Study exploring the social, economic and legal context and trends of telework and the right to disconnect, in the context of digitalisation and the future of work, during and beyond the COVID-19 pandemic

VT/2021/030

under the multiple framework contracts EMPL/2020/OP/0016

Final Report

May – 2023

VISIONARY ANALYTICS
notus

EUROPEAN COMMISSION

Directorate-General for Employment, Social Affairs and Inclusion
Directorate Jobs and Skills
Unit Future of Work, Youth Employment
Contact: Krisztina Boros
E-mail: EMPL-B1-UNIT@ec.europa.eu

European Commission
B-1049 Brussels

Study exploring the social, economic and legal context and trends of telework and the right to disconnect, in the context of digitalisation and the future of work, during and beyond the COVID-19 pandemic

VT/2021/030

under the multiple framework contracts EMPL/2020/OP/0016

Final Report

Authors:

Visionary Analytics: Žilvinas Martinaitis (project director), Audronė Sadauskaitė, Aurinta Garbašauskaitė, Olea Morris, Vainius Bartasevičius, Nini Gigani

Notus: Maria Caprile, Pablo Sanz, Juan Arasanz

Expert: Tania Bazzani (European University Viadrina)

Contributors:

We would like to thank Heejung Chung and Yvonne Lott for valuable comments and advice. The study team is grateful to national experts for data collection and comments: L. Antoniou, Z. Bankó, J. Bednorz, P. Bejaković, N. Boavida, A. Borg, V. Czesana, I. Daminov, R. Dimitriu, D. Drabble, F. Hendrickx, I. Kadarik, V. Koniaris, I. Lichner, B. Lužar, I. Neykov, I. Reinholde, Z. Šímová, M. Štefanik, F. Turlan, P. Vroonhof and experts from Oxford Research.

Directorate-General for Employment, Social Affairs and Inclusion

2023

Manuscript completed in December 2022

Luxembourg: Publications Office of the European Union, 2024

PDF ISBN 978-92-68-13425-2 doi: 10.2767/532522 KE-02-24-315-EN-N

TABLE OF CONTENTS

ABBREVIATIONS

AC	Administrative commission
AIC	Akaike information criterion
ARIMA	Autoregressive integrated moving average
AVRAG	Employment Agreement Law Adaptation Act
BIC	Bayesian information criterion
CFREU	Charter of Fundamental Rights of the European Union
CJEU	Court of Justice of the European Union
COVID-19	Coronavirus disease 2019
ECS	European Company Survey
ECtHR	Chamber of the European Court of Human Rights
EU	European Union
EU GDPR	General Data Protection Regulation
EWCS	European Working Conditions Survey
HRM	Human resource management
ICT	Information and communication technologies
ILO	International Labour Organization
ISCO	International Standard Classification of Occupations
ISPs	Internet service providers
LFS	Labour force survey
MSDs	Musculoskeletal disorders
OSH	Occupational safety and health
SER	Standard employment relationship
SMEs	Small and medium-sized enterprises
STAR	Support, Transform, Achieve Results initiative
TFEU	Treaty on the Functioning of the European Unions
VVAs	Virtual voice assistants
WRC	Workplace Relations Commission
WTD	Working Time Directive

1. INTRODUCTION

This study was initiated as one of the follow-up actions to the European Parliament resolution of 21 January 2021, which called upon the Commission to propose a Directive establishing standards and conditions regarding the right to disconnect, and a legislative framework providing minimum requirements for telework. To this end, the study aims to provide evidence and analysis to support the Commission in its reflections on the appropriate response to the resolution of the European Parliament. The specific objectives of the study are as follows:

1. Assess the current state of play. Chapter 2 of the report provides an analysis of trends, challenges and opportunities presented by telework and the right to disconnect.
2. Provide an overview and analysis of the relevant EU acquis, national legislation and social partner agreements. This task is the focus of Chapter 3.
3. Identify likely future scenarios for the evolution of telework, and assess the economic, social and environmental impacts of different extents of the prevalence of telework. The results of this future-oriented analysis are provided in Chapter 4 of the report.
4. Provide conclusions and recommendations for policy development and future research.

Thematically, the study covers telework (with a focus on ICT-enabled telework performed at home) and the right to disconnect. Its evidence base and overall findings rely on the following sources and methods (for further details, see Methodology in Annex 1):

- Desk research, focusing on academic and policy studies in the field;
- Analysis of micro-data from the Labour Force Survey (LFS);
- A survey of employees (a total of 14,081 responses received; final data set after data cleaning comprises 11,010 respondents);
- A survey of employers, which yielded in 3,558 responses, 2,260 of which were retained after data cleaning;
- Interviews with national stakeholders in all EU Member States: national authorities, sectoral or regional trade unions and employers' associations. A total of 83 interviews were carried out;
- Expert interviews with academics and policy experts (a total of 13 experts were interviewed);
- 10 case studies focusing on notable organisation-level practices related to telework and/or the right to disconnect; these case studies, provided in Annex 5, cover both private and public organisations in 10 Member States (DK, FR, IE, IT, LT, LU, PL, RO, ES and SE). Each case study is based on at least two interviews with representatives of management and employees;
- A Delphi survey on future trends;
- Three deep-dive studies (Annex 10) focusing on cross-border telework, equality and non-discrimination, and privacy and surveillance. These studies are based on a focus group (with 12 cross-border teleworkers) and 12 interviews;

- Four workshops, comprising a thematic workshop on the right to disconnect, a workshop with national authorities, a workshop with experts in the future of telework, and a final workshop with experts and stakeholders to validate preliminary findings;
- Econometric modelling of the likely future trends in telework.

Significant efforts have been dedicated to building a strong and wide evidence base for the study; however, a number of challenges and constraints were encountered. First, key statistical data for 2021 and 2022 were not yet available. LFS micro data were only available for 2020 and previous years, while the results of the European Working Conditions Survey (EWCS) 2021 were not yet available at the time of writing. Second, in June 2022, European social partners signed a joint 2022-2024 Work Programme, which includes the negotiation of legally binding measures to regulate telework and the right to disconnect. In order not to interfere with this process, cross-industry social partners at national and EU levels were not interviewed, nor were they contacted to provide assistance in distributing the survey questionnaires. This had a negative impact on reaching survey respondents. Nevertheless, we believe that overall, the data collected provide a sufficient evidence base for a well-founded analysis and conclusions.

Table 1-1 maps how specific sections of the report contribute to the implementation of study tasks, as outlined in the Tender Specifications.

Table 1-1. Study map

Structure of the report	Respective study work packages/ tasks
2. Telework and the right to disconnect: concepts and trends	
2.1. Concepts	T4: Conceptualisation and quantified overview of the extent of telework and the right to disconnect in the EU (WP1)
2.2. Prevalence	
2.3. Telework and the right to disconnect: challenges and opportunities	T1: Updated mapping and summary of existing research (WP1) T2: Identification / confirmation of current challenges and opportunities (WP1)
3. Legal and policy context	
3.1. – 3.6. Sections providing the results of the analysis of the EU labour acquis and case law	T3: Analysis of the relevant elements of the EU labour acquis, and analysis of the relevant case law (WP1)
3.7. Overview of national regulations and social partner agreements	T3: Overview of policies and legislation on telework and the right to disconnect in the Member States (WP1)
3.8. Analysis of social partner agreements at EU level	T3: Analysis of social partner agreements at EU level (WP1)
4. Future trends, challenges and opportunities	
4.1. Methodological considerations and assumptions	WP2: Identification of future trends and the possible evolution of telework and the right to disconnect, along with relevant challenges and opportunities
4.2. Future trends in telework	
4.3. Disaggregation of projections	
4.4. Likely social, economic and environmental effects of further growth in telework	
4.5. The role of public policy in shaping the likely scenarios	
5. Conclusions and recommendations	WP4: Policy conclusions
Annex 1. Methodology	All WPs
Annex 2. Analysis of case law	T3: Analysis of the relevant elements of the EU labour acquis, and analysis of relevant case law (WP1)

Annex 3. National regulation of working time	T3: Overview of policies and legislation on telework and the right to disconnect in the Member States (WP1)
Annex 4. Synopsis report covering all stakeholder consultations	WP3. Consultations
Annex 5. Case studies	T3. Case studies (WP1)
Annex 6 Country fiches	T3: Overview of policies and legislation on telework and the right to disconnect in the Member States (WP1)
Annex 7. Data for future scenarios	WP2: Identification of future trends and the possible evolution of telework and the right to disconnect, along with relevant challenges and opportunities
Annex 8. Factual summary of each consultation activity	WP3. Consultations
Annex 9. Questionnaires	WP3. Consultations
Annex 10. Three deep-dive studies	T2: Identification / confirmation of current challenges and opportunities (WP1)
Annex 11. Environmental issues	T2: Identification / confirmation of current challenges and opportunities (WP1)
Annex 12. Summaries of selected research projects	T1: Updated mapping and summary of existing research (WP1)
Annex 13. Raw and cleaned survey data	WP3. Consultations

Source: Authors' own elaboration.

2. TELEWORK AND THE RIGHT TO DISCONNECT: CONCEPTS AND TRENDS

Key findings:

- The share of employees working from home in the EU-27 has almost doubled between 2019 and 2021, from 11.1% to 21.9%. It has increased significantly in all EU Member States, although wide variation between countries persists.
- Prior to the pandemic, telework was mostly concentrated among highly skilled professionals and managers, as an occasional work pattern. During the pandemic, a significantly wider range of employers and employees experienced some of the benefits of working from home, while some of employers' worst fears, such as declining productivity and absenteeism, did not materialise.
- Telework can provide multiple benefits for employers and employees alike. However, to achieve these potential benefits, certain potential drawbacks must be addressed.
- Key opportunities and challenges in relation to telework and the right to disconnect have been identified in five fields:
  - Adequate employment and working conditions, including working time and work-life balance.
  - Occupational safety and health, including mental and physical health.
  - Management and performance.
  - Equal treatment and non-discrimination.
  - Geographical mobility, with a focus on cross-border telework.

Over recent decades, the use of information and communication technologies (ICT) for work purposes has facilitated greater flexibility with regard to working time and work location. Flexible work arrangements and/or telework offer potential benefits for employees, such as increased autonomy to organise their working hours according to their needs and preferences or reduced commuting time. However, it also poses important risks. They include receiving work requests outside working hours, increased difficulties in disengaging from work, and long working hours/overtime (Eurofound and ILO, 2017; Chung, 2022).

These working patterns have been significantly impacted by the COVID-19 pandemic, during which a large number of workers have been forced to carry out their work remotely (mostly from home). Following the relaxation of social distancing restrictions, a significant share of workers has continued to work from home for at least part of their working time. There is also evidence that a sizeable proportion of employees and employers have a preference for hybrid working arrangements that combine telework with on-site work (Criuscolo et al., 2021; Aksoy, et al., 2022).

In January 2021, the European Parliament adopted a resolution[1] based on Article 225 of the Treaty on the Functioning of the European Union (TFEU). The resolution called on the Commission to present a legislative proposal on the right to disconnect, as well as an EU legislative framework for telework. Specifically, the resolution highlighted the fundamental

[1] P9_TA (2021)0021European Parliament resolution of 21 January 2021 with recommendations to the Commission on the right to disconnect (2019/2181(INL)).

role social partners play in identifying and implementing measures regarding the right to disconnect, and in striking the right balance between reaping the opportunities for the workplace brought about by digitalisation, and tackling the challenges it poses.

In light of this policy background, the European Commission commissioned this study to gather evidence and to better understand the challenges, opportunities and trends in relation to the flexibility of working time and work location, with a focus on telework and the right to disconnect. The aim of the study is to contribute to the debate on a possible policy response to the new challenges faced by workers and employers.

On 28 June 2022, the European cross-sectoral social partners (ETUC, Business Europe, SGI Europe and SMEunited) signed their Work Programme 2022-24. This includes a review and update of the 2002 Autonomous Agreement on Telework[2], to be put forward for adoption as a legally binding agreement implemented via a Directive. As explained in the introduction, this new context has resulted in adaptations to the study's tasks to take into account the autonomy and action of the social partners[3].

This first section of the chapter is structured as follows:

- It begins by developing an initial conceptual framework for telework and the right to disconnect, highlighting the interplay between the two. This framework provides operational definitions of telework and the right to disconnect, potential benefits and drawbacks for employees and employers, and an outline of the individual and organisational factors that shape these potential outcomes.
- It then presents existing evidence regarding the prevalence of telework and the 'always on' working culture.
- It concludes by analysing the challenges and opportunities relating to telework and the right to disconnect.

2.1. Concepts

For decades, scholars have highlighted how globalisation and technological change have increased competitive pressures on firms and altered the environment in which they operate (Castells, 1996). While globalisation, digitalisation and technological advances have expanded opportunities in the way enterprises conduct all aspects of their business, these broad-scale changes have also given rise to challenges for enterprises in effecting the necessary adaptations to their strategies and practices. In this context, companies have sought solutions to improve efficiency and reduce costs, as well as attracting and retaining a talented workforce.

The literature extensively shows that since the 1980s, both governments and companies have sought greater flexibility in employment as a perceived solution to the increased competition resulting from global economic changes (Aglietta, 1979; Boyer, 1986; Hyman, 1991; Pollert, 1991). 'Flexibilisation' has fundamentally modified employment relationships, progressively eroding the so-called **standard employment relationship (SER).** Institutionalised in various forms in different European countries (e.g. the *contrato indefinido*, unfixed term contract, or *unbefristeter Arbeitsvertrag*), the SER model is based on stability, predictable career paths, regular working time schedules, and social protection rights that favour the decommodification of labour. This model normatively prescribed what

[2] See https://www.etuc.org/en/framework-agreement-telework; https://www.businesseurope.eu/sites/buseur/files/media/imported/2006-01428-EN.pdf.

[3] At the time of conducting this study, EU cross-industry social partner negotiations were ongoing but have since ended without an agreement on a new text.

workers (in particular, men without a migration background) could expect from a 'normal' employment relationship (Castell, 1997; Supiot, 2001; Barbier, 2013; Prieto 2014; Schoukens and Barrio, 2017).

Although the SER model still represents the most common form of work in Europe and is the basis for welfare state policies in many countries, research shows that this model has been challenged both externally and internally (Lott, Kelliher and Chung, 2022). Externally, non-standard employment relationships (for example, temporary employment, part-time work, on-call work and temporary agency work) have increased and become more diverse (ILO, 2016; Rubery et al., 2018). Internally, the flexibilisation of the labour market and developments in ICT have modified some of its defining features (Schoukens and Barrio, 2017; Huws et al., 2018); working time has become less predictable and more irregular, and spatial and temporal boundaries between work and non-work have become blurred (Schoukens and Barrio, 2017; Huws et al., 2018).

In light of these changes, some authors have stressed the general precarisation of standard employment – namely, that precarious working conditions have become the new norm (Rubery et al., 2018). Other authors have questioned the binary distinction between SER and non-standard or atypical forms – in their view, more complex interactions now exist between different types of employment contracts (such as open-ended and fixed-term) and work arrangements (for example, open-ended contracts with flexible working-time patterns) (Huws et al., 2018).

Lastly, some authors have called for a reframing of previous debates that put flexibility in opposition to workers' security. These authors propose new conceptual approaches based on distinguishing between flexibility that is driven by performance-enhancing goals, and flexibility that is driven by goals of work-life balance or well-being (Chung, 2022). The latter approach understands that flexible work arrangements (such as working-time flexibility or telework) can also be beneficial for employees. When exercised appropriately, such arrangements may improve workers' well-being – for example, by enabling their work to fit alongside the demands of family or private life. It also draws on empirical evidence showing that workers (particularly women and young people) increasingly demand greater flexibility in their work (Chung, 2022).

The present report focuses on two interconnected topics related to debates about flexible work arrangements: telework and the right to disconnect. The following subsections define each of these concepts and analyse their interrelationship, based on the risks and opportunities for both employers and employees that stem from ICT-enabled flexibility over working time and space.

2.1.1. Telework

While different and overlapping legal and research definitions of telework exist, this study defines 'telework' as follows:

Telework is a form of work organisation in which work that could also be performed at the employer's premises is carried out away from the employer's premises by using ICT.

This definition of telework, which is based on the legal definition established in the 2002 Social Partners' Framework Agreement on Telework,[4] excludes work that is performed away from the employer's premises when its location is a requirement of the work (e.g., working at clients' premises or in beneficiaries' homes). It does, however, include mandatory telework which, because of the pandemic crisis, could temporarily not be performed at the employer's premises.

Telework arrangements vary in terms of:

- **intensity** (the share of working time spent teleworking);
- **pattern** (whether it is carried out regularly, or on *ad hoc* basis);
- **location** (whether it is predominantly home-based telework or mobile telework, carried out from multiple locations); and
- **formality** (the degree to which telework is regulated)

  National regulation of telework varies greatly between EU Member States (Eurofound, 2022b). Furthermore, at the company level, telework can be:

  - regulated in diverse ways (collective agreement, human resource management policies or labour contracts);
  - informally agreed with the employer; or
  - carried out as an employee's informal practice to supplement on-site work.

Furthermore, telework may also differ according to how an employee's **working time** is arranged. Telework is often linked to some kind of flexible working time arrangement, such as flexitime or self-determined work hours, but this is not always the case.[5]

Despite these differences in telework arrangements, physical separation from the employer's premises and the intensive use of ICT remain common features. For this reason, telework entails **crucial changes in the physical work environment and in the organisation and management of work**, which are key aspects in addressing the impact of telework on working conditions and performance.

Box 2-1 provides an overview of different terms and definitions used to refer to telework or certain types of telework arrangements.

[4] The Agreement adds that telework is carried out 'regularly'. However, given the expansion of occasional telework, this study has adopted a more comprehensive definition, leaving the intensity and pattern of telework open.

[5] For instance, highly routine jobs such those in call centres may be performed remotely, but under the same rigid work schedules as on-site work.

Box 2-1. Telework: various terms and definitions

'Telework' remains the term most prevalently used in empirical research (Sostero et al., 2020; EU-OSHA, 2021a), in European regulation (Social Partners' Framework Agreement on Telework) and in national legislation (EU-OSHA, 2021b; Eurofound, 2022b) to refer to working arrangements outside employers' premises that are enabled by ICT.

Nevertheless, the term is complemented by various other terms to describe working from places other than an office or company premises ('telecommuting', 'flexible work', 'distance work', 'remote work', 'virtual teams'). Differences in the use of such terms relate to the use of ICT and the locations of workplaces (Vartianen, 2021).

Furthermore, new terms have emerged to describe telework arrangements according to their regularity or frequency, such as 'occasional telework' or 'hybrid work'. The former explicitly refers to work arrangements under which work is performed outside the employers' premises without a regular pattern and/or with a low frequency (flexible work arrangements, smart work, occasional ICT-based mobile work). The term 'hybrid work' is increasingly used to refer to work arrangements that combine (with some degree of regularity) working at the employers' premises with working from home or other locations. For the purpose of clarity, Table 0-1 provides a sample of the various terms used in the research literature on telework.

Table 0-1. Main concepts and definitions

Terms	Definition	Source
Telework (Social Partners' Framework Agreement on Telework)	Telework is 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.	Social Partners' Framework Agreement on Telework (2002)
Remote work	Currently there is no international definition. Remote work is understood as a working arrangement in which an employee resides and works at a location beyond the local commuting area of the employing organisation's work site.	Vartianen (2021), based on ILO (2020)
Home-based telework	Working from home using electronic devices. 'Permanent teleworkers' spend more than 90 % of their working time from home. 'Supplementary teleworkers' or 'regular teleworkers' spend one full day per week working at home. 'Occasional teleworkers' have worked from home at least once in the last 4 weeks.	Vartianen (2021), based on ILO (2020)
Virtual team	A group of people who work interdependently with a shared purpose across space, time and organisational boundaries using ICT.	Vartianen (2021)
Hybrid work	A form of organising work in which work can be performed partly from the employers' premises, and partly from other locations (including a worker's home).	Microsoft Work Trend Index (2021)
Mobile virtual work	Virtual work that is physically mobile.	Vartiainen (2006)

Digital nomads	Teleworkers who are location-independent and can perform work duties remotely using ICT, often combining work and travel.	Hermann and Paris (2020)
Smart work	Flexible working system that allows a person to work in a convenient and efficient manner, free from time and place constraints (anytime, anywhere) using ICT via a network.	Lee (2016)

Source: Authors' own elaboration based on sources indicated in the table.

Except in cases where telework is carried out informally (i.e. on a worker's own initiative to supplement on-site work) and results in unpaid overtime, telework is approached as a 'win-win' arrangement, formally relying on the principle of voluntariness for both employers and employees. However, positive or negative outcomes can arise for workers and employers. These depend on factors relating to the **national context**, the specifics of how telework is arranged (intensity, pattern, location, and type of regulation) as well as other **organisational, individual and job or work-related factors** (Allen et al., 2015; Beauregard et al., 2019; Chung, 2022; Rimbau-Gelabert and Pasamar, 2022).

Factors relating to the **national context** refer to how telework is regulated and culturally framed so that it supports quality working conditions, the well-being of workers and job performance, while preventing discrimination against workers who use flexible working arrangements (e.g. 'flexibility stigma', as described by Williams et al., 2013, and others).

Organisational factors refer to the extent to which work is organised to ensure:

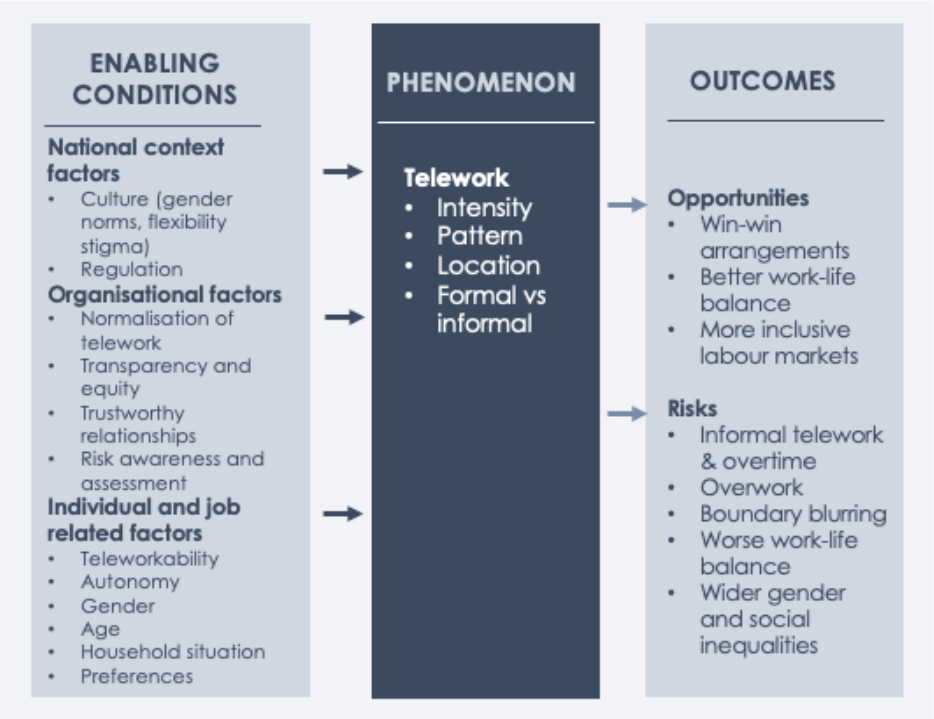
- a specific balance exists between remote and on-site work;
- there are clear and transparent rules regarding: a) jobs and tasks that are teleworkable; b) procedures for requesting to telework; c) equipment and costs; d) intensity and patterns of telework; e) policy on disconnecting from work and limits to availability beyond regular working hours; f) formal communication guidelines aimed at respecting hours of non-availability; and g) preventing possible discrimination;
- trust-based relationships exist between managers and workers, based on workers' autonomy and supportive performance monitoring;
- psychosocial risks are adequately assessed and preventative measures are taken;
- there is effective risk assessment of the remote workstation, and guidance on complying with ergonomic standards; and
- a substantial proportion of workers use teleworking (i.e. 'normalisation').

At the individual level, the extent of workers' **autonomy** is a crucial factor. Autonomy is defined as the extent to which a worker has discretion over organising his/her tasks and work hours according to his/her needs and preferences. Individual needs and preferences may concern work-related aspects (e.g. the capacity to organise tasks/work hours to increase individual performance) as well as private life (e.g. the capacity to organise tasks/work hours to safeguard health or to better adapt work activities to the needs of caring responsibilities and leisure activities).

The greater the autonomy, the greater the importance of other individual factors. Individual factors are diverse and include **work-related factors** (e.g. type of tasks, professional expectations, 'teleworkability' – i.e. the technical feasibility of working remotely) as well as **other individual factors** relating to the cultural, social and economic context, socio-demographic features and individual characteristics (e.g. socio-economic class, housing conditions, age and stage of life, family circumstances, gender role attitudes and preferences for boundary management between work and private life, among others).

Figure 0-1 below provides a graphical visualisation of the conceptual analysis developed in this subsection.

Figure 0-1. Telework: enabling conditions and outcomes



Source: Authors' own elaboration.

2.1.2. The right to disconnect

The term 'right to disconnect' embraces various issues and concerns raised in response to the use of new forms of ICT for work purposes, and their implications in terms of the increased flexibility of working time and location (Hesselberth, 2018). The implementation of the right to disconnect has been pursued via various definitions and regulatory approaches in different European countries (Dagnino, 2020, Gonzalez, 2020, Lerouge, 2020). For the purpose of this study, the 'right to disconnect' is defined according to the following European Parliament resolution:[6]

> *"The right to disconnect refers to workers' right not to engage in work-related activities or communications outside working time, by means of digital tools, such as phone calls, emails or other messages. The right to disconnect should entitle workers to switch off work-related tools and not to respond to employers' requests outside working time, with no risk of adverse consequences, such as dismissal or other retaliatory measures. Conversely, employers should not require workers to work outside working time. Employers should not promote an 'always on' work culture in which workers who waive their right to disconnect are clearly favoured over those who do not. Workers reporting situations of non-compliance with the right to disconnect in*

[6] P9_TA(2021)0021European Parliament resolution of 21 January 2021 with recommendations to the Commission on the right to disconnect (2019/2181(INL))

the workplace should not be penalised. The right to disconnect should apply to all workers and all sectors, both public and private."

The **purpose** of the right to disconnect is to ensure the protection of workers' health and safety and to support fair working conditions, including work-life balance. For employers, limits to their discretion with regard to working hours and work location may pose difficulties in the short term. However, the enforcement of the right to disconnect is expected to be beneficial in the medium and long terms (e.g. fewer health issues, higher job satisfaction, better individual performance and overall productivity gains).

The right to disconnect can be regulated and enforced through law, public policies, collective bargaining and social dialogue at national, sectoral and company levels (Eurofound, 2022b).

At company level, both organisational and individual factors play an important role in the organisation and management of working time and are therefore important for the regulation and enforcement of the right to disconnect.

Flexibility at work can be broadly defined as the range of alternative actions available to either employers (organisations) or workers (Vobruba, 2006). The right to disconnect requires a certain balance between flexibility for employers and protection for workers against expectations of their permanent availability; or alternatively, between employees' need for flexibility at work in order to meet personal demands, and employers' ability to carry out their business (e.g. certainty over having enough staff at a given right time to carry out the necessary work) (Chung, 2022). For this reason, the degree of autonomy workers have over the organisation of tasks and their working time is again a crucial aspect.

Factors relating to the **national context** refer to specific regulation of the right to disconnect. They also refer to working time conditions, as well as occupational safety and health (OSH) regulation, to avoid excessive, lengthy working hours and a lack of opportunities for rest. In addition, they involve cultural norms surrounding work, work-life balance and gender roles (Chung, 2022).

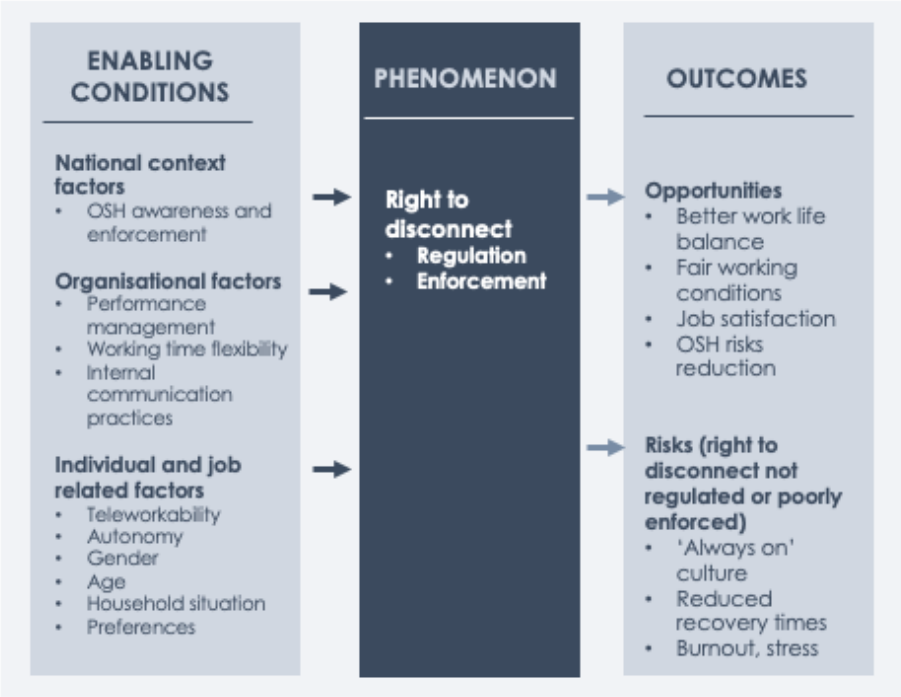
Organisational factors refer to the extent to which work is organised to ensure:

- congruence between the workload and the number of work hours;
- a clear delimiting of work hours and rest hours, including a clear demarcation of those hours during which the employee is not available to engage in work-related activities and communications (either by the company or from external clients or beneficiaries);
- communication rules for managers, workers and external clients or beneficiaries, especially rules aimed at respecting hours of non-availability; and
- a definition of 'force majeure' situations that would entail the disruption of non-availability hours, as well as procedures for such situations.

Individual factors refer to the extent to which a worker is able to exercise his/her **autonomy** over the organisation of tasks and working time to protect his/her health and safety and ensure his/her adequate working conditions, including work-life balance.

Figure 0-2 below provides a graphical visualisation of the conceptual analysis developed in this subsection.

Figure 0-2. The right to disconnect: enabling conditions and outcomes



Source: Authors' own elaboration.

2.1.3. Telework and the right to disconnect

Telework implies the physical separation of workers from the company's premises, the use of ICT for work purposes, and broad changes in the organisation and management of work. These aspects can have important implications for the organisation and management of working time for both workers and employers, including the establishment and enforcement of the right to disconnect:

- Physical separation from the company's premises may entail greater autonomy for employees, and thus facilitate the adaptation of working time according to employees' needs and preferences. This, in turn, may have **positive impacts** on a workers' health and safety and overall working conditions, including work-life balance. Greater flexibility over working time may also reduce commuting time.
- At the same time, physical separation from the company's premises (and a consequent lack of physical separation between the work sphere and the home/private sphere), in addition to the intensive use of ICT for work purposes, may reinforce an 'always-on' working culture. This can lead to **conflicting outcomes**: blurred boundaries between working and non-working time and increased difficulty in disengaging from work, resulting in higher working hours, extended availability, increased work-life conflict and increased work stress.

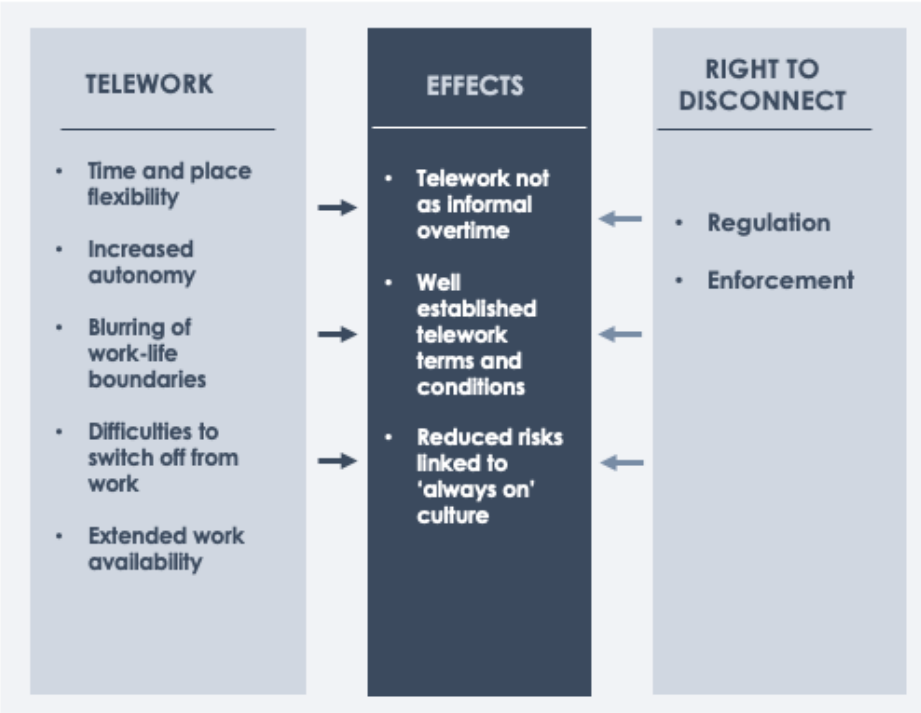
The **tension between greater autonomy and the risk of long work hours / extended availability** is at the core of any telework arrangement. National contexts as well as organisational and individual factors, intersect to enforce the right to disconnect. In this regard, enforcement of the right to disconnect:

- Prevents the informal practice of employees relying on telework to supplement their on-site work. It thus ensures that there must be congruence between workload and number of work hours, and that employees should not be requested to engage in work activities and communications outside those working hours;

- Sets limits to employers' discretion concerning working time and work location, facilitating the establishment of common rules and procedures at organisational level to regulate telework; and
- Prevents or mitigates an 'always on' culture that leads to a downward spiral of competition among workers, which also negatively affects employers.

Figure 2-3 below provides a graphical visualisation of the conceptual analysis developed in this subsection.

Figure 0-3. Telework and the right to disconnect



Source: Authors' own elaboration.

2.2. Prevalence

2.2.1. Telework

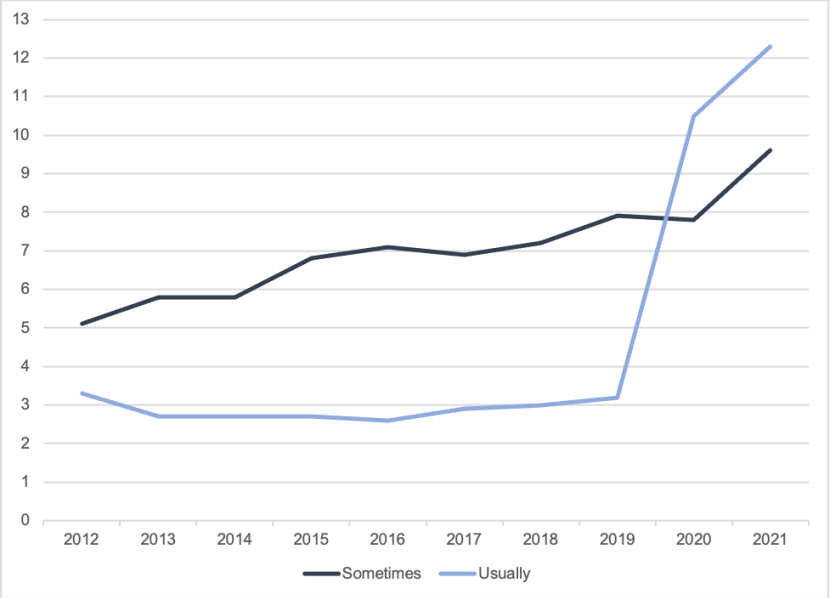
The prevalence of telework in the EU was fairly modest prior to the outbreak of the COVID-19 pandemic. Based on EU-LFS data, Sostero et al. (2020) estimated that in 2019, only 11 % of employees in the EU-27 worked from home at least some of the time, up from less than 8 % in 2008. Furthermore, just 3.2 % of employees usually worked from home in 2019 – a share that had remained fairly stable since 2008. Telework was mostly concentrated among a group of highly skilled professionals and managers and was utilised only occasionally. During this time, there was also a small but significant presence of low-skilled, part-time, multiple job holders among those employees who usually worked from home (Sostero et al., 2020).

The COVID-19 pandemic had an important impact on these working patterns. In addition to increasing the prevalence of telework, its outbreak changed the profile of teleworkers, as telework became the norm for all jobs for which it was technically feasible. According to a survey by Eurofound (2020b) at the peak of the pandemic (July 2020), nearly half of employees (48 %) worked from home for at least part of their working time, of which over a

third (34 %) reported working exclusively from home. Among those who reported working from home, nearly half (46 %) had no previous experience of this way of working.

Since the lifting of social distancing restrictions, a significant share of workers has continued to work from home. Data from the EU-LFS show a substantial increase in the prevalence of working from home in the EU-27 (from 11 % in 2019 to 22 % in 2021)[7], mainly driven by a rise in the number of those who usually work from home (from 3.2 % to 12.3 %)[8].

Figure 0-4. Share of employees (%) working from home by frequency (EU-27, 2012-2021)



Source: Eurostat, Labour Force Survey (lfsa_ehomp).

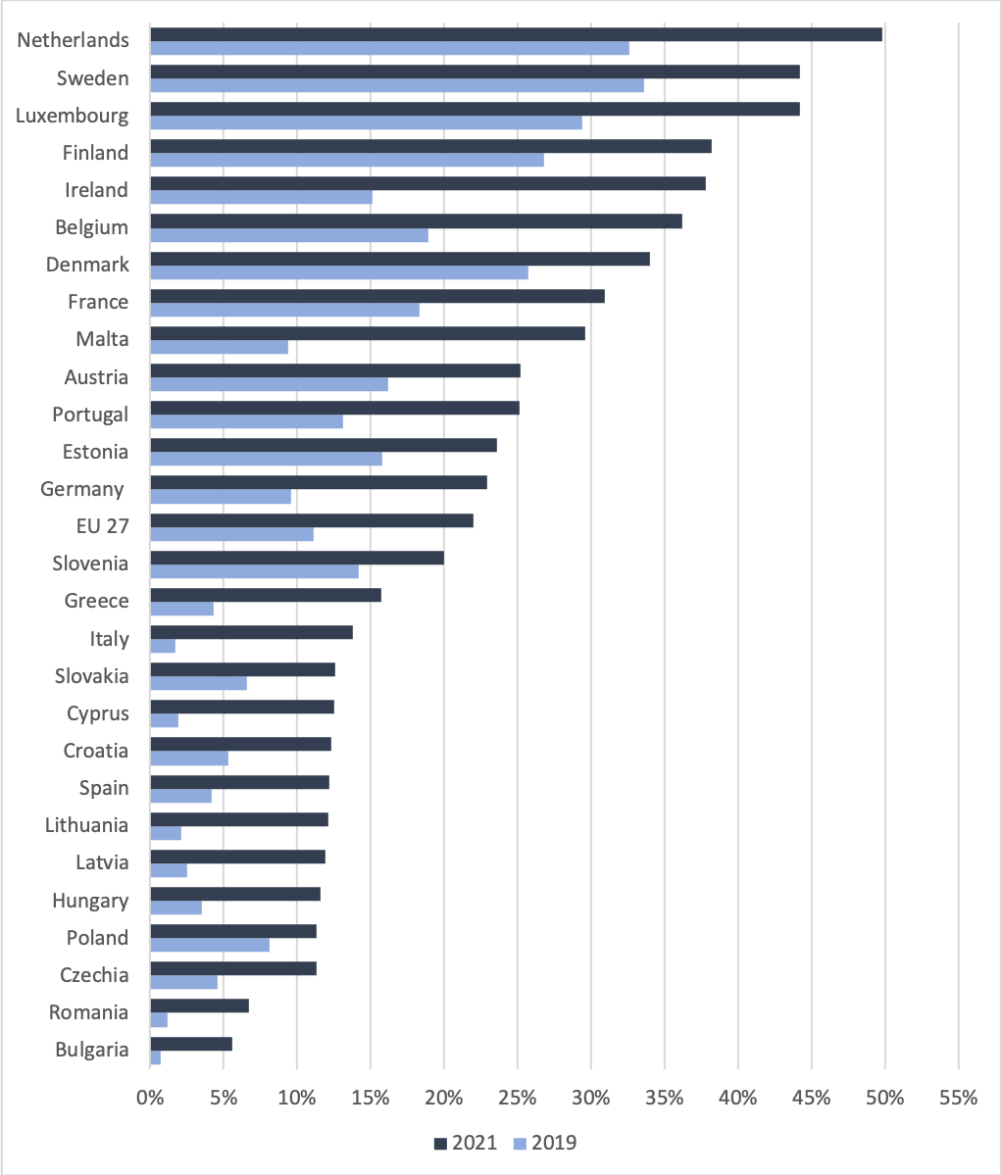
Before the COVID-19 pandemic, the prevalence of working from home **varied widely from country to country**. In some countries, such as Bulgaria, Romania, Latvia, Lithuania and Italy, it was marginal or almost non-existent. By contrast, in Denmark, Finland, Luxembourg, Sweden and the Netherlands, over a quarter of employees reported working from home at least some of the time.

The outbreak of the pandemic led to a significant increase in working from home across all EU countries, despite wide variation still existing between Member States (from less than 6 % in Bulgaria to almost 50 % in the Netherlands). In 2021, the incidence of working from home in 2021 still tended to be higher in those countries in which it had previously been more prevalent. The main exception to this is Ireland, which is among those countries with a higher incidence of telework in 2021, despite having had a relatively low share of teleworkers before the pandemic.

[7] Latest data available at the time of conducting this research

[8] "Usually" is defined as working from home for at least half of the days within a reference period of four weeks preceding the end of the reference week; "sometimes" is defined as working from home less than half of the days worked, but at least one hour during the four-week reference period.

Figure 0-5. Share of employees (%) working from home by country (EU-27, 2019, 2021)



Note: working from home includes both those who work from home 'usually' or 'sometimes'.
Source: Eurostat, Labour Force Survey (lfsa_ehomp).

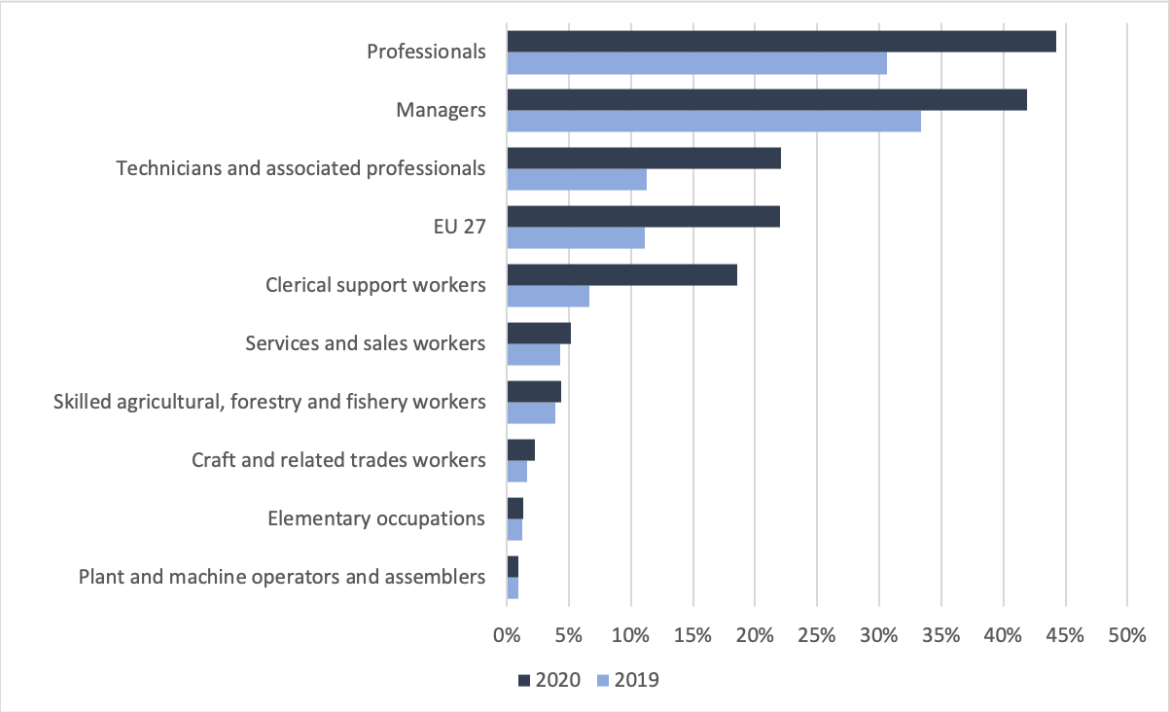
Prior to the pandemic, the prevalence of working from home varied widely according to four main factors: **occupation, sector, firm size and type of area (urban/rural).** Differences in relation to these factors continue to be salient in the aftermath of the pandemic, as shown in the figures below, based on EU LFS micro-data from 2019-2020.

Working from home has a very strong **occupational gradient** (Sostero et al., 2020). In 2020, the share of employees working from home at least part of their time was over 40 % among managers and professionals, around 20 % for technicians and clerical support workers, almost 5 % for service and sales workers, and practically nil for blue-collar occupations (Figure 2-6). This occupational gradient relates closely to the educational gradient: the higher an individual's level of education, the greater the prevalence of working from home (Eurofound, 2022d).

The divide between white-collar and blue-collar jobs increased sharply during the pandemic, as most blue-collar jobs cannot be performed remotely. Within white-collar occupations, the increase in working from home has been highest among professionals (nearly 14

percentage points), followed closely by clerical support workers and technicians. This has led to a substantial change in the composition of the population working from home: in 2020, employees in low-status white-collar occupations (technicians and clerical support workers) represented almost a third of this population (32 %), compared with 24 % in 2019.

