

Negotiations were conducted by Merck Serono's management, with the assistance of the sectoral employer organisations Unindustria and Farmindustria, and the trade union confederations the Italian General Confederation of Labour (CGIL), the Italian Confederation of Workers Unions (CISL) and the Italian Labour Union (UIL), and their representatives at company level. These organisations were entitled to sign company agreements, as they are the signatory parties to the sectoral national collective agreement in the chemical and pharmaceutical industry, which covers Merck Serono.

The social partners that participated in the design phase of this agreement are now taking part in the implementation phase. They were fully supportive of the agreement, as they consider that it brings benefits in terms of productivity and well-being.

5.9 Cash grant scheme for teleworking (Malta)

In Malta, the Government of Malta's economic development agency, Malta Enterprise, set up a teleworking cash grant scheme at the beginning of the pandemic in March 2020[17] [18]. The rationale for this was that encouraging people to work from home, limiting interactions between different households, and stopping meetings being held at the workplace were important mitigation measures to contain the spread of COVID-19. The Maltese government also envisaged that the promotion and adoption of teleworking during this period could bring about a positive change in how some companies viewed teleworking. The government also hoped that the promotion of teleworking during[19] this time could lead to a more positive attitude towards teleworking more widely among employers, which in turn could also

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[15] Eurofound (2020) 'Financial support for teleworkers'. Retrieved from: https://static.eurofound.europa.eu/covid19db/cases/RO-2021-1_1700.html

[16] Eurofound (2020) 'Merck Serono company agreement on smart working'. Retrieved from: https://static.eurofound.europ.eu/covid19db/cases/IT-2021-6_1447.html

[17] https://www.maltaemployers.com/en/teleworking-scheme

[18] https://covid19.maltaenterprise.com/wp-content/uploads/2020/03/FAQs-Facilitation-of-Teleworking-Activities-27-03-2020.pdf

[19] Eurofound (2020) 'Financial support for teleworkers'. Retrieved from: https://static.eurofound.europa.eu/covid19db/cases/RO-2021-1_1700.html

lead to a higher female labour force participation rate. Overall, the proportion of employees teleworking in Malta rose, on average, from 12 % in 2019 to 33 % by the end of March 2020.

In March 2020, Malta Enterprise issued a guideline document and an application form to enable employers to facilitate homeworking for employees. This scheme provided financial support of up to EUR 500 per teleworking agreement and EUR 4,000 per undertaking to cover up to 45 % of eligible costs incurred between 15 February and 8 May 2020. The financial support covered investment in technology to support teleworking and some of the costs of teleworking. This included purchasing and/or leasing portable computer hardware (including operating systems), installing and setting up connectivity software and communication hardware and software that allows users to connect to their place of work, such as a VPN.

There were 1,001 applications for this grant, of which 845 were deemed eligible. The scheme was open to all undertakings, irrespective of size and sector, and limited up to EUR 500 per teleworking agreement and EUR 4,000 per undertaking. Each application for support typically covered between 4 and 10 teleworking agreements. In addition, single-person businesses were also eligible to apply. Overall, the financial support covered approximately 3,740 teleworking agreements, disbursing a total of around EUR 1.2 million to applicants.

The main challenges were dealing with the volume of applications to the scheme in a short time and allocating the resources effectively. Dealing with the administrative requirements of the scheme was also a challenge, particularly in the case of smaller companies.

Employees are still being encouraged to telework in Malta in both the public and private sectors.

5.10   Moving to teleworking in the public services (Portugal)

As a response to the pandemic, teleworking was established in Portugal in March 2020 as the mandatory way of working for public employees, in accordance with Article 6 of the Decree of the President of the Republic no. 14-A/2020[20]. This temporary measure applied whenever teleworking was compatible with the nature of the job and the tasks performed by employees. Teleworkers retained their normal rates of pay and meal allowances.

As of May 2020, almost 90 % of employees at the Directorate General for Administration and Public Employment (DGAEP) have been working from home on a full-time basis. Those employees who could not work remotely from home have had access to some protective measures, including social distancing, working in the office in rotation to ensure that there were fewer employees in the office at any one time, and off-peak work schedules to avoid travel at peak times.

The DGAEP conducted a preliminary needs assessment of the ICT infrastructure. It was recognised that creating an effective technological framework to enable public employees to telework, and doing it in a very short period of time, was a key challenge. This was because few employees were teleworking before the pandemic, despite having the option.