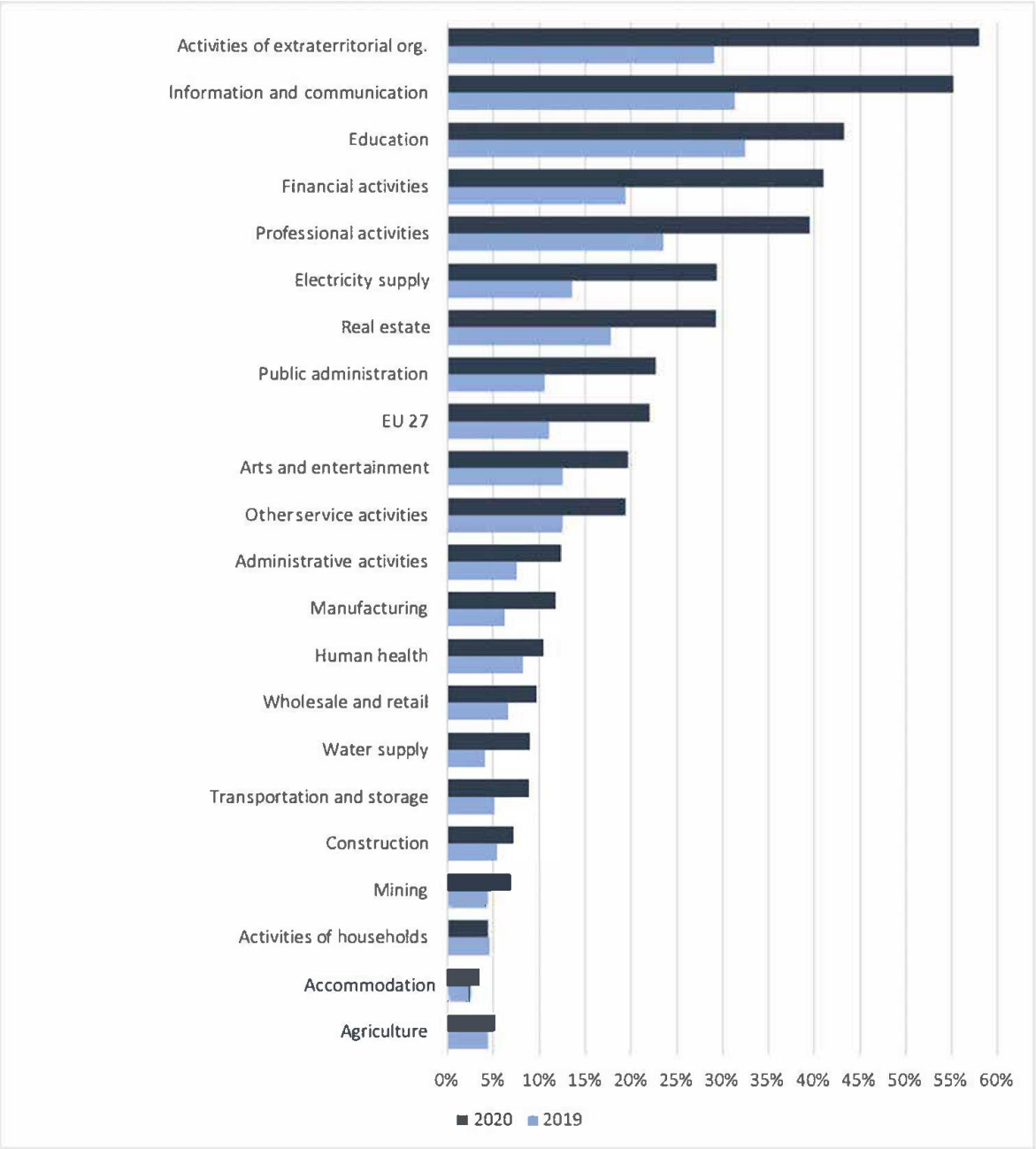
Figure 0-6. Share of employees (%) working from home by occupation (EU-27, 2019, 2020)



Note: working from home includes both those who work from home 'usually' or 'sometimes'.
Source: authors' own calculations, based on from Eurostat Labour Force Survey.

The prevalence of working from home, both before and during the pandemic, also **differed from sector to sector** (Figure 2-7). In sectors that rely mainly on jobs that cannot be performed remotely (such as agriculture, accommodation, construction and health), the share of employees who worked from home was very low in 2019, and the increase from 2019 to 2020 was modest. In sectors with a high share of teleworkable jobs, working from home increased sharply after the outbreak of the pandemic. This trend is found in both sectors that already had a high prevalence of working from home before the pandemic (such as information, communication and financial activities), as well as in sectors in which working from home was less common (e.g. public administration).

Figure 0-7. Share of employees (%) working from home by sector (EU-27, 2019, 2020)

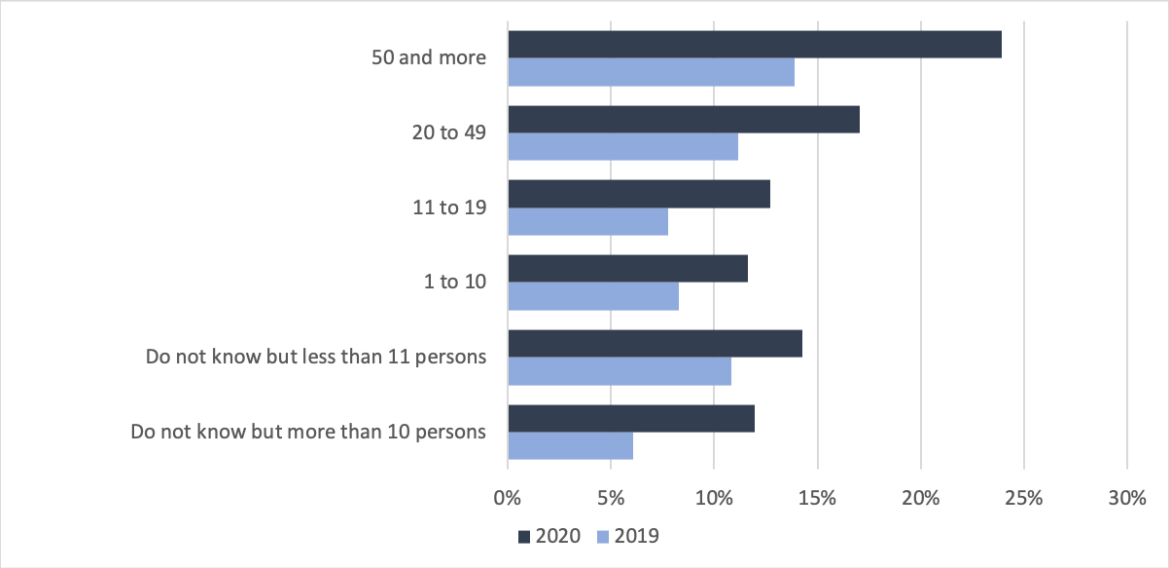


Note: working from home includes both those who work from home 'usually' and 'sometimes'.
Source: authors' own calculations, based on Eurostat Labour Force Survey.

Working from home also differs by the **size of company**. Nearly 25 % of workers in firms with 50 or more employees worked from home in 2020, a share more than 10 percentage points higher than that for micro-companies (0-10 employees). The larger the company, the greater the increase in working from home during 2019-2020 (Figure 2-8).

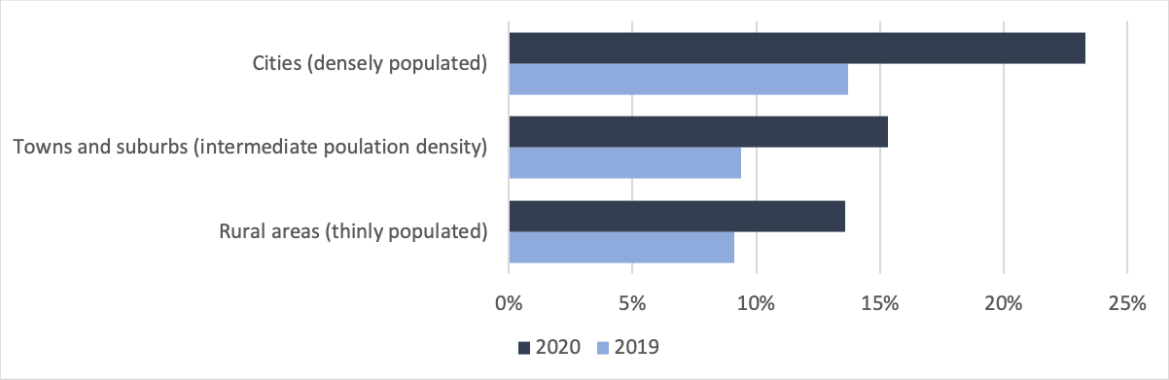
With regard to the **type of area (urban/rural)**, in 2019 the prevalence of working from home was substantially higher in cities than in other areas, and this gap increased in 2019-2020 (Eurofound, 2022d). As Sostero et al. (2020) note, densely populated areas have structural characteristics that may explain these differences: a higher share of knowledge-based, white-collar services jobs that are more teleworkable, as well as the greater availability of the digital infrastructure required for teleworking.

Figure 0-8. Share of employees (%) working from home by firm size (EU-27, 2019, 2020)



Note: Work from home includes work from home 'usually' and work from home 'sometimes'.
Source: authors' own calculations, based on Eurostat Labour Force Survey.

Figure 0-9. Share of employees (%) working from home by degree of urbanisation (EU-27, 2019, 2020)



Note: Work from home includes work from home 'usually' and work from home 'sometimes'.
Source: authors' own calculations, based on Eurostat Labour Force Survey.

In contrast, differences in the prevalence of working from home (both before and during the COVID-19 pandemic) are less marked in relation to other individual and job-related characteristics:

- Prior to the pandemic, **women were slightly more likely to work from home** than men. This gap increased somewhat during the period between 2019 and 2021. This difference relates in part to the fact that more men than women work in non-teleworkable jobs, mainly in manufacturing and construction (EIGE 2021, Eurofound 2022d).
- **Workers who live with children were slightly more likely to work from home** than other workers in 2019; this situation did not change in 2020.
- **Employees with permanent contracts or those in full-time jobs were slightly more likely** to work from home than their counterparts in 2019, and this gap increased slightly in 2020.

- **Age differences are of little importance, except among young workers (19-25 years old)**. In 2019, the prevalence of working from home among young workers was marginal (4 %); the gap between young workers and older workers increased during the pandemic. ESDE (2022) notes that this gap cannot be explained by differences in the distribution of jobs according to the level of teleworkability, which is broadly similar across age groups. Other structural disadvantages are at play – for example, relatively large proportions of young workers have low to medium skills and are employed on temporary or part-time contracts.

A recent report by Eurofound (2022d) further analyses recent trends in working from home. The report also draws on EU LFS micro-data for 2019 and 2020 and estimates a series of logistic multivariate regression models on three dependent variables: working from home, working from home usually, and working from home sometimes. These models are estimated for employees aged 15-65+. Other things being equal, the analysis shows that:

- The incidence of **usually working from home varies greatly between countries**. Ireland and Luxembourg witnessed the largest increase in the likelihood of teleworking usually (almost 20 %). In contrast, workers in Romania, Croatia, Bulgaria and Latvia have seen little or no significant increase in the likelihood of usually engaging in telework as a result of the pandemic.
- **Women were 0.7 % more likely than men to usually telework**. This difference is small, yet statistically significant. It may reflect a higher propensity for women to combine work with domestic and/or caregiving responsibilities, driven by traditional gender norms and related to the gender pay gap.
- The likelihood of **teleworking correlates strongly with education and income**. Highly educated and highly paid workers were more likely to engage in telework both before and after the outbreak of the pandemic. Furthermore, data show that the pandemic has heightened the polarisation of telework along the lines of education and income level. While the pandemic has made telework more widespread, it has also increased disparities, with the incidence of working from home comparatively higher among workers with the highest levels of education and those in the top income deciles.
- With respect to occupations, the analysis shows a **clear divide between blue- and white-collar occupations**. While the pandemic did not lead to significant changes in the likelihood of teleworking among blue-collar occupations, it led to large increases in the likelihood of usually teleworking among managers, professionals, technicians and clerical support workers. Nevertheless, even within these occupations there is a **significant divide depending on the level of authority, skill and autonomy**. Managers and professionals were 20 % more likely to usually telework in 2020, 8 percentage points higher compared with the increase among technicians and clerical support workers.

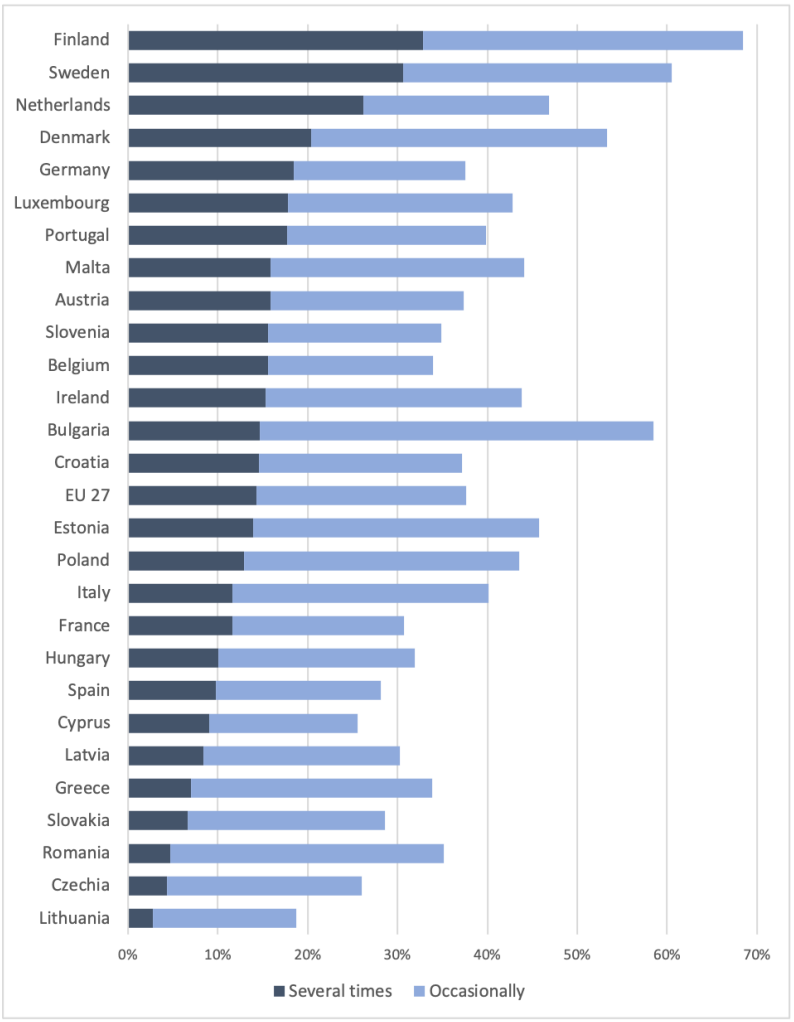
2.2.2. ‘Always-on’ culture

Comparative evidence at EU level is scarce concerning the extent of an ‘always-on’ working culture.[9] Data on working time flexibility and work-related requests during leisure time are

[9] Even data on overtime are not publicly available. Based on non-comparable national sources, a recent report from Eurofound (2022a) highlights that a fairly substantial share of employees perform overtime with some regularity, and in most cases, reaches double digits. Data regarding the extent of overtime hours worked is more irregular. Among those countries that collect complete data, the amount of overtime is equal to around one additional working day per week in Austria, Malta, Ireland and Portugal, but much lower in Italy and France (around one hour per week).

only available for 2019,[10] just before the outbreak of the pandemic. In that year, 14 % of employees in the EU-27 reported being contacted several times for work-related purposes outside working hours, while 23 % were contacted occasionally (Figure 0-10).

Figure 0-10. Share of employees (%) by frequency of work-related contacts during leisure time in the last two months and by country (EU-27, 2019)



Source: authors' own calculations, based on Eurostat Labour Force Survey.

The extent of **work-related contacts during leisure time varied markedly between countries**:

- Contacts were most frequent in Finland and Sweden, with more than 30 % of employees contacted several times and a similar share contacted occasionally. A high, but lesser extent was reported in the Netherlands;
- The level was relatively high in Denmark, Germany, Luxembourg and Portugal;
- In Malta, Austria, Slovenia, Belgium, Ireland, Bulgaria and Croatia[11], the level was above, but close to, the EU average;

[10] Eurostat (2020), "EU-LFS ad-hoc module 2019 on working time flexibility and work-related requests during leisure time." Quality Assessment Report. https://ec.europa.eu/eurostat/documents/7870049/11382164/KS-FT-20-006-EN-N.pdf

[11] Bulgaria stands out as a country with a relatively low share of workers who were contacted frequently (15%) but a very high share of workers contacted occasionally (44%).

- The level of contacts was below, but close to, the EU average in Estonia, Poland, Italy and France;
- The level was relatively low in Hungary, Spain, Cyprus, Latvia, Greece and Slovakia; and
- Contacts were least frequent in Romania, Czechia and Lithuania, with less than 5 % of employees contacted several times, although the share of employees contacted occasionally varies (from 16 % in Lithuania to 30 % in Romania).

The incidence of **work-related contacts was slightly higher for men than women**. Across the EU-27, 16 % of men and 13 % of women were contacted several times; 24 % and 22 % occasionally. No important differences were seen with regard to the size of company, or whether the employees' contracts were part-time or full-time. However, **employees with temporary contracts were more likely to be contacted** than those with indefinite contracts (14 % vs 10 % for frequent contacts and 29 % vs 24 % for occasional contacts).

Differences between occupations were very salient. Managers, and to a lesser extent professionals and technicians, are the occupations with the highest share of frequent work-related requests. However, receiving work-related requests is **by no means confined to managerial or high-skilled occupations**. Around 6 % of workers in elementary occupations were contacted several times, with this share rising to 13 % in the case of service and sales workers. The share of workers who were contacted occasionally was high for all occupations (Figure 2-11).

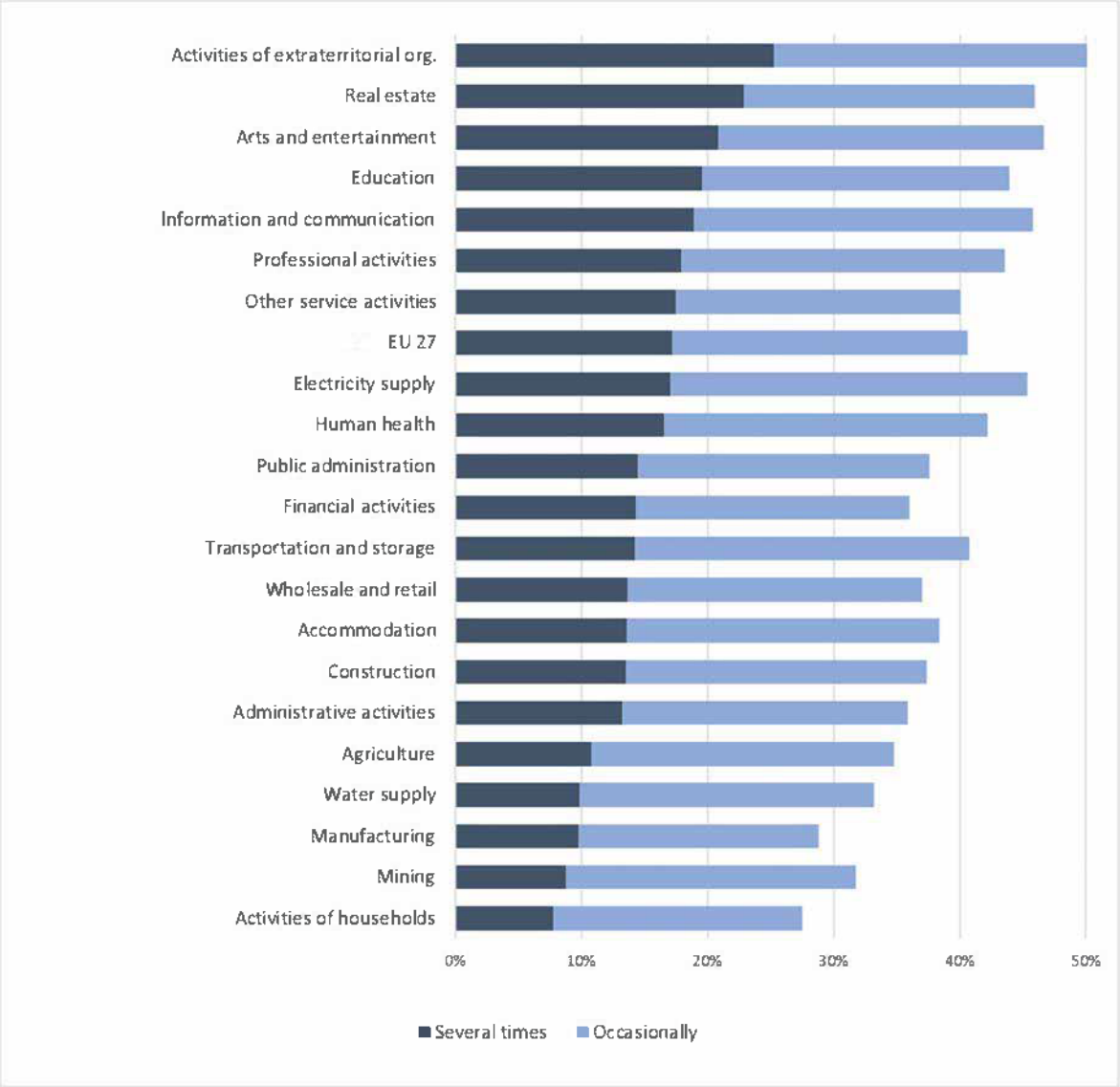
Figure 0--11. Share of employees (%) by frequency of work-related contacts during leisure time in the last two months and by occupation (EU-27, 2019)

Source: authors' own calculations, based on Eurostat Labour Force Survey.

Differences between sectors were also substantial, although not as marked as the differences by occupation. Sectoral differences partly relate to differences in the occupational structures of sectors. The share of workers who receive work-related contacts

several times was highest in services sectors such as real estate, as well as in arts and entertainment, education, information and communication, and professional activities (Figure 2-12).

Figure 0-12. Share of employees (%) by frequency of work-related contacts during leisure time in the last two months and by sector (EU-27, 2019)



Source: authors' own calculations, based on Eurostat Labour Force Survey.

LFS data from 2019 also show marked differences in out-of-hours contacts depending on **work arrangements**. The share of workers receiving work-related contacts several times during their leisure time was higher for workers with flexible working time arrangements (27 % vs 10 % of workers without any flexibility in work schedules). The incidence of frequent contacts also varied depending on the employee's main place of everyday work (26 % for those working mainly from home vs 13 % for those working mainly at the employer's premises).

Overall, evidence from before the pandemic shows that extended availability – that is, receiving work-related requests in leisure time – **varied greatly between countries, had a strong occupational gradient and was closely connected to flexible work schedules and teleworking**. Multivariate analysis of EU datasets from before the pandemic (LFS and EWCS) demonstrates that differences between countries and occupations with regard to working long hours and being available beyond working hours are explained to a great

extent by differences in the prevalence of flexible working time arrangements and teleworking (Chung, 2022).

The **outbreak of the pandemic and the shift towards telework led to a significant increase in extended availability**. According to national studies across Europe (Eurofound, 2022g):

- In **Slovenia**, 65 % of teleworkers felt they were expected to be available outside working hours, while a similar percentage said that they wanted their employers to limit their access to work emails outside working hours (Černe and Aleksić, 2020).
- In **Greece**, 32 % of teleworkers reported being compelled by their employer to remain available outside working hours, although most employees did not deem this necessary (Nikos Poulantzas Institute, 2021).
- In **Finland**, 24 % of employees reported being contacted for work-related purposes outside working time on a daily basis, while 23 % were never contacted outside working time (Keyriläinen, 2021).

This significant increase in extended availability also applies to countries such as France or Spain, where the right to disconnect was already in place:

- In **France**, the UGICT-CGT, which represents engineers, managers and tech workers affiliated to the French union confederation, conducted a major survey (15,000 respondents) on the evolution of the working conditions of teleworkers during the second year of the pandemic. Although the right to disconnect has been regulated in France since 2016, the survey shows that almost 80 % of remote workers did not enjoy this right during the pandemic, and workloads increased for nearly half of them compared with the previous year (UGICT-CGT, 2021).
- In **Spain**, studies carried out since the outbreak of the pandemic indicate a large increase in extended availability. According to survey data,[12] 82 % of employees answered phone calls or emails outside normal working hours in 2021, compared with 51 % in 2018. Nearly half of Spanish employees (48 %) stated that they felt compelled to answer messages outside their normal work schedule, while 36 % noted that this was a job requirement. Also in Spain, a study by Cóppulo and Palau (2021) shows that the shift to teleworking during the pandemic has gone hand in hand with a rise in extended availability, to the point where it has become a relevant health risk factor.[13]

EWCS 2021 data confirms these findings. According to this survey, 44 % of teleworkers[14] worked **overtime**, a share 14 percentage points higher than that of on-site workers in occupations with some degree of teleworkability.

There are also important differences, albeit less marked, concerning **long working hours**. Among full-time employees, 21 % of teleworkers worked between 41 and 48 hours per week, and 14 % more than 48 hours (meanwhile, the shares for on-site employees in occupations with some degree of teleworkability were 17 % and 9 %, respectively).

---

[12] InfoJobs report on Digital Disconnection for 2021 (N=4,472). Press release with the main results available at: https://nosotros.infojobs.net/prensa/notas-prensa/el-75-de-los-trabajadores-espanoles-no-desconecta-fuera-del-horario-laboral

[13] The study explores the main practices surrounding digital connectivity, with a view to assessing the awareness of managers and employees of the right to disconnect and its implications for health and well-being. The research builds on qualitative and quantitative research methods, with a focus on workers based in Catalonia (N=608). Most of the respondents are managers in small and medium-sized companies (51-500 employees).

[14] Teleworkers include employees in three teleworking arrangements: full-time telework, hybrid telework and occasional telework. These arrangements are defined by Eurofound according to intensity of time spent teleworking. With regard to working time patterns, differences between these arrangements are not prominent.

Teleworkers also experienced greater **difficulties in disconnecting from work** during the pandemic: 30 % of individuals who teleworked reported that they worried to some extent about work while not working (either often or always), compared with 21 % of non-teleworkers.

2.2.3. Teleworkability

The overall prevalence of telework in the EU-27 is well below the share of jobs that are teleworkable, estimated by Sostero et al. (2020) to be around 37 %. Building on the initial assessment of Dingel and Neiman (2020) in the US, teleworkability is defined as the technical feasibility of working remotely.

Sostero et al. (2020) developed an analytical framework to establish not only the technical feasibility but also the desirability of working remotely, based on the occupational tasks framework developed by Fernández-Macías and Bisello (2022). This analytical framework considers three aspects:

- The **content of tasks**, distinguishing tasks which require physical presence, tasks that require social interaction, and intellectual tasks that focus on information processing;
- The **forms of work organisation used to coordinate labour processes**, which are broadly characterised by the levels of autonomy, teamwork and routine; and
- The **technologies** used in the production process or delivery of services.

While many positions are technically teleworkable, it is not always an ideal arrangement. The technical feasibility of working remotely is only constrained by the degree of physical presence required to interact with persons or operate particular machines or devices. However, telework is less than ideal for occupations involving a high degree of social interaction, because the lack of face-to-face interactions results in a loss of quality. To take this into account, Sostero et al. (2020) developed a complementary index measuring the intensity of social interactions in occupations (see Box 2-2). This provides a framework distinguishing three main types of occupations:

- **Highly teleworkable** occupations - that is, jobs that involve intellectual tasks and little social interaction (examples include finance professionals, ICT professionals and office clerks);
- Occupations that are **teleworkable, but with a loss of quality**, due to a high component of social interaction. Typical examples are managers and teachers. As exemplified by the closure of schools, full-time remote work was feasible during the extraordinary circumstances of the pandemic, but far from ideal; and
- **Non-teleworkable** occupations – that is, occupations that require the physical presence of employees, such as nurses, manufacturing workers or drivers.

Box 2-2. Teleworkability and social interaction indices

The technical teleworkability index developed by Sostero et al. (2020) is primarily based on the analysis of the *Indagine Campionaria sulle Professioni* (ICP), an Italian occupation survey that closely follows the structure of the American O*Net survey. The detailed information on tasks provided by this survey was used to achieve the fine-grained classification of occupations (798 five-digit occupations) as being technically teleworkable or not, based on the amount of physical interaction captured by six continuous variables:

- Manual dexterity;
- Finger dexterity;
- Performing general physical activities;
- Handling and moving objects;
- Inspecting equipment, structures or material; and
- Operating vehicles, mechanised devices or equipment.

Based on the distribution of scores for each of the six variables, the value of 40 on a 100-point scale was established as a single threshold: each five-digit occupation was classified as not being teleworkable if its score for any of the six variables examined in the survey exceeded 40; otherwise, it was deemed teleworkable. The threshold was set at 40 because this most accurately divided those occupations involving physical tasks from those that do not. *Ad hoc* adjustments were made for just two of the 798 occupations, to take into account that while their physical interaction scores were slightly below 40, this did not appear to accurately reflect the task profile of the occupations concerned (cashiers, and childcare and teaching assistants).

To build the technical teleworkability index at the three-digit level, employment data at the five-digit level from the Italian Labour Force Statistics was used. The teleworkability score for a three-digit occupation category reflects the share of employment within the occupation that is teleworkable, according to the binary (teleworkable/not teleworkable) variable for each five-digit occupation within it. Thus, at the three-digit level, the index is a continuous variable ranging from 0 (the occupation is completely non-teleworkable) to 100 (the occupation is fully teleworkable).

In addition to the six physical interaction variables contained in the ICP, Sostero et al. (2020) also drew on the EWCS to add an additional continuous variable, this time providing information about another type of physical interaction not covered by the ICP; namely, the frequency of lifting or moving people. The values for this indicator were zero or very low for most ISCO three-digit occupations, but there exists a distinct cluster of occupations for which it is high, mostly in health and social care.

A complementary index of social interaction task content was constructed to assess teleworkable occupations in terms of how socially comfortable and efficient the remote provision of labour would be, understood as a function of the degree of social interaction involved. For this purpose, five continuous variables were used, all of them from the ICP:

- Selling or influencing others;
- Training and teaching others;
- Assisting and caring for others;
- Performing for or working directly with the public; and
- Coordinating the work and tasks of others.

These five variables encompass the five main dimensions of social interaction task content from the framework of Fernández-Macías and Bisello (2020). For each three-digit occupation, the two highest scores in any of the five social interaction variables were computed. The reason for this is that it is impossible for any individual job to involve all of the five different types of social task content simultaneously. Again, a threshold was established to differentiate between teleworkable occupations with limited (<50) or extensive (>=50) social interaction.

Sostero et al. (2020) state that the operationalisation of any index inevitably involves arbitrary methodological choices. For analytical simplicity, it was decided to conceptualise technical teleworkability as a binary indicator, based on the detailed level of information provided at five-digit level. The thresholds were adopted on the basis of a task content approach and an analysis of the distribution of scores for each variable.

Among the limitations of its methodological approach, the study notes that these indices rely on a snapshot of the nature of work taken before the COVID-19 crisis and lockdown. They are also especially reliant on detailed data from a single country, whereas work tasks, methods and tools vary between countries and change over time. However, existing evidence suggests that the cross-country variation in task content (the core of the classification) is much smaller than in task methods and tools (Fernández-Macías, Hurley and Bisello 2016).

Data from the EU LFS in 2020 show that **17.2 % of jobs are highly teleworkable and 21.3 % are teleworkable with difficulties** (Eurofound, 2022d). This does not preclude certain tasks – even those that form part of jobs that mainly require social interaction, (such as administrative tasks by social workers) – from being performed remotely without a loss of quality. For a large share of workers, some tasks can be performed remotely, while others may require physical presence. Overall, the feasibility of telework depends on the mix of tasks carried out in each job, and their physical and social context.

The flexibility afforded by teleworking is the main reason for the great potential offered by hybrid arrangements. According to estimates based on this approach, Lund et al. (2020)[15] conclude that **nearly a quarter of the total workforce in advanced economies could work remotely at least three days a week without any potential loss of productivity** (27 % in Germany and 18 % in Spain), while under one-fifth of workers could do so for one or two days a week (15 % in Germany and 18 % in Spain).

The extent to which teleworking could become more prevalent is contingent on the sectoral and occupational structure of a given country's economy, but also on other institutional and social factors. Sostero et al. (2020) show that:

- The countries reporting higher proportions of teleworkers are those with the highest shares of employment in knowledge and ICT-intensive services, notably the Benelux and Nordic countries.
- Sizeable differences exist between EU countries in the share of teleworkers within the same sector. These differences partly relate to the different occupational compositions of sectors between countries.
- Even within the same occupation, the prevalence of telework varies significantly across countries.
- In addition, larger companies are more prone to adopting flexible work arrangements (such as teleworking) than smaller ones. Therefore, the prevalence of telework in a

[15] The countries covered are: China, France, Germany, India, Japan, Mexico, Spain, United Kingdom, and the United States.

given occupation also correlates with the distribution of employees by company size within this occupation.

Occupations such as clerical workers, classified as highly teleworkable, presented very low rates of telework during the pre-pandemic period, which was not the case for managers and professionals (Sostero et al., 2020, Eurofound, 2022d). Post-pandemic data show that the incidence of telework has increased less among clerical workers than among managers and professionals and remains well below their potential teleworkability.

Table 0-2. Teleworkability and working from home by occupation (EU-27, 2020)

	Employees in non-teleworkable jobs (%)	Employees in jobs that are teleworkable with difficulty / loss of quality (%)	Employees in highly teleworkable jobs (%)	Employees working from home, usually or sometimes (%)
Managers	22.0	78.0	0.0	41.9
Professionals	28.1	49.2	22.7	44.4
Associated professionals	47.9	38.8	13.2	22.1
Clerical support workers	13.3	0.0	86.7	18.5
Services and sales workers	91.1	7.8	1.1	5.1
Skilled agricultural workers	100.0	0.0	0.0	4.3
Craft and related trades workers	99.2	0.0	0.8	2.3
Plant and machine operators	98.6	0.0	1.4	0.9
Elementary occupations	97.8	0.0	2.2	1.3
EU-27 average	61.5	21.3	17.2	18.3

Source: Eurofound 2022d, based on EU-LFS and Sostero et al. (2020) and further calculations

These data are consistent with general assumptions that the implementation of telework is not simply a matter of teleworkability; other factors play an important role:

- **Managerial culture and work organisation practices**: in particular, teleworking by workers in medium-skilled occupations has traditionally been confronted by a lack of trust and reluctance by managers to lose direct control (Ono, 2022; Sostero et al. 2020; Chung 2019; Magnusson, 2019; Lott, 2015; Sewell and Taskin, 2015).
- Also related to this, teleworking has been constrained by **employees' fear of missing out on career opportunities**, since it might be perceived as a lack of commitment (Golden and Eddleston, 2021; McDonald and O'Connor, 2021,

Williams et al. 2013). This **'stigma' surrounding teleworking tends to be gendered**, and disproportionately affects women (Chung, 2020; Lott and Abendroth, 2020; Magnusson, 2019). Through the idea of the 'teleworker dilemma', Grzegorczyk et al. (2021) illustrate that the uptake of telework may remain at a less than desirable level if the choice of whether or not to telework is left to individual workers. This supports the view that achieving optimal solutions requires the initiative of employers to establish common rules and procedures for regulating telework at the company level, and to support attractive teleworking conditions for their employees.

- The incidence of telework is also related to **national regulation** (Gschwind and Vargas, 2019) as well as **broader contextual aspects** that impact the prevailing national work culture, including workers' bargaining positions, social inequalities and gender norms (Chung, 2022).

Barrero et al. (2020) suggest that the massive shift towards telework during the pandemic provided a learning opportunity for both employers and employees. Although it required a large effort to adjust to teleworking arrangements, they led to better-than-expected outcomes for many organisations and workers. Managerial reluctance towards telework appears to have diminished, and both managers and workers are more aware of the benefits and drawbacks of telework. These aspects are discussed further in the next section.

2.3. Telework and the right to disconnect: challenges and opportunities

This section identifies and analyses the main challenges and opportunities relating to telework and the right to disconnect. It is based on a literature review, a quantitative analysis of survey data (EWCS, EU-LFS and the surveys of employers and employees carried out for this study), as well as case studies, consultation activities (interviews with EU experts, national authorities and national/sectoral social partners) and workshops. These challenges and opportunities are considered from the points of view of employers and employees, indicating main drivers, discussing the potential benefits and risks, and identifying the main indications for policymakers.

The analysis of challenges and opportunities is structured around five main aspects:

- Adequate employment and working conditions, including working time and work-life balance;
- Occupational safety and health, including mental and physical health;
- Management and performance;
- Equal treatment and non-discrimination; and
- Geographical mobility, with a focus on cross-border teleworking.

2.3.1. Adequate employment and working conditions, including working time and work-life balance

Working time and work-life balance are at the core of academic and policy debates on telework and the right to disconnect. Extensive empirical evidence shows that for workers, the main benefits of telework are savings in commuting time and greater autonomy over maintaining a better work-life balance. Meanwhile, its potential downsides include an

intensification of work, the risk of being 'always-on', and a blurring of the boundaries between work and private life (Arntz et al., 2020; Chung and van der Horst, 2018).

As acknowledged by a German White Paper on digital work (BMAS, 2017), at the heart of these contradictory effects lies an **intrinsic tension** between the potential to work 'anytime and anywhere', and the pressure to work 'always and everywhere'.

The effects of telework on working time and work-life balance have been extensively researched. Overall, the literature shows mixed evidence regarding the potential contribution of telework to balancing work and private life or family responsibilities (Beauregard and Canonico, 2019). Research stresses that telework may turn out to be a '**doubled-edge sword**' (Dén-Nagy, 2014), due to the blurring of boundaries between work and non-work domains and increased interference in both directions (Wöhrmann and Michel, 2022).

With regard to working time, empirical research conducted before the pandemic crisis consistently showed that teleworkers were more likely to work longer hours and to have more irregular schedules than their counterparts who worked on their employers' premises (Eurofound and ILO, 2017; Eurofound, 2020a; Chung, 2022).

The same pattern was found during the pandemic: teleworkers were more likely to work more than 40 hours a week than on-site employees, according to a recent analysis by Eurofound of EWCS 2021 data (Eurofound, 2022g). The Eurofound report also highlights evidence from across Europe suggesting that workers in teleworking arrangements during the COVID-19 pandemic worked more hours, and at more unusual times, than they had when working from the office prior to the crisis (Eurofound, 2022g).

The results of the employee survey carried out as part of this study support the view that since the pandemic, teleworkers have enjoyed greater autonomy over the organisation of working hours, to accommodate their needs and preferences regarding work and private life. A comparison between those who teleworked (at any intensity) and those who never teleworked during the period under analysis provides the following results:

- Around two-thirds of respondents who teleworked (66 %) had flexibility to take time off to attend to private matters, compared with 36 % of non-teleworkers. This indicator is largely used as a 'proxy' for the extent to which working time arrangements support work-life balance (Eurofound 2020a). This finding fits with the overall pattern of greater flexibility in work schedules among those respondents who teleworked: 62 % could decide when to start or end their work day and 51 % had the possibility to work longer on some days and to compensate with time off on other days (for non-teleworkers, these shares were 32 % and 26 %, respectively).
- Differences are less prominent and clear-cut when it comes to the intensity of work, extended availability and blurred boundaries between work and private life. One-third of respondents who teleworked (34 %) reported working more than their contracted hours without additional compensation – a share that was slightly higher (by 5 percentage points) than that among non-teleworkers. The share of respondents who were often requested to work outside working hours was greater among those working on-site compared with those who teleworked (34 % and 21 % respectively). The proportion of workers who reported problems in maintaining stable boundaries between their private and professional lives was similar for both groups (around 26 %).

According to this survey, the majority of respondents who teleworked wished to continue doing so, with greater autonomy over when and where to work. When asked to indicate the three most important issues that would improve their work environment, large shares of teleworkers selected the ability to have more freedom to work from anywhere (61 %); to set their own working schedules (56 %); and to take some hours off to attend to personal matters (49 %). Nevertheless, a significant share of teleworkers was concerned about

extended availability: 32 % said they did not wish to be contacted outside their designated working hours.

This subsection explores the challenges and opportunities of telework and the right to disconnect in the area of working conditions, with a particular focus on working time and work-life balance. It begins by presenting the main drivers that can enhance or worsen working time and work-life balance (technological change; worker autonomy; a culture that emphasises 'passion for work'; economic pressures; work culture; and work organisation). It then goes on to discuss potential benefits and risks. Building on this analysis, the subsection identifies key policy challenges, with its main findings being summarised in Figure 2-13.

Drivers affecting working time and work-life balance

Technological change

The pace of technological change has been a critical driver of the spread and diversification of working arrangements that allow flexibility in determining working time and location. Indeed, digitalisation has been regarded as the third or fourth industrial revolution (Valenduc and Vendramin, 2017), in the sense that is has drastically changed the nature of contemporary work.

Early teleworking arrangements during the 1980s relied on the first generations of computers and telecommunications tools, which allowed employees to work from home with the aid of fixed ICT (i.e. phone and computer) as a substitute for working in the office. By the end of the 1990s and in the early 2000s, the proliferation of smaller and cheaper wireless devices such as mobile phones and laptops allowed employees to not only work from home, but also from other locations – the so called 'mobile office' (Messenger and Gschwind, 2016).

Since the mid-2000s, a third generation of ICT has developed rapidly. This includes smartphones and similar internet-connected devices in conjunction with cloud computing technologies that provide the capacity to store data on a massive scale via virtual locations and networks (Holtgrewe, 2014; Valenduc and Vendramin, 2016). This technological change favours not only the 'mobile office', whereby workers can work from anywhere, but also the development of a '**virtual office**' that is accessible "**anywhere and anytime**" (Messenger and Gschwind, 2016).

Autonomy

Telework has the potential to enhance workers' autonomy over the organisation of working time, according to their preferences and needs (Eurofound and ILO, 2017). However, the available literature shows that autonomy in balancing work and private life is undermined by organisational practices involving the expectation that employees take work home and remain available beyond regular working hours. Such issues are relevant to all telework arrangements, including those workers who take work home after having worked at the employer's premises, and/or who attend work requests remotely outside of working hours (Golden 2012; Ojala and Natti, 2014; Vayre and Vonthron, 2019; Büchler et al, 2020; Cho et al., 2020; Kao et al, 2020; Lott, 2020; Van Zoonen et al., 2020; McDaniel et al. 2021; Pak et al, 2021; Chung, 2022; Qiu and Dauth, 2022). Indeed, in the employee survey carried out for this study, 12 % of respondents who teleworked said they did so because they needed to work extra time to finish their assigned work; 10 % said they did so because they had to attend to work requests outside of working hours.

In addition, the literature shows that a large proportion of those employees who have autonomy to organise their own working time tend to work longer hours. In their analysis of the use of mobile email devices by knowledge professionals, Mazmanian et al. (2016) coined the term **'autonomy paradox**' to describe this phenomenon. They found that knowledge professionals enacted a norm of permanent connectivity, and that accessibility that produced contradictory results.

While the permanent use of mobile email was framed by the knowledge professionals as an individual 'choice' made autonomously, its use intensified collective expectations regarding the availability of these professionals, escalating their engagement and thus diminishing their autonomy in practical terms. Importantly, what began as an individual practice ended up becoming a collective professional norm: "the professionals' daily use of mobile email was shifting the cultural norms of their professional communities. Specifically, they were redefining in practice what it means and what it takes to be an effective knowledge professional in an era of ubiquitous, always-on, mobile technologies" (Mazmanian et al. 2016, p. 17).

Research has provided extensive evidence of the existence of such an 'autonomy paradox' in connection with new forms of ICT-enabled work flexibility. The internalisation of a particular work ethic in highly competitive and demanding professions leads workers who presumably enjoy high levels of autonomy to work long hours and be 'always on' –hence, they may be more exposed to work-related stress and exhaustion (Bloom et al., 2015; Felstead and Hensecke, 2017; Biron and Veldhoven, 2016; Maraux, 2018; Mullan and Wajcman, 2019; Chung and Van der Host, 2020; Eurofound, 2020a; Karimikia et al, 2021).

The autonomy paradox was also identified as a theme in interviews conducted with social partners. For instance, one **French** union representative quoted the results of a national survey conducted by the CFDT, which showed that while 75 % said they were better able to organise their working time since taking up teleworking, nearly two-thirds of teleworkers said they had extended their working hours. These paradoxical results reveal the ambiguities and risks associated with the increased autonomy offered by teleworking modalities in terms of setting one's own working boundaries.

Indeed, most union representatives interviewed agreed that many teleworkers work longer hours and do not comply with working time regulations. A **Danish** union representative noted that many employers expect some flexibility in exchange for the increased autonomy granted to employees who work from home (e.g. working longer hours and being available for work during their leisure time). A **Greek** trade unionist also stated that many teleworkers keep working after the end of the work schedule as a sign of commitment to their employers. A **German** trade unionist indicated that most colleagues felt pressured to work longer when working from home, as they do not view themselves as being as productive as they were in the office. Similarly, a **Romanian** union representative also noted that many workers remain available for work despite the regulation stating that overtime work requests by the employer must be submitted at least two hours before the end of the work schedule. This is the main reason why some union representatives advocate more stringent regulations regarding the right to disconnect, such as technical limitations on sending messages outside regular working hours.

It is also worth noting that one employer representative from **Sweden** highlighted that employees' desire for greater flexibility generally comes at the expense of permanent connectivity:

> *Technology is driving us to be connected outside working hours. The work culture normally is to respect people being off work. However, I think the problem lies in the desire for flexibility. The desire for freedom even when working and to be able, for example, to take care of private and family matters more flexibly. The 24/7 society is what drives it. You then check your email when you get home after picking up the children from school.* (Interview, employer representative)

Acknowledging the implications of the autonomy paradox, one EU expert interviewed highlighted the importance of educating employees on how to prevent an 'always-on culture':

> *Many employees might say that they are not comfortable with the right to disconnect because they have their own autonomous way of organising work, their own vision of working. That's why we need to educate employees to allow them to be disconnected. I think education is very important. There also has to be a good balance between the will of employers to ensure the right to disconnect, and how the right to disconnect would be enforced.* (Interview, EU expert)

Passion for work

Scholars have also highlighted the importance of the so-called '**passion principle**' in understanding why teleworkers end up working long hours and engaging in self-exploitation. According to Cech (2021), the 'passion principle' reinforces a culture of overwork, encouraging white-collar workers to tolerate precarious employment and sacrifice time, money and leisure for work that they feel passionate about.

Chung (2022) also highlights the importance of 'passion' in an analysis of longer working hours. In particular, the author draws on the results of the International Social Survey Programme (ISSP, 2015) to develop the understanding that the passion principle is not limited to high-paying white-collar jobs. Also, workers in medium- to low-paying jobs – teachers, nurses, or those in elementary positions, for example – believe that having an interesting job is important in life. According to Chung (2022, p. 80), "passion in one's job is something that is now asked of almost everyone regardless of their role or position." Cultural ideas about passion at work also legitimise exploitation by employers who think that if workers love their jobs, leading them to fulfil their passion is a big enough reward in itself, reducing the need for proper financial compensation (Chung, 2022). Such a passion is, however, not something that workers develop organically in relation to their work, but rather an attitude that they are forced to have or outwardly express. This is particularly true in light of the rise of a work culture that expects workers to work long hours in the name of 'professionalism'.

Work culture, work organisation and economic pressures

The prevailing work culture in a company is also crucial in explaining differences in flexible work arrangements and the extent of an 'always-on' culture. Some countries and companies may have a pronounced '**ideal worker culture**'[16], while others may be more supportive of autonomy when it comes to arranging working time[17] and maintaining work-life balance. In this regard, Eurofound (2021b) provides evidence of important differences in company cultures, including those within the same country, with regard to respect for disconnection and work-life balance.

Some organisations in highly competitive sectors such as finance or consulting require 60 or more working hours, with the expectation that employees will be permanently on call and consistently deliver high output. Research on such '**extreme work hours**' seeks to understand why and how these working patterns persist despite increasing evidence of their

[16] In an ideal worker culture, managers, supervisors and co-workers expect workers to prioritize work over private life, including working overtime, attending work requests outside working hours, etc (Acker, 1990; Kossek et al., 2010; Williams et al. 2013).

[17] Autonomy of working time is one aspect of the autonomy of work, referring to the degree of control workers have over the distribution of their working hours. In order to clarify the distinction between overall autonomy of work and autonomy of working time, autonomy of working time is sometimes referred to in English as 'self-management' of working time. In Germany, it is also referred as 'sovereignty' (*Souveränität*) over working time.

detrimental effects on workers, families and organisations (Blagoev et al 2018). While working time legislation is often disregarded (Kellogg, 2011), extreme hours are shown to persist even when management engages in well-intentioned efforts to reorganise or redistribute work (Blagoev and Schreyogg, 2019).

Research shows that rather than having a single cause, these extreme regimes emerge from a complex web of “taken-for-granted and mutually reinforcing practices, interactions, expectations, policies, and reward systems that reflect and reinforce the ideal worker” (Blagoev et al., 2018, 4). ’The study on time famine by Perlow (1999) demonstrates how interdependent work patterns, temporal rhythms of work and social context (e.g. systems of rewards, values and norms governing work) can become entangled in a self-perpetuating loop. As a consequence of this ‘vicious work time cycle’, workers were continuously interrupting each other, thereby slowing down work, lengthening working hours and generating a constant feeling of not having enough time.

While many studies focus on initiatives for change, little research has explicitly addressed the problem of persistence that causes such initiatives to fail (Kellogg, 2012). Blagoev and Schreyogg (2019) aimed to identify the organisational drivers that explain the persistence of such extreme working regimes. The authors built on a case study of the German branch of an international consulting firm with several thousand employees worldwide. The study began in 2013 as an attempt to understand the reasons behind the failure of various projects the company had implemented over a period of 40 years to address problems associated with extreme working hours. One major internal factor was resistance to change in the patterns of extreme work established by the firm’s partners.

The authors found that small shifts in temporal structuring (i.e. increased professional availability towards clients) consolidated a norm of working hours that became increasingly uncoupled from the traditional working week. This ultimately resulted in an expectation to be available anytime, in addition to usual office work hours. The study shows how these small temporal shifts can consolidate over time, causing a ‘lock-in’ of workplace time management practices that is extremely difficult to reverse. Permanent availability was greatly appreciated by clients, even if it led to employees' burnout and turnover. A major external factor was intense price-driven competition in the consulting sector, directly reinforcing the pressure to work long hours. A second external factor was the availability of new recruits who were ready to quickly internalise the ‘ideal worker culture’ prevalent within the firm.

As Blagoev and Schreyogg (2019) note, several studies have confirmed that intensified **economic pressures, staff shortages and downsizing** are key drivers of an 'always on' culture in many occupations (Snir, 2014; Krause et al., 2015; Kratzer, 2020; Lott and Ahlers, 2021). Snir (2014) highlights in his research on investment in work that only a small group of employees work overtime out of a sense of voluntariness and passion for their work. In most cases, employees choose to work in the evenings and on weekends not out of enthusiasm for their work, but in order to get their workload done. This phenomenon is also discussed under the concept of ‘interested self-endangerment’ (Kratzer, 2020). This is understood as a kind of coping reaction when workers are confronted with large workloads and strong demands for self-organisation.

Research has also shown there is a potential for change at organisational level with regard to attitudes about overwork. Of particular relevance here is the work by Kelly and Moen (2020) on the organisational causes of work intensification and the extended availability of workers. Drawing on five years of research and hundreds of interviews with employees and managers from the IT division of a large Fortune 500 company based in the USA, their book presents the results of a major experiment the authors designed and carried out in the firm, to address overload and foster new ways of working. The company agreed to take part due to concerns about burnout and high turnover among professional staff. Top managers

acknowledged that work overload arose from downsizing and the need to coordinate with offshore counterparts.

The authors led a randomised field experiment involving the entire IT division (a total 56 teams) to test the effectiveness of a work redesign initiative called Support, Transform, Achieve Results (STAR). This programme aimed to change the 'rules of the game'; that is, to **tackle the organisational practices at the root of the problem** (i.e. overwork, and the expectation of being constantly available for work).

It is worth noting that work redesign initiatives such as STAR differ from common approaches to flexibility as an 'accommodation', in that they do not focus on individuals and their need to balance work with personal and family demands. On the contrary, STAR involved a collective process aimed at promoting and changing the organisational context that framed work intensification and extended availability. The understanding of flexible work arrangements as an optional accommodation catering to the needs of particular workers entails a risk of deepening social and gender inequalities through the stigmatisation of those employees who seek such flexible work options. Such employees may risk being perceived as 'less committed' to their work, and thus less worthy of advancement.

Evaluation of the STAR initiative revealed significant positive effects: in the treatment group, individual performance was maintained, with lower levels of burnout, increased job satisfaction and reduced turnover compared with the control group. These improvements were more significant among non-supervisory employees and among women. However, the experience also revealed a key limitation of such work redesign initiatives – namely, that they are likely to be dropped when managers change. Building on STAR and similar initiatives in different large US companies, the authors found that the increasing pressure of competition that leads to downsizing and work intensification also makes it difficult to sustain such organisational innovations over time.

Work organisation policies have the potential to support flexible work arrangements driven by work-life balance or well-being goals through the implementation of the **right to disconnect**. The company case studies conducted for this report in 10 countries[18] show that only three out of the 10 companies studied have explicitly regulated the right to disconnect through collective agreements – however, these rely solely on soft implementation approaches.

These regulations generally emphasise the personal responsibility of managers and employees through codes of conduct and guidelines (such as reminding that emails are "not appropriate in all circumstances" and that "emails received outside work hours do not require an immediate response"). Only in one case does a policy provide for an 'alert system' via which employees can raise complaints about infringements of their right to disconnect. In one company, policies regarding the right to disconnect were developed unilaterally by the management. In this case, a firmer approach was adopted, which entails that employees are not permitted to send e-mails to their colleagues after certain hours, even if they work under flexible work arrangements that allow them to work in the afternoon and evening. In the remaining companies, no regulations or policies were in place.

Lastly, the results of the case studies show a notable lack of actions and processes to analyse and evaluate the impact of teleworking on working conditions or the effectiveness of the right to disconnect in preventing availability beyond working hours.

The surveys of employers and employees conducted for this study provide additional evidence concerning the implementation of a right to disconnect at company level:

- The share of companies adopting policies and/or agreements is higher than expected from a review of the literature and interviews with national stakeholders:

[18] Denmark, France, Ireland, Italy, Lithuania, Luxemburg, Poland, Romania, Spain and Sweden.

Around half of employers surveyed (49 %) stated there is some kind of arrangement in their organisation; similar results are found among employees (45 % of respondents reported that there is an arrangement at their workplace).

- The surveys confirm there are various ways for addressing the right to disconnect, as indicated by the literature and interviews. According to employers, the most common approach is through a company policy communicated to workers (23 % of organisations surveyed), while formal agreements signed with employees' representatives are less common (6 %). In total, 26 % of organisations surveyed have in place either a company policy, a formal agreement, or both. Nevertheless, an important number of organisations (20 %) rely exclusively on informal agreements between some supervisors and workers[19]. The results for employees differ, but the main patterns coincide.

Furthermore, the surveys reveal that a high share of employers (46 % of respondents) and employees (59 % of respondents) have considered implementing a right to disconnect as one of their three main areas for improvement in the future, with the aim of ensuring that both parties can make best use of the opportunities offered by flexibility over working time and location. In this regard, it is worth noting that positive views among respondents concerning the relevance of the right to disconnect are often linked to practical experience: 63 % of employers who held positive views had implemented some kind of right to disconnect arrangement within their organisations, while 49 % of employees reported such an arrangement.

It should be noted that the above results may overstate support for the right to disconnect due to the methodological design of the survey (see Annex 1). However, they support the general view that **awareness of the potential risks posed by an 'always-on' culture**, as well as a willingness to take measures to mitigate those risks, may be **higher than expected, especially among employers**.

Gender inequalities

Research into mandatory telework during the pandemic has indicated the risk of exacerbating existing gender inequalities in the distribution of **care and household responsibilities**. Particularly among dual-earner couples with children, this factor may also have contributed to a widening of the gender gap in productivity when working from home (Shockley et al, 2021b; Yavorsky et al, 2021; Blaskó et al 2020; Chung and Van der Lippe, 2020). Qualitative fieldwork in the EU during the pandemic shows that work-life conflict was especially acute during the first peak of the COVID-19 crisis and was clearly gendered – most notably affecting working mothers with school-age children during school closures (Fana et al., 2020; EU-OSHA, 2021b). EIGE (2021) supports this conclusion, while highlighting a small shift in labour distribution: some men, mostly young, educated, with children and/or with partners performing essential jobs (i.e. non-teleworkable), dedicated more time to household management and domestic responsibilities. Rather than leading to a permanent shift in gendered roles and norms, however, EWCS data confirms the persistence of gender inequalities among teleworkers during the pandemic. Women were more likely than men to carry out unpaid work, and as a result experienced less improvement in work–life balance (Eurofound, 2022g).

Chung (2022) provides extensive evidence of **overtime and gendered patterns** in telework and other flexible working arrangements (working time autonomy and flexitime), building on analyses of European datasets (EWCS, LFS) as well as studies covering various countries.

[19] The remaining 3 % corresponds to organisations that rely exclusively on sectoral agreements or a combination of sectoral agreements and informal practices.

These analyses confirm that flexible working arrangements are linked to overtime and are taken up by workers in high-level positions. Importantly, the evidence is not only based on cross-sectional studies. A number of studies are longitudinal (e.g. Lott and Chung, 2016), providing more conclusive evidence that flexible working leads to longer overtime. In general, men were found to do more overtime than women, and were also found to increase the amount of overtime they did more than women when moving to more flexible arrangements. The main distinction regarding overwork was found between mothers and the rest of the population (Chung and van der Horst, 2020), in the sense that women increase their unpaid hours devoted to childcare work when carrying out telework (Chung and Booker, 2022). Chung (2022) concludes that flexible working arrangements are not provided to workers who need them most, but rather to workers in higher-skilled and/or higher-paid occupations and are consequently taken up by those in stronger bargaining positions.

Gendered workplace norms are crucial to understanding variations in the impact of telework on working time and explaining gender inequalities. When the '**ideal parent**' norm prevails in a workplace, men are expected by their supervisors/colleagues to be the main breadwinners, and women to be the main caregivers (Lott and Klenner, 2018). In addition, various studies have also noted the importance of acknowledging individuals' circumstances, preferences and capabilities in coping with job demands and managing the boundaries between work and private life, and in assessing their perceptions of work-life balance or conflict (Perrigino and Raveendhran, 2020; Allen et al, 2021). Boundary management strategies are influenced by individual job characteristics, and especially vary among employees in highly qualified positions with high levels of autonomy (Jostell and Hemlin, 2018; Choroszewicz and Kay, 2020; Gardner et al, 2021; Ghislieri et al, 2021; Reissner and Hislop, 2021).

Telework can potentially contribute to improving the work-life balance of all workers but may be particularly useful for boosting women's access to employment and career opportunities – an aspect widely acknowledged by the national stakeholder representatives interviewed for this report. Several interviewees stressed that working mothers may encounter difficulties in sticking to standard working schedules, and working from home could provide more working time, autonomy, and better opportunities to balance the needs of work and private life. Some interviewees, mostly from the employers' side, emphasised the need to maintain flexibility, warning of the risk of overregulating telework and the right to disconnect. Other interviewees adopted a more nuanced approach. Representatives of national authorities from Spain, for instance, noted that work-life balance policies should not rely entirely on telework, since such work arrangements do not necessarily entail greater autonomy with regard to working time. Similarly, some union representatives warned of the risk of bias and its impact on teleworkers' opportunities for promotion, especially given the prevailing value of presenteeism in mainstream managerial culture. Lastly, some trade unionists stated that one of the major challenges to the collective regulation of the right to disconnect is to prevent the extension of an 'always-on' culture from becoming a new aspect of gender discrimination. This is in part because women often have limited availability to take on additional tasks compared with men, due to family or caregiving obligations.

Summary and indications for policy intervention

As has been shown, there are several drivers of trends in work organisation that mediate the relationship between telework, working time and work-life balance. Overall, a review of the literature and primary data analysis (i.e. surveys and interviews) show that telework can support workers in achieving better work-life balance if:

- Employers dedicate greater efforts to preventing the spread of unpaid overtime and extended availability by making changes to the organisation of working time practices and the distribution of workload;
- Employers and managers dedicate efforts to removing the stigma that surrounds flexible working for caregiving or for other non-job-related purposes;
- Workers learn to develop clear strategies to manage the boundaries between work and private life;
- Normative and cultural views concerning work-life balance and gender (in general and in the workplace) are re-shaped so that gender imbalances in family responsibilities decrease; and
- Employers address the spread of a culture of working long hours by finding new ways to measure productivity and commitment, as well as developing new criteria for deciding promotions.

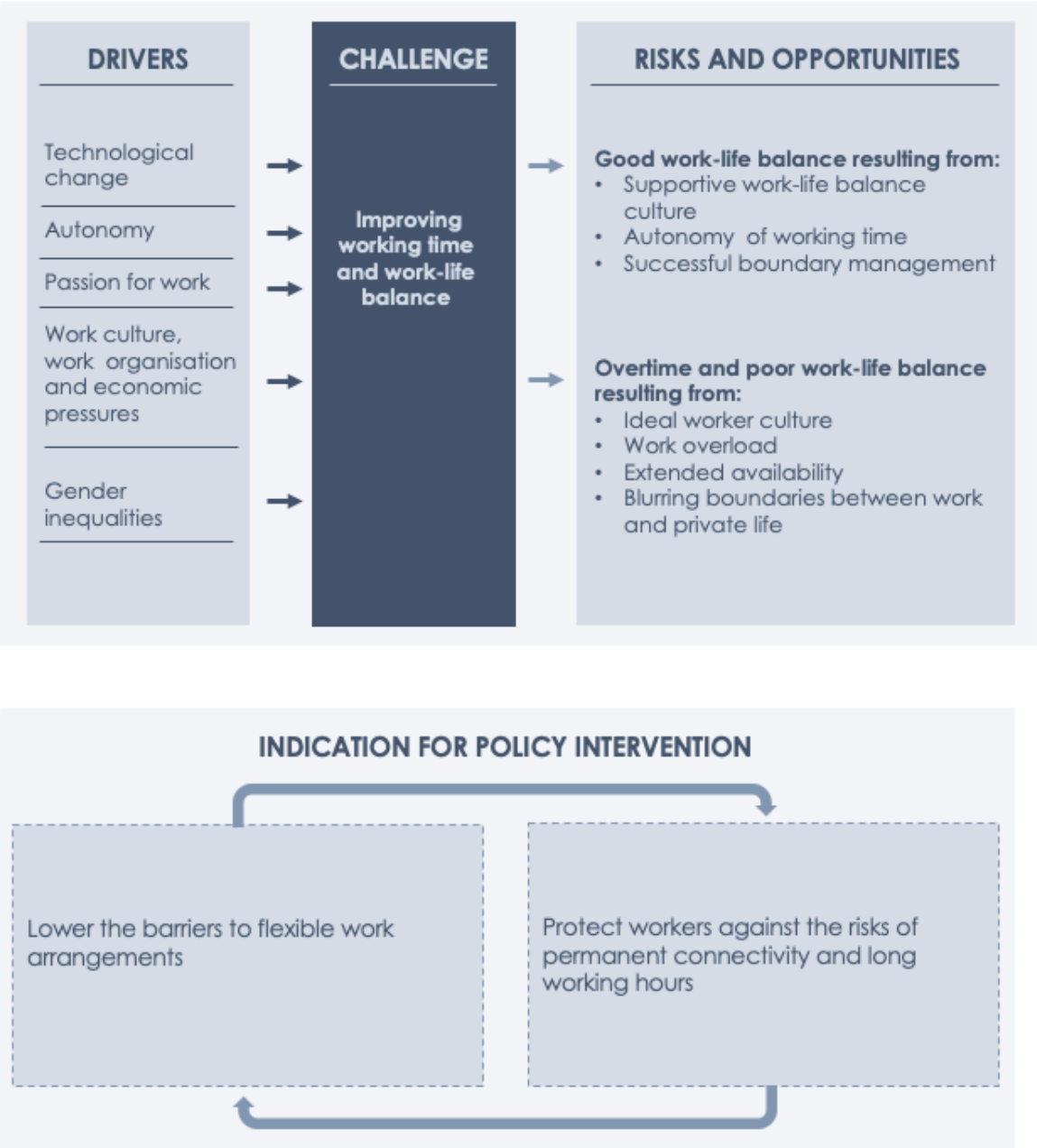
In line with these findings, the **main indication for policy intervention** in this field is to lower the barriers to flexible work arrangements while simultaneously protecting workers against the risks of permanent connectivity and long working hours.

The evidence analysed in this subsection indicates that policy intervention can achieve an effective balance between these two outcomes by:

- Ensuring compliance with working time regulation through effective enforcement actions;
- Implementing policy initiatives to support joint efforts by employers and workers to address the potential risks of an ‘always-on’ culture

Figure 2-13 below provides a summary of the key findings of this subsection, including the drivers that impact working time and work-life balance, as well as the main risks and opportunities.

Figure 0-13. Working time and work-life balance: drivers, risks and opportunities



Source: Authors' own elaboration.

2.3.2. Occupational safety and health, including mental and physical health

Occupational safety and health (OSH) is one of the main areas of concern in relation to telework and the right to disconnect. In some ways, increased flexibility of working time and location may lead to improved worker well-being and health. However, teleworking arrangements are also linked to potential psychosocial and health risks (EU-OSHA, 2021b; Eurofound, 2020a).

Psychosocial risks stem from the way in which work is designed, organised and managed, as well as from the economic and social contexts in which the work and the individual are situated. These can result in increased levels of stress, which in turn can lead to mental and physical impairment (EU-OSHA, 2021b). The main factors that can increase or reduce

workers' stress are job content, work autonomy, work intensity, working time and work–life balance, social environment, and job security.[20]

The literature suggests that psychosocial risks are the most prevalent health risks associated with telework (Eurofound, 2020a; Oakman et al., 2020; EU-OSHA, 2021b); this view was confirmed in interviews with national stakeholders. According to this information, issues such as anxiety and emotional fatigue were more acute during the pandemic and in the context of lockdown and mobility restrictions.

There is also evidence that some teleworkers are particularly exposed to ergonomic risks, which can cause musculoskeletal disorders (MSDs) and other physical health problems such as eye strain (Anugrahsari et al., 2021; Fukushima et al., 2021; Koohsari et al., 2021).

The surveys of employers and employees conducted for this study show that OSH issues in the context of telework are of high importance for a substantial number of employers and employees. Ensuring the protection of safety and health when working from home is considered one of the three main areas for future improvement by 27 % of the employers surveyed and 34 % of the employees surveyed.

Against this background, this subsection of the report explores the challenges and implications for OSH in the context of telework. It begins by discussing first psychosocial risks and then specific physical health risks. For both dimensions, the report reviews empirical findings (from both primary and secondary sources, i.e. EWCS survey data, as well as interviews with EU experts, national authorities and social partners) regarding the main health problems identified for teleworkers, as well as risk factors and drivers that stem from the way the work is designed, organised and managed. The subsection ends by identifying the main challenges to policy intervention, addressing the topic of OSH as it relates to telework. The main findings of the subsection are then summarised using a graphic visualisation.

Psychosocial risks

Evidence from empirical research shows that employees want to telework, but psychosocial risks must be assessed, and preventative measures must be adopted. Before the COVID-19 pandemic, EWCS 2015 data showed that **anxiety** was more likely to be reported by teleworkers than by those who worked exclusively at their employers' premises (Eurofound, 2020a). Results from empirical research during the pandemic must be taken with caution due to the exceptional health and social circumstances, including mandatory telework for those employees in teleworkable jobs. Having said that, it is worth noting that the most recent data from EWCS 2021 also reveals that teleworkers have suffered higher levels of anxiety than non-teleworkers in the pandemic context, with full-time home-based teleworkers faring the worst. In the 12 months before the survey, the share of teleworkers reporting anxiety was above the national average in all countries except Austria, Czechia, Germany and Sweden (Eurofound, 2022g). The EWCS 2021 survey also shows that employees carrying out teleworkable jobs at their employers' premises record higher scores for well-being than teleworkers.[21] However, these differences are slight, with well-being scores of 65 for those who work at the employers' premises, 64 for occasional teleworkers and 62 for other teleworkers (Eurofound, 2022g).

Empirical research shows that the most significant drivers causing stress and negatively influencing health and well-being in the context of telework are economic pressures that

[20] See 'Psychosocial Risks', https://www.eurofound.europa.eu/topic/psychosocial-risks

[21] Well-being scores range from 0 to 100, with 100 being the highest; below 50 indicates that the respondent is at risk of depression, and below 28 indicates that the respondent has clinical depression.

lead to the intensification of work (including extended availability) and isolation. Research also pays increasing attention to emerging risks linked to non-verbal and information overload encountered in digital work environments (EU-OSHA, 2021b); see further discussion below.

Work culture, work organisation and economic pressures

As described in relation to the challenges of working time and work-life balance, the extension of telework has been identified as part of a more general trend towards **work intensification**, particularly among certain categories of managers and professionals, resulting in part from increasing economic pressures (Felstead and Henseke, 2017; Mullan and Wajcman, 2019). Prior to the COVID-19 pandemic, several studies showed a relationship between work intensity and flexible work arrangements (Mauroux, 2018; Eurofound, 2020a). In the context of the pandemic, EWCS 2021 data has shown that teleworkers have been more exposed to work-related pressure (Eurofound, 2022g).

The expectation of being constantly available to attend to job requests beyond regular working hours is another source of work intensification related to economic and work pressures (EU OSHA, 2021b). In this regard, the study by Brauner et al. (2021) provides an in-depth analysis of types of work availability and well-being in Germany, building on a nationally representative sample. The study identifies three different types of extended availability. Each of these has different implications in terms of health and working conditions, including work-life balance. From this perspective, the study explores differences in unregulated extended work availability, according to contact frequency, expected availability and the perceived legitimacy of requests for employees to be available. Overall, the study highlights the risks to employee well-being that are associated with unregulated extended work availability – particularly when employees perceive these arrangements to be illegitimate. It also points to measures at individual, organisational and political levels that could help to reduce and better manage working arrangements that include extended availability. For individuals, conscious management of one's leisure time or creating times and spaces of 'unavailability' are strategies that can help employees who face demands for availability. Companies should develop transparent guidelines and rules at both company and team levels, as well as building awareness among employees and supervisors. In addition to advocating for the right to disconnect, the authors also suggest paying employees for 'available periods' as a way of increasing the perceived legitimacy of availability.

In the literature, ways of coping with increasing workloads have been identified as factors in worsening the quality of working time arrangements for teleworkers. Exposure to these risk factors intersects with various factors relating to individual jobs as well as personal/social characteristics, which may in turn influence observed health outcomes. The main related factors identified in the available literature are:

- **Autonomy**: this can lead to better health outcomes, because greater autonomy entails a higher degree of control over the length and distribution of working time, according to workers' preferences and needs. However, research consistently shows that workers who presumably enjoy greater levels of autonomy over the organisation of their work are also those who put in more effort, work longer and are more exposed to work-related stress (Mauroux, 2018; Thulin et al., 2019; Eurofound, 2020a; Chung, 2022).
- **Individual characteristics**, such as personal traits and boundary management preferences, have an influence on an employee's experience of extended availability and its impact on their well-being (Büchler et al, 2020; Belkin et al, 2020; Park et al 2020; Thörel et al, 2020; Van Zoonen et al., 2020, 2021; Spagnoli and Molinaro, 2021a; Gadeyne et al 2018). In this regard, the literature stresses that

work-life conflict is a source of stress that tends to be gendered and affects mothers in particular, who report the highest levels of time pressure because they cope with the greatest demands for non-paid work, such as care and housework, especially when they work from home (Thulin et al., 2019; Chung, 2022).

Some interviews with representatives of national authorities, trade unions and, to a lesser extent, employers' organisations, referred to work intensification and longer working hours as resulting from the need to adapt work organisation practices in a short time after the outbreak of the pandemic, with potentially negative outcomes in terms of stress and lack of recovery. Furthermore, interviewees from Cyprus, Finland, Poland and Spain also pointed to the development of more intrusive managerial practices during this period, under which employees who worked from home were expected to be always reachable and available for work.

Isolation

Prior to the pandemic period, the bulk of research into telework was concerned with the risk of isolation and work-related stress (Wang et al., 2021). Feelings of isolation result from an employee's **exclusion from formal and informal communication and information exchanges** in the workplace, as well as **reduced access to social and emotional support** from supervisors and colleagues. In this regard, research findings show that isolation and reduced communication and information exchanges with co-workers and supervisors significantly increase feelings of work overload, role ambiguity and stress, as individuals have to put in more effort and time to address these shortcomings (Weinert et al., 2015). For instance, Weintert et al. (2015) suggest that isolation due to teleworking causes teleworkers to possibly be overlooked, forgotten or rejected when rewards and promotions are handed out. The feeling of being disregarded or overlooked may lead teleworkers to the conclusion that they need to prove themselves, and hence, work longer hours. High-intensity telework increases the risk of professional and social isolation (Spilker and Breaugh, 2021), which in turn leads to emotional exhaustion (Sardeshmukh et al., 2012) and job-related stress (Van Zoonen and Sivunen, 2021; Weinert et al., 2015).

The massive shift towards telework since the outbreak of the pandemic has exacerbated the risk of isolation due to the **prolonged lack of face-to-face interactions** with colleagues and supervisors, which is hard to replicate by virtual means (Carillo et al., 2020; Waizeneger et al., 2020; Parry et al., 2021). Indeed, isolation and lack of communication are identified as some of the main risks to teleworkers' psychological health (Eurofound, 2022g). In a context in which employers and employees express a **preference for hybrid work arrangements** (Criscuolo et al. 2021), the promotion of such arrangements could contribute to reducing the risk of isolation. Indeed, the case studies conducted as part of this study show a preference for hybrid work arrangements, the most common arrangement in the 10 cases analysed being two to three days of telework per week.

The problem of isolation in the context of telework (particularly with respect to full-time telework) was stressed by the ILO expert interviewed:

> *Social isolation is also a huge issue – human beings are not plants or rocks, they don't respond in predictable ways; they're idiosyncratic. Socialisation and personal networks are essential to our well-being – if we're cut off from this, it has a horrible impact on our well-being.* (Interview, ILO expert)

Representatives of national authorities from Belgium, Estonia and Romania provided details of various initiatives aimed at providing guidance and support to companies and employees in handling the risk of isolation. In Romania, employers are legally obliged to ensure that teleworkers meet regularly with colleagues. Similar measures aimed at targeting particularly vulnerable workers were also agreed in a sectoral collective agreement in Belgium, although doubts were raised regarding its implementation. Some interviewees from

Belgium, Estonia, France and Poland who represented trade unions, labour inspectorates and other national authorities suggested that regulation should consider various measures to avoid or reduce the risk of isolation among teleworkers, in particular by limiting the frequency and the intensity of telework in order to guarantee that employees share time in the workplace.

Emerging risks: non-verbal and information overload

Recent research has increasingly focused on the emergence of new risks stemming from **intense virtual team collaboration**. Exposure to these risks is likely to have increased due to the exponential rise in the digitalisation of work organisation and communication practices in the context of the pandemic (Wontorczyk et al., 2022; Rohwer et al., 2022; Chirico et al., 2021; Oksanen et al., 2021; Nagel, 2020).

In particular, research has pointed out the importance of two types of overload related to the pervasive use of ICT. First, in terms of **non-verbal overload**, some studies have analysed the experience of exhaustion due to prolonged exposure to virtual meetings, popularly known as 'Zoom fatigue' (Bailenson, 2021; Bennett et al., 2022; Döring et al., 2022; Kuhn, 2022). Zoom fatigue or 'non-verbal overload' arises from the loss of face-to-face contextual information that helps in framing and understanding information. As a consequence, virtual meetings demand extra non-verbal effort from participants in order to achieve effective communication. This includes, for instance, consciously managing non-verbal behaviours to signal attention or agreement with other users, which also poses a higher risk of being misunderstood compared with face-to-face interactions.

Second, research highlights the risks stemming from '**communication and information overload**' (Lee et al, 2016). This type of overload refers to employees becoming overwhelmed by the need to manage large amounts of information from multiple and overlapping sources (such as e-mail and phone), beyond an individual's processing capacity. This can lead to fatigue and stress due to the need to work longer and faster (Pfatinger et al., 2020; Ingusci et al., 2021; Okabe-Niyamoto et al., 2021; Schmitt et al., 2021; Camacho et al., 2022; Rohwer et al., 2022; Taser et al., 2022).

Interviews with representatives of national authorities and social partners revealed a general **lack of awareness** of these emerging risks. Only one interviewee from a national authority (from Denmark) referred to the specific problem of "video call fatigue." This problem was also highlighted by an expert interviewee from the Joint Research Centre (JRC), who drew a link between the limitations of on-line interactions and a later drop in the rate of teleworking in the post-pandemic context:

> *Through online interaction, people are missing the closeness, non-verbal cues etc. – aspects that make online communication sub-optimal. Social interaction is still much better managed face-to-face than remotely. That's why we predicted a drop in telework after the pandemic. I'd say that the situation that we have now is pretty close to the one we predicted*. (Interview, JRC expert)

Physical health risks

In contrast to psychosocial risks, the impact of telework in terms of physical risks has received much less attention. Moreover, such research has mainly been conducted in the context of more traditional patterns of work-related ICT use, rather than focusing on home-based telework *per se* (Eijckelhof et al., 2013; Taib et al., 2016). Oakman et al. (2020) argue that the relatively low number of studies focusing on the impact of telework on physical health may be explained by the fact that pre-pandemic, most employees worked at home

for limited periods and the use of standard guidelines for office work might have been considered sufficient for managing ergonomic risks at home.

Before the COVID-19 pandemic, Eurofound multivariate analysis of the 2015 EWCS showed that regular home-based teleworkers and highly mobile teleworkers were more likely to report **musculoskeletal disorders** (MDs) in their upper limbs. This association was not found among occasional teleworkers. No association was found between teleworkers and other MSDs such as lower limb problems. Other physical health-related issues reported in the context of telework were **headaches and eyestrain**. Although these health problems are mainly a direct result of ICT use, Eurofound analysis of the 2015 EWCS showed that teleworkers were more likely to report headaches and eyestrain compared with workers using ICT at their employer's premises. This suggests that some factors in the work environment (such as interruptions due to having to attend to multiple requests from different digital channels, constant availability, and high levels of cognitive demands) are more common among teleworkers and contribute to differences in their physical health outcomes (Eurofound, 2020a).

In the context of the pandemic, EWCS 2021 data show that the main physical health issues reported by teleworkers were headaches and eyestrain: around 60 % of employees in telework arrangements reported these health problems, compared with 54 % of on-site workers in jobs with some degree of teleworkability, and 42 % of other on-site workers (Eurofound, 2022g). Evidence about the relationship between telework and MSDs is mixed. Some of the available literature shows that telework negatively impacted musculoskeletal pain. For instance, the study by Moretti et al. (2020) on the impact of telework on a small group of administrative officers in the context of the COVID-19 pandemic (n = 51) points to a worsening of previous MSD symptoms during lockdown. This was mainly attributable to poor ergonomic conditions at home workstations. Most respondents worked on standard kitchen chairs that were not height-adjustable, and none used a footrest during working hours. Both the frequency and the intensity of neck pain were found to increase among workers who used laptops without any height-adjustable support. Other studies, however, have found more positive results regarding this subject. For instance, a study based on a sample of workers (n = 474) at two Spanish universities during the lockdown between April and May 2020 showed a reduction in the prevalence of musculoskeletal pain during the period of telework, partly because the workers increased their physical activity during this period (Rodríguez-Nogueira et al., 2020).

Despite mixed evidence regarding the impact of telework on physical health outcomes, research suggests that **ergonomic risks are higher for teleworkers** than for on-site workers in similar occupations, for at least three main reasons. First, working from home makes any risk assessment or enforcement of health and safety standards, either by the company or by workers' representatives, more complex (EU-OSHA, 2021a; Eurofound, 2022g). Second, as noted in section 2.3.1, telework often entails working longer hours. Third, in research conducted during the pandemic, a substantial number of home-based teleworkers reported that their workspace and equipment at home were inadequate (Carillo et al., 2020, COVID-HAB, 2020; Davis et al., 2020; Moretti et al., 2020). The unexpected and sudden transition to mandatory telework during the pandemic may explain the lack of adequate OSH conditions with regard to workspace and equipment - however, difficulties for implementing risk assessment and enforcing safe and healthy working conditions, including working time conditions, remain. In line with this evidence, and in the context of the increasing prevalence and higher intensity of telework, it is reasonable to expect a higher incidence of physical health issues if these difficulties are not addressed.

The incidence of physical risks in the context of telework was usually mentioned in interviews with national stakeholders in connection with both difficulties in the enforcement of OSH standards in the home office; and differences in employees' living situations and access to suitable work environments at home.

In EU Member States, employers are legally responsible for risk assessment and the prevention of OSH risks to all employees – including teleworkers – in accordance with the OSH Framework Directive 89/391/EC.[22] However, many interviewees acknowledged difficulties in implementing this legal provision in the context of telework, particularly in relation to the issues involved in conducting inspections in private homes. In this regard, Labour Inspectorate representatives from Spain noted that consent from the worker is generally granted in cases where they have filed a complaint, but in other cases, judicial authorisation may be necessary. These issues may raise controversies concerning the employer's liability in the event of a work-related accident. Currently, however, this is not a major problem, and national labour enforcement agencies do not devote special resources to supervising teleworkers' workspaces. One of the national authorities interviewed (who preferred to remain anonymous) reported that it had received 10 reports of accidents that occurred in the context of telework in 2021, and which were reported by the injured employees themselves. In each case, the authority had not undertaken any control or supervision activities to examine the circumstances and causes of the accident. All of the accidents had occurred in private apartments, to which access by labour inspectors is, in principle, impossible. In each case, however, the authority collected information on the status of the post-accident proceedings conducted by the post-accident teams appointed by employers. Another interviewee from a national authority reported that procedures to implement the legal provisions on telework had so far been carried out mainly at employers' premises and consisted of verifying the documents prepared by the employer to comply with general legal requirements on employment. Usually, no checks were performed at the teleworker's home for the purposes of verifying compliance with OSH standards.

Interviews with EU experts also highlighted difficulties in enforcing OSH requirements in home offices as being the main driver negatively impacting the physical health of teleworkers. Indeed, improving enforcement was considered more important than revising the legal framework, which was generally regarded as being sufficient to protect the health of teleworkers. In addition, EU experts stressed the difficulties that companies, particularly SMEs, may encounter in implementing OSH regulations in the context of telework, thus indicating the need to create specific guidelines or mechanisms to support such companies. As one expert from EU-OSHA pointed out:

> *In our opinion, the existing OSH legal framework (including the undergoing revision of some EU directives) is sufficient to protect teleworkers' OSH. It is important though that this legal framework is properly enforced. Sometimes it is difficult for companies to implement these regulations because they are very broad. It might be useful to develop clear guidelines for companies on how this legal framework should be implemented.* (Interview, EU-OSHA expert)

Summary and indications for policy intervention

This subsection has identified several organisational, individual and regulatory drivers mediating the relationship between telework and health and safety outcomes. Overall, the literature and data analysis show that teleworkers' health and safety outcomes could be improved if:

- Hybrid work arrangements are promoted to prevent the risk of isolation;
- Employers dedicate greater organisational efforts and finances to carrying out risk assessments[23] (including psychosocial risks and physical risks related to working

[22] See further details in Chapter 3.

[23] As discussed in Chapter 3, employers are obliged to do this, in line with the OSH Framework Directive 89/391/EC.

away from the employer's premises), as well as adopting preventive and protective measures;

- Organisations develop transparent guidelines and rules for communication, and provide compensation for overtime and extended availability;
- Work is organised to ensure congruence between workload and the number of work hours;
- Employers provide teleworkers with adequate equipment, or fair compensation/reimbursement for equipment purchased by these employees;
- Managers are trained to avoid emerging risks linked to digital communication technologies and to provide better support in the context of telework; and
- Employees increase their participation in risk assessment practices and maintain self-compliance with OSH standards and procedures.

In line with these findings, the challenge of improving the occupational safety and health of teleworkers is closely related to preventing an 'always-on' culture and improving work-life balance, as indicated in subsection 2.3.1.

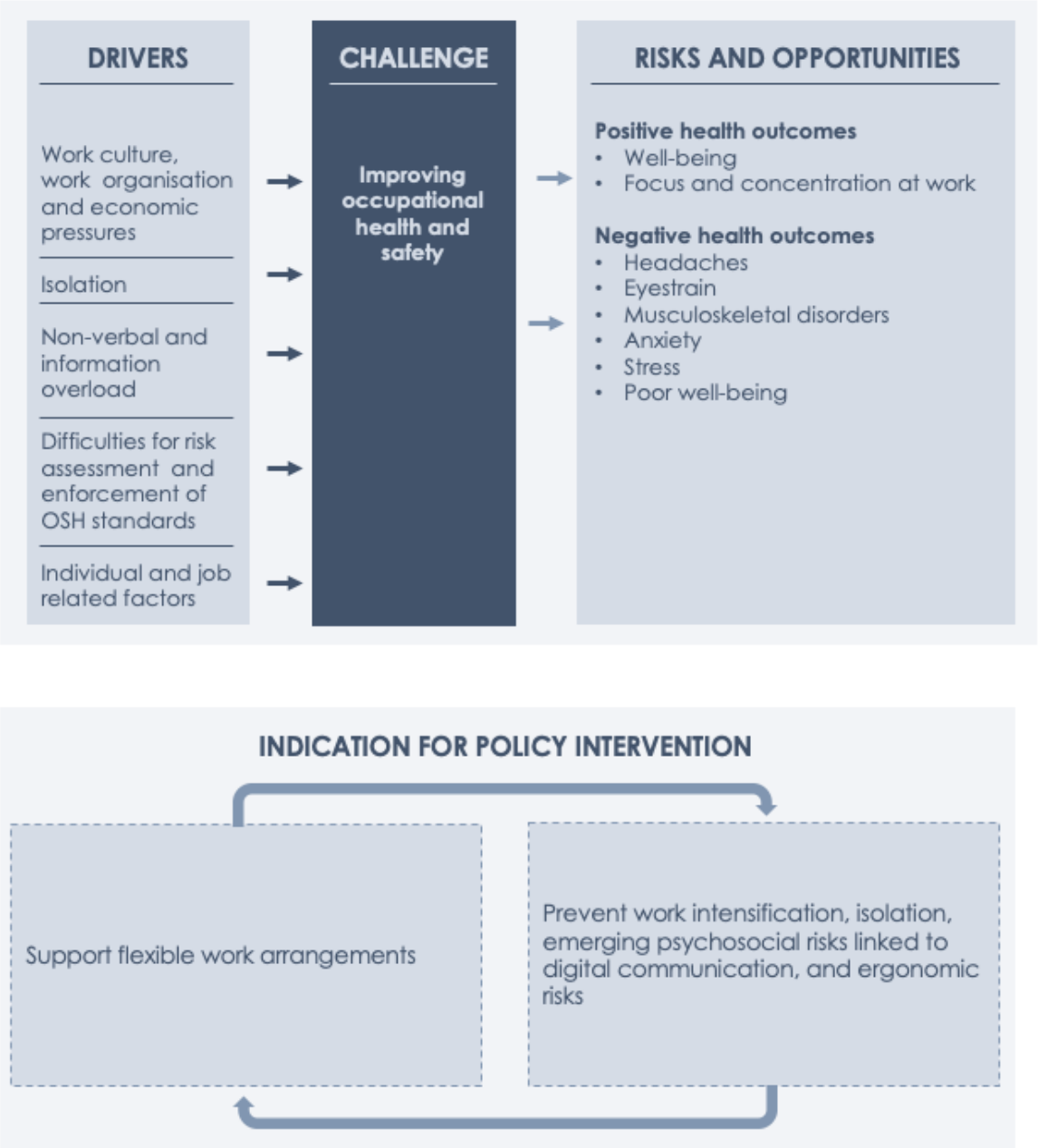
Accordingly, the **main indication for policy intervention** in this area is to promote flexible work arrangements while preventing work intensification, isolation, emerging psychosocial risks linked to digital communication, and ergonomic risks.

The evidence analysed in this subsection indicates that policy intervention can achieve an effective balance between these two outcomes by:

- Promoting and supporting hybrid work arrangements to increase socialising among workers and prevent isolation, while respecting autonomous negotiations between companies and employees regarding telework arrangements;
- Encouraging greater participation among workers and trade unions with regard to risk assessment and OSH policies in the context of telework; and
- Encouraging companies and workers to take advantage of new ICT for the purposes of communication and team coordination, while at the same time preventing the psychosocial risks linked to both information and non-verbal overload.

Figure 2-14 below provides a summary of this subsection's key findings, encompassing the key drivers impacting workers' health and safety at work as well as the main risks and opportunities.

Figure 0-14. Health and safety: drivers, risks and opportunities



Source: Authors' own elaboration.

2.3.3. Employee performance

Employee performance refers to accomplishments and outcomes achieved at work (Anitha, 2014). Employee performance is influenced by many determinants (e.g. organisational policies and practices, employee engagement, etc.) and is complex to measure. For these reasons, empirical findings with regard to this challenge should be interpreted with caution.

Flexible working arrangements and/or telework can have positive impacts on workers' performance because they have the potential to result in 'win-win' situations for both employers and employees (Beauregard and Henry, 2009; Kelliher and de Menezes, 2019; Eurofound, 2020a). As shown in the company case studies, managers remain interested in implementing telework in a post-pandemic context, as it contributes to reducing the costs

of maintaining office space, helps to attract international talents, and can improve the performance of existing employees.

Recent research from Eurofound (2022g) indicates that surveys carried out among employees in various EU Member States suggest that telework has generally improved worker performance and productivity. Employees report being better able to concentrate on work, with fewer disturbances and interruptions from co-workers as well as from the office environment in general. They also report greater discipline during formal meetings, less small talk than in face-to-face meetings, better work environments, simpler organisation of work and leisure time, more flexible working hours, a sense of empowerment/trust in making work-related decisions, and time savings due to a reduction in commuting (Bloom et al., 2015; CCCP, 2020; FAOS, 2020; Swedbank, 2020; Capital Media, 2021; Grossmann et al., 2021; KPMG, 2021; MPSV, 2021). Similarly, an expert from the JRC who was interviewed for this study reported that data from interviews they had conducted suggested there had been no drop in productivity due to the transition to telework during the pandemic.

Interviews with national stakeholders also indicate that individual and company performance has not been impaired by enforced telework during the pandemic. Many companies made an effort to adapt their work organisation processes to hybrid work arrangements and have also seized new opportunities to save costs and attract qualified staff by providing such work arrangements. This is reflected in the growing number of companies opting to restructure their office spaces. One employer representative from **Austria**'s IT sector noted that desk-sharing practices allowed companies to save office costs by maintaining a ratio of seven workplaces to every 10 employees. In 2021, 41 % of companies planned to implement a desk-sharing system, while 44 % said that such a system was already in place. Similarly, a **German** presentative from the insurance sector reported that the largest company in the sector (Allianz) had estimated that it would be possible to spare 40 % of office renting space based on the assumption that teleworking teams do not need to meet as frequently in the office.