Management had to react quickly to these significant changes in work organisation. In particular, it had to balance employees' productivity with their health and well-being. In relation to productivity, the fact that for almost 20 years the public administration services in Portugal had been following a management model in which productivity was measured by the achievement of objectives was considered helpful in evaluating performance. However, few, if any, managers and line managers were used to teleworking arrangements on such a massive scale and in place for so long. The skills of those in management positions are very important in properly managing staff who are working remotely and in avoiding any OSH risks related to telework. Furthermore, all employees needed to develop the skills relevant to telework. Encouragingly, the branch of Portugal's administration in charge of training made information and skill-building tools, including webinars, extensively available. Training focused on the skills of both the leaders and the whole workforce.

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[20] Eurofound (2020) 'Telework — Increasing the number of public administration workers in teleworking'. Retrieved from: https://static.eurofound.europa.eu/covid19db/cases/PT-2020-28_964.html

In terms of the health and well-being of workers, isolation, demotivation and feeling disconnected from colleagues were considered increasingly problematic during this period of extended teleworking. Alongside the focus on management skills, successful attempts to reduce social isolation included setting up social networking groups, such as WhatsApp groups, and regular virtual meetings of work teams.

The pandemic entailed the suspension of the trade unions' right to be included in consultations, as the aim was to decide on measures as quickly as possible. However, limited trade union consultations are now permitted, as the state of emergency has been extended.

Overall, COVID-19 has been a window of opportunity for teleworking in Portugal. According to Teresa Ganhão, Director of the Department for Cooperation, Management and Communication at DGAEP, government support is key to making teleworking the 'new normal' in the future. In line with this, a Council of Ministers Resolution in June 2020 (no. 41/2020) created measures to promote teleworking with a view to at least one quarter of the public administration working remotely by 2023. Telework is increasingly considered in a positive light[21], in contrast to its previous association with precarious working conditions before the pandemic[22].

5.11   Agreement on teleworking at Suez (France)

A group-level agreement on teleworking was signed by Suez management and employee representatives in November 2020[23]. The agreement states that all employees should be given the opportunity to telework, on a voluntary basis, if their job allows it. If employees opt for teleworking, this will for an average of 2 days a week, although not necessarily on fixed days. Planning of teleworking days should be shared by employees with their managers to enable teams to carry on working smoothly. Employees may be called on to travel to the company's premises when necessary.

The company provides teleworkers with an allowance of EUR 20 per month, exempt from social security and tax, plus a meal voucher for the days on which they are teleworking. The company also makes a laptop available to teleworkers and, if necessary, secure remote VPN access, in addition to a mobile phone if the employee's position is eligible for one.

The agreement was negotiated with the representative trade unions within the Suez group (CFDT, CFE-CGC, CFTC and FO) — the CGT refused to sign the agreement. The signatory unions have supported the agreement, noting that it protects the incomes of teleworkers, while at the same time protecting employees from social isolation by permitting them to organise their own working time.

6   Promoting and protecting OSH for teleworkers

Based on the issues raised in this article and the company practices identified, we can draw a number of conclusions that relate, firstly, to what works and, secondly, to the remaining challenges and how to address them.

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[21] Eurofound (2020) 'Telework — Increasing the number of public administration workers in teleworking'. Retrieved from: https://static.eurofound.europa.eu/covid19db/cases/PT-2020-28_964.html

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6.1   What works

The first step for all employers in OSH management is to carry out a risk assessment. Apart from being a legal obligation, this is a good practice measure that enables the employer, working with employee representatives where relevant, to identify relevant risks and appropriate preventive measures.

Once a risk assessment has been carried out, there is a range of practical measures that can be taken to ensure that OSH risks in relation to telework are prevented or minimised. These mostly relate to ensuring that the workstation and work equipment used by teleworkers is fit for purpose and is not likely to cause or exacerbate MSDs or any other physical difficulties. This can be more challenging in a home environment than at the employer's premises, but initial checks should be possible. As guidance, EU-OSHA has collected a range of information and resources on the types of actions and interventions that can be put in place to promote good health and safety for teleworkers[24].

It may be possible to allow employees to borrow office equipment such as screens, chairs and desks for teleworking during the pandemic. This would ensure that they are using the correct equipment, although the set-up would still need to be overseen. It may also be possible to set up schemes that make funding available to employees to purchase ergonomic equipment.

Liaising and communicating with workers and their representatives is also key in ensuring that workstations and work equipment are adequate and that teleworkers are satisfied with their workstation on an ongoing basis. To this end, communications channels should be set up. This should be relatively easy in the current context of rapid and effective digital communications channels.

Monitoring and inspection are also crucial to ensure that the equipment provided to teleworkers remains suitable and is not worn out or damaged. Processes should be put into place to ensure that visits can be made to inspect workstations and that workers can report damaged or worn out equipment.