Beyond incentives to reduce office costs, employer representatives from **Finland** and another European Member State[24] noted that the increased flexibility regarding the location from which employees work has created new opportunities for people who live outside large cities to get a city-based job, while it has also made some highly mobile professionals more selective about work-related travel. Telework also enables companies to enlarge their recruitment base. One employer representative from **Portugal** pointed to the advantages of teleworking in terms of tackling staff shortages in the call centres sector, a rapidly growing sector that currently accounts for nearly 2 % of all employment in the country. Similar arguments were raised by two employer representatives, who reported that an increasing number of companies were looking abroad in their search for new talent.

Although recent studies and interviews with employers support a positive association between telework and performance, previous research has also highlighted the complexity of establishing a causal inference between the two variables (Beauregard and Canónico, 2019; Kelliher and de Menezes, 2019). Empirical studies build on diverse aspects such as perceived autonomy, quality of supervisory relationship or job satisfaction as proxies for performance, although their links with performance are by no means straightforward. Furthermore, studies may be ignoring other related effects on individual performance, such as increased work intensification and overtime (Glass and Noonan, 2016). Employees who work from home may simply put more hours into work, either because they have more time than office-based workers (as they do not commute), or because they feel compelled to work harder in return for the flexibility granted by the company, as suggested by 'gift exchange theory' (Kelliher and Andersen, 2010). In addition, there is always a risk of

[24] The interviewee preferred to remain anonymous.

selection bias, since not all employees are granted an equal possibility to work remotely, thus resulting in different estimates (Emmanuel and Harrington, 2020).

Against this background, this subsection explores the challenges and implications for the performance of workers in the context of telework. Although job performance depends on both the individual (personality, experience, abilities, etc.) and aspects of work organisation (communication, evaluation systems, training company policies, etc.), which are themselves mediated by broader institutional and product market factors (Brandl, 2021), this subsection mainly focuses on the dimension of work organisation.

The structure of this subsection is as follows. It begins by discussing the main factors or drivers that can foster or impede improvements in workers' performance in the context of telework (i.e. relating to the intensity of telework, team coordination in the context of hybrid work organisation, managerial control and support, and digital monitoring technologies), as well as highlighting risks and opportunities. The subsection then goes on to conceptualise and identify the main challenges faced, both directly and indirectly, by any policy intervention seeking to address the topic of performance in the context of telework; Figure 2-15 summarises the main findings of the subsection.

Drivers affecting performance in the context of telework

Intensity of telework

Research evidence suggests that a high intensity of telework (i.e. the proportion of total working time that an employee spends working outside their employer's premises) may be detrimental to individual and team performance, due to **decreased performance feedback** and **reduced face-to-face interactions** with co-workers and supervisors. These impacts tend to be more pronounced for occupations that involve higher levels of task interdependence and social interaction (Golden and Gajendran, 2019; Gibbs et al., 2021; Van der Lippe and Lippényi, 2019).

High-intensity telework is also found to have a negative impact on access to opportunities for **professional training**, although research on this topic is particularly scarce (Bjursell et al., 2021). Based on EWCS 2015 data, Eurofound (2020a) found that teleworkers (ICT-based mobile workers) reported greater involvement in formal training than those groups who were always at their employer's premises. However, workers who telework on a regular basis are less likely to be offered training than those who telework occasionally. Differences also exist in terms of occupation: highly skilled professionals who telework enjoy more chances to participate in professional training than clerical teleworkers (Eurofound, 2020a).

The literature also highlights the importance of distinguishing between explicit knowledge transfer strategies (i.e. formal training) and **tacit knowledge**, which is gained through personal experience and is deeply rooted in action and involvement in a specific context (Taskin and Bridoux, 2010). More intense telework is also found to have a negative impact on the relational and cognitive factors that facilitate tacit knowledge transfer within organisations, which are not easily replicated by virtual means (Taskin and Bridoux, 2010; Sewell and Taskin, 2015).

In this regard, some research suggests that hybrid work arrangements, with a maximum of two to three days per week spent working from home, appear to provide the best balance, ensuring face-to-face interaction with managers and co-workers as well as access to tacit knowledge (Beauregard, Basile and Canónico, 2019; Contreras et al., 2020). This finding

partly aligns with employees' wishes as identified in recent surveys, which suggest that employees do not want to come into employers' premises more than two days per week.[25]

Team coordination in hybrid work organisation contexts

The massive shift towards teleworking at the peak of the pandemic raised new questions regarding how social and professional relationships among colleagues and supervisors are affected by remote work, including hybrid work organisation contexts. Recent publications have focused in particular on the challenges and implications of **new forms of virtual team collaboration and communication practices** (Chai and Park, 2022; DeFilippis et al., 2020; Criscuolo et al., 2021; Gibbs et al. 2021; Kircullen et al., 2021; Ma et al., 2021; Mercier et al., 2021; Shockley et al., 2021a; Smite et al., 2022; Yang et al., 2022a, 2022b). The main insights from this literature can be summarised as follows:

- **Virtual tools** offer new possibilities for effective team cooperation between remote workers, but also have potential drawbacks. In addition to 'information overload' and 'non-verbal overload' (see subsections 2.3.1 and 2.3.2), teamwork may be more time-consuming and may entail an increased number of virtual meetings and virtual communications, slowing the pace of work and potentially affecting team performance.
- **Line managers** play a pivotal role in the coordination of virtual teams, which require new approaches to overcome potential negative impacts that include adequate management of virtual communication practices in order to reduce related overload and stress.

Some interviewees highlighted the need for teams to agree upon solutions that best suit the nature of their tasks and workflow. A union representative from **Denmark** stated that their organisation is becoming more focused on developing polices aimed at finding a balance between face-to-face meetings to boost team cohesion and maintaining the flexibility enabled by remote working arrangements. Results from survey-based research carried out by the **Finnish** Institute for Occupational Health, quoted by the country's national representative in an interview. also supported the fostering of self-regulation practices among remote working teams (Kirsikka and Tuomo, 2022)

In interviews, many employer representatives also stressed the role played by line managers in preserving 'corporate culture', particularly for new employees:

> *It won't be a company if everyone sits at home. So, what's the difference of having a bunch of self-employed people? The identity of any business is built by those who work in it. The companies I work with will still have their workplaces and, in agreement with their boss, they will find days when they can work remotely.* (Interview, employer representative, Sweden)

> *HR managers will have the challenge of workers staying at home, but trying to make them feel like a community. Different departments will have different identities. After all, workers not only work for money but also for the idea. So, how do you create an idea, when the worker does not go to the office every day?* (Interview, employer representative, Germany)

[25] See McKinsey "What employees are saying about the future of remote work,", available here: https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/what-employees-are-saying-about-the-future-of-remote-work

Changes in managerial control, monitoring, surveillance and support

Managerial control is an essential dimension of management and work organisation policies. Generally, the literature on management control makes a distinction between:

- **Behavioural control**, which aims to direct workers and specify what needs to be performed, in what order and at what time, and with different degrees of accuracy, through the prescription of tasks, detailed instructions and frequent monitoring.
- **Output control**, which focuses on evaluating workers' activities and performance, and monitoring whether targets are achieved (Wood, 2021; Kellogg et al., 2020; Ball, 2021).

Before the pandemic context, the same monitoring techniques and performance measures tended to be used for both teleworkers and in-office workers, but with different emphases. Teleworkers experienced a greater emphasis on output measures compared with workers who were present in the office, who experienced a similar emphasis on both output and behavioural measures (Ball, 2021). Teleworkers therefore felt a greater pressure to meet performance objectives than on-premises workers (Ball, 2021). In addition, output controls were seen by managers as being preferable for teleworkers because they allowed a degree of autonomy over how the teleworker completes the task while still allowing for a degree of employer control (Ball, 2021). Indeed, clear outcome measures can reassure managers who are concerned about losing direct control, in particular of workers who are not in managerial or highly skilled positions (Lott, 2015; Sewell and Taskin, 2015; Chung 2019; Magnusson, 2019; Ono, 2022; Sostero et al. 2020). However, output control can also give rise to the risk of work intensification (Sewell and Taskin 2015). With regard to this, social and managerial support has been found to be crucial for teleworkers, as it can ameliorate some of the negative effects incurred by monitoring (Groen, Van Triest, Coers and Wtenweerde, 2018).

Research is not yet conclusive as to whether a shift towards more behavioural forms of control over teleworkers has been observed since the start of the COVID-19 pandemic. According to a recent Eurofound report, existing evidence at national level shows that in general, the monitoring of work performed by teleworkers did not increase noticeably during the first months of the pandemic, and was not widespread (Eurofound, forthcoming b). However, anecdotal evidence suggests that in some countries there was an increase in the use of managerial control measures to keep track of teleworkers' behaviour as well as their output. In a Hungarian online survey on telework conducted between March and April 2020, 36 % of respondents said they had communicated with their bosses more frequently since the start of the pandemic, which they attributed to their managers' desire to maintain control (Bakonyi and Kiss-Dobronyi, 2020). Another Spanish study shows that the main methods used to manage and monitor telework during the pandemic were supervising objectives and results (46 %); calls, messages and e-meetings with superiors (28 %); and calls, messages and e-meetings with co-workers (16 %) (Molina et al., 2020). Qualitative research conducted in France, Spain and Italy during the first months of lockdown found an increased frequency of virtual meetings and communications regarding the timing and execution of tasks, which were aimed at restoring supervisors' control over workers in medium-skilled jobs (Fana et al., 2020). The survey of employees conducted as part of this study shows that 15 % of employees surveyed agree or strongly agree that they are exposed to intrusive control and surveillance – this share was lower among those respondents who teleworked (11 %) compared with those respondents who worked on-site (26 %).

Some studies have also shown that **authoritarian management styles** during the period of mandatory teleworking due to COVID-19 had a negative impact on performance. Such management styles were associated with higher levels of cognitive demands and increased pressure to continue working beyond normal working hours, as well as limiting recovery time between working periods. These resulted in emotional exhaustion (Dolce et

al., 2020). Workers' perceptions of authoritarian management styles can also be negatively affected by the intensity of telework. Research conducted by Spagnoli et al. (2020) on administrative staff at an Italian university showed that full-time teleworking may exacerbate workers' perceptions of unilateral decision-making by managers, whereas this perception tends to be mitigated in hybrid arrangements because managers and employees meet regularly in the workplace.

In terms of **managerial support** in the context of the pandemic, evidence is also mixed. Some literature shows that in general, employees felt insufficiently supported by their superiors and employers (Raišienė et al., 2020; Rupčić, 2021). Other studies, however, have found more positive results. For instance, a Dutch survey found that the social support employees received from their superiors did not decrease during the pandemic, and nine out of ten teleworkers felt supported by their superiors (TNO, 2021). Data from the EWCS show that in general across the EU-27, a large majority of teleworkers (over 70 %) felt supported by their supervisors, with no relevant differences in comparison to on-site workers in similar positions.

The results of the employee survey conducted as part of this study align with this finding. Among those surveyed, teleworkers reported having good, supportive and trusting relationships with their supervisors more frequently than on-site workers. As explained above, feelings of being subjected to intrusive control or constant surveillance are more widespread among on-site workers than among teleworkers.

In interviews, national stakeholders suggest that the uptake of telework by companies has favoured a shift from direct supervision towards an output-oriented performance management system:

> *In the insurance sector, we see that the emphasis is shifting from control to supervising the output of the employees. We are changing from an obligation of means to an obligation of result. I think this is an evolution that goes hand in hand with telework: employers give more responsibility and trust, but there should also be something in return* (Interview, employer representative, Belgium)

> *There's more trust in employees now, but what's brought more to the fore, is the employees need to have a clearer role and responsibilities. They need to measure performance based on delivery rather than have a bum on a seat. If you're a manager without clear sets of deliverables and deadlines, it might be easier to manage people sat near them. (*Interview[26], employer representative)

Digital monitoring technologies

Recent research is paying increasing attention to developments in algorithmic technologies (Kellogg et al., 2020; Wood, 2021) or, more specifically, digital monitoring systems (Ball, 2021). The development of data-driven technologies over the last decade has provided employers with a wider range of tools for worker control. These differ substantially from traditional monitoring practices, in relation to which contemporary labour regulations have been enacted (Aloisi and De Stefano, 2022; Kellogg et al., 2020). Remote surveillance programs have grown particularly invasive since 2020, often going beyond traditional measures such as keystroke logging. While evidence for this is largely anecdotal, several news reports have highlighted the intrusiveness of many forms of monitoring software – from an employer's constant usage of employees' laptop camera for surveillance, to the use by employers of artificial intelligence in monitoring software to make hiring and firing

[26] Interviewee preferred to remain anonymous.

decisions (Corbyn, 2022). The expert interviewee from the JRC also confirmed that the use of algorithmic management control had increasing during the pandemic.

According to Ball (2021), four targets of employee digital surveillance have been identified:

- **Thoughts, feelings and physiology**: monitoring directed at individual attitudes and biometric data (e.g. identifying emotional patterns using AI);
- **Movement and location**: monitoring directed at the location and movement of the employee and the organisation's property (e.g. vehicles or devices);
- **Task**: monitoring directed at the amount of work completed and/or how well it has been completed, including behaviours as well as outputs; and
- **Relationships and reputation**: monitoring directed at workers' social connections (e.g. customer and peer ratings or social network monitoring).

According to Ball (2021, p. 5), these new digital monitoring systems have enabled "surveillance to extend beyond the realm of performance management and into the thoughts, feelings and behaviours, location and movement, and professional profile and reputation of the employee."

Quantitative research still shows a relatively low **prevalence** of the use of digital technologies for management control purposes. The main available source providing relevant statistics is the fourth edition of the European Company Survey – ECS (Eurofound 2019), which surveyed 21,869 establishments across the EU-27 and the UK in 2019. In the survey, 24 % of the EU-27 respondents reported using data analytics for 'process improvement only'; 5 % reported using them to monitor employee performance; and 22 % of respondents reported using them for both purposes (ibid., p. 25). Overall, 51 % of establishments reported using data analytics for some purpose (ibid). There are, however, significant differences between countries, with the use of data analytics being more widespread in Central and Eastern European countries. A large part of cross-country variation is explained by company-specific factors and the market context in which firms operate (Brandl et al., 2022). According to Brandl et al. (2022), ECS data show that the use of data analytics increases with organisation size and the number of hierarchical levels. In addition, firms operating in highly competitive markets are more likely to use such technologies. However, the authors also find some evidence that the use of data analytics is higher in countries with less strict regulations on data and privacy protection and wider managerial prerogatives (Brandl et al., 2022).

A handful of national level surveys on employee monitoring also exist – most notably, the 2018 Finnish Quality of Work Life Survey (Eurofound, 2020a, p. 27). In this survey, 54 % of respondents felt that the "digitalisation of work had contributed to increased workplace monitoring" (ibid.) Almost all employee respondents reported having their work monitored in some way: 17 % reported that their employer used monitoring software of some kind, while 13 % reported being monitored via cameras (ibid.)

Since the start of the COVID-19 pandemic, no EU-wide surveys have been carried out to track employee monitoring more broadly, nor to focus on the monitoring of teleworkers in particular. However, worldwide trends and statistics indicate a significant uptake in the use of monitoring software, especially after many workers were obliged to work from home following the pandemic shutdowns beginning in March 2020. In June 2020, just 16 % of employers worldwide reported using monitoring software for their remote employees, while another source suggests that this number had risen to 78 % by May 2021 (ExpressVPN, 2021; Sorensen, 2022). Similarly, Migliano and O'Donnell (2022) argue that the global demand for employee monitoring software increased by 80 % in March 2020 compared with the year before, with demand in April being 65 % higher than in 2019. According to Ball (2021), search engine queries asking how to monitor remote workers increased by 1,705 % in April 2020 and 652 % in May, compared with the same months in 2019.

There is also anecdotal evidence at national level regarding the use of software-based monitoring tools to track employees during the pandemic. In the Netherlands, research among 1,200 home-based workers shows that around 13 % of them were aware that they were being monitored by their employer using software. In addition, 8 % of respondents stated that their employer frequently checked whether they were available/connected via email, chat or other methods of communication (CNV-onderzoek Thuiswerken, 2021). In a survey of 451 Spanish teleworkers, 64 % of respondents claimed that their organisations had installed remote work management mechanisms, and feared being supervised remotely using specific real-time productivity metrics or other monitoring software (Capgemini Research Institute, 2020).

New digital technologies offer opportunities for more **efficient monitoring** of flexible working arrangements and telework. However, they also entail significant risks in terms of **workers' right to privacy and the protection of their personal data, as well as working conditions and overall well-being**. Indeed, when discussing opportunities and risks, there are marked differences across the social sciences in the way scholars frame new management policies enacted via digital or algorithmic technologies:

- Human Resource management (HRM) scholars offer a common narrative on digital or algorithmic technologies as offering opportunities for increased efficiency (Edelman and Geradin, 2016; Sundararajan, 2016)
- Labour process theorists see organisational control as a "contested terrain": managers implement new production technologies and control mechanisms that aim to maximise the value created by workers' labour, while workers try to resist and defend their autonomy. They also stress the negative impacts of such technologies on working conditions, such as longer working hours, increased work intensity and higher exposure to psychosocial risks (Kellogg et al., 2020; Wood, 2020).
- Pluralist or institutionalist scholars highlight how management and organisation via digital control will be driven by both external factors (i.e. competitive environment, national institutions and regulations, etc.) as well as company or organisational factors (i.e. size, number of hierarchical levels, etc.) (Brandl et al., 2022).

It is worth highlighting that research on the ground has not provided strong evidence for the positive **impacts of digital monitoring** on employee performance (Kalischko and Riedl, 2021). For instance, Clary (2022) found that employees showed "steady performance patterns" when being monitored, while others have suggested that monitoring increased employee productivity (p. 20). Generally, research suggests that the impacts of digital monitoring on behaviours and attitudes are moderated by the degree of transparency (i.e. the extent to which employees have information regarding the system in place), as well as the perceived extent of its intrusiveness (Kalischko and Riedl, 2021; Ravid et al., 2022).

Ravid et al. (2022) provide one of the most up-to-date and comprehensive assessments of the impacts of digital monitoring. Drawing on a research meta-analysis covering more than 23,000 workers from 94 independent samples,[27] the authors found that the very presence of digital monitoring systems is associated with increased levels of stress, regardless of the systems' specific characteristics. Most notably, their results point to a **strong association between perceptions of privacy invasion with negative or counterproductive work behaviours**. At the same time, the study finds a positive effect of transparency in mitigating the negative outcomes of digital monitoring. In other words, individuals may have a more favourable view of monitoring systems when their organisations clearly communicate the

[27] Samples identified in each study selected for the review were included separately. If an article reported results obtained from multiple independent samples, each sample was included separately.

reasons for collecting personal information, and when they have some control over the personal information collected.

The surveys carried out for this study show that concerns about a lack of clarity with regard to data protection and digital surveillance are widespread among both employers and workers. Around one-third of all respondents consider achieving greater clarity to be one of the main areas for improvement (35 % of employers; 33 % of employees).

However, drawing on the information gathered from interviews with national stakeholders, it can be argued that the use of digital monitoring on teleworkers is not a major issue on the agendas of social partners and national authorities. Most of these interviewees referred to the EU's GDPR as an effective framework for individual data protection, although some trade union representatives called for more specific rules. For instance, one **German** trade union representative stressed the need to regulate the use of emotional analysis tools in virtual meetings. Legislation in most Member States allows the use of digital monitoring systems based on reasonable and proportionate grounds and with the prior consent of the employees concerned. Moreover, the risk of intrusive monitoring practices has also been addressed in some countries. In **Estonia**, the Data Protection Inspectorate and Labour Inspectorate have drawn attention to forbidden practices (e.g. monitoring employees' computer use, demanding that the microphone and camera are turned on); however, their interventions are mostly aimed at providing guidance to employees and employees, since there is no specific national regulation covering employees' personal data protection in this context. **Poland**'s labour enforcement agency investigated the implementation of such systems and found infringements in the case of less than 3 % of remote workers in 4.8 % of companies (2021 PIP, National Labour Inspectorate Annual Report).

Overall, most interviewees expressed concerns over the potential impact these practices might have on workers' privacy rights, but only a few references were made with regard to their potential contribution to improving performance:

> *I honestly think that such systems are counterproductive. Lack of autonomy is one of the biggest reasons for burnout because employees feel they have no control over what they do. I think you can control and supervise in other ways. Just because you are in the office doesn't mean you work more than at home. One can also read the newspaper at the office.* (Interview, national authority representative, Belgium).

Summary and indications for policy intervention

This subsection has identified several drivers relating to work organisation that mediate the relationship between telework and performance. Overall, the literature review and data analysis show that telework can improve workers' performance and productivity if:

- It is based on hybrid work arrangements that acknowledge the importance of face-to-face interaction with managers and co-workers, which in turn facilitates teleworkers' access to tacit knowledge and encourages socialising among workers both on- and off-site;
- It relies on managerial approaches which combine output control methods that allow a high degree of work autonomy for teleworkers, with managerial support measures to prevent work intensification; and
- It avoids the use of digital monitoring/surveillance systems (as they are deemed largely ineffective), or at least ensures that they are implemented transparently through the provision of information and communication with workers and/or their representative bodies, in line with transparency obligations under the GDPR.

In line with these findings, the **main indication for policy intervention** in this field is to support flexible work arrangements and managerial approaches that are effective in

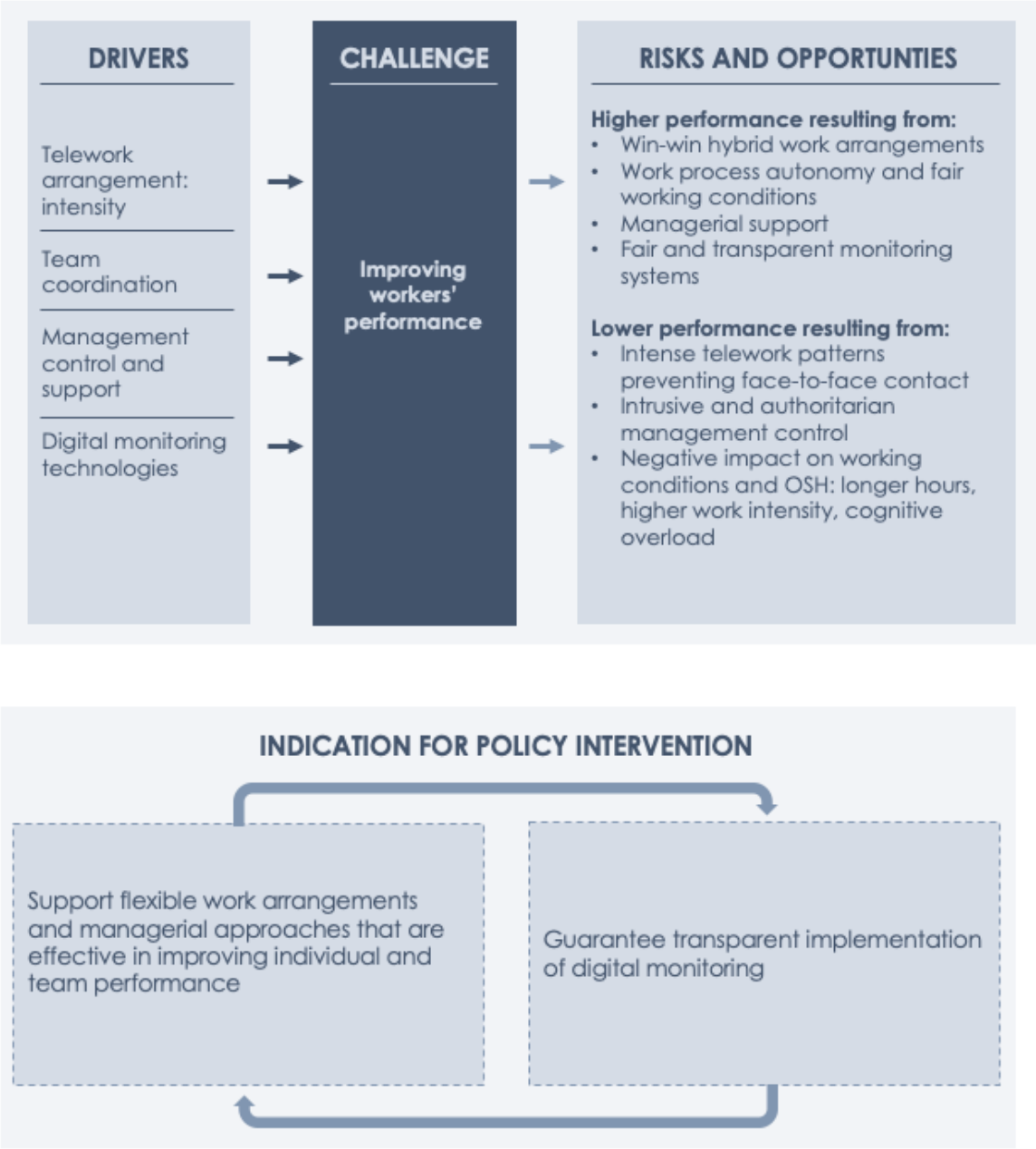
improving individual and team performance, including the transparent implementation of digital monitoring.

Evidence analysed in this subsection indicates that policy intervention can achieve an effective balance between these outcomes by:

- Promoting and supporting hybrid work arrangements while respecting autonomous negotiations between employers and workers regarding telework arrangements; and
- Supporting employers' need for efficient coordination, monitoring and evaluation of workers' performance, while guaranteeing workers' right to privacy, protection of their personal data, and fair employment and working conditions.

Figure 2-15 below provides a summary of the subsection's key findings, encompassing the key drivers that impact workers' performance, as well as the main risks and opportunities presented by telework.

Figure 0-15. Performance: drivers, risks and opportunities



Source: Authors' own elaboration.

2.3.4. Equal treatment and non-discrimination

Previous subsections have discussed the opportunities and challenges presented by telework and flexible working time arrangements in terms of managing working time, work-life balance, well-being and performance. This subsection on equal treatment and non-discrimination turns its attention to the potential contribution that teleworking arrangements can make towards building more **inclusive labour markets and societies** as a whole. Inclusiveness is addressed from an intersectional approach that encompasses class, gender, race, ethnicity, migrant background and health inequalities (among others). The subsection starts by presenting the main drivers that may either foster inclusiveness or reinforce bias and social inequalities, focusing in particular on work organisation practices.

Building on this analysis, the main policy challenges are identified, with Figure 2-16 summarising the main findings.

Drivers affecting equal treatment and non-discrimination

Work culture and work organisation

As discussed in subsections 2.3.1 and 2.3.2, the prevailing work culture within a company is crucial to explaining differences in the way telework and flexible working time arrangements are implemented, and the subsequent impacts these have on working time, work-life balance and well-being. This subsection focuses instead on how cultural norms and work organisation practices can either foster or hinder inclusiveness.

Most empirical research on the potential inclusiveness benefits of flexible working arrangements has addressed the issue in terms of **gender and social class inequalities**, and also indicates that it presents risks and challenges. Flexible working arrangements may increase **access to employment and opportunities for career progression** for workers with caregiving responsibilities. This impact is especially important when care demands are most acute, as is the case with motherhood. Quantitative, longitudinal UK household panel data study from Chung and van der Horst (2018) shows that women who were able to work from home were significantly more likely to maintain their working hours and not reduce them after childbirth – a common occurrence in the UK. Mothers reducing their working hours and moving into part-time jobs has been seen as one of the most important factors explaining the persistence of the gender pay gap in the UK (Costa-Dias et al 2018). Similar evidence is provided by Fuller and Hirsh (2018), based on data from the Statistics Canada's WES, a linked employer–employee longitudinal dataset from 1999 to 2005. Their study analyses how temporal and spatial flexibility moderate motherhood wage penalties, and how this varies according to women's educational levels. Their results show that working from home reduces wage gaps for most educational groups, while flexible work hours also reduce mothers' disadvantages, especially for the university-educated. The positive effect of flexibility operates mainly by reducing barriers to mothers' employment in higher-wage roles, although wage gaps within establishments are in some cases also diminished. In a similar vein, Lott (2020) shows that flexible working time arrangements contribute to mothers being able to make a quicker return to the labour market after childbirth.

As discussed in Section 2.2, however, the provision of specific 'family-friendly' flexible working arrangements has been mainly conceived of as 'accommodations' for the individual and their work-life balance needs, resulting in stigma, discrimination and low uptake (Chung, 2022). Williams et al. (2013) define this **flexibility stigma** as the discrimination workers face when using flexible working arrangements to manage family responsibilities, rooted in traditional gender stereotypes and social class inequalities. From this perspective, teleworking may hinder inclusiveness in various ways, by:

- Limiting the **wage and career progression** of workers using such working arrangements. Several studies show that this may be the case for teleworkers, although the effect is moderated by factors such as gender, parental status and telework intensity. For instance, Wulff and Bernon (2022) analyse the impact of telework on wage premiums/penalties based on pre-pandemic data from 2017 to 2018 in the US. After controlling for individual and job characteristics, the study finds that mothers who work most days from home experience a wage penalty compared with mothers who work at their employer's premises. Women without dependent children who occasionally work from home earn more than their office-based counterparts. In contrast, fathers who telework earn more than fathers in office-based jobs, regardless of the intensity of their telework. Similar evidence is provided

by the longitudinal study by Glass et al. (2016) on telework and the earning trajectories of women and men from 1989 to 2008 in the US.

- Limiting the **provision of flexible working arrangements** in women-dominated workplaces and occupations. Many studies show that workplaces and occupations in which women are more prevalent may also be those in which flexible working arrangements are more limited (Chung, 2019; Magnusson 2021). This is largely due to embedded gender stereotypes on the part of management, leading to a lack of trust that workers will maintain their performance levels when working autonomously (Chung, 2022). Due to gender segregation in the labour market, this is a risk that especially affects workers in low-status and/or low-paid jobs.
- Limiting the **uptake of flexible work arrangements,** due to workers' fears of missing out on career opportunities. Lott and Abendroth (2020) show that this impact is clearly gendered and is linked to prevailing work culture. Their study aimed to analyse to what degree cultural barriers (besides technical barriers) contribute to the non-uptake of telework, based on the second wave (2014-15) of the German Linked Personnel Panel (LPP). The results show that because men work more often than women in fields in which telework is technically unfeasible, they are more likely not to use telework, due to its perceived unsuitability for their job. Women, independently of the status of their positions, are more likely to forgo telework due to perceived cultural barriers (i.e. flexibility stigma). In workplaces with a pronounced 'ideal worker culture', workers are more likely to forgo telework because they perceive that there are cultural barriers (e.g. being perceived by managers as being less 'passionate' about work, being passed over for promotion opportunities). In contrast, company-level support for work-life balance diminishes the non-uptake of telework that results from perceived cultural barriers. Similar evidence is provided by other studies (e.g. Munch, 2016; Thébaud and Pedudlla).

Chung (2022) provides strong evidence that prior to the pandemic, telework (among other flexible working arrangements) was mainly used by employers as an incentive to be given in return for achieving performance targets, or as a part of a package of working conditions for higher-status workers to enhance their work productivity and performance. This means that flexible working arrangements have mainly hindered inclusiveness in two ways:

- They have contributed to the extension of an 'always-on' work culture of long hours and extended availability, which in turn reinforces gender and other social inequalities in the labour market; and
- They have been provided to workers in highly skilled/paid occupations and are thus taken up by those in stronger bargaining positions within the organisation.

Nevertheless, several studies show that the **national context** plays a crucial role in reducing stigma and supporting more inclusive flexible working arrangements (Abendroth and Reiman, 2018; van der Lippe and Lippényi, 2020; Lott, 2020; Chung, 2022). Inclusiveness is achieved through the better alignment of employment and societal goals (i.e. well-being and work-life balance) and the extension of equitable and universal flexible working arrangements (Kossek et al., 2005). Chung (2022) notes that work culture, gender norms, generous family policy context, and worker negotiation power based on the strength of trade unions and labour market conditions, all play a part in explaining differing levels of stigma between countries. Chung (2022) encourages national governments to address these imbalances by providing more rights to access flexible working, but also by adopting generous work-family policies, especially those that enable more fathers to take part in caring roles.

The shift to telework during the pandemic provides new opportunities to frame flexible working arrangements in **a more inclusive way**. On the employers' side, the flexibility stigma has decreased; on the workers' side, demands for greater autonomy over when and

where to work have increased (e.g. Barrero et al., 2020; Chung et al.,2020; Criuscolo et al., 2021; Forbes et al., 2021; Abendroth et al., 2022; Aksoy et al. 2022). Evidence from the surveys of employers and employees conducted as part of this study is also clear on this issue. For employers, the main reason for offering telework is that employees enjoy better work-life balance (66 %). From the employees' perspective, preferences are clearly aligned towards having more freedom to set their own working schedule (53 %) and to work from anywhere (52 %).

However, the surveys of employers and employees conducted for this study also provide evidence of risks relating to **potential discrimination and unequal treatment** in connection with telework:

- Nearly a quarter of organisations surveyed which use telework rely exclusively on informal agreements between supervisors and workers (23 %, according to the survey of employers). In a similar vein, around 20 % of organisations rely only on informal agreements to implement the right to disconnect. These informal agreements are a potential source of unequal treatment and bias, compared with formal arrangements at company level (i.e. company policies and agreements signed with workers' representatives).
- Around one-third of employee respondents who teleworked did so because they were requested to do so by their employers. This is an indication that the voluntary aspect of teleworking may be at stake in some cases, especially when companies decide to extend this working arrangement in order to reduce office space and related costs. Such teleworking arrangements may have a negative impact on working conditions, health and performance, and may also hinder inclusion in the workplace.
- Telework arrangements show some gendered patterns. Among employee respondents who teleworked, men enjoyed greater autonomy over their working time than women. Differences were especially marked with regard the possibility of taking time off to attend to private matters (74 % of men, compared with 62 % of women).
- A substantial share of both employers and employees surveyed expressed concerns with regard to discrimination potentially arising from teleworking relationships. The protection of teleworkers from discriminatory treatment is considered one of the three main areas for future improvement by 25 % of employers and 29% of employees.

In this regard, one Eurofound expert noted:

> *Implementing telework arrangements and keeping the right balance between those who telework and those who are not entitled to telework will be important. That's what we are now starting to call the hybrid way, and the question is how you manage that at company level. Also, how to avoid discrimination, how to ensure that work-life balance is taken into account, how to ensure that telework is not treated as a purely individual thing, but is taken into account in collective employment relations* (Interview, Eurofound expert).

Aspects relating to inclusion were also raised by national stakeholders during their interviews. Many representatives of national authorities and social partners stressed the relevance of gender issues in the context of telework. They pointed out that telework can contribute to improving work-life balance while also introducing the risks of an increase in bias with regard to career opportunities, as well as of the unequal distribution of paid and unpaid work.

Some interviewees also noted that a new **'teleworkability' divide** may be emerging between workers, a theme that also emerged from interviews with employers and trade

union representatives from various countries. A **Danish** representative from a service sector trade union put it as follows:

> *In general, we see a tendency where the employees from industries that do not have the opportunity to telework perceive telework as an incredible possibility and they would like to know how they can be compensated for always having to go to work physically. In contrast, the professional groups that have a lot of telework want to be compensated for mostly having to telework and stay at home.* (Interview, trade union representative, Denmark)

In a similar vein, a **French** trade union representative warned of the risk of grievances between white-collar workers who were eligible to telework, and blue-collar workers who were exposed to greater risk of contagion during the pandemic. A union representative from **Slovakia** noted that collective bargaining during the pandemic had already resulted in additional compensation (either financial or in the form of additional days off) being given to essential workers who had no opportunity to avoid their physical presence at work. In a country from Northern Europe,[28] interviews with both employers and union representatives in the hospital sector referred to the challenge of how to handle the uneven distribution of telework opportunities across different occupational groups. This challenge was addressed through the definition of transparent and objective criteria for different staff positions to access telework.

Inclusive teleworking – costs and workstations

Qualitative evidence gathered in the context of the pandemic shows that an important driver of inclusive teleworking is **material support from employers**, including the provision of ICT and office equipment, as well as compensation for costs incurred when working from home (EU-OSHA, 2021b). In contrast, the **lack of a suitable space to work at home** was seen as a major problem during the pandemic, particularly for young people and workers from low socio-economic backgrounds (Cuerdo-Vilches et al., 2021; EU-OSHA, 2021b).

Interviews with national stakeholders show that the **compensation of costs** is gaining importance within the current context of the high prevalence of telework – a factor that is also due to rising energy prices. Many trade union representatives are concerned that telework might be used by some companies to transfer part of these costs on to workers. Some employers' representatives, meanwhile, argue that workers should not expect full compensation for such costs, since telework is a voluntary arrangement and these costs are often offset by savings in commuting and other related costs such as meals. Indeed, the surveys carried out for this study show that the compensation of costs is one of the most important areas for improvement for a large share of both employees (62 %) and employers (46 %).

Interviews with national stakeholders illustrate the complexity and controversies surrounding the implementation of new regulations and agreements on the compensation of costs. In the **Netherlands**, a new working from home allowance (*thuiswerkvergoeding*) was introduced in January 2022 to cover additional costs incurred by employees working from home on a regular basis (i.e. gas, electricity, water). These payments by employers are to be negotiated via collective agreements. In **Austria**, legislation provides that companies should help employees to set up their home office infrastructure, but both representatives of social partners who were interviewed indicated that the distribution of the costs such as energy and other supplies is not clear. Similarly, one employer representative from Central Europe (who preferred to remain anonymous) expressed the need for greater clarity in legislation about the type of costs to be covered and the share that should be

[28] Both country representatives preferred to be anonymous.

reimbursed by employers, arguing that some margin should be left for individual agreement. One employer representative from Southern Europe stressed that legal provisions in this regard are unclear and subject to different interpretations. The interviewee stated that the form for compensation should be defined at company level, since many companies could agree on some form of compensation that does not entail additional wage costs. In contrast, trade unions are pushing for fixed fees to be defined in sectoral collective bargaining rounds to cover teleworkers' costs. A national authority representative from **Bulgaria** explained that while telework has led to some increases in working hours, there had been few complaints about this. Between 1 January 2022 to 30 September 2022, across the entire country, the Labour Inspectorate received only 15 complaints and enquiries, most of them concerning employers' obligation to pay for employees' internet, electricity or other consumables when teleworking.

With regard to costs, one emerging issue is the **potential trade-off between working from home and wages**. The Global Survey of Working Arrangements by Aksoy et al., (2022) carried out in 27 countries, aims to capture workers' willingness to pay for working from home. It estimates that workers value the option of working from home 2-3 days per week at 5 % of pay, on average, with higher valuations among women, people with children and those with longer commutes. In reality, the practice of paying teleworkers less is rare,[29] but a recent study by Barrero et al. (2022) in the US found that almost 40 % of companies surveyed were using telework to contain wage-growth pressures, and a similar number intended to do so in the coming year. This practice was found to be more prevalent among larger companies and those in the finance and insurance, real estate, information, and professional and business services sectors. Barrero et al. (2022) conclude that there is clear evidence that this wage-growth restraint mechanism associated with the rise of telework is operating in the US economy. They estimate a cumulative wage-growth moderation of 2 percentage points over two years.

A second driver that could make telework more or less inclusive is the **availability of affordable workplaces** for those workers who lack adequate conditions for working from home. According to the survey of employees conducted by this study, 12 % of respondents who did not telework cited poor conditions at home as a reason for not teleworking. Research shows that the high growth in the number of coworking spaces in the decade prior to the outbreak of the pandemic provided support for the development of coworking communities, mainly among self-employed workers in the knowledge and creative industries (Akhvana, 2021; Howell, 2022). Research into coworking communities tends to adopt an optimistic view that emphasises shared resources, collaborative practices and the capacity to foster knowledge transfer, innovation and entrepreneurship. However, some authors have also warned about coworking communities as urban enclaves of the informal economy, or rather as an expression of self-supportive practices in response to precarious working conditions (Avdikos and Kalogeresis, 2017; Merkel, 2019).

In line with these findings, demand for alternative workplaces may be on the rise among employees in the context of the higher prevalence of telework. Policies supporting 'work hubs' and/or community working spaces could be one solution[30].

[29] In May 2022, a top law firm based in the UK attracted worldwide media attention when it was announced that employees could work full time from home on the condition that they take a 20 % pay cut. The main rationale was that workers would be able to move to lower cost areas. The firm did not expect many employees to take up this option, and maintained hybrid work (2 days per week) without pay cuts (see https://www.theguardian.com/business/2022/may/02/staff-london-law-firm-can-work-from-home-full-time-if-they-take-20-per-cent-pay-cut).

[30] For instance, see https://www.workanywhere.org/research-policy

Inclusive telework – people with disabilities

Research points to the potential benefits of telework and flexible working time arrangements in supporting access to employment and career opportunities for workers with disabilities, as well as workers with caregiving responsibilities (Igeltjørn and Habib, 2020). However, Eurofound (2022c) notes that there is no evidence that telework during the pandemic has resulted in an **increase in participation in the labour market and/or improvement in working conditions** among people with disabilities and their families (i.e. caregivers) in the EU. As teleworking arrangements become more normalised and prevalent, the impacts of such working arrangements on social participation for persons with disabilities will require further study.

In the UK, a study by Taylor et al. (2022) highlights that flexibility and choice over location and working hours can be crucial to enabling people with disabilities to enter, remain and progress in a career. The shift to telework has provided an opportunity to overcome outdated workplace cultures that have led some workers with disabilities to feel left out or isolated while working from home, particularly when most colleagues were working at the employer's premises. However, the report also points out that a lack of essential support for persons with disabilities has, in some cases, limited progress in creating opportunities for employment and career progression. In the US, Schur et al. (2020) show that telework can increase employment opportunities for workers with disabilities, although they face similar wage gaps compared non-disabled workers, irrespective of whether they work at home or on-site. This finding indicates that telework does not necessarily entail changes in the types of jobs that are accessible to them. Pre-pandemic research has also warned of the risks of implementing working-from-home arrangements not as a voluntary option but as a strategy by employers to save costs by reducing the need to make reasonable adjustments to workplaces to accommodate people with disabilities (Moon et al., 2014).

Summary and indications for policy intervention

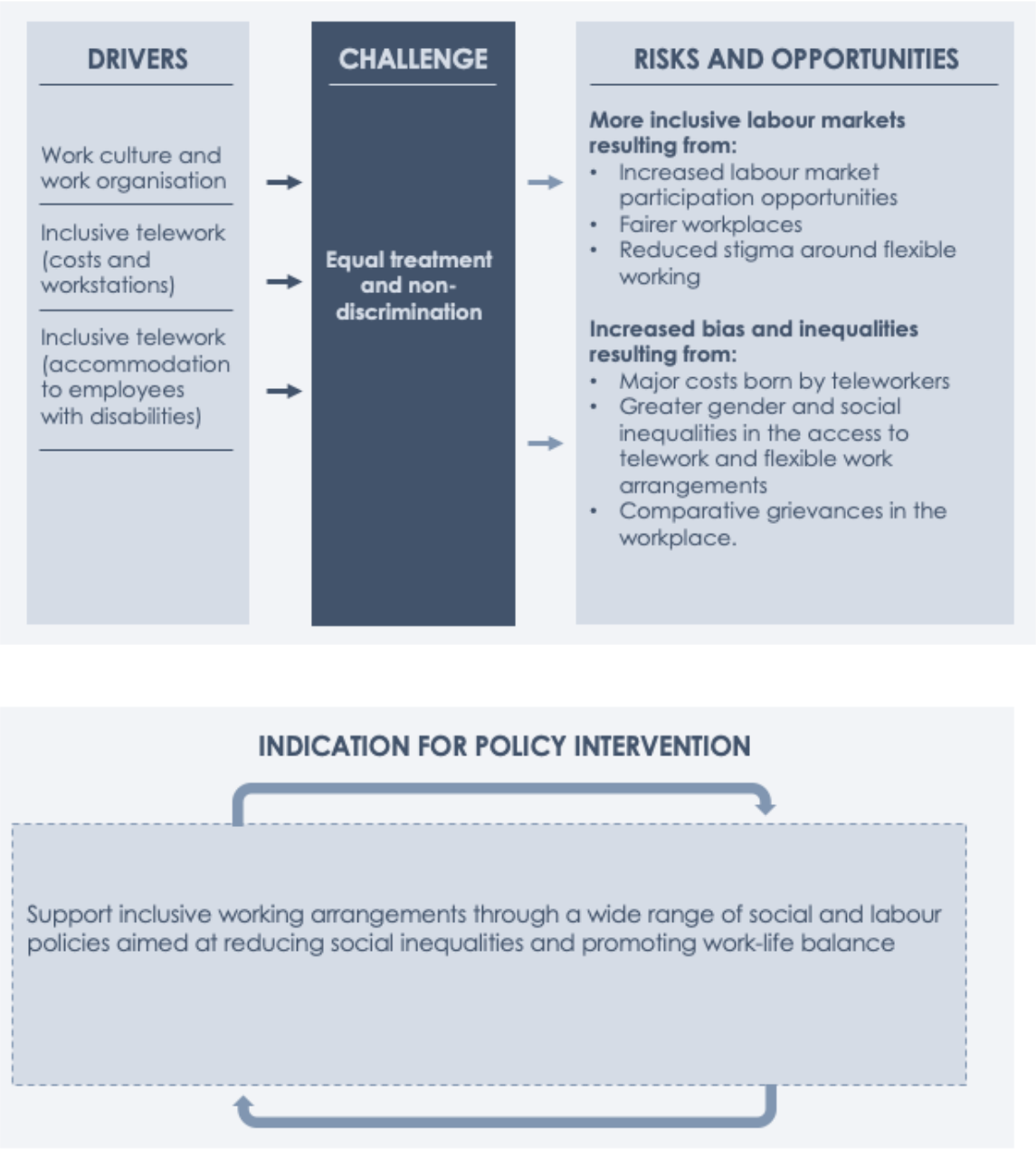
This subsection has indicated that cultural norms and work organisation practices can either enhance inclusion in the workplace or reinforce existing social inequalities through stigma and discrimination. Based on the literature review and data analysis, the shift to telework during the pandemic provides new opportunities to extend more inclusive work arrangements, provided that:

- Employers and employees agree on and guarantee access to teleworking and flexible working time arrangements in an objective, transparent and non-discriminatory manner; and
- Employers and managers dedicate efforts to removing the stigma surrounding flexible working for caregiving or other non-job-related purposes.

In line with these findings, the **main indication for policy intervention** in this field is to support inclusive working arrangements through a wide range of social and labour policies aimed at reducing social inequalities and promoting work-life balance.

Figure 2-16 below provides a summary of the subsection's key findings, highlighting the key drivers that impact working time and work-life balance, as well as the main risks and opportunities presented by telework.

Figure 0--16. Equal treatment and non-discrimination: drivers, risks and opportunities



Source: Authors' own elaboration.

2.3.5. Geographical mobility, with a focus on cross-border telework

The rise of telework in the context of the pandemic crisis may also have increased the prevalence of cross-border teleworking, or situations in which the employee performs work enabled by ICT while residing in a different EU country from their employer.

The category of cross-border telework is neither defined nor addressed in national or EU law. As addressed extensively in Chapter 3, there is no specific legal status for employees who work remotely from a different EU country. Cross-border telework can encompass **diverse situations and arrangements with different applicable legislation**, as was

clarified in the guidance of the Administrative Commission for the Coordination of Social Security Systems (AC).[31]

First, this category can include random or occasional forms of cross-border telework – including, for instance, cases in which an employee agrees with the employer that s/he will telework during the following four weeks to carry out work on a specific project. There may also be cases in which an employee works from a place not in their country of residence nor in the country of their employer (e.g. a holiday home) for a limited time, before returning home and resuming work in the office. Such situations may be covered under the Guidance note on telework (AC), if all conditions are fulfilled, by Article 12 of Regulation (EC) No 883/2004 of the European Parliament and of the Council on the coordination of social security systems (PCW, 2022).[32]

As employers have increasingly incorporated telework options (among other flexible working arrangements) as part of efforts to recruit and retain talent, this has also created the possibility that these formerly 'irregular' cross-border working patterns will become increasingly normalised. For example, employees living in a country other than that in which their employer is based might agree with the employer to alternate, on a regular basis, between working at its office and home-based work in their home country ('hybrid working'). While such situations may be covered under Article 13 of Regulation (EC) No 883/2004 (for 'frontier' workers or 'posted' workers), there are limitations to both that prevent these designations from covering all possible circumstances that might arise. Posted workers, for example, are limited to a period of 24 months under which they may remain covered by the social security system of their country of origin (for example, the place in which they were living/hired by the employer before being posted abroad). While these limits serve an important function with regard to worker protections (i.e. dissuading 'social dumping'), longer-term cross-border teleworking arrangements might require greater flexibility in the application of these regulations.[33]

Lastly, cross-border teleworking also covers the cases of workers who perform their work from multiple locations – including so-called 'digital nomads'[34] (Choudhury, 2022a). Such workers are often self-employed and/or freelance workers seeking clients in an increasingly digital labour market. Self-employed digital nomads would be covered – in line with Article 13(2) of Regulation (EC) No 883/2004 – by their Member State of residence, if they pursue a substantial part of their activity in that Member State, and if that is not the case, by the Member State in which the centre of interest of their activities is situated. An implicit challenge, however, concerns the ability to accurately determine such a centre of interest of a digital nomad. According to the AC, some atypical cases might be covered by Article 16 of Regulation (EC) No 883/2004, which relates to mutual agreements in the interest of certain persons or categories of persons. While the number of digital nomads is low in comparison to the total work force and/or difficult to calculate, infrastructural support for such workers (in the form of digital nomad visas or the proliferation of coworking spaces) suggests the number of such workers is rising.

Prior to the pandemic crisis, the topic of cross-border telework was generally neglected in the literature and policy debates on telework, except in a few countries that have a high proportion of cross-border workers, such as Luxembourg (Eurofound, 2010). The current

[31] During the pandemic, the Guidance note on COVID-19 pandemic was issued until 30 June 2022. At its meeting on 14 June 2022, the AC endorsed a new Guidance note on telework, which provided for a transitional period from 1 July 2022 until 31 December 2022. On 14 November 2023, the AC extended the transitional period until 30 June 2023.

[32] See Annex 10A: 'Cross-Border Telework', for further discussion.

[33] Article 13 of Regulation (EC) No 883/2004 of the European Parliament and of the Council provides special rules for teleworkers who work from multiple Member States ("Pursuit of Activities in Two or More Member States").

[34] Digital nomads are broadly defined as teleworkers who are location-independent and can perform work duties remotely using ICT, often combining work and travel (Hermann and Paris, 2020).

interest in cross-border telework reflects the emergence of new kinds of working arrangements, which have become increasingly common following the outbreak of the COVID-19 pandemic. Available evidence shows that as EU countries have emerged from COVID-induced lockdowns, two trends in cross-border telework may become more prominent:

- Cross-border telework increased significantly during the pandemic, and is likely to expand for the foreseeable future. Grzegorczky et al. (2022) explored data on online vacancies collected by Burning Glass Technology (BGT), and conclude that there is evidence that employers have continued to offer remote work even after the relaxation of lockdown measures. This is true in wide range of occupations, including managers, professionals, technicians, clerical support workers, and even service and sales workers.
- An increase in hybrid forms of cross-border telework. Prior to 2020, two rather distinct groups of cross-border workers existed: some worked full-time from home, while the others commuted on a daily basis to work at their employer's premises. It is likely that a significant share of the latter cross-border commuters will now aim for hybrid arrangements. This possibility may further expand the uptake of cross-border telework over coming years.

Estimating the exact **number of cross-border teleworkers** is a complex task, particularly in the current context. Analysis of LFS micro-data for 2020[35] carried out for this study indicates that 1.11 % of employed Europeans (approximately 2,2 mln. people) were working across borders. Furthermore, around 0.17 – 0.21 % of employed persons (approximately 0.3 – 0.4 mln. people) were teleworking across borders either 'usually' or 'sometimes.' Our analysis of LFS micro-data also shows that the highest shares of cross-border teleworkers were in Luxembourg (1.51 %), Belgium (1.04 %) and France (0.57 %). The lowest shares were in Cyprus (0 %), Bulgaria, Lithuania and Romania (0.01 %).

Furthermore, in a non-representative survey of employees carried out as part of this study, it was found that 2.32 % of respondents[36] indicated that they carried out telework while based in a country other than that of their (EU) employer between January and June 2022. However, these results should be treated with caution in relation to quantifying cross-border telework, as the results of the survey are likely to be biased upward due to the sampling strategy.[37]

Cross-border telework may provide **benefits for both workers and employers** (Grzegorczky et al., 2022). Workers enjoy greater employment opportunities and higher autonomy to live where they wish. Employers have a larger labour market to recruit from and may be able to hire workers for a lower cost than if they hired locally. However, the lack of a clear legal status for employees who work remotely from a different EU country may generate legal uncertainty for employers and employees. In addition, research has also pointed to the risk of 'social dumping'. As highlighted in Eurofound (2022d), office workers in wealthier Member States could become exposed to foreign competition. This issue could become particularly acute in service-sector jobs, which until recently had been relatively protected from the forces of international competition, in turn creating issues related to "telemigration" (Baldwin and Dingel, 2021; see also Wallis, 2021). In the long term, employment in more advanced or service-based economies may suffer from an increase of trade in teleworkable occupations.

[35] Micro-data for 2021 were not available, as explained in the introduction to this study.

[36] The analysis excluded responses from NL, ES, IT and DE. These countries produced outliers due to weights being applied to a small number of observations.

[37] For more details, consult Annex 10A: 'Cross-Border Telework'.

Against this background, this subsection explores the challenges and implications of cross-border teleworking. First, it discusses the main factors or drivers explaining the phenomenon. Second, it conceptualises and identifies the main challenges faced by any policy intervention seeking to address the topic of cross-border telework. The main findings of the subsection are summarised in Figure 2-17.

Drivers affecting cross-border telework

Occupational/sectoral drivers

As addressed extensively in Section 2.2, not all occupations can be performed remotely due to specific labour processes or task constraints (Sostero et. al. 2020). In this regard, it appears that the highest prevalence of cross-border mobility is recorded in sectors such as construction or manufacturing (De Wispelaere 2022), which include occupations recording low levels of teleworkability (Sostero et. al. 2020). Indeed, the LFS 2020 data shows that the phenomenon of cross-border telework appears to be mainly limited to a small number of white-collar professionals, technicians with specialised knowledge, and managers. Other teleworkable but less qualified occupations, such as clerical and administrative jobs, still appear to be unaffected by this phenomenon.

Information gathered from interviews with national stakeholders confirmed the prevalence of certain occupations/sectors among cross-border teleworkers. In an interview, one national expert from Austria noted that IT services is a common cross-border industry, in which many companies hire workers on a contract basis for tasks in both the short and long term. Such workers are largely understood to be 'self-employed', in that they are responsible for their own health and social insurance contributions.

Interplay between coordination of social security systems and cross-border taxation

As indicated above, there is no **specific legal status** for employees who work remotely from a different EU country. Cross-border teleworkers' legal status basically depends on the number of days spent in that country and the specificities of their work arrangement. These factors are crucial in determining employers' and employees' rights and obligations in terms of social security, taxes and labour law. To this end, this report explores how the lack of a specific legal status, and the associated **uncertainty** may impact the uptake (or lack thereof) of cross-border telework. In relation to this, the coordination of social security systems and cross-border taxation are particularly important pieces of this legal puzzle.

As explained in further depth later in Chapter 3, EU rules regulate the coordination of **social security systems** between EU Member States. In particular, Article 12 and Article 13 of Regulation (EC) No 883/2004 provide special rules for workers who pursue their working activity in a Member State other than in which their employer is located and/or in more than one Member State. In the latter case, Article 13 stipulates that a person who pursues an activity as an employed or self-employed person in two or more Member States shall be subject to "the legislation of the Member State of residence, if she/he pursues a substantial part of her/his activity in that Member State"[38] or otherwise, in the case of self-employed workers, where "the centre of interest of his activities is situated."[39] A "substantial part of working activity" is interpreted as at least 25 % of a worker's total working time and/or remuneration in the case of employed activities, and of the turnover, working time, number

[38] Article 13, Regulation No 883/2004.

[39] Article 13(2)(b) Regulation No 883/2004.

of services rendered and/or income in the case of self-employed activities.[40] These regulations – in particular, the 25 % threshold – have particular relevance for cross-border teleworkers, and factor into the organisation of working arrangements with an employer (for example, calculating the number of days that must be spent in the office in order to remain subject to a particular Member State's social security system, retain family benefits or similar (See Annex 10C for further discussion).

In contrast to the regulation of social security, no EU-wide rules exist that regulate the **taxation** of workers who work in multiple countries. The network of double taxation treaties concluded between Member States aims to safeguard against effective double taxation. However, cross-border teleworkers may be subject to double declaration duties, an increased risk of disputes, potential double taxation and the loss of tax revenue. Depending on the taxation treaties that exist between the countries concerned, workers may owe tax on their income in one or both countries (i.e. the countries in which they reside and in which their employer is located).[41] The interplay between social security and taxation rules can influence organisational policies on telework and generate risks of unequal treatment, such as unequal pay, labour contracts and associated labour law.

Problems relating to differences in telework arrangements were highlighted in several country interviews and in one case study. In particular, interviews with national stakeholders from **Luxembourg** (the country with the highest number of cross-border teleworkers in the EU) indicated that the interplay between social security and taxation rules produces differences in access to teleworking and in working conditions under telework arrangements. For example, while employees living in Luxembourg who work for a company in Luxembourg might be permitted by their employer to work completely from home, other employees at the same company with residence in neighbouring countries may be limited in terms of the number of days they are permitted to telework due to tax reasons. Employers' representatives from Luxembourg noted that this issue could foster employee discontent, with one interviewee remarking that "this resentment, which emerged at the beginning of the COVID-19 crisis between those who go to work and expose themselves to the virus and those who stay at home, protected, continues in a new form, between those who have the advantage of being able to telework and those who cannot." These differences in worker treatment could be framed as forms of employee discrimination, resulting in difficulties for employers in remaining compliant with anti-discrimination policies.

It is also worth mentioning one case study conducted for this project, which analysed a company that has a high number of cross-border workers. For these cross-border workers, the number of teleworking days is restricted to 48 days per year, including all travel abroad on business trips; however, within the same company, workers residing in the country in which the company operates can telework for up to 100 days per year. According to the interviewees, this difference is because national fiscal legislation and European social security legislation do not allow any more teleworking days for cross-border workers. In the event that cross-border workers worked from home for more than 48 days a year, they would be subject to the taxation system of their country of residence.

Beyond this anecdotal case, the survey carried out as part of this study revealed that nearly 20 % of companies reported experiencing administrative difficulties relating to their employees teleworking from another country. These difficulties included taxation, social security and other contractual concerns.

[40] Article 14(8) of Regulation (EC) No 987/2009.

[41] See Annex 10C, "Deep Dive: Cross-Border Telework," for further discussion.

New work organisation and hiring strategies

As discussed in the preceding subsection, cross-border telework presents several organisational challenges due to the lack of a specific legal status for cross-border workers, and the resulting uncertainty. As confirmed by some interviewees (representatives of employers' associations), complications over insurance, taxes and possible liability for health and safety issues are reasons why companies are sceptical about allowing their employees to work remotely or from their country of residence.

Nevertheless, consultation activities also reveal that employers increasingly see cross-border telework as a **competitive factor in hiring and attracting foreign talent**. Thus, employers also have an interest in resolving the complications and barriers to cross-border telework, in order to attract and retain high-quality workers. In this regard, the employer survey conducted within the framework of this study shows that, despite the administrative difficulties discussed above, companies report that they are increasingly looking for ways to provide greater freedom for their employees to work from anywhere.

Cross-border telework is still an emerging phenomenon. As a result, very little information is available regarding new strategies for work organisation or hiring; however, emerging trends and industries, such as digital nomad visas or 'Employers of Record' (intermediary companies which manage administrative issues for companies with a distributed workforce) may hint at future developments shaping cross-border telework to come.[42]

Summary and indications for policy intervention

This subsection has showed that several occupational, institutional and organisational factors influence the incidence and conditions of cross-border telework. Overall, the literature review and data analysis show that:

- Cross-border telework is becoming increasingly feasible for a higher proportion of white-collar professionals, technicians with specialised knowledge and managers;
- It is fostered by new recruitment policies by employers who see cross-border telework as a new competitive factor and, to this end, may even subcontract the services of new companies that specialise in helping them to address the administrative burdens; and
- Cross-border teleworking arrangements may be restricted by the interplay between the coordination of social security systems at EU level and the labour laws and taxation rules of different EU Member States. These may create administrative difficulties for companies and workers and, in some cases, can favour differential access to telework between workers with residence in the country in which the company is located, and those with residence in neighbouring countries.

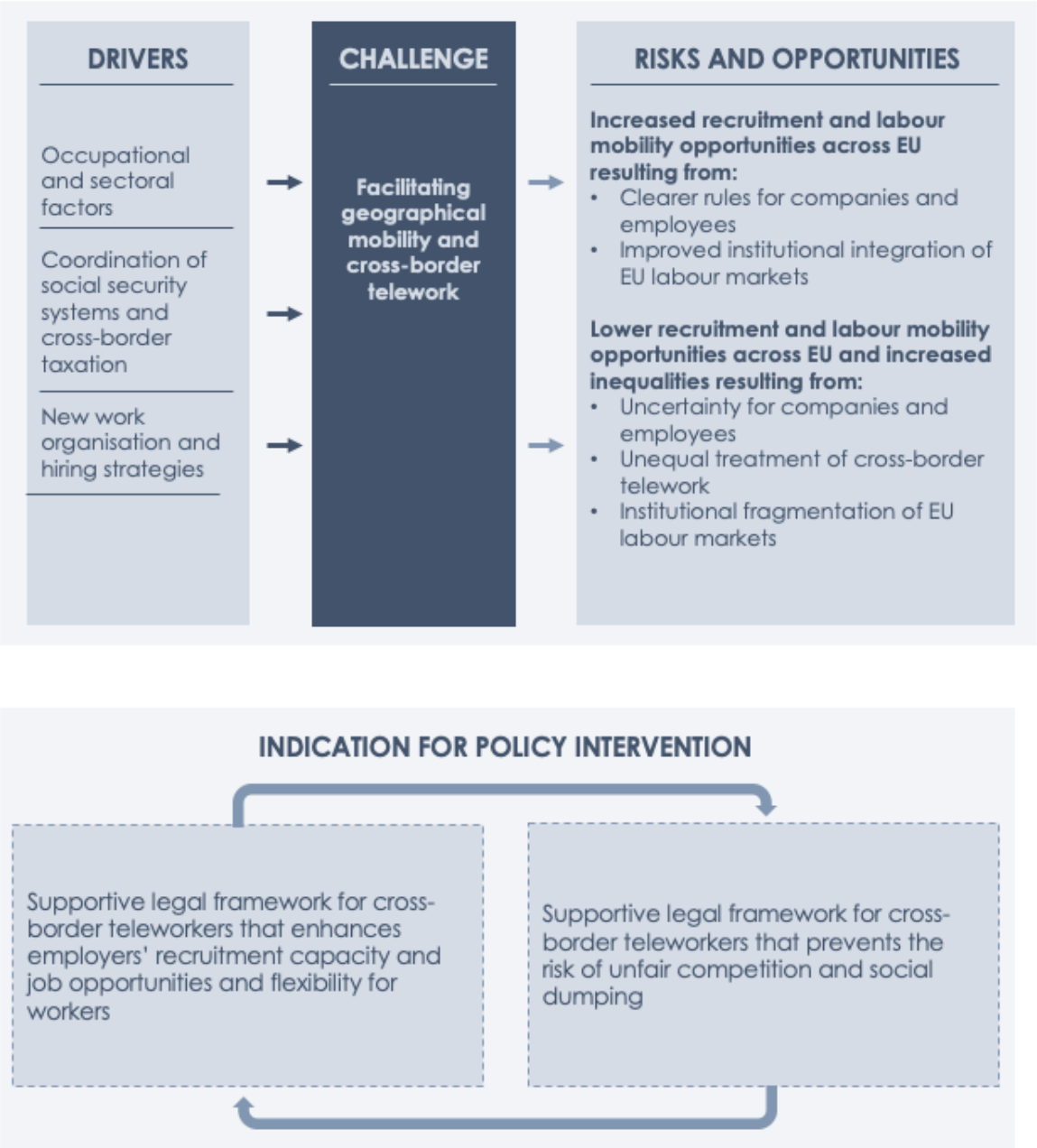
In line with these findings, the **main indication for policy intervention** in this field is to design a supportive legal framework for cross-border teleworkers that enhances employers' recruitment capacity and job opportunities and flexibility for workers, while also preventing the risk of unfair competition and social dumping.

Further evidence is needed to formulate further indications on how to address this challenge.

[42] See Annex 10A for further discussion.

Figure 2-17 below provides a summary of the key findings of this subsection, encompassing the key drivers impacting cross-border telework, and presenting the main risks and opportunities that arise from cross-border telework.

Figure 0--17. Geographical mobility and cross-border telework: drivers, risks and opportunities



Source: Authors' own elaboration.

3. LEGAL AND POLICY CONTEXT

Key findings:

- There is no single EU legal act specifically dedicated to telework or the right to disconnect. However, the existing Directives and Regulations cover a number of relevant aspects, including work-life balance, occupational safety and health, privacy, non-discrimination, and geographical mobility, which are all highly relevant for teleworkers.
- The scope of the existing Directives and Regulations may present challenges to their apllication in the context of telework, which introduces a number of considerations related to the processing of personal data, employee privacy, safety, and health, inclusion of persons with disabilities, and more.
- The evidence that is available for the assessment of efficiency of the EU acquis is insufficient to claim that action at EU level incurs costs (e.g. extra workload) that are *additional* to the costs that would be incurred in implementing national policies.
- The nature and extent of national-level regulations on telework vary widely across EU-27 Member States, influenced by differing traditions and practices in industrial relations. Differences also exist between countries with regard to aspects of the content of telework regulation such as the definition of the telework, the access to telework, the working time regime or the Occupational Safety and Health provisions.
- In relation to the right to disconnect, working time regulation in all EU countries guarantees workers the right to compulsory rest outside of their working hours. Moreover, several EU countries have also developed regulations on the recording of working time that support enforcement of and compliance with working time regulations (e.g. Spain, Greece). Specific legislation on the right to disconnect has been passed in Belgium, Croatia, France, Greece, Ireland (Code of Practices), Italy, Portugal, Slovakia and Spain, via different provisions.
- EU-level social partners have signed agreements on telework, and the issues emphasised by trade unions and employers' associations largely overlap.
- As indicated by the analysis, the objectives of the EU acquis, national legislation and social partner agreements at EU level are, for the most part, coherent.

This chapter analyses the legal and policy context in relation to telework and the right to disconnect. There are no EU Directives that focus exclusively on telework[43] and the right to disconnect. However, several Directives and Regulations touch upon relevant aspects that relate to the challenges and opportunities identified in Chapter 2. These cover aspects including:

- Adequate employment and working conditions, including working time and work-life balance;
- Occupational safety and health, including physical and mental health;

[43] At the European level, telework is regulated by a framework agreement concluded by the social partners in 2002, according to the procedure envisaged by Article 154 TFEU.

- Control, surveillance and performance monitoring systems, data protection and privacy;
- Equal treatment and non-discrimination; and
- Geographical mobility, with a focus on cross-border telework.

This chapter begins with an analysis of the EU acquis and is structured around these five themes, providing an assessment of the relevance and effectiveness of each legislative instrument with regard to the issues pertaining to telework and the right to disconnect (Sections 3.1-3.5). The efficiency and coherence of the EU acquis are covered in Section 3.6. Section 3.7 provides an overview of national regulations and social partner agreements with regard to telework and the right to disconnect. Lastly, Section 3.8 focuses on an analysis of social partner agreements at EU level.

This analysis builds on desk research, including case law, as well as data gathered from interviews, case studies and consultation activities.

3.1 Adequate employment and working conditions, including working time and work-life balance

EU acquis analysed in this section

- Working Time Directive (Directive 2003/88)
- Transparent and Predictable Working Conditions Directive (Directive (EU) 2019/1152)
- Work-Life Balance Directive (Directive (EU) 2019/1158)

3.1.1 Working Time Directive (Directive 2003/88)

Fundamental rights

The Working Time Directive (WTD) is crucial to giving substance to Article 31 of the Charter of Fundamental Rights of the European Union (CFREU), which enshrines (i) a worker's right to working conditions that respect his or her health, safety and dignity; and (ii) the right to a limitation on maximum working hours, to daily and weekly rest periods, and to an annual period of paid leave.

Personal scope

The WTD applies to:

- Workers under EU law (the CJEU has developed a jurisprudence clarifying the concept of 'worker' under EU law) (see Sanz de Miguel, Bazzani and Arasanz, 2021); as well as
- All sectors of activity, both public and private.

Notably, the provisions of the WTD do not apply to seafarers. In addition, Chapter 3 of the Directive allows Member States (MS) to derogate from specific articles in specific cases.

Regarding the application of the WTD to armed forces and police, a recent CJEU decision[44] confirmed an interpretation already upheld by previous case law, according to which the criterion set by Article 2(2) of the Directive on the introduction of measures to encourage improvements in the safety and health of workers at work (Directive 89/391) is relevant. This criterion (which excludes certain activities from the scope of that Directive and, consequently, from that of the WTD), "is based not on the fact that workers belong to one of the sectors of the public service referred to in that provision, taken as a whole, but exclusively on the specific nature of certain particular tasks performed by workers."[45] Exceptions to the rules regarding the protection of the safety and health of workers should therefore be justified by the particular nature of the activity mentioned.[46]

Material scope

The goal of the WTD is to establish minimum safety and health requirements for the organisation of working time. In addition, it lays down minimum standards for daily rest, weekly rest and annual leave, as well as maximum weekly working time. The WTD defines working time as: "any period during which the worker is working, at the employer's disposal and carrying out his activity or duties, in accordance with national laws and/or practice" (Article 2 WTD). According to this Article, rest time is any time that is not working time.

Relevance

The WTD is aimed at avoiding excessive, lengthy working hours and a lack of opportunities for rest, with a view to protecting workers' safety and health. This Directive can therefore achieve some of the goals that a right to disconnect might provide, such as the need to protect workers' safety and health when the work is carried out using ICT. At a minimum, the need to guarantee a right to rest is coherent with the requirements set by the CJEU in applying the WTD.

In *Fuß v Stadt Halle* (paragraph 32), as already affirmed by previous decisions[47] and later confirmed in *CCOO v Deutsche Bank SAE* (paragraph 36), the aim of the application of the WTD is to establish minimum requirements to improve the living and working conditions of workers – in particular, with regard to working time. Thus, it intends to ensure the protection of safety and health by guaranteeing minimum rest periods and adequate breaks, as well as by placing a ceiling on average working time.

Effectiveness

As worldwide comparative research has shown, the implementation of the WTD has required EU Member States to provide more protective legislation in terms of rights to rest and maximum weekly working time than any other region in the world (ILO, 2016). As detailed in Annex 3 on national regulations on working time, the minimum standards laid down by the WTD have been satisfactorily applied in all EU countries. Moreover, several

[44] Judgment of 15 July 2021, *B. K. v Republika Slovenija (Ministrstvo za obrambo),* C-742/19, ECLI: EU:C:2021:597.

[45] Judgment of 15 July 2021, *B. K. v Republika Slovenija (Ministrstvo za obrambo),* C-742/19, ECLI: EU:C:2021:597, paragraph 56.

[46] Judgment of 20 November 2018, *Sindicatul Familia Constanţa and Others,* C 147/17, EU:C:2018:926, paragraph 55.

[47] Joined Cases C 397/01 to C 403/01 *Pfeiffer and Others* [2004] ECR I 8835, paragraph 76; Case C 14/04 *Dellas and Others* [2005] ECR I 10253, paragraphs 40 and 41; and Case C 484/04 Commission v United Kingdom [2006] ECR I 7471, paragraphs 35 and 36.

countries provide standards that are higher than those uplaid down in the WTD, either through statutory legislation or collective bargaining (European Commission, 2017; Eurofound, 2019, 2021).

- In terms of **limits to working time**, only four Member States set their maximum weekly hours at the 48 hours specified by the WTD (Denmark, Germany, Ireland and the Netherlands). Most countries operate under a limit of 40 hours, while two countries set their maximum weekly working time below 40 hours (38 hours in Belgium and 35 hours in France). Moreover, the average for collectively agreed normal weekly working time is lower than 40 hours in most EU countries for which estimates are available (EC, 2017; Eurofound database on wages, working time and collective disputes).
- In relation to the **duration of the breaks**, only Denmark and Romania do not establish a minimum duration (Eurofound, 2019). The largest group of countries consider 30 minutes to be the minimum duration for rest breaks from work during the working day (Eurofound, 2019).
- Most Member States require a minimum of 11 consecutive hours of **daily rest**, as imposed by the WTD. Some countries go further by requiring a minimum rest of 12 consecutive hours (Bulgaria, Spain [in the private sector], Croatia, Latvia, Romania and Slovenia).
- Around half of Member States stick to the minimum requirements set out in the WTD in terms of **minimum weekly rest** (35 hours), while several countries go beyond this minimum (Austria, Spain, Croatia, Latvia, Luxembourg, Netherlands, Sweden, Slovakia, etc.)

However, the implementation of the WTD has also been challenged, as the CJEU has had to interpret the provisions of the WTD on numerous occasions (European Commission, 2017; Eurofound, 2015, 2020). Several EU court cases have revealed disputes and discussions concerning topics that are of particular relevance to any regulation that might address flexible working arrangements, including telework or the right to disconnect. In particular, the two most problematic aspects addressed by the jurisprudence in terms of legal clarity concern the increasingly complex distinction between 'working time' and 'rest time', as well as the issue of recording working time.

Complexity of the distinction between working time and rest time

The binary or dichotomous understanding of working time has been beset by problems of interpretation. In setting the boundaries between working time and rest time, a case-by-case perspective is necessary to assess the specific circumstances of the case. Although CJEU case law provides criteria that help to clarify the differences between working time and rest time, this distinction is not always clear. Moreover, the boundaries between both concepts have become increasingly blurred in the context of the expanding number of flexible work arrangements.

The difficulties involved in distinguishing between working time and rest time are most evident when addressing two aspects of telework highlighted in the literature: 'standby time' or on-call work,[48] and interruptions to rest time caused by work-related digital communication.

[48] So-called 'on-call' work might require a worker to maintain vigilance and respond to work-related communication as needed, although they might not be consistently engaged in work-related activity.

Cases on standby time

Standby time, which first appeared in CJEU jurisprudence more than two decades ago, has been one the most disputed issues in connection with the WTD.

The WTD does not provide a definition of standby time; rather, it is defined by national law. The CJEU, if asked to issue a decision on a question referred to it in the form of a preliminary ruling, provides an interpretation of EU law in reference to the particular case brought before it; in the case of standby time, it examines whether or not the time period in question might be considered as working time or rest time for the purposes of applying the WTD. When the worker is required to be at the employer's premises or at a place determined by the employer and to respond to the call, this is considered working time ("on call").[49] The situation is different, however, in cases in which working time is spent at any place of the worker's choosing, with the worker being required to be contactable and ready to work if called upon ('standby' in the strict sense).[50] As already established in the *Simap*, *Dellas* and *Jaeger* cases, in the *D.J. v Radiotelevizija Slovenija*, Case C-344/19, it was established that the time linked to the actual provision of services must be regarded as working time. Moreover, in recent CJEU rulings[51] (see Annex 2 on case law), the CJEU provides further criteria to determine whether or not standby time might be considered working time.

In particular, the CJEU highlights that it is not necessary that a worker remain at the workplace, or at any other location expressly designated by the employer, for such standby time to be considered working time. Instead, the CJEU has ruled that the nature and the intensity of the constraints imposed on the worker are decisive, such as the time in which an employee is expected to react. In *Matzak*, for example, the time within which the worker was expected to respond to calls from the employer was only 8 minutes: in this case, the 'standby' time in question was considered working time. Conversely, in *D.J. v Radiotelevizija Slovenija*, the time to react was considerably greater (one hour). The above cases mean that in order to classify standby time as either working time or a rest period, national courts should evaluate whether particular work arrangements "objectively and very significantly" restrict the worker's opportunities to pursue other activities (Mitrus, 2022); to this end, the time to react is highly relevant. At the same time, as broadly highlighted by the CJEU, all of the relevant circumstances of the case must be taken into consideration.

Interestingly, EU case law shows a sort of 'dematerialisation' of the workplace with regard to those kinds of work which, thanks to ICT, can be carried out outside the employers' premises. In other words, the workplace is "any place where the worker is required to

[49] See Interpretative Communication on Directive 2003/ 88/ EC of the European Parliament and of the Council concerning certain aspects of the organisation of working time: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017XC0524(01)&from=EN. In *Simap*, the Court of Justice ruled that periods during which doctors in primary care teams are obliged to be on call and required to be present at the health centre are considered working time. It would be different, however, in cases in which they are required to be contactable at all times, but their presence is not required. In the *Jaeger* case, a doctor in the surgical department of a hospital was asked to perform on-call duty by being physically present in the hospital. This time was considered working time, even though he was permitted to rest at his place of work during periods when his services were not required (it is not deemed a rest period if an employee's period of inactivity is carried out in the context of on-call duty).

[50] See Interpretative Communication on Directive 2003/ 88/EC of the European Parliament and of the Council concerning certain aspects of the organisation of working time, p. 18: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017XC0524(01)&from=EN. In *D.J. v Radiotelevizijia Slovenija*, Judgment of the CJEU 9 March 2021, standby time is defined as all periods during which "the worker remains available for his or her employer, in order to ensure that work is provided, at the employer's request" (*D.J. v Radiotelevizijia Slovenija*, Judgment of the CJEU, 9 March 2021). Standby time according to a standby system indicates, in particular, "periods of standby time during which the employee is not required to remain at his or her workplace" (*D.J. v Radiotelevizijia Slovenija*, Judgment of the CJEU 9 March 2021).

[51] Case C-344/19, *D.J. v Radiotelevizija Slovenija* and Case C-580/19, *R.J. v Stadt Offenbach am Main*.

exercise an activity on the employer's instruction, including when that place is not where he or she usually carries out his or her professional duties."[52]

Interruption of daily rest through communication via ICT

In some MS, there are ongoing debates about the effectiveness of existing regulations in addressing problems linked to the potential interruption of daily rest, particularly through communication via ICT (email, messaging applications, etc.). In general, it can be stated that on the basis of the WTD definition of working time, dealing with work-related emails and other communications may count as an interruption of the statutory rest period of 11 hours between working days (Bell et al., 2021). However, even in countries such as Germany (which, in line with the WTD, establishes the mutually exclusive nature of "work" and "rest"), there has been debate as to how to interpret these types of interruptions (Bell et al., 2021).

According to Bell et al. (2021), a strict application of Section 5 (1) of the Germany's Working Time Act (ArbZG) means that even a short answer to an e-mail at midnight would lead to a 'restart' of the rest period of 11 hours. However, it has been argued that this interpretation is too formalistic and should be corrected. A more restrictive interpretation has been proposed in some case law, which excludes the answering of an e-mail or a short phone call from constituting working time because these activities are often so insignificant that the underlying objectives of the rest period remain untouched (Maier and Ossoinig, 2015, p. 2391-2392; Baeck, 2020, p. 96-99).

Nevertheless, the jurisprudence of the CJEU has argued that work intensity should not play a role in assessing whether or not the activity in question constitutes work (Bell et al., 2021).[53] When employees are working, the corresponding time is working time: this is valid also in those periods in which the intensity of their work is not particularly high due to the characteristics of the work. Therefore, an employer's phone call during the rest time effectively interrupts it. According to CJEU case law, it is in the interests of the effective protection of workers' safety and health that they must normally be able to benefit from an effective rest period.[54] In the case of emails outside working time, the interpretation is more complex, because employees can – and should – choose not respond to it (once again, this excludes cases of standby time, during which there is an obligation on the employee to respond).

One crucial aspect highlighted by the CJEU in recent decisions has been the need to account for the OSH Framework Directive in determining rest time. According to the CJEU, the classification of a period of standby time as a 'rest period' for the purposes of applying Directive 2003/88 is without prejudice to the duty of employers to comply with their specific obligations under Articles 5 and 6 of Directive 89/391 (namely, to protect the safety and health of their workers). It follows that employers cannot establish standby periods that are so long or so frequent that they constitute a risk to the safety or health of workers, irrespective of those periods being classified as 'rest periods' within the meaning of

---

[52] Judgment of 9 March 2021, *Radiotelevizija Slovenija* (Period of standby time in a remote location), C-344/19, EU:C:2021:182, paragraphs 33 to 35; Judgment of 15 July 2021 B.*K. v Republika Slovenija*, Case C-742/19, EU:C:2021:597, paragraph 94.

[53] Judgment of 1 December 2005, C-14/04, ECLI:EU:C:2005:728, *Abdelkader Dellas, Confédération générale du travail, Fédération nationale des syndicats des services de santé et des services sociaux CFDT, Fédération nationale de l'action sociale Force ouvrière v Premier ministre, Ministre des Affaires sociales, du Travail et de la Solidarité, en présence de: Union des fédérations et syndicats nationaux d'employeurs sans but lucratif du secteur sanitaire, social et médico-social*. [General Confederation of Labour, National Federation of Health and Social Services Unions CFDT, National Federation of Social Action Force Ouvrière v Prime Minister, Minister of Social Affairs, Labour and Solidarity, in the presence of: Union national federations and unions of non-profit employers in the health, social and medico-social sector].

[54] To this effect, see, among others: Case C-350/06 and C-520/06 Schultz-Hoff and Others [2009] ECR I-350/06 and C-520/06 EU:C:2009:18, paragraph 23.

Article 2(2) of Directive 2003/88. It is for the Member States to define, in their national law, the detailed arrangements for the application of that obligation.[55]

Recording of working time

The WTD (2003) does not explicitly contain provisions on measuring or keeping records on working time, with the exception of those obligations laid out in Article 22, the "opt-out clause" (Leccese, 2022). A lack of legal clarity in terms of the recording of working time has led the CJEU to interpret this matter.

Recently, in the case of the Spanish trade union *Federación de Servicios de Comisiones Obreras (CCOO) v Deutsche Bank* (Judgment of the Court, 14 May 2019, C-55/18), the CJEU ruled that Member States must require employers to use a system for recording working time that is "objective, reliable and accessible" (Helmerich, 2021; DLA Piper, 2020). According to the Court's argument, Member States may, however, choose the "necessary measures" taken to ensure compliance with WTD (Leccese, 2022).

The WTD requires Member States to take necessary measures to ensure that every worker is entitled to the limitations on time guaranteed by the Directive.[56] The WTD does not establish the specific nature of the arrangements to be adopted by each Member State to ensure the implementation of the limitations on working time it lays down. Therefore, Member States are free "to adopt those arrangements, by taking the measures necessary to that effect."[57] However, since the essential objective of the WTD is to ensure the effective protection of the living and working conditions of workers and the better protection of their safety and health, Member States have to "ensure that the effectiveness of those rights is guaranteed in full".[58] Furthermore, as already ruled in *BECTU*[59] and in *Jaeger*,[60] *Federación de Servicios de Comisiones Obreras (CCOO) v Deutsche Bank SAE* also highlights that "the effective protection of the safety and health of workers should not be subordinated to purely economic considerations."[61]

Because employees are in a position of relative weakness compared with their employers, they may be hesitant to exercise their rights with respect to working time and related issues, in order to preserve their good standing with or avoid retaliation by their employer. Therefore, systems for recording working time must be adopted in an effective way as a tool to rebalance the weaker position of the worker within the employment relationship in comparison with their employer[62] (i.e. the 'protection principle', as discussed in Section 3.5).

Systems for recording working time are necessary not only to guarantee safety and health protections for workers and to limit their working time, but also to: (i) verify that the limits to

---

[55] Judgment of the Court (Grand Chamber) of 9 March 202, *D.J. v Radiotelevizijia Slovenija*, case C-344/19, paragraph 65; Judgment of the Court (Grand Chamber) of 9 March 2021, *Stadt Offenbach am Main (Période d'astreinte d'un pompier),* case C-580/19, paragraph 60; Judgment of the Court (Fifth Chamber) of 11 November 2021, *M.G. v Dublin City Council*, case C-214/20: paragraph 47.

[56] Judgment of 7 September 2006, *Commission v United Kingdom*, C-484/04, EU:C:2006:526, paragraph 37.

[57] Judgment of the Court, 14 May 2019, C-55/18, paragraph 41.

[58] Judgment of the Court, 14 May 2019, C-55/18, paragraph 42.

[59] Judgment of the Court, 26 June 2001, *BECTU*, C-173/99, EU:C:2001:356, paragraph 59.

[60] Judgment of the Court, 9 September 2003, Jaeger, C-151/02, EU:C:2003:437, paragraphs 66 and 67.

[61] Judgment of the Court, 14 May 2019, *Federación de Servicios de Comisiones Obreras (CCOO) v Deutsche Bank*, C-55/18, paragraph 66.

[62] According to the summary of the Judgment of the Court, *Fuß v Stadt Halle*, C-429/09, section 3, "The worker must be regarded as the weaker party in the employment relationship, and it is therefore necessary to prevent the employer being in a position to impose on him a restriction of his rights. On account of that position of weakness, such a worker may be dissuaded from explicitly claiming his rights vis-à-vis his employer where doing so may expose him to measures taken by the employer likely to affect the employment relationship in a manner detrimental to that worker."

rest time are respected; (ii) determine overtime, which corresponds to the number of hours worked beyond the normal working time[63]; (iii) enable supervisory bodies such as the employment inspectorate to investigate and impose penalties[64]; (iv) enable "worker representatives, who have a specific responsibility in respect of the protection of the safety and health of workers, to exercise their right, laid down in Article 11(3) of that Directive, to ask the employer to take appropriate measures and to submit proposals to it."[65]

Paragraph 63 of the judgment explains that Member States may exercise their discretion to determine the specific arrangements for implementing the system for recording working time.[66] In doing this, they should have regard for "the particular characteristics of each sector of activity concerned, or the specific characteristics of certain undertakings concerning, inter alia, their size."[67] In this sense, the implementation of such as system should always guarantee the possibility for Member States to derogate, inter alia, from Articles 3 to 6 of the WTD "when, on account of the specific characteristics of the activity concerned, the duration of the working time is not measured and/or predetermined or can be determined by the workers themselves."[68] Even in cases of derogation, Member States should still maintain due regard for the general principles of the protection of the safety and health of workers.

So far, only some countries have laid down an obligation to record all working time (e.g. Greece, Italy, Spain, Portugal); moreover, the strictness of such legislation varies. Debates over working time are also taking place in countries such as Germany. On the one hand, the Emden Labour Court decided that an employer was obliged to pay compensation for overtime because it had failed to establish a system to record working time. [69] On the other hand, the Labour Court of appeal of Hamm (LAG Hamm) ruled that the Works Council has the right of initiative to introduce an electronic time recording system pursuant to the German Works Council Constitution Act (BetrVG).[70] More details on national regulations on recording working time can be found in Annex 3.

Telework is a form of work organisation that can be carried out in different ways:

- Workers who follow the same working time schedule they used to follow when working at the employer's premises: in this case, the only difference between a teleworker and a worker working at the employer's premises is that the former works from home (or another place determined by the employer) and is not physically at the employer's premises
- Workers who can decide when they can work, i.e. they still are employees, but they can decide **when** they work. They may also be free to decide **where** they work.

[63] *Federación de Servicios de Comisiones Obreras (CCOO) v Deutsche Bank*, paragraph 47.

[64] *Federación de Servicios de Comisiones Obreras (CCOO) v Deutsche Bank*, paragraph 56.

[65] *Federación de Servicios de Comisiones Obreras (CCOO) v Deutsche Bank*, paragraph 62.

[66] *Federación de Servicios de Comisiones Obreras (CCOO) v Deutsche Bank*, paragraph 63.

[67] *Federación de Servicios de Comisiones Obreras (CCOO) v Deutsche Bank*, paragraph 63.

[68] *Federación de Servicios de Comisiones Obreras (CCOO) v Deutsche Bank*, paragraph 63.

[69] ArbG Emden, decision of 20 February 2020 – 2 Ca 94/19.

[70] LAG Hamm, Judgment of 27.07.2021 - 7 TaBV 79/20. Available at: https://openjur.de/u/2349817.html.

Flexible working time and the classification of the work relationship: self-employed workers and employees

Flexible working and derogations

- It is possible that workers could attain a high level of flexibility, deciding when, for how long, and where they work. In relation to this, Article 17.1 of the Working Time Directive provides derogations from the main provisions of the Working Time Directive on account of the specific characteristics of the activity concerned, if the duration of the working time is not measured and/or predetermined or can be determined by the workers themselves, and particularly in the case of, *inter alia*, management executives or other persons with autonomous decision-taking powers.

Flexible working time: workers

If the nature of the work activity allows it, potentially every worker – and not only management executives – can work in a flexible way. However, such flexibility does not automatically classify them as autonomous workers.

An example of this is the Judgment of the Court (Fourth Chamber) of 26 July 2017, *Hannele Hälvä and Others v SOS-Lapsikylä ry*. In this case, the CJEU highlighted that:

- although 'relief parents'[71] enjoy a certain degree of autonomy over the organisation of their time, they are still employees and "the difficulties that an employer may face, regarding the supervision of the daily exercise of the activities of its employees are not, in general, sufficient for a finding that their working time as a whole is not measured or predetermined or may be determined by the worker himself, since the employer stipulates in advance both the beginning and the end of the working time" (paragraph 36).

- "it cannot be argued that the working time of the 'relief parents' as a whole is not measured or predetermined or that it can be determined by the 'relief parent' himself, by reason of the specific characteristics of the activity performed, which is for the referring court to ascertain" (paragraph 34).

- "in the periods during which they are responsible for running a children's home, the 'relief parents' have a certain degree of autonomy in the organisation of their time and, more specifically, in the organisation of their daily duties, their movements and their periods of inactivity, without there appearing to be any supervision by their employer." (paragraph 35).

Rest time, standby time and the right to disconnect

The Working Time Directive is characterised by the dichotomous definition of 'working time' and 'rest time'. However, CJEU case law provides important interpretations that deal with the grey aspects that exist between these definitions.

The CJEU admits a certain degree of compatibility between rest time and working constraints. This is the case of standby time. To be compatible with rest time, working constraints during standby time must be limited. Hence, in situations where working constraints objectively and

[71] 'Relief parents' are one of the categories of personnel working at SOS-Lapsikylä ry, a child protection association. 'Relief parents' relieve "the 'foster parents' while the latter were absent (justified by days off, annual leave or sick leave)" (paragraph 7).

very significantly restrict the worker's opportunities to pursue other activities, such constraints are incompatible with rest time.

The CJEU has frequently highlighted the role of Articles 5 and 6 of the OSH Framework Directive in determining the quality of rest time in cases involving standby time. These articles are particularly relevant to the conceptualisation of the right to disconnect:

- According to the CJEU, the fact that standby time is classified as a 'rest period' is without prejudice to the duty of employers to comply with their specific obligations under Articles 5 and 6 of the OSH Framework Directive, i.e. that employers must protect the safety and health of their workers.
- It follows that employers cannot establish standby periods that are so long or so frequent that they constitute a risk to the safety or health of workers. It is for the Member States to define, in national law, detailed arrangements for the application of this obligation (see: *D.J. v Radiotelevizija Slovenija*, Case C-344/19, paragraph 65; *Stadt Offenbach am Main*, Case C-580/19, paragraph 55; *MG v Dublin City Council*, Case C-214/20, paragraph 47).