Any teleworkers with existing MSD-related conditions should be noted and their workstations adapted accordingly to ensure that these conditions are not exacerbated by teleworking.

If a teleworker starts to experience any MSD-related issues, there should be clear channels through which these can be reported to the organisation, and a process should be in place to deal with the issue. This could involve OSH professionals at the company, human resources (HR) professionals and relevant managers.

As illustrated in this article, there are increased psychosocial risks for teleworkers, due to factors such as potential isolation, lack of support from colleagues and managers, blurring of the boundaries between their home and working lives, increased work intensity and the potential to be contacted at any time. There are, however, steps that can be taken to reduce these risks. Formal steps that the employer can take include putting in place regular team or other meetings with colleagues to reinforce team bonding and ensure that remote workers feel that they are connected to their colleagues. Regular meetings in the office, where possible, can also help to minimise isolation. More informal steps could include establishing remote chat groups, as seen in some of the company examples, set up by employees themselves and which can help employees to remain connected with each other. The employer has less control over these more informal steps, although they can be encouraged by the company, as they are important in helping to combat isolation.

Infrastructure issues, such as slow or patchy broadband connections, can increase frustration and irritability in workers forced to work at home on a permanent basis. Therefore, it is important to provide properly functioning tools for teleworkers. The employer should therefore focus on advising on or supplying the right tools and maintaining them by providing effective IT support and communication channels for employees to report any malfunctioning of tools and equipment.

Managers, and especially line managers, play an important role in ensuring the psychological well-being of those they manage. They can offer significant support by checking in regularly and answering any queries and issues that teleworkers may have. They can also be an important sounding board in terms

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[24] For details, see: https://healthy-workplaces.eu/en/tools-and-publications/practical-tools?f%5B0%5D=field_hazards%3A3739

of listening to the problems that teleworkers may be facing and how these can be addressed. As virtual working has been the norm for a year now, it is also important that managers and line managers are comfortable with and competent in the management of virtual teams.

Providing clear guidance on working hours and addressing workload is important in addressing issues around the blurring of home and working lives. As shown in the company examples in this article, addressing the blurring of the work-life boundary can include measures around the right to disconnect, including bans on sending emails outside working hours and ringfencing time for employees to deal with emails on their return to work.

Pressure, in terms of workload, can be a challenge to address, because it might have a range of drivers, including structural issues but also factors related to organisational culture. It is important to listen to individual teleworkers and their concerns about work intensity and to try to find joint solutions to this, involving worker representatives where relevant.

Overall, it is very important to ensure that worker representatives, including trade union and health and safety representatives, are fully involved in the development of measures designed to reduce the psychosocial risks of teleworking. They are important stakeholders in terms of collecting feedback from employees on the issues that concern them and helping to gain employee buy-in to the measures that are developed.

It is also important to put into place structures and systems that can prevent and minimise stress, whatever its causes. Prevention measures could include the appointment of mental health champions in the workplace, who can provide confidential support, or the provision of external mental health support services, which may be preferred by employees for reasons of anonymity. The provision of psychological support in terms of access to a helpline or a financial contribution to therapy sessions can also be helpful. If a teleworking employee is experiencing symptoms of stress, systems should be in place to help and support them.

There are also issues around creating an organisational culture in which the admission of stress is not seen as a weakness for all employees, not just teleworkers. This is more difficult to achieve in the longer term, but the support of senior management in moving towards this kind of culture is vital.

6.2   Main remaining challenges

Tackling the OSH risks of teleworkers is a significant challenge and one that is likely to become even more pressing in the post-pandemic future, in the context of sustained increased levels of full-time teleworking. The points in the previous section concerning what works are all practical ways of dealing with the OSH-related issues arising from teleworking. However, a number of challenges remain.

Firstly, all organisations are competing internally for financial resources to fund policies and projects. It is therefore likely to be challenging to secure the financial resources that might be necessary to implement policies such as carrying out risk assessments of home workstations in a systematic and structured way or putting in place new procedures and systems to deal with psychosocial risks. Although this is not an easy task, it will be important to set out the business case in terms of the financial losses arising from absence due to MSDs or stress, and the reduced productivity or higher turnover of employees who are experiencing physical or psychosocial strain. Against these losses, the financial resources needed to implement changes may be seen more favourably. The positive case for introducing teleworking also includes the cost savings that result from a happier and more productive workforce that is more able to maintain a good work-life balance by teleworking.