In all other cases in which a standby obligation – namely, the expectation that the employee with respond to a call from the employer – does not comply with the criteria set by case law, rest time is not compatible with working constraints. According to the CJEU, it is in the interests of the effective protection of workers' safety and health that they must normally be able to benefit from an effective rest period.

We can define the CJEU's clarification of the right to an effective rest period as a sort of 'right to tranquillity', or a 'right not to be disturbed' during the rest time (e.g. Case C-350/06 and C-520/06 *Schultz-Hoff and Others* [2009] ECR I-350/06 and C-520/06 EU:C:2009:18, paragraph 23).

In summary:

- Standby time (periods during which there is an expectation, under the contract of employment, for the employee to respond to calls) can be regarded as working time or rest time, depending on the extent of the constraints that emerge from the circumstance of the case.
- Rest time without any obligation to respond to calls (i.e. time not on standby) entails the right to an effective rest period.

3.1.2 Transparent and Predictable Working Conditions Directive (Directive (EU) 2019/1152)

Fundamental rights

The Transparent and Predictable Working Conditions Directive gives substance to Article 31 of the CFREU, which establishes that every worker has the right to working conditions that respect his or her health, safety and dignity, as well as the right to a limitation on maximum working hours, to daily and weekly rest periods, and to an annual period of paid leave.

The Directive refers to the following principles of the European Pillar of Social Rights (henceforth, 'the Pillar'):

- **Principle 5,** which lays out the **conditions for secure and adaptable employment**. Regardless of the type and duration of the employment relationship, workers should have the right to fair and equal treatment regarding working conditions, access to social protection and training. The transition towards open-ended forms of employment should be fostered. Access to social protections and ongoing training should also be promoted.
- **Principle 7**, which focuses on **information which must be provided to employees about employment conditions and protection**. In particular, workers have the right to be informed in writing at the start of employment about their rights and obligations. This information should include information about probationary periods and about reasons for dismissal (which should be provided prior to any termination or dismissal). Additionally, workers should have the right to access effective and impartial resolutions of disputes should they arise. In the case of unjustified dismissal, they should have a right to redress, including adequate compensation.

Personal scope

The Transparent and Predictable Working Conditions Directive applies to "every worker in the Union who has an employment contract or employment relationship as defined by the law, collective agreements or practice in force in each Member State with consideration to the case-law of the Court of Justice" (Article 1.2).

Possible exclusions to the application of the Directive are as follows:

- MS may decide not to apply the obligations imposed by this Directive to workers who have an employment relationship in which the worker's predetermined and actual working time is equal to or less than an average of three hours per week within a reference period of four consecutive weeks. Time worked with all employers that form or belong to the same enterprise, group or entity should count towards this three-hour average (Article 1.3). However, this does not apply to an employment relationship in which no guaranteed amount of paid work is predetermined before the employment starts (Article 1.4).
- MS may provide, on objective grounds, that the provisions regarding minimum requirements in relation to working conditions laid down in Chapter III of the Directive do not apply to civil servants, public emergency services, the armed forces, police authorities, judges, prosecutors, investigators or other law enforcement services (Article 1.6).
- MS may decide not to apply specific obligations – set in the case of transition to another form of employment (Article 12), in the case of mandatory training (Article 13) and in the case of applying favourable presumptions (Article 15(1), point (a))[72] to natural persons in households acting as employers where work is performed for those households (Article 1.7).
- Chapter II of the Directive applies to seafarers and sea fishermen, without prejudice to Directives 2009/13/EC and Directive (EU) 2017/159, respectively. The obligations set out in points (m) and (o) of Article 4(2), and Articles 7, 9, 10 and 12 do not apply to seafarers or sea fishermen (Article 1.8).

[72] Where a worker has not received in due time the information referred to in the Directive (Article 5(1) or Article 6).

Material scope

The Transparent and Predictable Working Conditions Directive aims to "improve working conditions by promoting more transparent and predictable employment while ensuring labour market adaptability" (Article 1.1).

Employers are required to provide each worker – individually – with written information regarding the essential aspects of the employment relationship. Information about certain selected, essential aspects of the employment relationship should be given within seven calendar days of the beginning of the employment relationship, while additional aspects may be provided within one month. Over the course of the relationship, eventual modifications to the employee's working conditions should be communicated to the employee at the earliest opportunity, and at the latest on the day on which they take effect.

In the event that the employee does not receive such information within the due time, s/he will either benefit from favourable presumptions and/or should have the possibility to submit a complaint to a competent authority or body, and to receive adequate redress in a timely and effective manner (Article 15).

Relevance

The Transparent and Predictable Working Conditions Directive refers explicitly to Principle 5 of the Pillar. In addition to ensuring the fundamental rights of all workers, this principle appears to be particularly relevant to telework, as it encourages innovative forms of work that ensure quality working conditions. In particular, telework may help to foster occupational mobility which, according to the Pillar, should be facilitated. With regard to the potential negative impacts of telework, the Directive is also applicable in the sense that it establishes that no employment relationships should lead to precarious working conditions.

Although telework is not explicitly mentioned in the Directive, the provision requiring that workers should receive written information regarding the essential aspects of the employment relationship is also especially relevant to teleworkers, since they may face more challenges to receiving information about their working conditions and rights due to their physical separation from the workplace. In particular, rights to information appear to be relevant for teleworkers with regard to the following aspects of Article 4:

- **Place of work**: "where there is no fixed or main place of work, the principle that the worker is employed at various places or is free to determine his or her place of work, and the registered place of business or, where appropriate, the domicile of the employer [shall apply]" (Article 4.2.b). This gives teleworkers the right to greater predictability in understanding where they can carry out the job. In addition, the indication of the territorial scope (national and/or EU-level) is relevant to the application of social protection regulations.
- **Predictable and unpredictable work patterns**: in the former case, employers are required to inform the employees of the "standard working day or week and any arrangements for overtime and its remuneration", and for eventual shift changes (Article 4.2.l). In the latter case, the information required focuses on "the number of guaranteed paid hours" and the arrangements that exist to guarantee them (Article 4.2.m (i)). If the employee's work pattern is entirely or mostly unpredictable, the employer must inform the worker of the reference hours and days within which the worker may be required to work (Article 4.2.m (ii)); the minimum notice period to which the worker is entitled before the start of a work assignment; where applicable, the deadline for cancellation referred to in Article 10(3) (Article 4.2.m (iii)). Because teleworkers more frequently work according to irregular working time schedules, these provisions can support teleworkers in being aware of their rights,

understanding how the right to disconnect should be guaranteed, and to have a clear picture of their working time (not only with respect to the regulation of working time, but also in order to receive their correct remuneration.)

- **Information on those collective agreements that govern the worker's conditions of work** (Article 4.2.n): telework is often regulated through collective agreements and adapted to the specific employer's activity and organisational structure. This provision contributes to guaranteeing that teleworkers receive information regarding the agreements that regulate their working conditions.
- **Information about social security**: "the identity of the social security institutions receiving the social contributions attached to the employment relationship and any protection relating to social security provided by the employer" (Article 4.2.o).
    - Within the context of workers' mobility and the use of telework in Member States other than those in which the employer is located, it is of the utmost importance that the employee has a clear picture of the responsible social security institutions in the relevant Member State.

In addition, it is also important to emphasise the relevance of Article 9 on 'parallel employment'. Given the potential flexibility offered by telework, it is possible that teleworkers may have parallel employment relationships. Indeed, the Directive recognises the right to take up other forms of employment outside the work schedule established with that employer. Only when they have a clear picture of their working time will teleworkers be able to organise their free time to find another job; in additional, this should not result in adverse treatment against the worker by the employer for doing so (Article 9).

Effectiveness

EU Member States were required to transpose the new requirements laid down in the Transparent and Predictable Working Conditions Directive (Directive (EU) 2019/1152) into national legislation by 1 August 2022; however, it appears that in certain countries the transposition process will take longer than expected. In December 2022, no national transposition measures had yet been communicated by Cyprus, Denmark, Greece, Hungary, Spain, Luxembourg, Poland, Portugal, Slovenia or Spain.[73] While some of these countries had already developed a draft law, in the case of Denmark this legislation will not enter into force until 2023.[74]

So far, the CJEU has referred to this Directive in recent case law related to training and working time.[75] Article 13 of the Directive on Predictable and Transparent Working Conditions establishes that where an employer is required to provide training to a worker in order to carry out their work activities, such training must be provided to the worker free of charge, will count as working time and, where possible, must take place during working hours. In the case of *B.X. v Unitatea Administrativ Teritorială D.*, the Court provided an interpretation of the WTD highlighting that the time required for training, even if outside working hours, must be considered working time.

It is also worth highlighting that Directive (EU) 2019/1152 offers the following tools to guarantee the rights it sets out, which can reinforce its effectiveness:

[73] Ireland transposed the Directive on December 20, 2022. See https://eur-lex.europa.eu/legal-content/EN/NIM/?uri=CELEX:32019L1152&qid=1669210618100.

[74] See https://www.lexology.com/library/detail.aspx?g=826a3a33-b8dc-484c-9546-5c1e9ef6c0c4

[75] Judgment of the Court, 28 October 2021, *B.X. v Unitatea Administrativ Teritorială D.,* Case C-909/19.

- In cases where there is a lack of information and/or favourable presumptions, claimants should have the possibility to submit a complaint to a competent authority or body, and to receive adequate redress in a timely and effective manner (Article 15);
- Workers should have access to effective and impartial dispute resolution and a right to redress in the event that their rights arising from this Directive are infringed (Article 16);
- Workers and their representatives must have protection against adverse treatment or consequences resulting from a complaint lodged with the employer or resulting from any proceedings initiated with the aim of enforcing compliance with the rights provided by the Directive (Article 17);
- Necessary measures should be taken by Member States to prohibit dismissal or its equivalent, and all preparations for the dismissal of workers, on the grounds that they have exercised the rights provided by this Directive. Furthermore, workers enjoy an inversion of the burden of proof (Article 18); and
- MS should impose penalties applicable to infringements of the rights established by the Directive, which should be effective, proportionate and dissuasive (Article 19).

3.1.3 Work-Life Balance Directive (Directive (EU) 2019/1158)

Fundamental rights

Article 157(1) of the TFEU establishes the duty of Member States to ensure the principle of equal pay for workers for equal work or work of equal value, regardless of gender. Meanwhile, Article 153(1)(i) recognises the role of the Union as being to support and complement the activities of the Member States in the field of equality between men and women, with regard to labour market opportunities and treatment at work. Thus, "work-life balance policies should contribute to the achievement of gender equality by promoting the participation of women in the labour market, the equal sharing of caring responsibilities between men and women, and the closing of the gender gaps in earnings and pay. Such policies should take into account demographic changes including the effects of an ageing population" (Recital 6 of the Directive).

The Directive on work-life balance for parents and carers (Directive (EU) 2019/1158, or the "Work-Life Balance Directive")[76] refers to Principle 9 of the European Pillar of Social Rights, which recognises the right of parents and people with caregiving responsibilities to suitable leave, flexible working arrangements and access to care services. Women and men should have equal access to special leaves of absence in order to fulfil their caregiving responsibilities and should be encouraged to use them in a balanced way. The Directive also refers to Principle 2 of the Pillar, which refers to gender equality in relation to equal opportunities and access to the labour market.

Personal scope

The Work-Life Balance Directive "applies to all workers, men and women, who have an employment contract or employment relationship as defined by the law, collective

[76] The Directive repealed Council Directive 2010/18/EU.

agreements or practice in force in each Member State, taking into account the case-law of the Court of Justice" (Article 2).

Material scope

The Work-Life Balance Directive lays down minimum requirements designed to achieve equality between men and women with regard to labour market opportunities and treatment at work, specifically by facilitating the reconciliation of work and family life for workers who are parents or caregivers. To this end, this Directive lays down: (a) individual rights relating to paternity leave, parental leave and leave for caregivers; (b) encouragement of flexible working arrangements for workers who are parents or caregivers.

The Directive defines flexible working arrangements for workers as "the possibility for workers to adjust their working patterns, including through the use of remote working arrangements, flexible working schedules, or reduced working hours" (Article 3(1)(f)), in particular with regard to workers with children and caregivers. In this context, telework is considered to be such a "flexible working arrangement".

The Directive establishes that employers should consider and respond to requests for flexible working arrangements within a reasonable period of time and provides that should an employer deny this request, they should provide the reasons for this decision (Article 9). The Directive also recognises time off from work on the grounds of *force majeure* for urgent family reasons and envisages a balanced approach between the needs of the employee and the company.

Relevance

The Work-Life Balance Directive encourages flexible working arrangements for workers who are parents or caregivers (i.e. those who are likely to benefit most from working arrangements such as telework). This provision, which has been already regulated in a few countries and is under discussion in several Member States (see Section 3.7 on the national regulation of telework), could improve workers' opportunities to access telework and other flexible work arrangements that have the potential to ensure work-life balance. However, its impact is limited with regard to supporting work-life balance for precarious workers who are unable to negotiate changes in their working patterns, because it does not create a strong and enforceable legal entitlement (Chung, 2022; d'Andrea, 2022).

Effectiveness

EU Member States were required to transpose the provisions of the Work-Life Balance Directive into national law by 2 August 2022. However, at the time of writing this report, final legislation is in place in only a few countries (Bulgaria, Denmark, Estonia, Finland, Greece, Italy, the Netherlands, and Sweden). The remaining countries either have draft laws (Belgium, Croatia, Ireland, Germany, Latvia, Poland and Slovakia), or transposition is in a more preliminary phase (e.g. Austria, Spain and others).[77]

The Work-Life Balance Directive offers the following tools to guarantee its effective implementation and the enforceability of the rights it recognises:

- Article 11, which prohibits discrimination, provides that Member States should take the necessary measures to prohibit less favourable treatment of workers on the

[77] See https://eur-lex.europa.eu/legal-content/EN/NIM/?uri=celex:32019L1158.

ground that they have applied for, or have taken, specific leaves or flexible work arrangements.

- Article 12 offers protection from dismissal and burden of proof, provides that Member States should take the necessary measures to prohibit the dismissal and all preparations for the dismissal of workers, on the grounds that they have applied for or taken specific leave, or have exercised the right to request flexible working arrangements. In the event that doubts arise in this regard, the employee may request that the employer provides duly substantiated reasons for their dismissal. In cases where a presumption arises that an employee has been dismissed on such grounds, it is for the employer to prove that the dismissal was based on other grounds.
- Article 13 refers to the obligation of Member States to lay down rules regarding the penalties applicable to infringements of national provisions adopted pursuant to this Directive, and to take all measures necessary to ensure that they are implemented. The penalties provided for must be effective, proportionate and dissuasive.
- Article 14, which refers to the protection against adverse treatment or consequences: Member States are required to introduce measures necessary to protect workers, including workers who are employees' representatives, from any adverse treatment by the employer or from adverse consequences resulting from a complaint lodged within the employer with the aim of enforcing compliance with the Directive.
- Article 15, concerning Equality bodies: without prejudice to the competence of labour inspectorates or other bodies that enforce the rights of workers, including social partners, Member States are required to ensure that the body or bodies designated for the promotion, analysis, monitoring and support of equal treatment of all persons without discrimination on grounds of sex, are competent with regard to issues relating to discrimination that falls within the scope of this Directive.
- Article 17, Dissemination of information: Member States are required to ensure that the national measures transposing the Directive are brought to the attention of workers and employers, by all appropriate means.
- Article 18, Reporting and review: Member States must communicate to the Commission all information concerning the implementation of the Directive that is necessary for the Commission to draw up a report.

Nevertheless, some doubts have arisen regarding the extent to which the Work-Life Balance Directive can be effective in guaranteeing workers' access to telework for caregiving purposes. While the Directive recognises a right to request flexible working arrangements for purposes of providing care, it does not oblige an employer to grant this request. In the case that a request is refused, the employer must provide reasons for that decision. Accordingly, this provision can have a limited impact on supporting work-life balance for precarious workers who are unable to negotiate changes in their working patterns, because it does not create a strong and enforceable legal entitlement (d'Andrea, 2022; Chung, 2022). Recognising telework as a right that should be granted for circumstances other than caregiving purposes is an open issue (Böök et al., 2020, p. 36).

The OECD highlights the relevance of eventually introducing a 'right to telework', at least for some hours each week.[78]

A Dutch Court was recently called upon to decide a case relating to this matter.[79] On the basis of various circumstances (i.e. the worker's colleagues did not respect minimum social distancing; the government had recommended the prolongment of telework; the employee teleworked in a productive manner; relevant agreements had been made between the employee and employer), an employee sued her employer in order to be able to continue teleworking after COVID-19-related emergency measures had ended. However, the employer refused to grant such a possibility, alleging the need for the employee to work in-person, citing the organisation's needs and the fact that telework had only been granted in the company on a temporary basis. The Court decided the case in the employer's favour.

Additionally, the right to telework (or "agile work") for caregiving purposes was established in Italy during the pandemic, as an exceptional measure.[80] Recent decisions of the Italian courts show that this right has been invoked to make access to telework effective. For example, the Court of Rome, Employment Section,[81] recognised the right to 'smart work' during the COVID-19 emergency for an employee with a disabled mother, whose request to telework in order to better assist the mother was refused by the employer. In the absence of the recognition of an *ad hoc* right, this person would not have had access to telework on the mere basis of the Work-Life Balance Directive.[82]

3.1.4 Conclusions

This section of the report has analysed three Directives that may be relevant in ensuring adequate working conditions for teleworkers or, more generally, for employees engaging in flexible work arrangements: 1) the Working Time Directive (WTD); 2) the Transparent and Predictable Working Conditions Directive; and 3) the Work-Life Balance Directive.

The section has shown that the three Directives contain provisions that are relevant to teleworkers:

- The WTD contributes to the avoidance of excessive, lengthy working hours and of a lack of opportunities for rest, with the aim of protecting workers' health and safety.
- The Transparent and Predictable Working Conditions Directive can ensure the quality of working conditions for teleworkers by setting forth clear rights to information regarding certain dimensions that are crucial in the context of flexible work arrangements (place of work, work patterns, social security, etc.).

---

[78] OECD (2020). Productivity gains from teleworking in the post COVID-19 era: How can public policies make it happen?, available at:

https://www.oecd.org/coronavirus/policy-responses/productivity-gains-from-teleworking-in-the-post-covid-19-era-a5d52e99/

[79] Dutch Civil Court, Judgment of June 2020, ECLI:NL:RBGEL:2020:2954, available at: https://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:RBGEL:2020:2954. See also: 'Work-life balance during Covid-19', 22 July 2020, available at: https://www.equalitylaw.eu/downloads/5191-netherlands-work-life-balance-during-covid-19-48-kb

[80] In particular, the Italian Law Decree 2/2021 established a right to telework until 30 April 2021 in favour of parents caring for children under the age of 14, in situations where they were the only caregiver in the family; this provision was extended until the end of 2022. Moreover, a right to telework has been recognised in further cases: e.g. Article 5-ter Decree Law 1/2022; Article 2 L.D. 30/2021; Article 21-ter Decree-Law 104/2020; Article 39 Decree-Law 18/2020. See: Chamber of Deputies, Study Service, Agile Work, 22 September 2022: https://www.camera.it/temiap/documentazione/temi/pdf/1213936.pdf?_1589973431681

[81] Court of Rome, Employment Section, Order no. 5961 of 21 January 2021.

[82] Furthermore, the Work-Life Balance Directive was transposed into national law in Italy after the aforementioned court decision, in particular by Legislative Decree 30 June 2022, n. 105.

- The Work-Life Balance Directive can support access to telework for parents or caregivers by entitling them to request flexible working arrangements.

At this stage, only the WTD has been fully transposed into Member States' national legal frameworks.[83] In this regard, this section shows that the WTD has been applied satisfactorily in EU Member States in terms of setting limits on working time, the duration of breaks, daily rest and minimum weekly rest. Moreover, several countries provide higher standards than those set by the WTD, either through statutory legislation or collective bargaining. However, several EU court cases reveal disputes and discussions concerning topics that challenge its effective implementation and are highly relevant to any regulation that addresses flexible work arrangements (including telework) and/or the right to disconnect. Thus, the section has illustrated how the question of the increasingly complex distinction between working time and rest time (in particular, in the context of standby time), as well as the issue of recording working time, have been the most problematic aspects addressed by the jurisprudence.

The WTD is based on a binary distinction between 'working time' and 'rest time', and therefore does not cover the grey area in which working time and rest time are blurred. Although the CJEU has provided criteria to define the conditions according to which standby time can be considered to be either rest time or working time, this remains a challenge in the application of the WTD.

With regard to the recording of working time, which is crucial for applying the limitations to working time set by the WTD, Member States are free to decide by which means they will require employers to adopt a system to record working time that is "objective, reliable and accessible" and which has due regard for the general principles of the protection of the safety and health of workers. However, in exercising their discretion, Member States may take into consideration "the particular characteristics of each sector of activity concerned, or the specific characteristics of certain undertakings concerning, inter alia, their size."[84]

With regard to the Transparent and Predictable Working Conditions Directive, possible challenges arise from its application to the context of telework (e.g. teleworkers may face more challenges when it comes to receiving information due to not being physically present within the employer's premises.)

While the Work-Life Balance Directive is also highly relevant to the right to request flexible working arrangements, there may also be challenges relating to its scope. This is due to the fact that the EU acquis does not guarantee a right to telework, but instead only a right to *request* it. This right does not, therefore, create a strong and enforceable legal entitlement to obtain flexible working arrangements, and effectively depends on the individual circumstances of an employer. For example, an employer may deny such a request on the basis that the nature of the employee's work requires their presence at the employer's premises. This could limit access to the benefits of flexible working in the case of those who might stand to benefit the most from such arrangements, including working parents, caregivers or persons with disabilities.

The Transparent and Predictable Working Conditions Directive and the Work-Life Balance Directive were required to be transposed by August 2022; however, several countries have only developed draft laws so far. Accordingly, any analysis of the effectiveness of these Directives must be approached with caution. Indeed, there is no existing EU case law concerning the application of these Directives to the field of telework, and only one CJEU

[83] See https://eur-lex.europa.eu/homepage.html.

[84] *Federación de Servicios de Comisiones Obreras (CCOO) v Deutsche Bank*, paragraph 63.

case[85] refers to the Transparent and Predictable Working Conditions Directive without applying it in the Judgment.

While acknowledging this, the section has also identified certain elements that can influence how both Directives contribute to effectively accomplishing their goals. On the one hand, it has been pointed out that both Directives provide tools aimed at guaranteeing the enforceability of the rights they recognise. These tools must be implemented by MS and can therefore potentially guarantee the effectiveness of the Directives. Such tools could also be applied in relation to teleworkers. On the other hand, this section has also highlighted that, in the case of the Work-Life Balance Directive, the right to request flexible work arrangements does not oblige employers to grant such requests, but they must provide reasons for a refusal. As a result, precarious workers who are unable to negotiate changes to their working patterns may face problems in accessing telework/flexible work arrangements for purposes such as providing care.

3.2 Occupational safety and health, including physical and mental health

EU acquis analysed in this section

- Occupational Safety and Health (OSH) Framework Directive (Directive 89/391/EEC)
- Directive on the minimum safety and health requirements for work with display screen equipment (Directive 90/270/EEC)
- Directive on the minimum safety and health requirements for the workplace (Council Directive 89/654/EEC)

3.2.1 Occupational Safety and Health (OSH) Framework Directive (Directive 89/391/EEC)

Fundamental rights

The Occupational Safety and Health (OSH) Framework Directive, in conjunction with the WTD (among others), is crucial to giving substance to Article 31 of the CFREU, which enshrines (i) the worker's right to working conditions that respect his or her health, safety and dignity; and (ii) the right to a limitation on maximum working hours, to daily and weekly rest periods, and to an annual period of paid leave.

Personal scope

The OSH Framework Directive applies to workers in all sectors, both public and private. While it includes trainees and apprentices, it excludes domestic servants. According to Article 2(2), the OSH Framework Directive is applicable where characteristics peculiar to certain specific public service activities, such as the armed forces or the police, or to certain specific activities in the civil protection services, inevitably conflict with it. However, this

[85] Judgment of the Court, 28 October 2021, BX v Unitatea Administrativ Teritorială D., Case C-909/19

exclusion should be interpreted in a narrow way, highlighted by the CJEU in the case of Sindacatul,[86] and confirmed by other CJEU decisions.[87]

Material scope

The OSH Framework Directive applies in full to all of the areas covered by the individual Directives within the field of health and safety at work. Only in cases where a Directive contains more stringent and/or specific provisions than national provisions do these special provisions of the individual Directives prevail. The OSH Framework Directive applies to (a) minimum periods of daily rest, weekly rest and annual leave, to breaks and maximum weekly working time, and (b) certain aspects of night work, shift work and patterns of work (Article 1, paragraph 2, WTD), without prejudice to more stringent and/or specific provisions contained in the Directive (Article 1, paragraph 4 of the WTD). Therefore, in the case of working time both the Framework Directive and the WTD apply, and the provisions of the latter prevail over those of the Framework Directive in cases where they are more stringent and/or specific.

The Directive sets forth general principles concerning the prevention and protection of workers against occupational accidents and diseases. These include:

a) avoiding risks;

b) evaluating those risks that cannot be avoided;

c) combatting risks at source;

d) adapting the work to the individual, especially as regards the design of workplaces, the choice of work equipment and the choice of working and production methods, with a view to alleviate monotonous work and work at a predetermined work-rate, as well as reducing the impacts of these kinds of work on health;

e) adapting to technical progress;

f) replacing the dangerous with the non-dangerous or the less dangerous;

g) developing a coherent overall prevention policy that covers technology, the organisation of work, working conditions, social relationships and the influence of factors related to the working environment;

h) prioritising collective protective measures over individual protective measures; and

i) giving appropriate instructions to the workers.

---

[86] CJEU Case C-147/17 / Judgment *Sindicatul Familia Constanţa and Others v Direcţia Generală de Asistenţă Socială şi Protecţia Copilului Constanţa*: "the exception under the first subparagraph of Article 2(2) of Directive 89/391 must be interpreted in such a way that its scope is restricted to what is strictly necessary in order to safeguard the interests which it allows the Member States to protect" (para 53).

[87] CJEU, Cases C-397/01 - C-403/01, *Pfeiffer and Others*, EU:C:2004:584, p. 54, Case C211/19, Készenléti Rendőrség, EU:C:2020:344, p. 32.

The OSH Framework Directive also sets out obligations for both the employer and the worker that must be complied with. The employer is responsible for ensuring the safety and health of workers in every aspect related to the work. By the same token, workers' obligations in the field of safety and health at work should not affect the principle of the responsibility of the employer in this regard.

In addition, the employer is required to implement specific measures to guarantee safety and health at work, and must adjust them to take account of changing circumstances and should improve existing situations wherever possible. In adopting an effective system of prevention of risks, the employer should:

a) evaluate the risks and implement necessary measures, and ensure that improvements to the level of protection are integrated into all activities and hierarchical levels;

b) take into consideration the worker's capabilities as regards health and safety when assigning tasks to them;

c) ensure that the planning and introduction of new technologies are subject to consultation with the workers and/or their representatives; and

d) ensure that only workers who have received adequate instructions can access areas in which there is serious and specific danger.

When undertaking these actions, the employer must consider the nature of the activities of the enterprise and/or establishment. The employer must also designate one or more workers to carry out activities related to the protection and prevention of occupational risks, who should have the necessary characteristics to carry out such functions in an adequate way.

The workers' obligations with regard to safety and health are:

a) to take care, to the greatest extent possible, of their own safety and health and that of other workers; to make correct use of the machinery, personal protective equipment, tools, etc.;

b) to inform the employer or designated worker responsible for maintaining health and safety in the workplace with regard to situations and risks to health and safety; and

c) to cooperate with the employer or designated worker to guarantee health and safety.

Relevance

The OSH Framework Directive provides general principles regarding the protection of workers from and prevention of occupational risks. The employer is responsible for ensuring the safety and health of workers in every aspect related to the work. The Framework Directive establishes obligations for both employers and workers with regard to OSH. It requires employers to assess emergent risks brought about by new technologies at work, to take necessary measures to avoid risks to workers, and to consult with workers and their representatives about these risk assessments and the resulting preventive and protective measures. Teleworkers use ICT intensively, and these technologies are constantly being

developed; thus, a continuous practice of risk assessment and the subsequent development of preventative and protective measures is also highly relevant to the case of teleworkers.

In relation to telework and the right to disconnect, the OSH Framework Directive (in combination with the WTD) is relevant to the prevention of the psychosocial and ergonomic risks related to the organisation of working time, including excessive workload and working hours as well as extended availability. The same applies with regard to other risks related to telework, such as isolation, few opportunities to collaborate, information overload, and non-verbal overload.

Effectiveness

The application of the OSH Framework Directive in the case of telework presents a few practical issues. First, because employees may not be physically present at their employer's premises, this poses a challenge for employers to fulfil their legal obligations with regard to protecting worker safety (e.g. conducting a risk assessment or guaranteeing the enforcement of health and safety requirements). Furthermore, these risk assessments and inspections may clash with limitations stemming from the employee's right to privacy at home (EU-OSHA, 2021; Eurofound, 2022). According to the EU-OSHA ESENER survey, in 2019 only around 30% of European establishments carried out risk assessments of telework settings (i.e. teleworkers' homes) (Eurofound 2022b).

National regulation of telework in Member States provides different measures to address these practical problems (see Section 3.7 for further discussion). Among the countries with a statutory definition of or specific regulations relating to telework, the most relevant aspects are as follows (Eurofound 2022b):

- A few countries (Belgium, Spain, Germany, Greece, Croatia[88] and the Netherlands) have specifically put in place regulations addressing risk assessments as a pre-condition for allowing telework. Even in these cases, different approaches have been adopted to implement the risk assessment or decide how to monitor employees' remote workplaces.
- In Bulgaria and Portugal, legislation provides that labour inspectorates, employers (or safety and health experts), and/or workers' representatives with the right of access to teleworkers' places of work (home, etc.), can inspect workers' compliance with OSH (and in these cases, under certain limits).
- In other countries, legislation does not entitle the company, employee representatives or enforcement agencies to inspect a teleworker's place of work (mainly when the teleworkers' workplace is their home); alternatively, this may be subject to prior notification of the employee and their explicit consent/agreement.

In countries with no specific regulation of telework, legislation acknowledges the equal rights of teleworkers and those employees working at the employers' premises in terms of health and safety. In three Nordic countries (Denmark, Norway and Sweden), inspection of a teleworker's workplace by an employer or worker representative is subject to employee consent. In the case of Sweden, the Work Environment Authority highlights on its website the importance of cooperation between employer and teleworker due to the limited ability of the employer to assess risks in the working environment. In Ireland, where there is no specific legislation on this subject, the HSA Guidance on Working from Home for Employers and Employees contains a checklist to be followed by employers (Eurofound, 2022b).

[88] In Croatia, occasional telework is excluded from mandatory risk assessment.

In relation to collective bargaining, Eurofound (2022) highlights that sectoral and company-level agreements on telework usually include provisions for risk assessment. Eurofound found that according to at least one company agreement (the collective agreement on telework used by the Suez group, France) employees must fulfil certain safety criteria in order to be eligible for telework. The prevention of psychosocial risks in flexible working arrangements, including telework, is inherently linked to the application of the WTD. Other psychosocial risks specific to telework, such as isolation, are sometimes included in the national regulation of telework as well as in collective bargaining. In this regard, Subsection 3.2.1 has discussed the problems in application and jurisprudence concerning the distinction between work time and rest time, and in the recording of work time.

3.2.2 Directive on the minimum safety and health requirements for work with display screen equipment (Directive 90/270/EEC)

Fundamental rights

The Directive on the minimum safety and health requirements for work with display screen equipment (Directive 90/270/EEC, or 'DSE Directive') concerning the minimum safety and health requirements for work with display screen equipment gives substance to Article 31 CFREU, which enshrines (i) the worker's right to working conditions that respect his or her health, safety and dignity, and (ii) the right to a limitation on maximum working hours, to daily and weekly rest periods, and to an annual period of paid leave.

Personal scope

The DSE Directive applies to all workers, with the exception of drivers' cabs or control cabs for vehicles or machinery. In addition, the Directive does not apply to computer systems onboard a means of transport; computer systems mainly intended for public use; 'portable' systems not in prolonged use at a workstation; calculators, cash registers and any equipment that has a small data or measurement display required for the direct use of the equipment; typewriters of traditional design, of the type known as 'typewriter with window.'

Material scope

The DSE Directive lays down minimum safety and health requirements for working with display screen equipment.

It establishes the following obligations for employers:

- Carrying out an analysis of workstations in order to evaluate safety and health conditions, particularly with regard to risks to eyesight, physical problems and problems of mental stress;
- Taking appropriate measures to address the aforementioned risks;
- Providing workers with information and training on applicable measures;
- Planning daily routines so that screen time is periodically interrupted by breaks or changes in tasks;

- Ensuring that consultation with workers and/or workers' representatives is carried out in accordance with Article 11 of the OSH Framework Directive (89/391/EEC), which establishes the principles of fair and balanced participation; and
- Protecting workers' eyes and eyesight (both before commencing work using a display screen, as well as at regular intervals thereafter and/or as workers begin to experience difficulties that may impact their eyes/eyesight).

Relevance

The DSE Directive is of special relevance to protecting the health and safety of teleworkers who use ICT intensively, as an analysis of workstations needs to be carried out independently whether the employee's work is carried out remotely or not. Obligations includes a risk assessment of workstations used to provide work remotely, and taking appropriate measures to prevent these risks, which are applicable to teleworkers. The Directive might also be of relevance to workers who are requested to fulfil work requirements through the use of portable ICT devices such as smartphones, which would require a proper risk assessment of other types of display screen equipment.

Effectiveness

New technologies are developing quickly and increasing involve the use of a variety of devices which challenge the scope of application of the DSE Directive. The extensive use of smartphones and other portable devices for work purposes entails new risks to workers' safety and health, including eyesight (due to their small screen size), which may also lead to physical problems or stress. While these risks may be higher for workers in flexible working arrangements, including telework, such devices may not be explicitly covered by the DSE Directive.

Notably, the impact of specific devices on the application and effectiveness of the DSE Directive was touched upon in the case of *Margrit Dietrich v Westdeutscher Rundfunk*.[89] In this case, the Court of Justice had to interpret the meaning of "display screen equipment" and the meaning of "drivers' cabs or control cabs for vehicles or machinery" for the purposes of the application of the DSE Directive. The Court included within its definition screens that display film recordings in an analogue or digital form but did not extend the definition to a job which uses analogue or digital images processed with the aid of technical devices and/or computer programs in order to produce television broadcasts. This decision shows that the DSE Directive not necessarily include all types of screens, effectively limiting its applicability in the case of certain work activities.

While this case does not directly concern telework (for one, because teleworkers presumably use screens that are capable of displaying film recordings for working purposes), it does demonstrate that the definition of a 'screen' is an issue in some decisions in case law. The relevance of this decision to telework should be understood from a future-facing perspective: technology is developing fast, and working remotely may entail working with different kinds of interfaces and screens of different sizes (e.g. tablets, mobile phones, etc.), some of which could potentially fall outside the application of the Directive. Discrepancies with regard to how a "display screen" is defined and interpreted could potentially lead to gaps in the way the Directive is applied to unforeseen technological developments. It is also possible that current working tools, including smartphones, may not be subject to a specific risk assessment, which considers the dimensions of their screens

[89] Judgment of the Court (Sixth Chamber) of 6 July 2000. *Margrit Dietrich v Westdeutscher Rundfunk*. Case C-11/99.

or any specific risks to health and safety (e.g. ergonomic) that their use might entail. In this sense, the application of the Directive to the case of telework might require a broader understanding and definition of technological devices as well as a consideration of any specific risks to workers' health and safety that they might pose.

Working at home on a permanent or long-term basis implies a duty on the part of the employer to assess the health and safety conditions of an employee's workstation, with the aim of mitigating risks (e.g. problems with eyesight). In this regard, it is not clear whether the personal scope exclusion from the application of the Directive and the reference to whether or not 'portable' systems not in prolonged use at a workstation might include phones or laptops. At the same time, such technological tools have become increasingly common in the daily working life of teleworkers and should be therefore included within any risk assessment carried out by the employer.

A 2015 evaluation of the practical implementation of the DSE Directive in the EU's Member States[90] concluded that "there is evidence that the relevance, and possibly therefore effectiveness, of the Directive would be enhanced by changes to its provisions. There is widespread consensus that the provisions of the Directive (in particular, those relating to the minimum requirements for workstations) are much less relevant to modern computer technologies (laptops, tablets, smartphones) than they were when the Directive was first conceived. Expert opinion also emphasises that these changes in technology have resulted in radical changes to the concepts of workstations and that many users no longer use a fixed desk" (p. 83). Expressing concern for the overall effectiveness of the Directive,[91] the evaluation highlighted "a very low level of knowledge of compliance in MS, with most not being able to provide any data or even a subjective estimate" (p. 52)

3.2.3 Directive on the minimum safety and health requirements for the workplace (Council Directive 89/654/EEC)

Fundamental rights

The Directive on the minimum safety and health requirements for the workplace (Council Directive 89/654/EEC) gives substance to Article 31 of the CFREU, which guarantees (i) the worker's right to working conditions which respect his or her health, safety and dignity, and (ii) the right to a limitation of maximum working hours, to daily and weekly rest periods, and to an annual period of paid leave.

Personal scope

The Directive on the minimum safety and health requirements for the workplace applies to all workers except those working in locations such as: (a) those where a means of transport is used outside the undertaking of work activities and/or outside the establishment, or workplaces located inside a means of transport (e.g. truck cabs); (b) temporary or mobile work sites; (c) those related to extractive industries (e.g. mines); (d) fishing boats; and (e)

[90] At the national level, the Irish Health and Safety Authority recognises that a laptop screen has specific characteristics in comparison to a desktop PC or similar equipment. Laptops are therefore not regulated according to the same health and safety regulation that applies to traditional PC screens and similar equipment. See Guide to the Safety, Health and Welfare at Work (General Application) Regulations 2007 Chapter 5 of Part 2: Display Screen Equipment: www.hsa.ie/eng/Publications_and_Forms/Publications/General_Application_Regulations/Display_Screen.pdf

[91] DG Employment, Social Affairs and Inclusion of the European Commission (September 2015), Evaluation of the practical implementation of the EU Occupational Safety and Health (OSH) Directives in EU Member States, Report by Directive, Directive 90/270/EEC https://ec.europa.eu/social/BlobServlet?docId=16942&langId=en

fields, woods and other land forming part of an agricultural or forestry enterprise, but situated away from the enterprise's buildings.

Material scope

The Directive on the minimum safety and health requirements for the workplace lays down minimum requirements for the safety and health of workers in the workplace.

Relevance

The Directive on the minimum safety and health requirements for the workplace provides a definition of 'workplace', which is understood as "the place intended to house workstations on the premises of the undertaking and/or establishment and any other place within the area of the undertaking and/or establishment to which the worker has access in the course of his employment." This definition appears to exclude telework from the application of the Directive (i.e. workspaces located in an employee's home or another location away from the employer's premises are not specifically mentioned).

However, the lack of definitional specificity in the Directive on the minimum safety and health requirements for the workplace must also be framed within the context of the OSH Framework Directive (which also applies to teleworkers); namely, its requirement that "the employer shall, taking into account the nature of the activities of the enterprise and/or establishment, evaluate the risks to the safety and health of workers, *inter alia* in the choice of work equipment, the chemical substances or preparations used, and the fitting-out of workplaces" (Article 6(3) Directive 89/391/EEC). Since the Directive on the minimum safety and health requirements for the workplace does not provide a definition of a workplace outside the premises of the employer, "it may be assumed… partly in the light of the recitals of the Framework Directive, which repeatedly use the term 'workplace'," that the term is to be understood in a broad sense,[92] including "the safety of home workplaces or other place-independent workplaces."[93]

Effectiveness

The concept of 'workplace' in the context of telework, though not specifically addressed by this Directive, has important impacts on issues relating to telework (for example, the applicability of social security coverage, labour law and taxation at the national level). This Directive may therefore be used to establish the rights of teleworkers in workplaces that are not located at the premises of an employer, but which also may not be considered 'temporary or mobile work sites' (e.g. a coworking office regularly used by an employee, an employee's home, etc.). Relevant to this interpretation is the decision of the German Federal Social Court (*Bundessozialgericht Verhandlung* B2 U 4/21 R), which ruled that in the case of a worker who was injured while working from home, this incident must be considered an 'accident at work'. While the decision does not specifically make reference to this Directive, the Court's decision reflects an emphasis on workers' equal treatment in view of the ongoing pandemic situation, reflecting a sense that people who work from home should not be subject to different standards from those applied to other employees in the company.

---

[92] Popma, J. (2017). The Janus face of the 'New Ways of Work': rise, risks and regulation of nomadic work, ETUI Working Paper, July 2013: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2376713

[93] Ibid.

Because the definition of 'workplace' is so important for teleworkers' rights, the notion of the workplace may need to be adapted to deal with the increased dematerialisation or fluidity of the workplace, to ensure that teleworkers' health and safety at work are adequately protected. The need for adaptation with regard to the concept of the workplace is coherent with the 2015 evaluation of the practical implementation of the EU Health and Safety Directives,[94] in which Member States expressed concerns regarding the definition of a workplace. "This partly reflects new ways of working, as well as issues regarding working away from an employer's premises. Some Member States have adopted a wider definition of a 'workplace'. Although specific changes are restricted to one or two Member States, the general impression is that Member States have identified this as a deficiency in the Workplace Directive, which impacts on its current and future relevance" (p. 46).

3.2.4 Conclusions

The new 2021-2027 OSH Strategic Framework,[95] which sets out the key priorities and actions necessary to improve workers' health and safety over the coming years in the context of a post-pandemic world, maintains that "OSH action in the EU is needed to make the workplaces fit for the increasingly rapid changes in the economy, demography, work patterns, and society at large."[96] Such workplace adaptation is needed by some EU workers in particular, for whom the concept of a workplace is becoming more fluid but also more complex as new organisational forms, business models and industries are emerging: "The COVID-19 pandemic has accentuated these complexities and made OSH and public health policy more inter-related than ever before."[97]

To modernise the OSH legislative framework, three key cross-cutting objectives must be addressed in the coming years: (i) anticipating and managing change in the new world of work brought about by the green, digital and demographic transitions; (ii) improving the prevention of workplace accidents and illnesses; (iii) increasing preparedness for any potential future health crises. Such objectives will be achieved through (i) social dialogue; (ii) strengthening of the evidence base; (iii) strengthening of enforcement; (iv) awareness raising; and (v) funding. This can be possible on the basis of action at EU, national, sectoral and company level.

To this end, this section of the report has analysed three Directives that may be relevant to the protection of teleworkers' health and safety: 1) the OSH Framework Directive; 2) the Directive on the minimum safety and health requirements for work with display screen equipment; and 3) the Directive on the minimum safety and health requirements for the workplace.

Specifically, this section has shown that these three Directives contain some provisions that may be relevant for teleworkers: the OSH Framework Directive is relevant because, beyond

---

[94] DG Employment, Social Affairs and Inclusion of the European Commission, Evaluation of the practical implementation of the EU Occupational Safety and Health (OSH) Directives in EU Member States, Synthesis Report, September 2015: https://osha.europa.eu/en/legislation/directives/the-osh-framework-directive/1https://osha.europa.eu/en/legislation/directives/the-osh-framework-directive/1

[95] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions EU, Strategic framework on health and safety at work 2021-2027. Occupational safety and health in a changing world of work, COM(2021) 323 final: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52021DC0323&rid=8

[96] COM(2021) 323 final, Communication from the Commission to the European Parliamennt, The Council, the European Economic and Social Committee, and the Committee of the Regions, EU strategic framework on health and safety at work 2021-2027. Occupational safety and health in a changing world of work {SWD(2021) 148 final} – {SWD(2021) 149 final}, p. 5: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021DC0323&from=EN

[97] COM(2021) 323 final, Communication from the Commission to the European Parliamennt, The Council, the European Economic and Social Committee, and the Committee of the Regions, EU strategic framework on health and safety at work 2021-2027. Occupational safety and health in a changing world of work {SWD(2021) 148 final} - {SWD(2021) 149 final}, p. 5: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021DC0323&from=EN

providing general principles about OSH prevention, it requires employers to (among other responsibilities) assess all risks, including emergent risks brought about by new technologies at work; to take the necessary measures to avoid risks and protect workers; and to inform and/or consult with workers and their representatives. In combination with the WTD, this Directive contributes to the prevention of risks to psychosocial health related to the organisation of working time, including excessive workload and extended availability.

In addressing the Directive on the minimum safety and health requirements for work with display screen equipment, although this Directive does not exclude telework, we have nevertheless highlighted the need for this legislative instrument to specifically refer to the case of telework and the potential use of other types of display screen equipment while working remotely.

With regard to the Directive on the minimum safety and health requirements for the workplace, we have highlighted that the definition of 'workplace' in this Directive does not include telework. However, since the OSH Framework Directive does not refer to a specific definition of a workplace, its provisions are applicable in relation to every place in which work is carried out and "it may be assumed, … partly in the light of the recitals of the Framework Directive, which repeatedly use the term 'workplace', that 'workplace' is to be understood in a broad sense,"[98] including "the safety of home workplaces or other place-independent workplaces."[99]

Nevertheless, this section has also identified certain issues that challenge the ways in which the three Directives can effectively accomplish their goals in the context of telework arrangements. The application of the OSH Framework Directive may encounter practical problems because the physical separation of workers from employers' premises in the context of telework entails difficulties for employers in fulfilling their legal obligations. Moreover, the context of telework makes it more complex to conduct a risk assessment and guarantee the enforcement of health and safety requirements. Furthermore, risk assessments and inspections might clash with limitations stemming from the employee's right to privacy at home.

Meanwhile, the application of the Directive on the minimum safety and health requirements for work with display screen equipment could, in the future, be challenged by the arrival of new types of screens that have not yet developed, and which may raise doubts about their interpretation as a 'screen' falling within the application of the Directive.

3.3 Control, surveillance and monitoring performance systems, data protection and privacy

3.3.1 General Data Protection Regulation (Regulation (EU) 2016/679)

Fundamental rights

The EU's main legal instrument regarding data protection is Regulation (EU) 2016/679/EU (the General Data Protection Regulation, or "GDPR"), which derives its legal basis from Article 16 of the TFEU, according to which everyone has the right to the protection of personal data concerning him/her. The right to the protection of personal data is also

[98] Popma, J. (2013), The Janus face of the 'New Ways of Work': rise, risks and regulation of nomadic work, ETUI Working Paper, July 2013. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2376713

[99] Ibid.

enshrined in Article 8 of the CFREU, which recognises the same right (Article 8.1 CFREU). Personal data must be processed fairly, for specified purposes, and on the basis of the consent of the person concerned or some other legitimate basis laid down by law. In addition, personal data must be accessible to anyone whom it might concern, and individuals have the right to have their personal data rectified (Article 8.2 CFREU). Finally, compliance with data protection regulation should be subject to control by an independent authority (Article 8.3 CFREU).

The right to the protection of personal data is not an absolute right; rather, it must be considered in relation to its function and be balanced against other fundamental rights, in accordance with the principle of proportionality (Recital 4 GDPR).[100]

Personal scope

The GDPR lays down rules governing the protection of natural persons with regard to the processing of personal data, as well as rules relating to the free movement of personal data (Article 1.1).

Material scope

The GDPR protects the fundamental rights and freedoms of natural persons; in particular, their right to the protection of personal data (Article 1.2). This Regulation applies to the processing of personal data wholly or partly by automated means, and to the processing other than by automated means of personal data which form part of a filing system or are intended to form part of a filing system (Article 2.1). According to the Regulation, "'personal data' means any information relating to an identified or identifiable natural person ('data subject'); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person" (Article 4).

Relevance

The GDPR provides a general framework for the protection of the personal data of natural persons.

Data processing requires a lawful ground based on Article 6 of the GDPR, admissible only if and to the extent that at least one of the following applies: (i) the data subject's consent has been given to the processing of their personal data for one or more specific purposes (Article 6.1 (a) GDPR; however, as it will be explained below under the heading 'The employee's consent', consent within the context of an employment relationship takes on a particular connotation); (ii) processing of the data is necessary in order to perform a contract

[100] Judgment of the Court (Grand Chamber) of 29 January 2008, *Productores de Música de España (Promusicae) v Telefónica de España SAU*, Case C-275/06. In *Productores*, Promusicae claimed before the national court that the users of peer-to-peer file sharing application KaZaA were engaging in unfair competition and infringing intellectual property rights. Promusicae therefore sought the disclosure of information in order to enable it to bring civil proceedings against the persons concerned. The national court asked the CJEU to interpret relevant EU law in order to understand whether ensuring the effective protection of copyright could involve an obligation to communicate personal data in the context of civil proceedings. Such an interpretation should not be in conflict with those fundamental rights, or with the other general principles of Community law, such as the principle of proportionality.

With regard to data protection, the balancing of private and public interests is also relevant: Decision 13 May 2014, *Google Spain and Google*, EU:C:2014:317; Decision 9 March 2017, *Manni*, C-398/15, EU:C:2017:197; Decision 8 April 2014, *Digital Rights Ireland Ltd*, C-293/12 and C-594/12.

to which the data subject is party or in order to take steps at the request of the data subject prior to entering into a contract (Article 6.1 (b) GDPR); (iii) processing is necessary in order to comply with a legal obligation to which the controller is subject (Article 6.1 (c) GDPR); (iv) processing is necessary to protect the vital interests of the data subject or of another natural person (Article 6.1 (d) GDPR); (v) the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller make processing necessary (Article 6.1. (e) GDPR); (vi) with the exception of processing carried out by public authorities in the performance of their tasks (Article 6.2), when processing is necessary for the purposes of the legitimate interests pursued by the controller or by a third party, except where such interests are overridden by the interests or fundamental rights and freedoms of the data subject which require the protection of personal data, in particular where the data subject is a child (Article 6.1 (f) GDPR).

In addition to Article 6 of the GDPR, when processing sensitive personal data, Article 9 of the GDPR comes into play (i.e. processing is possible only if one of the exceptions provided in Article 9(2) apply).[101]

Article 5 GDPR defines the principles to be applied to any data processing: namely, “lawfulness, fairness and transparency”, “purpose limitation”, “‘data minimisation”, “accuracy”, “storage limitation”, “integrity and confidentiality” and “accountability.” Art. 5 (2) states that the data controller shall be responsible for and be able to demonstrate compliance with these principles.

Telework presents a unique challenge for compliance with Article 5 of the GDPR because all work is conducted through technological means. This may also mean that the collection, processing, and storage of personal data is more vulnerable to potential data breaches or unauthorized access. Therefore, it is essential for data controllers in telework scenarios to strictly adhere to the ‘data minimisation’ principle. This involves limiting the collection of personal data to what is directly necessary to achieve a specified purpose (Article 5(c) GDPR), which can be particularly challenging given the use of increasingly complex technology in telework.

Furthermore, the ‘storage limitation’ principle requires that personal data should only be retained for as long as it is necessary for fulfilling the designated purpose. It is important for data controllers in telework to avoid retaining personal data for the sole purpose of being able to react to potential requests (Recital 64 GDPR). Data controllers in telework scenarios must also be able to demonstrate their compliance with these data protection principles (Article 5(2) GDPR). This means ensuring that their data processing practices comply with the principles of data minimisation and storage limitation, and that personal data is not processed in a way that is incompatible with the purpose for which it was collected.

The principle of transparency has particular relevance in the context of digital monitoring by means of biometric technologies (e.g. facial or voice recognition), as it may involve processing sensitive data. Article 9 of the GDPR provides a general prohibition on the processing of sensitive personal data, including the processing of biometric data for the purpose of uniquely identifying natural persons, and provides certain exemptions from it (paragraph 2).

The guidelines of the European Data Protection Board (EDPB) highlight how the use of technologies that collect biometric data can present challenges to complying with transparency requirements. For example, the collection of voice data (i.e. biometric data) is a primary function of virtual voice assistants (VVAs). These devices may be activated by multiple users (rather than only the user that sets up the device) either intentionally or

[101] Already set by Article 6 Directive 95/46, and highlighted for example in Judgment of the Court (Grand Chamber), 13 May 2014. *Google Spain SL and Google Inc. v Agencia Española de Protección de Datos (AEPD) and Mario Costeja González*, Case C-131/12. ECLI:EU:C:2014:317.

unintentionally (e.g. through the inadvertent use of 'wake up' commands or ambient noise).[102] This ecosystem complexity could lead to situations where users may not be aware whether a device is idle or 'listening' for commands, and whether or not their personal data could be processed (and therefore, are not able to offer their consent). It may also not be clear to the user what the role of data processors or controllers are in the collection of voice data by VVAs.[103] In this respect, complying with transparency requirements should address this "asymmetry of information," and inform all users of the possibility for processing personal data and the status of the device (through vocal acknowledgements, lights, icons, or other measures.[104]

In the case of video surveillance, the purposes of monitoring must be specified in writing (Article 5 (2)). This clarification must be provided for every surveillance camera in use. At the same time, data subjects must be informed of the purpose(s) of the processing in accordance with Article 13 (under Section 7, 'Transparency and information obligations'). This explanation is crucial because, according to the EDPB, "video surveillance based on the mere purpose of 'safety' or 'for your safety' is not sufficiently specific (Article 5 (1) (b))."[105]

Instead, such surveillance must be based on one of the specific grounds for lawful processing of personal data under Article 6(1). Such aspects are relevant to workers' expectations of privacy in carrying out telework, particularly because in this context digital monitoring may be employed to a greater extent than when work is carried out on-premises, and remote working environments may be less predictable.[106] Moreover, owing to an inherent imbalance of power between employer and employee in employment relationships, EDPB guidelines note that "in most cases employers should not rely on consent when processing personal data, as it is unlikely to be freely given."[107]

The employee's consent

Data processing is lawful only if it is carried out under the conditions set forth by the GDPR (Article 6 and, in case of sensitive personal data, only if one of the exceptions under Article 9(2) applies). In this regard, telework can entail certain difficulties in referring to 'consent' as a lawful ground for data processing within the context of an employment relationship.

The GDPR provides clarification and specifications as to the requirements for obtaining and demonstrating valid consent, particularly Article 7. According to Article 7(4), consent cannot be considered as freely given if the performance of a contract is dependent on the consent to the processing of personal data even though the processing of such personal data is not necessary for the performance of that contract. In making such an assessment, it is important to determine what the scope of the contract is and what data would be necessary for the performance of that contract. The scope and the data needed to perform the contract should be interpreted strictly; for example, in the context of an employment contract, the

---

[102] See EDPB Guidelines on Virtual Voice Assistants, Version 2.0, 02/21, adopted 07 July 2021. Available at: https://edpb.europa.eu/system/files/2021-07/edpb_guidelines_202102_on_vva_v2.0_adopted_en.pdf.

[103] Paragraph 49, See EDPB Guidelines on Virtual Voice Assistants, Version 2.0, 02/21, adopted 07 July 2021. Available at: https://edpb.europa.eu/system/files/2021-07/edpb_guidelines_202102_on_vva_v2.0_adopted_en.pdf.

[104] Paragraph 51, See EDPB Guidelines on Virtual Voice Assistants, Version 2.0, 02/21, adopted 07 July 2021. Available at: https://edpb.europa.eu/system/files/2021-07/edpb_guidelines_202102_on_vva_v2.0_adopted_en.pdf.

[105] See Guidelines 3/2019 on processing of personal data through video devices, https://edpb.europa.eu/our-work-tools/our-documents/guidelines/guidelines-32019-processing-personal-data-through-video_en.

[106] For example, in instances where voices of others present in the home are captured or registered by virtual voice assistants, triggering the recording mechanism, or the otherwise unintended recording of persons who have not offered consent (for example, those appearing in the background of a recorded video call). See Deep Dive on Privacy and Surveillance (Annex 10C) for further discussion of these and related issues.

[107] See paragraph 47, EDPB Guidelines 3/2019 on processing of personal data through video devices. 29 January 2020. Available at https://edpb.europa.eu/sites/default/files/files/file1/edpb_guidelines_201903_video_devices.pdf.

processing of employees' personal data related to salary information and bank account details can be considered necessary in order to pay wages.

In addition, the principle of fairness (Article 5, GDPR) implies the recognition of the reasonable expectations of the data subjects by considering the possible adverse consequences that the processing of their data might have on them, as well as the relationship and potential effects of imbalance between the subject and the controller. Indeed, according to EDPB Guidelines 05/2020, obtaining consent (which must be genuine) does not diminish the controller's obligations to observe the principles of processing enshrined in the GDPR, especially Article 5 of the GDPR with regard to fairness, necessity and proportionality, and data quality.[108]

According to Opinion 2/2017 (WP29), in the specific context of an employment relationship, the position of dependency of the workers with respect to their employer means consent is not always freely given. This is also confirmed by the EDPB Guidelines 05/2020 on consent under Regulation 2016/679, according to which "given the dependency that results from the employer/employee relationship, it is unlikely that the data subject is able to deny his/her employer consent to data processing without experiencing the fear or real risk of detrimental effects as a result of a refusal" (Guidelines 05/2020, Recitals 21, pg. 9). However, this imbalance of power does not mean that the employee's consent is always invalid. The employee's consent can be considered a lawful ground for processing personal data when the employer demonstrates that it was freely given and that the employee's decision of whether or not to provide such consent "will have no adverse consequences at all" for the employee (Guidelines 05/2020, Recitals 22, pg. 9).

Lastly, Article 88 of the GDPR allows Member States to provide more specific rules in national law in order to "ensure the protection of the rights and freedoms in respect of the processing of employees' personal data in the employment context" – however, those more specific rules cannot derogate from the rules laid down in the GDPR.[109] In this sense, national rules could take into consideration that in the context of an employment relationship, consent is generally speaking not considered to be valid (Article 7 GDPR requires freely-given consent) due to the imbalance of power between the employee and the employer, as discussed above.[110] Therefore, national rules could create the conditions to protect the weaker party of the contract (in this case, the employee) whose consent could be influenced by the imbalance of power within the employment relationship.

Employers' monitoring of employees and management of personal information

Telework is a form of work organisation that takes place through the use of technology, which is closely connected with collecting data and translating it into usable information (that is, data processing). Employers have the right to ensure that work activity is carried out according to their instructions, while at the same time, monitoring activities are allowed only within the limitations provided by the GDPR and only on the basis of a lawful ground.

Employers' monitoring activities in case of telework rely on **Article 6.1(c) of the GDPR,** according to which the processing of data is necessary for compliance with a legal obligation

[108] EDPB guidelines on consent, available at: Guidelines 05/2020 on consent under Regulation 2016/679 | European Data Protection Board (europa.eu)]

[109] A few Member States (Germany, Greece, and Italy) make explicit reference to Article 88 in their data protection legislation, and Germany, Greece, and Spain include detailed rules on data processing that go beyond data practices listed in Article 88(1). See Abraha, 2022 for more details.

[110] See EDPB guidelines, paragraphs 21-22.

to which the controller is subject.[111] Additionally, **Article 6.1(f) of the GDPR** allows for the processing data in cases where it is necessary for the purposes of legitimate interests pursued by the controller[112] which are not overridden by the interests or fundamental rights and freedoms of the data subject which require protection of personal data. An example of this could be in the case of employee monitoring for management purposes or for guaranteeing safety, if such monitoring can be considered proportionate in relation to the specific legitimate purpose, and if it is not possible to reach the same goal through less intrusive means.

Article 6(1)(b) of the GDPR provides a lawful basis for processing personal data to the extent that "processing is necessary for the performance of a contract to which the data subject is party or in order to take steps at the request of the data subject prior to entering into a contract". This supports the freedom to conduct business, which is guaranteed by Article 16 of the Charter, and "reflects the fact that sometimes the contractual obligations towards the data subject cannot be performed without the data subject providing certain personal data."[113] However, the same Article 6(1) (b) may also be relevant in the context of an employment relationship, where the collection, processing and disclosure of personal data may be necessary in order to perform pre-contractual steps taken at the data subject's request (e.g. to process a data subject's job application with the intention of possibly entering into an employment contract with them) (Article (6)(1)(b)).

Legitimate interests are required as a ground for data processing. This requires a balancing test, according to which: (i) the data processing should be necessary for the legitimate interests of the controller or third parties, and (ii) such interests should not override the interests or fundamental rights and freedom of the data subject. **The Article 29 Working Party Opinion on "legitimate interests"** clarifies this concept. The "legitimate interests" balancing test has to take into consideration different elements, such as the nature of the data and how they are processed. The GDPR requires transparency in the processing of personal data and emphasises that data controllers are obliged to inform the data subject of the processing of his or her personal data **(Article 13-14 GDPR).** The information provided should be "concise, transparent, intelligible, and easily accessible" **(Article 12(1)).** Information should include *inter alia* the identity and contact information of the data controller, the purposes of the data processing, as well as the legal basis for the processing...the period for which the data will be stored […] (Article 13-14 GDPR). Therefore, in the context of monitoring teleworkers' activities, in addition to requiring a lawful reason, the kinds of employee data – and the ways in which it is processed – should be sufficiently clear. In any case, the teleworker should be able to contact the controller at any time to request more information.

The controller has specific duties under Articles 24, 25, 30, 32, 33, 34 of the GDPR.

According to Article 24, the controller should take appropriate technical and organisational measures to ensure (and to be able to demonstrate) that the GDPR rules have been complied with. This article responds to the idea that the controller should be entitled to a clearly established responsibility and liability for data processing (Recital 74 GDPR).

In determining what technical and organisational measures are appropriate, it is necessary to consider, on the one hand, the nature, scope, context, purposes of processing, and on

[111] An example of a legal obligation for which it is necessary for the employer to process teleworkers' personal data to ensure fulfilment is provided by the obligations set by the Working Time Directive: that is, limitations on working time can only be guaranteed via the recording of working time.

[112] For an in-depth analysis of this aspect, see Frank Hendrickx, 'Privacy 4.0 at Work: Regulating Employment, Technology and Automation', *Comparative Labour Law & Policy Journal* 41, no. 1 (Fall 2019): 147-172.

[113] Guidelines 2/2019 on the processing of personal data under Article 6(1)(b) GDPR in the context of the provision of online services to data subjects, pg. 4. Available at: https://edpb.europa.eu/sites/default/files/files/file1/edpb_guidelines-art_6-1-b-adopted_after_public_consultation_en.pdf

the other hand, the risks of the varying likelihood and severity of the rights and freedom of the person whose data are being processed (for example, whether such data processing may lead to discrimination; see Recital 75 GDPR). The likelihood and severity of the risk to data subjects' rights should be assessed objectively (Recital 76 GDPR).

Measures taken by the controller in accordance with Article 24 must be reviewed and updated where necessary, and where appropriate, should form part of the specific policies on appropriate implementation by the controller. These measures should also include the adequacy of codes of conduct and medical mechanisms (Article 24 GDPR and Recital 77 GDPR).

Therefore, there should be appropriate technical and organisational measures that consider the particular context in which telework is carried out, such as the worker working in a place other than the employer's premises. Thus, in the case of telework, the employer will only be understood to have complied with all of the requirements of the GDPR if they can demonstrate that it has taken into consideration all of the specific circumstances entailed by telework in terms of work organisation (e.g. teleworkers could find themselves in a place in which the internet connection is unstable or insecure).

Data protection should be effective by design and by default, both at the time at which the means used for processing are determined, and at the time of the processing itself. Processing should integrate the necessary technical and organisational measures in order to ensure that the requirements of the GDPR are met and the rights of the data subject are protected (Article 25 GDPR). Appropriate technical and organisational measures should be implemented which: (i) take into consideration various aspects, including the state of the art; the cost of implementation; the nature, scope, context and purposes of processing; and the risks, likelihood and severity for the rights and freedoms of natural persons (Article 25 GDPR); (ii) ensure that, by default, only personal data which are necessary for each specific purpose of the processing are processed (Article 25 GDPR); and (iii) are demonstrated via the adoption of internal policies and implementation of measures that meet the principles of data protection by design and data protection by default (Recital 78 GDPR).

In the case of telework, all of the specific circumstances of this particular type of work organisation should be taken into consideration in order to determine the appropriate technical and organisational measures required by the GDPR (e.g. data processing should be planned in a way that envisages the possibility that teleworkers might be requested to submit to an inspection of their working environment). Furthermore, since such measures "can be anything from the use of advanced technical solutions to the basic training of personnel,"[114] specific training for teleworkers aimed at building awareness of how their employer carries out data processing may be useful for establishing the conditions where an employee might offer 'genuine' consent.

Each controller (and, if applicable, their representative) is required to record their processing activities, including the specific information requested by Article 30 of the GDPR. Likewise, every processor (and, if applicable, their representative) is required to maintain a record of all categories of processing activities carried out on behalf of the controller.

The EDPB[115] provides recommendations on how controllers, processors and producers of products, services and applications can cooperate to guarantee appropriate technical and

[114] Paragraph 9, Guidelines 4/2019 on Article 25, Data Protection by Design and by Default, Version 2.0, Adopted on 20 October 2020, https://edpb.europa.eu/sites/default/files/files/file1/edpb_guidelines_201904_dataprotection_by_design_and_by_default_v2.0_en.pdf.

[115] Guidelines 07/2020 on the concepts of controller and processor in the GDPR | European Data Protection Board (https://edpb.europa.eu/our-work-tools/our-documents/guidelines/guidelines-072020-concepts-controller-and-processor-gdpr_en); Guidelines 4/2019 on Article 25 Data Protection by Design and by Default | European Data Protection Board (https://edpb.europa.eu/sites/default/files/files/file1/edpb_guidelines_201904_dataprotection_by_design_and_by_default_v2.0_en.pdf).

organisational measures to ensure compliance with the GDPR. According to Opinion 2/2017, data processing at work must rely on a legitimate purpose, should be proportionate and should be carried out in the least intrusive manner possible. These principles are based on Article 5 of the GDPR, as discussed in the context of the general principles on data protection (i.e. the principles of purpose limitation and data minimisation).

With regard to the obligations of employers as controllers of personal data, they – together with the processors – must implement appropriate technical and organisational measures to ensure a level of security appropriate to the risk to the data subject's rights (Article 32 GDPR: implementation of appropriate security measures).

In the event of a breach of personal data, the controller must, without undue delay, notify the breach to the supervisory authority (Article 33 GDPR) and communicate the breach to the data subject without undue delay when the personal data breach is likely to result in a high risk to the rights and freedoms of natural persons (Art 34 GDPR). Such communication may not be required under certain circumstances. Such circumstances include, for example, if the controller has implemented appropriate technical and organisational measures to protect personal data from possible breaches, including measures that render the personal data unintelligible to any person who is not authorised to access it, such as using encryption (Article 34, paragraph 3, a-c)). In the case of telework, in order to demonstrate compliance with the controller's (i.e. the employer's) obligations under the GDPR, it might be useful to be able to show that employees have been informed about the existence of measures taken to protect their personal data at an organisational level, as well as procedures in the event of personal data breaches.[116]

In addition, in some cases the employer must carry out a Data Protection Impact Assessment (DPIA), which is particularly relevant when data processing is carried out through the use of new technologies. More generally, according to Article 35 of the GDPR the controller must first carry out an assessment of the impacts of data processing on the protection of personal data. Such an assessment is obligatory when a type of processing is likely to present a high risk to the rights and freedoms of natural persons, and must take into account the nature, scope, context and purposes of the data processing,

According to WP29, a DPIA is required in the context of employment relationships when the employer systematically monitors the workers' activity, their workstation and their internet activity. In the case of telework, such systematic monitoring could be easily carried out (although not necessarily in an intentional manner) through the employers' intranet, platforms and programs in such a way that an employee may not be aware of this monitoring. Furthermore, in cases where teleworkers use their own private computer, such monitoring practices may also involve the (inadvertent) collection of private data, which are not justified objects of lawful data processing. In such cases, the DPIA is a crucial instrument to assess the possible impacts of the processing operations on the protection of personal data, and to account for the level of risk of interference in an employee's private life.

Teleworkers (i.e. 'data subjects') have several rights under the GDPR concerning their personal information collected by an employer. Under Article 12 of the GPDR, data subjects have the right to transparency and information about how they might exercise their rights. Articles 13, 14 and 15 of the GPDR set out the right to obtain information about data processing from the controller, as well as the right of access to personal data.[117] Under Articles 16, 17, 18, 20 and 21 of the GPDR, the data subject has the right to rectify and

[116] Guidelines 9/2022 on personal data breach notification under GDPR | European Data Protection Board (https://edpb.europa.eu/our-work-tools/documents/public-consultations/2022/guidelines-92022-personal-data-breach_en) pg. 27.

[117] Exceptions are specified in Article 14.5; for example, when data subjects already have this information; when the provision of such information would involve a disproportionate effort; Article 15.4 GDPR);

erase personal data[118]; as well as the right to the restriction of data processing (in the cases established in Article 18 GDPR), [119] the right to data portability,[120] and the right to object to processing of personal data concerning him or her.

With regard to the right to access, the EDPB[121] clarifies the rights of employees in requesting personal data held by their employers. Using an example in which an employee might request personal data held by their former employer for the purpose of pursuing legal action against them, the EDPB notes that the controller (i.e. the employer) "shall not assess the intention of the data subject, and the data subject does not need to provide the controller with the reason for their request." If the request for personal data fulfils certain requirements, the employer must act on the request (unless it is "manifestly unfounded or excessive").[122]

In the case of the right to portability – that is, when the data subject has the right to receive personal data concerning him or her in a common and readable format, as well as the right to transmit those data to another controller – specific considerations can be made within the context of an employment contract. Indeed, in this case, the right to data "typically applies exclusively if the processing is based on a contract to which the data subject is a party" (Article 20),[123] as consent is usually considered to be not freely given due to the imbalance of power between employee and employer.

Article 22 of the GDPR, which also applies to the employment relationship, provides for the right not to be subject to an automatic decision without human intervention, under specific conditions. This is particularly important for avoiding discrimination: in the case of profiling, for example, unfair criteria could be used that may discriminate against the access of certain people to employment opportunities.[124]

However, this prohibition does not apply when the decision is necessary for the entering into or performance of a contract or when such decision is authorises by Union or Member State law. As clarified in Recital 71, "such processing should be subject to suitable safeguards, which should include specific information to the data subject and the right to obtain human intervention, to express his or her point of view, to obtain an explanation of the decision reached after such assessment and to challenge the decision".

Moreover, Article 22 states that "the data subject shall have the right not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her" (Article 22, paragraph 1 GDPR).[125] The data controller is required to implement suitable measures to safeguard the data subject's rights and freedoms and legitimate interests, the least of which being the right to obtain human intervention on the part of the controller, to express his or her point of view, and to contest the decision.

Each of the aforementioned GDPR provisions has potential relevance to the case of telework, which relies on technological interfaces and access points, distributed networks,

---

[118] Exceptions are specified in Article 17.3; for example, to comply with a legal obligation that requires processing, to which the controller is subject under Union or Member State law.

[119] Unless this proves impossible or involves disproportionate effort (Article 19 GDPR).

[120] An exception is where data processing is necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller (Article 20.3 GDPR).

[121] Guidelines 01/2022 on data subject rights: Right of access. European Data Protection Board (https://edpb.europa.eu/our-work-tools/documents/public-consultations/2022/guidelines-012022-data-subject-rights-right_en) pg. 9.

[122] See Article 12(5) of the GDPR.

[123] Opinion 2/2017 on data processing at work – WP249, pg. 8: https://ec.europa.eu/newsroom/article29/items/610169.

[124] Guidelines on Automated individual decision-making and profiling for the purposes of Regulation 2016/679, pg. 10.

[125] However, this right shall not apply if the decision is necessary for entering into, or the performance of, a contract between the data subject and a data controller (point a, paragraph 2 of Article 22 GDPR), and if the decision is based on the data subject's explicit consent (point b, paragraph 2 of Article 22 GDPR).

and the transfer of data within and between these networks. As new technologies are implemented to facilitate telework, the protection of teleworkers' personal data will continue to be relevant to the ways that such data is collected, managed and shared.

Effectiveness

Personal data in the context of telework

Within CJEU jurisprudence, the concept of 'personal data' has been gradually broadened, keeping pace with social and technological shifts that have given new meaning to this idea. As the technical capacity to measure and extract personal data has become more sophisticated over recent years, the boundaries between the public and private spheres have become increasingly blurred. New technologies – including the use of dynamic IP addresses, the ability to extract and enhance images from video, or metadata stored in images or other user uploads – have complicated attempts to protect personal data. The CJEU has taken these emergent social impacts and incursions into the private sphere into consideration in issuing decisions and has established a broad scope for what might constitute personal data, as well as an individual's right to control or monitor its use.

The General Data Protection Regulation (Regulation [EU] 2016/679) defines personal data as:

> *any information relating to an identified or identifiable natural person ("data subject"); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person.* (Article 4)

This definition of 'personal data' stems largely from an earlier definition in the Data Protection Directive (95/46/EC, 24 October 1995), and is intended to encompass many different forms of data that could be potentially identifiable (Purtova, 2018).

A relevant example is the CJEU ruling in the case of Peter Nowak (Judgment of the Court (Second Chamber) of 20 December 2017, *Peter Nowak v Data Protection Commissioner*, Case C-434/16), which demonstrates a more expansive understanding of personal data. Deciding in favour of a complainant who claimed that answers provided during the course of a professional exam constituted personal data, the Court of Justice argued that "there is no requirement that all the information enabling the identification of the data subject must be in the hands of one person" for information to be considered "personal data"; rather, it is enough to have the "information needed to enable it easily and infallibly to identify that candidate through identification number". The ruling in this case establishes the view that personal data might constitute a broad range of information that *pertains to* an individual but might not traditionally be considered "personally identifiable" (in this case, answers to a professional exam).

Other cases have established that data can be considered "personal" if it could be used for the purposes of identification *in conjunction with* other forms of data held by employers or other parties. In the Patrick Breyer case (Judgment of the Court [Second Chamber] of 19 October 2016, *Patrick Breyer v Bundesrepublik Deutschland*, Case C-582/14) the Court ruled on whether or not a dynamic IP address – a temporary address assigned by internet service providers (ISPs) to users, which identifies interfaces between host and network – might be considered personal data. The CJEU interpreted Article 2(a) of Directive 95/46/EC and the concept of personal data to include dynamic IP addresses, despite the fact that

these addresses did not allow ISPs to identify individual users on their own. Rather, dynamic ISPs were understood to be personal data because the ISP had the capability to match data associated with a dynamic IP address (i.e. websites visited), such as personal information stored by the company. There are, however, limitations to this ruling, pursuant to legislative differences between Member States. This is particularly the case in instances where the data collected are used in the provision of and billing for additional services.[126]

Together, these cases (among others) demonstrate the impacts of a broader understanding of 'personal data', and the implications that arise for employers in cases where employees perform work activities remotely using ICT (e.g. teleworking). First, the conception of personal data is somewhat expansive, and may pertain to multiple forms of data and their transmission that at first glance might not appear to be 'personal' (Purtova, 2018). Second, these rulings also establish a sense in which data are often used in conjunction with and in relation to other forms of data (Reid, 2017). Therefore, personal data encompasses not only data that might be used on their own for identification purposes, but also includes data that might be connected to an individual (e.g. an employee) through secondary association.

Processing of personal data, privacy and consent

CJEU decisions have established the conditions and limits for the processing of personal data and are essential to providing relevant criteria for the assessment of implications of the surveillance and monitoring of workers, including teleworkers.

The Lindqvist case (Judgment of 6 November 2003, *Göta hovrätt v Bodil Lindqvist*, C-101/01, EU:C:2003:596) considered the scope of the processing of personal data over the internet, and sought to determine whether or not the posting of a person's personal data on a website by a third party constituted a violation of the Data Protection Directive (95/46/EC). In this case, the Court held that "the act of referring, on an internet page, to various persons and identifying them by name or by other means, for instance by giving their telephone number or information regarding their working conditions and hobbies, constitutes 'the processing of personal data wholly or partly by automatic means' within the meaning of Article 3(1) of Directive 95/46/EC" (*Lindqvist*, C-101/01, 4). Among other issues, the Lindqvist decision weighed the balance between the defendant's freedom of expression (as it was argued that her publication of information was intended for the purposes of "economic and social integration") and the rights and freedoms of the individuals whose information was published. Of these rights and freedoms, the decision singles out the right to privacy, arguing that "data which are capable by their nature of infringing fundamental freedoms of privacy should not be processed unless the data subject gives his explicit consent" (Judgment of 6 November 2003, *Lindqvist*, C-101/01, EU:C:2003:596, paragraph 33).

This case is relevant for two main reasons. First, it demonstrates the complexity of understanding the scope of data processing over the internet, which is also used in telework. Second, it provides a clear example of balancing the different interests at stake in situations such as telework, including the worker's right to personal data protection, the employer's right to control the work activity, and the control of data by public authorities. Specifically, the Lindqvist case not only highlights the importance of consent, but also defines the limits of the employer's legitimate interest. In this case, Lindqvist's 'legitimate interest' to free speech was overridden by that of the employees' reasonable claim to privacy in this case (i.e. not to have their personal information posted on a website).

[126] The CJEU also ruled that "Article 7(f) of Directive 95/46 must be interpreted as precluding the legislation of a Member State, pursuant to which an online media services provider may collect and use personal data relating to a user of those services, without his consent, only in so far as that the collection and use of that data are necessary to facilitate and charge for the specific use of those services by that user, even though the objective aiming to ensure the general operability of those services may justify the use of those data after a consultation period of those websites."

Telework may present circumstances where such considerations for consent and privacy are relevant. For example, a teleworker could be videorecorded in a work meeting and the company, and/or another participant in the meeting (for example a client) could publish a screenshot or recording of the meeting on the internet. This would constitute the posting of personal data.

CJEU decisions on digital privacy protection and consent also extend to persons who are not directly engaged in teleworking themselves, but whose personal data nevertheless might be compromised as a result of/by means of teleworking: for example, a person who has not offered their explicit consent appearing in the background of a recorded virtual meeting. Relevant to this example is the František Ryneš case (Judgment of the Court [Fourth Chamber], 11 December 2014, *František Ryneš v Úřad pro ochranu osobních údajů [Request for a preliminary ruling from the Nejvyšší správní soud],* Case C212/13), the image of a person involuntarily recorded by a camera installed for home security purposes was considered to be personal data in so far as it enabled the identification of the person accused of a crime. Given the broad definition of 'personal data' (referring to any information related to an identified or identifiable natural person [Article 4 (1)]), the case of a video recording of a meeting would be considered as the processing of personal data. This has implications for employers using video meetings, as they have a responsibility to protect stored data and recordings collected in the process of day-to-day business operations.

CJEU decisions have also referred to a person's right to access their personal data, independent of the form that data takes or how it is produced. Relevant to this point is the case of *YS v Minister voor Immigratie*, which concerned a national immigration authority and its refusal to provide third-country national visa applicants with personal data collected during the application process. The Court ruled that such information: a) constituted personal data, and b) that applicants should be able to access that information, which was used in making a determination on their visa application. Specifically, the Court found that "an applicant for a residence permit has a right of access to all personal data concerning him which are processed by the national administrative authorities within the meaning of Article 2(b) of that directive. For that right to be complied with, it is sufficient that the applicant be in possession of a full summary of their data in an intelligible form; that is to say, a form which allows the applicant to be aware of the nature of collected data, and to check whether it is accurate and processed in compliance with that directive, so that they may (where relevant) exercise their rights (Judgment of the Court [Third Chamber], 17 July 2014, *YS v Minister voor Immigratie, Integratie en Asiel* and *Minister voor Immigratie, Integratie en Asiel v M and S*. Joined Cases C-141/12 and C-372/12).[127]

EDPB Guidelines 01/2022 on data subject rights – Right of access

Regarding the personal data to which the right of access refers, the European Data Protection Board (EDPB) Guidelines 01/2022 highlight some interesting points stemming from Article 15(1). In particular, according to Article 15(1) GDPR, "the data subject shall have the right to obtain from the controller confirmation as to whether or not personal data concerning him or her are being processed, and, where that is the case, access to the personal data and the following information":[128]

> According to the Guidelines, "The words 'personal data concerning him or her' should not be interpreted in an 'overly restrictive' way by controllers"[129] when it comes to personal data that also relate to someone else. The Guidelines present an

[127] In paragraph 55 of this Judgment, the CJEU refers to the judgment in *Google Spain and Google*, EU:C:2014:317, paragraph 69.

[128] EDPB Guidelines 01/2022 on data subject rights – Right of access.

[129] Ibid, pg. 33.

example that "recordings of telephone conversations (and their transcription) between the data subject that requests access and the controller, may fall under the right of access provided that the latter are personal data. […] In the same vein, messages that data subjects have sent to others in the form of interpersonal messages and houed themselves from their device, that are still available to the service provider, may fall under the right of access."[130] As another example, the Guidelines refer to cases of identity theft, when "the victim should be provided with information on all personal data the controller stored in connection with their identity, including those that have been collected on the basis of the fraudster's actions."[131]

With regard to personal data that "are being processed," the guidelines highlight the wording of Article 15(1), which suggests that the right of access does not distinguish between the purposes of the processing operations. In addition, the guidelines highlight the need to treat archived personal data and backup data differently insofar as the backup data is "in principle similar to the data in the live system". The subtle differences between backup data and data in the live production system stem from the fact that in cases where data were deleted from the live system, a corresponding loss of backup data will only occur at the time of the subsequent backup. Hence, "in case there is an access request at the moment where there are more personal data relating to the data subject in the backup than in the live system or different personal data (noticeable for example via log of deletions in the live production system implemented in full compliance with the principle of data minimisation), the controller needs to be transparent about this situation and where technically feasible provide access as requested by the data subject, including to personal data stored in the backup."[132]

The principle of proportionality is also relevant in balancing the interests of the employer and the employee in data protection matters – this has been highlighted in particular in several cases at national level,[133] as well as at the international level by the European Court of Human Rights (ECtHR), whose decisions the CJEU often refers to in the context of data protection.

In the case of *López Ribalda and Others v. Spain*, which concerned the use of hidden video surveillance cameras in a supermarket where the applicants were employed, the Grand Chamber of the European Court of Human Rights (ECtHR) ruled that the use of such cameras had not constituted a violation of employee privacy under Article 8 of the Convention of Human Rights and Fundamental Freedoms, which establishes the right to respect for private and family life. This was a reversal of a previous decision by the Chamber of the ECtHR, which had found that there had been a violation of Article 8 on the grounds that employees had not previously been informed about the processing of their personal data (i.e. a video recording of their work activities).

The decision of the Grand Chamber of the ECtHR was based in part on the application of several criteria of Article 6 of Directive 95/46/EC, also used in the case of *Bărbulescu v. Romania* to decide whether a breach of privacy had occurred in another case concerning employee surveillance. The principles of Article 6, themselves adapted from the Guidelines for the regulation of computerised personal data files (UN General Assembly, 14 December 1990, A/RES/45/95),[134] requires that Member States provide that personal data are: 1)

[130] Ibid. pg. 34.

[131] Ibid, pg. 34.

[132] Ibid, pg. 35.

[133] See Rulings 29/2013 of March 31 and 39/2016 of 3 March 2016, Constitutional Court of Spain.

[134] The Guidelines establish the minimum standards for Member States.

"processed fairly and lawfully"; 2) "collected for specified, explicit, and legitimate purposes and not processed in a way incompatible with those purposes"; 3) "adequate, relevant, and not excessive in relation to the purposes for which they are collected and/or processed"; 4) "accurate and kept up to date"; and 5) kept in a form that permits the identification of an individual for no longer than is necessary (Judgment of the Grand Chamber European Court of Human Rights, 5 September 2017, *Bărbulescu v. Romania,* 61496/08, paragraph 42*)*. In considering *López Ribalda and Others v. Spain* in relation to these criteria, the court found that no violation of privacy had occurred because the employer had a legitimate business interest in preventing suspected theft, which served as the initial motivation for installing surveillance cameras. In this respect, the decision demonstrates a greater consideration of employer and business interests in the determination of privacy violations.

More broadly, this case relates to telework in the sense that it involves the balancing of the legitimate interests of the employer with the employee's right to privacy. Specifically, these cases show that employers might claim "legitimate interest" in surveilling employees if they have reason to suspect theft or other employee misconduct. One might imagine that this reasoning could be stretched to apply to employer surveillance of remote employees. It could be argued, for instance, that an employer might have a "legitimate interest" in making sure their employee is working/online when they say they are, which – in the view of the employer – necessitates surveillance systems or video recording.

There are other instances in which employee data – conceived broadly as software usage patterns – have been used as grounds for the termination of employment contracts. In Sweden, the Labour Court accepted evidence that a worker was not signed into the company's computer program as proof that the worker had not been carrying out his assigned duties. The worker had brought a case for wrongful termination, with the termination itself was based on refusal to work (AD 2011 nr 34: Labour Court, 2011-04-27, Case number B-38-2010). While only constituting part of the evidence presented (as the case was also premised on the worker's lack of communication and the economic consequences of his failure to respond to an important client), this decision nevertheless represents an example of **using information collected through workplace software as a basis for deciding on the termination of employment**. These cases demonstrate in part the challenges of balancing workers' rights to privacy with consideration for the employer, in the sense that the monitoring of employees might be considered reasonable in certain instances. As new technologies and patterns in usage of technologies emerge, interpretations as to what constitutes employee privacy will need to evolve in the context of the increasing use of digital monitoring.

Recordings of working time from start to finish (including interruptions or breaks) fall within the scope of "personal data" for the purposes of EU law (Judgment of the Court [Third Chamber], 30 May 2013, Case C-342/12, *Worten*); this includes instances where processing occurs by automatic means. Although the case of *Federación de Servicios de Comisiones Obreras (CCOO) v Deutsche Bank SAE*[135] does not explicitly touch on issues of employee privacy, according to Leccese (2022, pg. 3), it is possible that it provides implicit reference to the issue when referring to the Court's judgment in Case C-342/12, as the Advocate General paid a significant amount of attention in his Opinion to discussing breaches of employee privacy. Leccese (2022) highlights the Court's perspective in the *Federación de Servicios de Comisiones Obreras (CCOO) v Deutsche Bank SAE* ruling, according to which "the employer's obligation to provide the competent national authority responsible for monitoring working conditions immediate access to working time records, is not incompatible with the obligation to establish an adequate system of protection of the personal data" (paragraph 43). In fact, such national authorities are duly authorised to

[135] Judgment of the Court, 14 May 2019, *Federación de Servicios de Comisiones Obreras (CCOO) v. Deutsche Bank*, C-55/18.

access this data, and therefore the person responsible for processing personal data has the obligation to implement “appropriate technical and organisational measures to ensure that only those persons duly authorised to access the personal data in question are entitled to respond to a request for access from a third party” (Case C-342/12, *Worten*, paragraphs 27-28 and 45). If recordings of working time are considered ‘personal data’, then access to that data must be limited to those authorities that have the responsibility of monitoring working time, and reasonable measures should be taken to ensure that access is limited only to those parties.

3.3.2 Conclusions

This section has discussed key aspects of the General Data Protection Regulation (GDPR), which sets forth rules regarding the processing of personal data and which relate to the exchange and collection of personal data (by employers, in the case of telework.)

The GDPR provides a general framework for the protection of personal data of natural persons, and also regulates aspects of data protection which are relevant to the control, surveillance, and monitoring of employee performance in the context of telework. As discussed, of particular relevance are the following articles of the GDPR:

- Article 6, according to which all data processing **requires a lawful ground**;
- Article 9, which provides **possible exceptions from the general prohibition to process sensitive personal data – in particular, the requirement of data subject's explicit consent**, when the employer can demonstrate that it was freely given and that neither the employee’s consent nor refusal to provide consent would have "adverse consequences” for the employee.[136]
- Articles 13 and 14, on **transparency in the processing of personal data**, which emphasise that data controllers are obliged to inform a data subject of the processing of his or her personal data (Art 13-14 GDPR) in such a way that the information provided is “concise, transparent, intelligible, and easily accessible” (Article 12(1)).

The GDPR applies across the EU, and as an EU Regulation it is directly applicable at the national level. This means that natural persons, to a large extent, enjoy similar personal data protection in all Member States. However, the Regulation allows Member States a certain amount of flexibility to provide more specific rules and over whether or not to apply certain provisions, e.g. to the public sector. In this regard, Recital 10 explains the nature of the GDPR.

With the aim of guaranteeing a high level of protection of natural persons and of removing obstacles to flows of personal data within the Union, Recital 10 provides that “the level of protection of the rights and freedoms of natural persons with regard to the processing of such data should be equivalent in all Member States’. Moreover, rules for the protection of personal data should be applied consistently and homogeneously throughout the EU, with Member States allowed to maintain or introduce their own national provisions that specify the application of some these rules.

Employers’ monitoring activities can also involve the processing of personal data for certain purposes. For instance, this may be necessary for compliance with a legal obligation to which the controller is subject, or when it is necessary for the purposes of the legitimate

[136] EDPB Guidelines 05/2020, recitals 22, pg. 9.

interests pursued by the controller. Data subjects/individuals whose personal data is processed have the right to be informed about the processing of their own personal data and have a right to access it. However, due to the use of new technologies, it may be more challenging for data subjects to exercise such rights (e.g. a lack of awareness that personal data is being processed, non-compliance with GDPR transparency obligations, etc).

Furthermore, according to Recital 4 of the GDPR, the right to the protection of personal data is not an absolute right. Instead, it must be considered in relation to its function and be balanced against other fundamental rights in accordance with the principle of proportionality. For instance, the right to the protection of personal data is not an obstacle to the measurement of working time in cases in which such measurement has the goal of protecting an employee's right to a rest period and to limitations on working time.

The central role that the use of technology and the transmission of data plays in the performance of telework could make it difficult to understand possible infringements on teleworkers' rights. Therefore, it would appear advisable to strengthen the application of the EDPB Guidelines 4/2019 regarding data protection by design and by default, which focus on the relevant obligations set out in Article 25 of the GDPR (effectiveness and demonstration of effectiveness). The key obligation here is the requirement for data controllers to put in place appropriate technical and organisational measures and necessary safeguards to effectively ascertain the data protection principles, and to protect the rights and freedoms of data subjects. In addition, data controllers must be able to demonstrate the effectiveness of the measures implemented.

Developing a sufficient level of knowledge regarding rights and legal obligations related to the GDPR is important for both employers and employees. Employers should have an understanding both of their obligations for the protection of employee data, as well as the technical and organisational means to ensure this protection. Likewise, employee training might be recommended to ensure that they are aware of their rights with regard to personal data and understand how to exercise them. This is especially pertinent in cases where teleworkers use their own devices for work (e.g. a laptop), as there may be a greater potential for personal data to be (inadvertently) shared with or collected by an employer. Therefore, they should have a clear picture of their rights in order to be able to request from their employers any information concerning the collection, use, and protection of their data.