Incentivising employers to invest in the infrastructure to support teleworking can be a vital enabler of increasing the uptake of teleworking and protecting the health and safety of workers, for example by providing funds to enable the purchase of ergonomic equipment, particularly in smaller companies.

Organisational culture is difficult to change in the short term and therefore needs a vision for the medium and long term. This needs to come from senior management in an organisation, as the direction of organisations is set at the top and cascades through the company. Senior management's commitment is also key to unlocking the financial resources needed to implement aspects of this vision. Changing culture from one of presenteeism, or seeing physical or mental ill health as weakness, to one that is

supportive and inclusive takes time. It also requires cooperation and communication between the different actors in a company, including management at all levels, employee representatives and the employees themselves. Developing a culture of trust within which such cooperation and communication can flourish is therefore extremely important and should be a priority for all organisations that are serious about reducing OSH risks for all employees, including teleworkers. If senior management can convince the middle management layer, and particularly line managers, of the benefits of teleworking, then this can open up the organisation to this way of working. Training courses and the provision of information can also help to convince key actors of the benefits of teleworking.

Most specifically on the issue of the stigma associated with psychosocial risks, as noted above, it is crucial that a culture of support is developed, which may include more open dialogue and workshops on stress and psychosocial risks. Confidentiality is essential to encourage people to come forward and ask for help, even in a relatively open and inclusive environment. Therefore, the provision of external counselling services and support can be very effective. This may be costly for small companies, although the potential benefits of this type of service in preventing and mitigating stress will be significant.

Risk assessment is a crucial element in the strategy to prevent and mitigate OSH risks in the context of teleworking. As noted above, there are specific challenges associated with risk assessment for teleworkers, based on the difficulties of assessing home workstations and the fact that workers who are remote from the normal place of work may not be as easily included in many of the measures designed to build teams and foster good working relationships among colleagues. Therefore, attention should be paid to these specific risk assessment challenges and the ways to overcome them. These could include devising specific and targeted risk assessment systems, with the involvement of all key stakeholders, including employee representatives[25].

One step towards dealing with ongoing telework-related OSH challenges is to ensure that a comprehensive policy is in place that clearly sets out the rights and responsibilities of all those involved, such as the teleworkers themselves, the company, managers — and particularly line managers — and employee representatives. Line managers should also be encouraged to act as role models for employees by behaving in ways that mitigate psychosocial and other OSH risks.

Increasing awareness of employees and managers of ways to avoid the OSH risks associated with teleworking is also important. These can include taking regular rest breaks, taking exercise and eating healthily.

6.3　The post-pandemic future

Finally, and looking to the future, it is important to consider the challenges that companies will face when operating in a post-pandemic environment that is likely to see a permanent increase in the prevalence of teleworking. It is clear that when the pandemic is over there are likely to be many more workers choosing to telework on a full-time and permanent basis, in addition to workers who will choose to work at home permanently for a portion of the working week. This will mean that companies will need to redesign office spaces to accommodate this new way of working. It might be that there will be more hot desking to permit people to come into the office on a more sporadic basis, or that more office space will be dedicated to meeting space rather than individual workstations. All of this reconfiguration of space will need to be ergonomically designed and inspected to ensure that OSH risks in relation to MSDs are minimised.

The European Commission's Joint Research Centre (JRC) notes in a 2020 report[26] that evidence suggests that 'in normal times people working from home can sustain, or even enhance, their productivity, while enjoying a better work-life balance. Yet, under the current exceptional circumstances productivity, working conditions, or both, may be deteriorating for many workers due to, among other problems, lack of childcare, unsuitable working spaces and ICT tools.' Employers will therefore need to

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[25] EU-OSHA's risk assessment tool can be found here: https://osha.europa.eu/en/publications/risk-assessment-tool/view

[26] European Commission Joint Research Centre (JRC) (2020) *Telework in the EU before and after the COVID-19: Where we were, where we head to*. Retrieved from: https://ec.europa.eu/jrc/sites/jrcsh/files/jrc120945_policy_brief_-_covid_and_telework_final.pdf

carefully consider how to ensure that teleworkers' job quality as a whole, and OSH in particular, are not compromised.

Once the pandemic is over and wholesale teleworking is no longer a crisis response, companies will need to make strategic choices about the way that work is organised, bearing in mind a range of factors, including employee preferences but also issues such as the potential effects on productivity, job quality, work-life balance and psychosocial risks.

Although the COVID-19 pandemic has caused considerable damage to the EU's economy and its citizens, rebuilding work organisation once it is over presents an opportunity to reorganise working life in a way that builds on the advantages of more widespread teleworking but also mitigates the OSH risks of this way of working.

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