3.4 Equal treatment and non-discrimination

EU acquis analysed in this section

- Directive establishing a general framework for equal treatment in employment and occupation (Council Directive 2000/78/EC) (Employment Equality Directive)

3.4.1 Directive establishing a general framework for equal treatment in employment and occupation (Council Directive 2000/78/EC)

Fundamental rights

Equality is a fundamental principle and value of the Union (Article 2, TEU), which emphasises in particular the goal of "combating social exclusion and discrimination, and shall promote social justice and protection, equality between women and men, solidarity between generations and protection of the rights of the child" (Article 3.3, TEU). The

promotion of equality between women and men is a task for the Union in all its activities and is required by Article 8 TFEU. In defining and implementing its policies and activities, the Union also aims to combat discrimination based on sex, racial or ethnic origin, religion or belief, disability, age or sexual orientation (Article 10 TFEU). The principle of equality is also a key element of the Charter of Fundamental Rights of the EU (CFREU, Chapter 3), which prohibits "discrimination based on any ground such as sex, race, colour, ethnic or social origin, genetic features, language, religion or belief, political or any other opinion, membership of a national minority, property, birth, disability, age or sexual orientation" (Article 21(1)). The CFREU also prohibits discrimination based on national origin within the scope and application of EU treaty provisions (Article 21(2)), and enshrines a respect for cultural, religious, and linguistic diversity" (Article 22). Of particular relevance when discussing teleworkers and workers within the employer's premises is Article 20 of the CFREU, which establishes that everyone is equal before the law.

According to Article 23 of the CFREU, equality between men and women is a fundamental principle, established as both a value (Article 2 TEU) and a goal of the Union (Article 3(3) TEU). In Article 33(2) of the CFREU, the chapter on 'Solidarity' references workers' rights to protection from dismissal for a reason connected with maternity, the right to be paid maternity leave and the right to parental leave following the birth or adoption of a child.

The Equality Chapter also specifically mentions the rights of children (Article 24) and of the elderly (Article 25). According to Article 26, the Union recognises and respects the right of persons with disabilities to benefit from measures designed to ensure their independence, social and occupational integration, and participation in community life. Further, the EU's ratification of the United Nations Convention on the Rights of Persons with Disabilities in 2010 represented its commitment and obligation to ensure the guarantee of the rights mentioned in the UN Convention.

Principles 2 and 3 of the EU Pillar of Social Rights also focus on discrimination, stating that everyone has the right to equal treatment and opportunities with regard to employment, social protection, education, and access to goods and services available to the public, regardless of gender, racial or ethnic origin, religion or belief, disability, age or sexual orientation. Principle 3 of the Pillar also establishes the intention of fostering equal opportunities for under-represented groups, including equal treatment in and access to the labour market.

The EU acquis against discrimination includes several Directives.[137] The main corpus of EU Directives against discrimination comprises:

- Directive 2000/43/EC, which prohibits discrimination on the grounds of race and ethnic origin;
- Directive 2000/78/EC, which prohibits discrimination on the grounds of religion or belief, disability, age and sexual orientation in employment and occupation;
- Directive 2006/54/EC on the equal treatment of men and women in matters of employment and occupation;
- Directive 2004/113/EC on the equal treatment of men and women in access to and the supply of goods and services; and the

[137] Specifically, Directive 2000/43/EC against discrimination on the grounds of race and ethnic origin; Directive 2000/78/EC against discrimination at work on the grounds of religion or belief, disability, age or sexual orientation; Directive 2006/54/EC equal treatment for men and women in matters of employment and occupation; Directive 2004/113/EC on the equal treatment of men and women in access to the and supply of goods and services; Directive Proposal (COM(2008)462) against discrimination based on age, disability, sexual orientation and religion or belief beyond the workplace.

- Council Directive 92/85/EEC, which introduces measures to encourage improvements to the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding.

Each of the Directives mentioned above (with the exception of Directive 2004/113/EC, which explicitly excludes matters of employment and occupation[138]) are relevant to avoiding discrimination at work and focus on different grounds of discrimination (e.g. gender, disability, age, etc.). Consequently, all of them also apply to teleworkers.

This section focuses on two specific aspects in relation to teleworking: the possibility for people with disabilities to access telework and the need for equal treatment between teleworkers and other workers. With regard to the former issue (i.e. the possibility for people with disability to access telework), Council Directive 2000/78/EC is particularly relevant, as it establishes that employers shall provide "reasonable accommodation" to workers with disabilities to facilitate their equal participation in the workforce (Article 5). This means that employers shall take appropriate measures, where needed in a particular case, to enable a person with a disability to have access to, participate in, or advance in employment, or to undergo training, unless such measures would impose a disproportionate burden on the employer.

Concerning the equal treatment of teleworkers in comparison to those who work at the employer's premises, the analysis refers only to Article 20 of the CFREU, which refers to equality before the law. Although all EU equal treatment legislation concerning employment and occupation is applicable to workers, and is therefore also applicable to teleworkers, the issue of equal treatment between teleworkers and other workers does not fall within the scope of Council Directive 2000/78/EC or within any of the aforementioned Directives in the realm of equality.

Personal scope

The Directive establishing a general framework for equal treatment in employment and occupation (Council Directive 2000/78/EC, or the 'Employment Equality Directive') applies to all persons as regards both the public and private sectors (including public bodies).

Material scope

Council Directive 2000/78/EC (the 'Employment Equality Directive') applies to all persons – in both the public and private sectors (including public bodies) – in relation to conditions for access to employment (including selection criteria and recruitment conditions), vocational guidance and vocational training (including practical work experience), employment and working conditions, as well as membership of, and involvement in, an organisation of workers or employers, or any organisation whose members carry on a particular profession.

This Directive does not cover differences in treatment based on nationality; payments of any kind made by state schemes or similar, including state social security or social protection schemes. Member States may also provide that this Directive, in so far as it relates to discrimination on the grounds of disability and age, shall not apply to the armed forces.

The purpose of the Employment Equality Directive is to lay down a general framework for combating discrimination on the grounds of religion or belief, disability, age or sexual

[138] Recital 15, Directive 2014/13/EC.

orientation as regards employment and occupation, with a view to putting into effect the principle of equal treatment in the Member States.

The concept of discrimination includes harassment – that is, unwanted conduct with the purpose or effect of violating the dignity of a person and of creating an intimidating, hostile, degrading, humiliating or offensive environment on the grounds of religion or belief, disability, age or sexual orientation. An instruction to discriminate against persons on any of the grounds of religion or belief, disability, age or sexual orientation also constitutes discrimination under this Directive.

Discrimination can be direct or indirect. According to Article 2:

> *a) **direct discrimination** shall be taken to occur where one person is treated less favourably than another is, has been or would be treated in a comparable situation, on the grounds of religion or belief, disability, age or sexual orientation, while*
>
> *(b) **indirect discrimination** shall be taken to occur where an apparently neutral provision, criterion or practice would put persons having a particular religion or belief, a particular disability, a particular age, or a particular sexual orientation at a particular disadvantage compared with other persons unless (i) that provision, criterion or practice is objectively justified by a legitimate aim and the means of achieving that aim are appropriate and necessary, or (ii) as regards persons with a particular disability, the employer or any person or organisation to whom this Directive applies, is obliged, under national legislation, to take appropriate measures <…> in order to eliminate disadvantages entailed by such provision, criterion or practice.*

Relevance

Telework presents both opportunities and challenges in addressing equality and discrimination in the workplace. On the one hand, the expansion and normalisation of telework could contribute to greater inclusion in the job market, including for persons with disabilities (segments of the population that have historically been underrepresented in the labour market).[139] On the other hand, increasing rates of telework might also present new barriers to access the labour market for underrepresented groups, while at the same time compounding existing stereotypes.

The Employment Equality Directive may be relevant to the situation of teleworkers with disabilities, particularly if telework could be considered a "reasonable accommodation" of a disability. Article 5 of the Employment Equality Directive (2000/78/EC) establishes the right of equal treatment for persons with disabilities in the workplace, and sets forth that employers must provide "reasonable accommodation" to workers with disabilities that enable them to have "access to, participate in, or advance in employment, or to undergo training, unless such measures would impose a disproportionate burden on the employer"; moreover, "this burden shall not be disproportionate when it is sufficiently remedied by measures existing within the framework of the disability policy of the Member State concerned." The Directive also confirms that such measures are effective and practical with respect to the circumstances of the individual, such as by "adapting premises and equipment, patterns of working time, the distribution of tasks or the provision of training or integration resources" (Directive 2000/78, Recital 20). Telework (among other kinds of flexible working arrangements) may provide an opportunity for employers to comply with the provision of reasonable accommodation.

[139] See Annex 10B for further discussion.

Effectiveness

Establishing 'reasonable accommodation'

The Strategy for the Rights of Persons with Disabilities 2021-2030 (COM(2021) 101) highlights that "participation in employment is the best way to ensure economic autonomy and social inclusion for persons with disabilities," and includes the objective to improve labour market outcomes.[140] Telework can create valuable opportunities for persons with disabilities to obtain jobs and access new forms of employment. However, the economic transformations associated with the growing digitalisation of labour may also create new barriers and forms of discrimination.[141] In this respect, the subsections below explore the effectiveness of the relevant EU acquis in addressing this objective.

Article 27 of the UN Convention on the Rights of Persons with Disabilities establishes the right to work and employment,[142] including the rights of persons with disabilities to "just and favourable working conditions, including protection from harassment"[143] and the exercise of collective labour rights on an equal basis with others.[144] Telework may help to facilitate access to employment (particularly for those that face barriers to office-based work), and therefore might be understood in certain contexts as a reasonable accommodation, allowing persons with disabilities to perform their perform their job in a more accessible location.

As discussed above, Article 5 of the Employment Equality Directive establishes that employers must provide such reasonable accommodations to workers with disabilities to facilitate their equal participation in the workforce. However, there remains the issue that what is deemed effective or practical may be subject to the interpretation of the employer and/or the individual context of the working arrangement. Daly and Whelan (2022) observe that the provision that such accommodations for workers with disabilities need not "impose a disproportionate burden" on the employer effectively "sends the message that, if an employer can avail [themselves] of the disproportionate burden defence, the employee need not be treated equally" (Daly and Whelan, 2022, p. 746).

While the Employment Equality Directive requires employers to provide reasonable accommodation, this provision does not exist in all national law; moreover, "not all disabled workers are covered, [nor are they] covered regarding all aspects required by the Directive" (MEMO/08/69, European Commission, 2008). According to the EU law, is not discrimination if the decision is considered "proportional".

These gaps in scope and coverage have somewhat complicated attempts at implementation, and ultimately leave much of the determination as to what is a 'reasonable'

---

[140] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Union of Equality: Strategy for the Rights of Persons with Disabilities 2021-2030, COM (2021) 101 final, p. 10, https://www.un.org/development/desa/disabilities/wp-content/uploads/sites/15/2021/04/European-Strategy-2021-2030_EN.pdf.

[141] General Comment No. 8 on Article 27 of the CRPD (Work and employment) - adopted by the Convention on the Rights of Persons with Disabilities (CRPD) Committee on 09 September 2022, Available at: https://www.ohchr.org/en/documents/general-comments-and-recommendations/crpdcgc8-general-comment-no-8-2022-right-persons#:~:text=The%20aim%20of%20the%20present%20general%20comment%20is%20to%20provide,with%20the%20provisions%20of%20other.

[142] See General Comment No. 8 (2022) on the right of persons with disabilities to work and employment for more: https://www.ohchr.org/en/documents/general-comments-and-recommendations/crpdcgc8-general-comment-no-8-2022-right-persons.

[143] Article 27(1(b)).

[144] Article 27(1(c)).

accommodation to the employer in question.[145] To this end, the effectiveness of this Directive could be improved with regard to teleworkers (particularly those with disabilities) by specifying telework as a form of reasonable accommodation in and of itself. In addition, clearer guidelines could also be laid down as to what constitutes 'reasonable accommodation' in workplace contexts outside of an employer's establishment (e.g. in a teleworker's home or coworking space).

To this end, the CJEU has been asked to provide preliminary rulings to interpret the nature of what constitutes "reasonable accommodation" for workers with a disability, and employers' responsibilities therein. Case C-485/20 (*XXXX v HR Rail SA*)[146] concerns the scope of the Employment Equality Directive (and in particular, the interpretation of Article 5) in the case of a worker who experienced the onset of a disability during their training period for a job, a condition that precluded him from performing the essential duties of the position. The HR Rail has been a landmark judgement for the rights of workers with disabilities, as the Court clarified that 'reasonable accommodation' requires that a worker (including someone undertaking a traineeship following his or her recruitment) who, owing to his or her disability, has been declared incapable of performing the essential functions of the post that he or she occupies, be assigned to another position for which he or she has the necessary competence, capability and availability, unless that measure imposes a disproportionate burden on the employer (paragraph 49).

Furthermore, the Opinion of Advocate General Rantos (11 November 2021)[147] makes clear that workers at all stages, including recruitment and training, are subject to the Employment Equality Directive (paragraph 47). Furthermore, the Opinion clearly interprets "reasonable accommodation" to include actions that are clearly aimed at the "continuance of employment" (paragraph 66). In this case, this included the offer of a different position "for which he or she has the necessary competence, capability and availability, unless that measure imposes a disproportionate burden on the employer" (paragraph 49).

The CJEU has also considered whether and what kinds of measures in particular might constitute a "disproportionate burden" on employers. In the joined cases C-335/11 and C-337/11,[148] concerning an employer's argument that a reduction in the working hours of a worker with a disability imposed an undue burden, the Court interpreted Article 5 of Directive 2000/78 as meaning that "a reduction in working hours may constitute one of the accommodation measures referred to in that article." Furthermore, they stated that "it is for the national court to assess whether, in the circumstances of the main proceedings, a reduction in working hours, as an accommodation measure, represents a disproportionate burden on the employer" (paragraph 93.2).

The decision also takes into consideration specific circumstances according to which the absences of the worker can be considered as an effect of the employer's failure to take the appropriate measures in accordance with the obligation to provide reasonable accommodation laid down in Article 5 of that directive (paragraph 93.3).

The Opinion of Advocate General Kokott indicated that Article 5 of the Employment Equality Directive "must be interpreted as meaning that a reduction in working hours may constitute

[145] At the same time, the state parties to the UNCRPD receive respective recommendations, including on article 27 of the UNCRPD on work and employment.

[146] Judgment of the Court (Third Chamber), 10 February 2022, *XXXX v HR Rail SA*, Case C-485/20.

[147] Opinion of Advocate General Rantos, delivered on 11 November 2021, Case C-485/20, *XXXX v HR Rail SA*.

[148] Judgment of the Court (Second Chamber), *HK Danmark, acting on behalf of Jette Ring v Dansk almennyttigt Boligselskab* (C-335/11) and *HK Danmark, acting on behalf of Lone Skouboe Werge, v Dansk Arbejdsgiverforening, acting on behalf of Pro Display A/S, in liquidation* (C-337/11), Joined Cases C-335/11 and C-337/11, ECLI: EU:C:2013:222).

one of the accommodation measures referred to in that article."[149] Further, the Opinion notes that "it is for the national courts to assess whether, in the circumstances of the main proceedings, a reduction of working hours, as an accommodation measure, represents a disproportionate burden on the employer" (ibid).

As far as the effectiveness of the Employment Equality Directive is concerned, it should also be noted that it provides important tools for its enforcement. Specifically, Chapter II on 'Remedies and Enforcement' provides that:

- Member States shall ensure the availability of judicial and/or administrative procedures to enforce obligations under this Directive, even after the relationship in which the discrimination is alleged to have occurred has ended;
- Associations, organisations or other legal entities have a legitimate interest in ensuring that the provisions of this Directive are complied with (in accordance with the criteria laid down by their national law) may engage, either on behalf or in support of the complainant, with his or her approval, in any judicial and/or administrative procedure provided for the enforcement of obligations under this Directive;
- Member States must ensure, in accordance with their national judicial systems, the reversal of the burden of proof in favour of the presumed victim; this means that when persons who consider themselves wronged because the principle of equal treatment has not been applied to them establish, before a court or other competent authority, facts from which it may be presumed that there has been direct or indirect discrimination, it shall be for the respondent to prove that there has been no breach of the principle of equal treatment;
- Protection must be ensured against dismissal or other adverse treatment by the employer as a reaction to a complaint within the undertaking, or to any legal proceedings aimed at enforcing compliance with the principle of equal treatment;
- Member States shall take care that information regarding the provisions of this Directive is disseminated, along with the relevant provisions already in force in this field;
- Member States should promote dialogue between the social partners with a view to foster equal treatment; Member States shall also encourage the social partners (without prejudice to their autonomy) to conclude agreements that lay down anti-discrimination rules at the appropriate level.
- Member States should encourage dialogue with relevant non-governmental organisations that have a legitimate interest in contributing to the fight against discrimination with the aim of promoting the principle of equal treatment.

Flexible work and labour market access

At the national level, several examples exist in which telework has been used as a tool to ensure access to the labour market for underrepresented groups. Prior to the pandemic, Italy had already included a priority clause relating to workers in positions of particular hardship as part of new legislation to make flexible working arrangements more widely available. Under Law No. 81 of 22 May 2017,[150] employers are obliged in all cases where

[149] Opinion of Advocate General Kokott, 6 December 2012, Joined cases C-335/11 and C-337/11, *HK Danmark, acting on behalf of Lone Skouboe Werge, v Dansk Arbejdsgiverforening, acting on behalf of Pro Display A/S, in liquidation* (C-337/11), Joined Cases C-335/11 and C-337/11, ECLI: EU:C:2013:222).

[150] 'Measures for the Protection of Non-Entreprenurial Autonomous Work and Measures to Encourage Flexible Adaptation as to Times and Places of Subordinate [i.e.,Non-Autonomous] Work.'

"agile work arrangements" are offered, to give priority to the requests of "workers with children up to 12 years of age, or without any age limit in the case of children with disabilities" (Article 18, paragraph 3). In addition, workers with disabilities or workers who are caregivers[151] who request agile working arrangements should also be given priority.

One such example was Article 39 of the 'Cure Italy' decree (Law Decree no. 18/2020), which conferred a potestative right[152] on employees with disabilities, allowing them to telework (this was extended until the end of March 2022).[153] As a consequence of this right, an employer – having verified the 'feasibility' of telework in relation to the worker's work activities – was obliged to implement it.[154]

However, recent decisions demonstrate that in practice, telework is not always offered to employees with disabilities by default; rather, the appropriateness of telework is often decided at the discretion of the employer. One relevant case was brought by an employee who was 60% disabled due to a serious lung disease, and who requested the ability to carry out agile work[155] under a provision specified by Article 39(2) of Decree Law 18/2020.[156] After the employer rejected his request for flexible work, and instead proposed that he be granted 'early' holidays as an alternative to an unpaid suspension, the employee applied to the labour court arguing that his departmental colleagues had been assigned to agile work and that he should have been given priority for remote work due to his disability. The company objected that it would cause significant economic and organisational costs to employ the employee in a flexible working arrangement, given that he was on sick leave at the time that decisions were made concerning his department's flexible working arrangements. The Judge upheld the employee's appeal, however, due to the employer's failure to provide justified reasons for refusing a request for telework on the basis of an objective and reasonable criterion. In this context, the refusal to grant flexible working time to the employee constituted discriminatory treatment.[157]

Equal treatment between workers, remote and in-office

Several Directives[158] establish the principle of equal treatment between workers employed in flexible working arrangements compared with those who are employed in more traditional forms of contracts or organisational modalities. The right to request flexible working arrangements has been already mentioned in Subsection 3.1.2, within the scope

[151] Defined by Article 4, paragraph 1 of Law No. 104, 5 February 1992.

[152] Namely, a right that gives the holder the power to intervene in an existing legal situation through a unilateral activity.

[153] This right was extended until 31 June 2021 by Article 15 Decree Law 41/2021; however, this right has been prolonged for different cases of disabilities (see "Lavoro agile" [Agile work], Camera dei Deputati Servizio Studi [Chamber of Deputies Research Department], https://www.camera.it/temiap/documentazione/temi/pdf/1213936/pdf?_1589973431681).

[154] This right was prolonged until 31 June 2021 by Decree Law of 14 August 2020, n. 104, converted into Law no. 126/2020. However, this right has been prolonged even further in specific cases (see '*Lavoro agile'* [Agile work], Camera dei Deputati Servizio Studi [Chamber of Deputies Research Department], https://www.camera.it/temiap/documentazione/temi/pdf/1213936/pdf?_1589973431681).

[155]Referring to a flexible working arrangement involving telework.

[156]Tribunal of Grosseto, Section Lav. [Labour Section], Ordinance 23 April 2020, n. 502 – 'Smart Working: il datore di lavoro non puo negareil lavoro agile in maniera irragionevolmente o immotivatamente discriminatoria' [Smart Working: the employer cannot deny agile work in an unreasonable or unreasonably discriminatory way].

[157] Here the Judge adopted an "order". The order, according to the Italian Code of Civil Procedure, Article 700, retains its effectiveness even if the proceedings on merits is not introduced (this is to say that it is not a foregone conclusion that the judgment is continued on the merits).

[158] For example, Council Directive 1999/70/EC of 28 June 1999 concerning the framework agreement on fixed-term work concluded by ETUC, UNICE and CEEP and Council Directive 97/81/EC of 15 December 1997 concerning the Framework Agreement on part-time work concluded by UNICE, CEEP and the ETUC.

of the Work-Life Balance Directive (Article 9). The same Directive also prohibits less favourable treatment of workers who have applied for or exercised that right (Art. 11).

At the same time, (as noted under the heading of 'Fundamental rights' in Subsection 3.5.1), the corpus of EU Directives against discrimination also applies to workers in flexible working arrangements such as telework.

In addition, the EU legal acquis provides for equal treatment between workers in other circumstances. Directive 1999/70/EC (28 June 1999), which concerns fixed-term work, establishes the principle of non-discrimination, and the principle of *pro rata temporis* (where appropriate). Similarly, Directive 1997/81/EC (15 December 1997) on part-time work also emphasises the principle of non-discrimination, stating that "in respect of employment conditions, part-time workers shall not be treated in a less favourable manner than comparable full-time workers solely because they work part time" (Clause 4). However, Clause 4 provides some degree of flexibility for employers in this regard ("…unless different treatment is justified on objective grounds"). In this sense, it is necessary to ascertain whether the difference in treatment is justified by an objective and reasonable criterion; that is to say, whether it is related to a legitimate goal pursued by the legislation in question, and whether that difference in treatment is proportionate to that goal.

In addition, Article 20 of the CFREU prescribes that everyone is equal before the law: this is also relevant to guaranteeing equal treatment between teleworkers and employees who work at the employer's premises (see case law Annex 2).

Furthermore, the 2002 Framework Agreement on Telework provides that teleworkers should benefit from the same rights as comparable workers at the employers' premises. Such rights refer to the employment conditions guaranteed by applicable legislation and collective agreements. In order to consider the particularities of teleworking, it is possible for employers and workers (and/or their representatives) to agree on and apply specific complementary collective and/or individual agreements.

3.4.2 Conclusions

This section has focused on a specific aspect of the Employment Equality Directive (Council Directive 2000/78/EC), which prohibits discrimination on the grounds of religion or belief, disability, age or sexual orientation in the field of employment and occupation. A specific aspect of the Directive is Article 5, which imposes an obligation on employers to provide "reasonable accommodation" in support of the inclusion into employment of persons with disabilities. Forms of reasonable accommodations include the adaptation of the premises, equipment, or patterns of working time, the redistribution of tasks, or the provision of training or resources to aid integration. In this context, telework may be considered to be a form of reasonable accommodation for workers with disabilities. However, an increase in telework for persons with disabilities could also present new challenges and risks.

This chapter has shed light on the legal situation surrounding the employment of persons with disabilities. However, it is important to acknowledge that we have not comprehensively addressed the perspectives of people with disabilities or the unique challenges they face when teleworking. In particular, the establishment of accessibility requirements to promote the "full and effective equal participation" of persons with disabilities should also be understood in the context of access to new technologies.[159] In so far as telework can remove

[159] Recital 13, Directive (EU) 2019/882 of the European Parliament and of the Council of 17 April 2019 on the accessibility requirements for products and services.

or prevent barriers to persons with disabilities in accessing work, it might also be understood as a tool for achieving accessibility.[160]

The Employment Equality Directive provides provisions that are relevant to teleworkers in that it:

- Lays down a general framework for combating discrimination on the grounds of religion or belief, disability, age or sexual orientation in the field of employment and occupation. Thus, this Directive is relevant to ensuring the effectiveness of the principle of equal treatment for all workers, including teleworkers.
- Provides relevant tools for the enforcement of the rights it recognises.

Article 5 of the Employment Equality Directive is particularly relevant to telework, in that it provides that employers should provide "reasonable accommodation" to workers with disabilities to facilitate their equal participation in the workforce. **However**, in relation to the effectiveness of the Directive in this regard (i.e. using telework as a means to ensure the inclusion of workers with disabilities), **it is worth noting that in some cases, employers seem reluctant** to rely on this possibility, claiming that it is impossible to offer such accommodation even when it is in fact feasible.

This section has also addressed the issue of equal treatment between remote workers and in-office workers. This must be guaranteed on the basis of Article 20 of the CFREU, which provides that everyone is equal before the law. The case law in Annex 2 focuses on this principle.

[160] Recital 50, Directive (EU) 2019/882 of the European Parliament and of the Council of 17 April 2019 on the accessibility requirements for products and services.

3.5 Geographical mobility with a focus on cross-border telework

EU acquis analysed in this section

- Regulation (EC) No 593/2008 of the European Parliament and of the Council of 17 June 2008 on the law applicable to contractual obligations (Rome I Convention)
- Regulation (EU) No 1215/2012 of the European Parliament and of the Council of 12 December 2012 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters (recast) (Brussels I Convention)
- Regulation (EC) No 883/2004 of the European Parliament and of the Council of 29 April 2004 on the coordination of social security systems

3.5.1 Fundamental rights in the case of EU cross-border mobility

There are fundamental rights in the case of cross-border mobility that are relevant to all three of the Regulations analysed in this section of the report. Therefore, they are presented here first instead of being repeated throughout the sections on each Regulation.

Article 45 of the CFREU sets out the right to freedom of movement and residence within the territory of the Member States for every citizen of the Union and sets forth the possibility of granting such freedom to nationals of third countries who are legal residents in the territory of an EU Member State. The freedom of movement and residence is also laid down by the Treaties (Article 20 and 21 TFEU) and should be read in the light of the EU's goal to offer its citizens access to freedom, security and justice without internal frontiers, within which the free movement of persons is ensured (Article 3.2 TEU). The TFEU states that the Union and the Member States have shared competence in the area of the internal market (Article 4 TFEU), and that the Union should adopt measures with the aim of establishing or ensuring the functioning of the internal market (Article 26 TFEU).

Article 45 of the TFEU guarantees the freedom of movement of workers within the EU (paragraph 1), which "entails the abolition of any discrimination based on nationality between workers of the Member States as regards employment, remuneration and other conditions of work and employment" (paragraph 2). This article is therefore connected with Article 21 of CFREU, paragraph 2, according to which "any discrimination on grounds of nationality shall be prohibited."

To make effective the right to freedom of movement of EU citizens, and to guarantee they are not discriminated against on the grounds of their nationality, the relevant EU Regulations and Directives are:

- Regulation (EU) No 492/2011 of the European Parliament and of the Council of 5 April 2011 on freedom of movement for workers within the Union, and its subsequent amendments, which sets forth several measures to improve mobile workers' personal and professional situations;
- Directive 2014/54/EU of the European Parliament and of the Council of 16 April 2014 on measures facilitating the exercise of rights conferred on workers in the context of freedom of movement for workers, which lays down provisions that facilitate the uniform application and enforcement in practice of the rights conferred by Article 45 of the TFEU (i.e. access to employment; conditions of employment and work, with particular regard to remuneration, dismissal, health and safety at work, and, if Union

workers become unemployed, reinstatement or re-employment; access to social and tax advantages; membership of trade unions and eligibility for workers' representative bodies; access to training; access to housing; access to education, apprenticeship and vocational training for the children of EU workers; assistance afforded by employment offices).

Particularly relevant in the case of workers' mobility are the Regulations analysed below.

3.5.2 Regulation (EC) No 593/2008 of the European Parliament and of the Council of 17 June 2008 on the law applicable to contractual obligations

Fundamental rights

The fundamental rights mentioned above under the heading 'Fundamental rights in the case of EU cross-border mobility', focusing on the freedom of movement within the EU, are relevant to Regulation (EC) No 593/2008. Particularly pertinent is Recital 6 of the Regulation, according to which "the proper functioning of the internal market creates a need, in order to improve the predictability of the outcome of litigation, certainty as to the law applicable and the free movement of judgments, for the conflict-of-law rules in the Member States to designate the same national law irrespective of the country of the court in which an action is brought." These aspects are linked to the fundamental rights guaranteed by Chapter VI on 'Justice' of the CFREU, as well as to further fundamental rights regarding contractual obligations, which are the primary focus of the Regulation. The fundamental rights set out by the 'Solidarity' chapter of the CFREU are particularly relevant to the issue of obligations under employment contracts, as they include protection in the event of unjustified dismissal (Article 30 CFREU), and the application of fair and just working conditions (Article 30 CFREU).

Personal scope

The regulation on the law applicable to contractual obligations (Regulation (EC) No 593/2008 or "Rome I Convention") applies to employees and employers.

Material scope

The regulation on the law applicable to contractual obligations (Regulation (EC) No 593/2008) applies to contractual obligations in civil and commercial matters, in situations involving a conflict of laws.

Relevance

The regulation on the law applicable to contractual obligations (Regulation (EC) No 593/2008) is relevant in establishing the law applicable to individual employment contracts. According to Article 8, an individual employment contract is governed by the law chosen by

the parties; however, such a choice should not deprive the employee of the protection afforded by mandatory provisions "in the absence of an explicit choice of law."[161]

In cases where no explicit choice of law intervenes, the contract should be governed by the law of the country *in* which – or, failing that – *from* which the employee habitually carries out his/her work in performance of the contract. The concept of 'habituality' is not affected in the case of an employee who is temporarily employed in another country (Article 8.2). If this is not possible, "the contract shall be governed by the law of the country where the place of business through which the employee was engaged is situated" (Article 8.3). However, it is possible to 'escape'[162] from the cases indicated in Articles 8.2 and 8.3 by taking into consideration all of the circumstances as a whole, and understanding which is the country with the closer connection to the employee (Article 8.4).

3.5.3 Regulation (EU) No 1215/2012 of the European Parliament and of the Council of 12 December 2012 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters (recast)

Fundamental rights

The fundamental rights mentioned above under the heading 'Fundamental Rights in the case of EU cross-border mobility', focusing on the freedom of movement within the EU, are also relevant to Regulation No 1215/2012. Of particular pertinence is the right to an effective remedy, and to a fair trial – both of which are guaranteed by Article 47 of the CFREU.

Personal scope

The Regulation on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters (Regulation (EU) No 1215/2012) concerns jurisdiction over individual contracts of employment; that is, it applies to employees and employers (Section 5).

Material scope

The Regulation on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters (Regulation (EU) No 1215/2012) "shall apply in civil and commercial matters whatever the nature of the court or tribunal," with the exclusion, among others, of social security.

Relevance

In matters relating to individual contracts of employment, where an employee enters into an individual contract of employment with an employer that is not domiciled in a particular EU Member State (MS), but which has a branch, agency or other establishment in another MS,

[161] Collins, H., Ewing, K.D. & McColgan, A. (2019). *Labour Law*. Cambridge: Cambridge University Press.

[162] Blackett, A., & Trebilcock, A. (2015). *Research Handbook on Transnational Labour Law*. Cheltenham: Edward Elgar Publishing. p. 442.

the employer shall, in disputes arising out of the operations of the branch, agency or establishment, be deemed to be domiciled in that Member State (Article 20).

An employer domiciled in a Member State may be sued (Article 21.1): (a) in the courts of the Member State in which s/he is domiciled; or (b) in another Member State in two cases, which are: (i) in the courts for the place where, or from where, the employee habitually carries out his work or in the courts for the last place in which he did so; or (ii) if the employee does not or did not habitually carry out his work in any one country, in the courts of the place where the business which engaged the employee is or was situated. In the aforementioned instances (in which the employer can be sued in another Member State), an employer that is not domiciled in an EU Member State may also be sued in a court of that Member State (Article 21.2).

An employer may bring proceedings only in the courts of the Member State in which the employee is domiciled. However, s/he is always allowed to bring a counterclaim in the court in which the original claim is pending (Article 22).

The provisions mentioned above, set down by the Regulation on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters (Regulation (EU) No 1215/2012), may be departed from only by an agreement: (1) which is entered into after the dispute has arisen; or (2) which allows the employee to bring proceedings in courts other than those indicated above by the Regulation (Article 23).

The Regulation on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters sets forth that, in specific matters in which the employee is a defendant, the court shall, before assuming jurisdiction, ensure that the defendant is informed of her/his right to contest the jurisdiction of the court and of the consequences of entering or not entering an appearance (Article 26.2).

3.5.4 Regulation (EC) No 883/2004 of the European Parliament and of the Council of 29 April 2004 on the coordination of social security systems

Fundamental rights

Fundamental rights in the case of EU cross-border mobility, which focus on the freedom of movement within the EU, are relevant for Regulation (EC) No 883/2004. Further, since the Regulation concerns the coordination of social security systems, the fundamental rights recognised by Article 34 of the CFREU are of utmost importance. In particular, “the Union recognises and respects the entitlement to social security benefits… in accordance with the rules laid down by Community law and national laws and practices” (Article 34.1 CFREU). The concept of mobility is specifically referred to in the second paragraph of Article 34, according to which “everyone residing and moving legally within the European Union is entitled to social security benefits and social advantages in accordance with Community law and national laws and practices.”

Personal scope

This Regulation on the coordination of social security systems (Regulation (EC) No 883/2004) applies to: (i) nationals of an EU Member State and of Iceland, Liechtenstein, Norway and Switzerland, who are or have been insured in one of these countries, and their family members; and (ii) stateless persons and refugees resident in the territory of an EU Member State, Iceland, Liechtenstein, Norway or Switzerland, who are or have been subject

to the social security legislation of one or more of these counties, as well as to the members of their families. Furthermore, UK nationals are covered by the Regulation if they are within the personal scope of the Withdrawal Agreement.[163] The Regulation applies in the case of workers who are employees or self-employed.

Material scope

The coordination of national social security systems aims to guarantee the free movement of persons and to improve their standard of living and conditions of employment. Because each Member State has its own individual social security legislation, coordination is necessary to guarantee "equality of treatment under the different national legislation for the persons concerned" and that "persons moving within the community and their dependants and survivors retain the rights and the advantages acquired and in the course of being acquired" (Regulation No. 883/2004, Articles 5 and 13).

One of the main principles to be applied within this field is equality of treatment for the persons concerned under the various countries' legislation: namely, for workers who do not reside in the Member State of their employment, including frontier workers. In particular, "persons to whom this Regulation applies shall enjoy the same benefits and be subject to the same obligations under the legislation of any Member State as the nationals thereof" (Article 4).

The matters covered by the Regulation on the coordination of social security systems include specific branches of social security: (a) sickness benefits; (b) maternity and equivalent paternity benefits; (c) invalidity benefits; (d) old-age benefits; (e) survivors' benefits; (f) benefits in respect of accidents at work and occupational diseases; (g) death grants; (h) unemployment benefits; (i) pre-retirement benefits; and (j) family benefits.

The coordination of social security systems is based on key principles that aim to guarantee social security rights to workers moving within the EU: a) they cannot be discriminated against while moving within the EU, and cross-border facts and events should be equally treated (i.e. the principle of assimilation); b) their insurance periods should be aggregated; c) their benefits should be exportable; and d) only the legislation of one Member State should be applied at a particular time.

Relevance

As a general rule set forth by the Regulation on the coordination of social security systems (Regulation (EC) No 883/2004), where a person is considered to be working in a Member State other than where s/he resides, *the lex loci laboris* principle is applied. This means that the applicable social security rules are those of the Member State in which the person works. Workers who simultaneously pursue employed activities in two or more Member States are only subject to the legislation of their Member State of residence when they pursue a "substantial part of their activity" – at least 25% of working time in a 12-month period – from their country of residence. A share of less than 25% of working time or of remuneration over a 12-month period indicates that the requirement is not satisfied. This is particularly relevant in the case of cross-border teleworking (see Annex 10A for further discussion of these issues).

[163] Agreement on the withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union and the European Atomic Energy Community, Article 30 (and subsequent): https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:12020W/TXT

The European Pillar of Social Rights Action Plan places a similar emphasis on the imperative to protect and improve working conditions for mobile workers, including seasonal workers.[164] Premised on the idea of creating a "well-functioning internal market" (Action Plan, p. 22), the Action Plan affirms the need to protect and improve the rights and working conditions of mobile workers, including seasonal workers.[165] In addition, it highlights the importance of coordinating social security systems in guaranteeing fair mobility for EU residents.

With the aim of "achieving a modernised system of social security coordination that responds to the social and economic reality in the Member States,"[166] the European Commission has also proposed a revision of the social security coordination rules (COM [2016] 815, 13 December 2016).

The connection between worker protections and a strengthened single market system are also highlighted in the European Commission's 'Long-term action plan for better implementation and enforcement of single market rules' (2020). The European Labour Authority (ELA) plays a key strategic role in this regard, "ensuring that the EU rules on labour mobility and social security coordination are enforced in a fair, simple and effective way, making it easier for citizens and businesses to reap the benefits of the single market" (COM [2020], 94). The ELA is also tasked with ensuring access to quality information on EU and national labour mobility legislation for both employers and workers.

3.5.5 Effectiveness of the Regulations

The overall effectiveness of the three Regulations discussed above is considered jointly here, given that the aspects of the Regulations under consideration are intertwined with one another, and hence highly relevant to the case of mobile teleworkers within the EU.

The freedom of movement of workers within the EU is laid down by both primary (the Treaties and the CFREU) and secondary (Directives, Regulations, etc.) forms of EU law. In addition, a very broad corpus of rules at different levels applies in the case of mobility within the EU and coordinates different national systems. These include applicable social security rules, tax rules and employment contract rules pertaining to the enforcement of fundamental rights. The application of these rules can change depending on the specific situation of the worker, including in the case of frontier workers, workers who work in more than one MS, and posted workers. Telework can pose challenges for both the employer and worker in understanding which national rules apply, particularly because these rules can change depending on where a worker is physically located.

The EU acquis effectively addresses the geographical mobility of workers in a number of instances, establishing rules for frontier workers, posted workers and workers who perform working activities across multiple Member States. The legislation covers several areas that are relevant to the situations of teleworkers (and cross-border teleworkers). These include labour law, taxation, and the coordination of social security systems. However, gaps remain between the current legislation and the emerging issues presented by teleworkers working for extended periods of time in a Member State other than those in which they are employed, whether this is their country of residence or across multiple Member States.

---

[164] See also: European Labour Authority (ELA), 'European Platform tackling undeclared work', https://www.ela.europa.eu/en/undeclared-work

[165] See also: European Labour Authority (ELA), 'Undeclared Work', https://www.ela.europa.eu/en/undeclared-work

[166] Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EC) No 883/2004 on the coordination of social security systems and Regulation (EC) No 987/2009 laying down the procedure for implementing Regulation (EC) No 883/2004, COM(2016) 815 final, 13.12.2016, p. 2.

Defining the law applicable to employment obligations with regard to telework

As described above, according to Article 8 of Regulation (EC) No 593/2008 (Rome I Convention), an individual employment contract should be governed by the law chosen by the parties involved, in such a way that the employee is not deprived of the protection afforded by mandatory provisions "in the absence of an explicit choice of law" (Collins et al. 2019, p. 59). In the absence of a clear determination of this choice of applicable law, the contract is governed by the law of the country that is the habitual place of work (or, failing that, by the law of the country of the business engaging the employee).

In recent decisions, the CJEU has interpreted the concept of 'place of business' in line with previous labour conventions (e.g. the Rome convention and the Brussels I convention), noting the similarity of the concepts on which these different instruments were premised (Blackett and Trebilcock, 2015, p. 440). As a result, the working definition of 'place of business' as a 'a habitual place of work' is considered valid in the interpretation of the Rome I convention and applicable law (ibid.).

In some circumstances, however, the nature of the 'habitual place of work' is more difficult to determine. In such cases, CJEU decisions in the relevant case law are highly pertinent to the issue of teleworking. The case of *Voogsgeerd* (C 384/10), involved the dismissal of a seaman residing in the Netherlands while working for an establishment based in Luxembourg and operating partly in Belgium. This case concerned the applicable national laws pertaining to the matter – and was the first in which the "connecting factor of the engaging place of business was considered" (Grušić, 2013, p. 3). In particular, the Court's opinion relied on an interpretation of "place of business through which an employee was engaged" (as established in Article 6(2)(b) of the Rome I Convention) as "referring exclusively to the place of business which engaged the employee, and not to that which the employee is connected by his actual employment". In this respect, in determining the applicable employment law, an employee's habitual place of work might be said to take precedence over an employer's location (whether in the country in which the employer is established, or in country/countries in which work duties might temporarily be carried out).

Some scholars argue that this interpretation could present practical issues for employees who regularly conduct work outside of the country in which their employer is established (such as teleworkers). According to Grušić (2013), relying on the 'habitual place of work' as a connecting factor for determining the relevant labour law may not align with the goal of employee protection, based on the understanding that only in rare instances would an employee not have a 'habitual place of work' (even if they worked remotely or in multiple locations). Grušić (2013) argues that prioritising 'habitual place of work' over the 'engaging place of business' in determining which country's laws apply effectively limits the number of juridical forums that claimant employees may approach to settle employment disputes (p. 26) and is therefore a less beneficial state of affairs for the employee.

It is possible to "escape"[167] from the circumstances indicated in Article 8 paragraphs 2 ("place where you are habitually employed") and 3 ("place of business"), by instead referring to the place with the closest connection to the employee, taking into consideration all of the circumstances as a whole (paragraph 4). According to De Boer (2009), this escape clause adheres to the "protection principle", or the understanding that workers constitute the weaker party to the employment relationship and must be protected through a restriction of the autonomy of the stronger party (i.e. employer)[168]. It is thus important to give due

[167] Blackett, A., & Trebilcock, A. (2015). Research Handbook on Transnational Labour Law, Cheltenham: Edward Elgar Publishing, p. 442.

[168] De Boer, T.M. (2009). The Purpose of Uniform Choice-of-Law Rules: the Rome II Regulation, *Netherlands International Law Review*, p. 295-332.

consideration to its impacts on the worker. According to the CJEU's case law, national courts can take other elements of the employment relationship into account when it appears that the elements relating to one or other of the two criteria set out in Article 6(2) of the Rome Convention suggest that the contract is more closely connected with a particular Member State other than that suggested through the application of the criteria referred to in Article 6(2)(a) or (b). (See, to this effect, *Voogsgeerd*, paragraph 51). Such an escape clause had already been set down by CJEU case law prior to the application of Rome and has since been confirmed through subsequent case law.

The example of the case of *Schlecker v Boedeker*[169] is highly relevant to understand the CJEU's reasoning in determining to which country's laws an employment contract is subject. The *Schlecker* case concerned the decision of the Schlecker company to employ their employee, Ms. Boedeker, in Germany in a different position from the one she had held in the Netherlands, where the employment was then terminated. Because Ms. Boedeker had habitually worked in the Netherlands prior to her relocation, she initiated proceedings based on Dutch employment regulations (which happened to be more favourable to her circumstance than those of Germany). However, the Schlecker company argued that because the employee was now working in Germany, she had a stronger connection to this country – not only because her employment was governed by German tax law, social security and additional pension schemes, but also due to other aspects, such as the language and original currency of the contract and the reference to German law in the contract. The CJEU held that "even where an employee carries out the work in performance of the contract habitually, for a lengthy period and without interruption in the same country, the national court may, under the concluding part of that provision, disregard the law applicable in that country, if it appears from the circumstances as a whole that the contract is more closely connected with another country" (paragraph 42).

In the Schlecker case,[170] the CJEU held that according to the Court's case law, the national referring court "can take other elements of the employment relationship into account where it appears that the elements relating to one or other of the two criteria set out in Article 6(2) of the Rome Convention" (i.e. habitual place of work or the place where the business in which the worker is engaged is located); these criteria might be used to "suggest that the contract is more closely connected with a Member State other than the Member State suggested through application of the criteria referred to in Article 6(2)(a) or (b) (see, to that effect, *Voogsgeerd*, paragraph 51)" (paragraph 37). The CJEU found such an interpretation "consistent also with the wording of the new provision on the conflict rules relating to contracts of employment, introduced by the Rome I Regulation, although that Regulation is not applicable to the main proceedings *ratione temporis*" (paragraph 38).

The appropriate application of such an 'escape clause' should be ascertained by the national Courts, taking into consideration all relevant circumstances. In the Schlecker case, the CJEU highlights the need to consider the different circumstances of each individual worker. However, some circumstances play a stronger role than others. From paragraph 41 of that decision:

> *Among the significant factors suggestive of a connection with a particular country, account should be taken in particular of the country in which the employee pays taxes on the income from his activity and the country in which he is covered by a social security scheme and pension, sickness insurance and invalidity schemes. In addition, the national court must also take account of all the circumstances of the*

[169] Judgment of the Court (Third Chamber), 12 September 2013, *Anton Schlecker v Melitta Josefa Boedeker*, C- 64/12.

[170] Ibid.

case, such as the parameters relating to salary determination and other working conditions.

In this sense, determining the relevant labour law is somewhat flexible to the various ways in which an employment relationship might differ. A potential drawback of this understanding, however, is the necessity to decide each case individually, rather than aiming towards the principle of foreseeability in the application of the law. The same difficulty arises in relation to the issue of determining the competent juridical forum in the event of disputes (i.e. the case of Regulation (EU) No 1215/2012).

Identifying applicable social security systems

Regulation (EC) No 883/2004 governs the coordination of national social security systems. A key principle of this Regulation is the equal treatment of workers, regardless of national origin – a principle that the Regulation acknowledges may have particular relevance for frontier workers (Recital 8). In particular, the Regulation states that "persons to whom this Regulation applies shall enjoy the same benefits and be subject to the same obligations under the legislation of any Member State as the nationals thereof" (Article 4). In this regard, the coordination of social security systems is based on principles that aim to guarantee continuity and coherence to workers moving within the EU. Namely, the "principle of assimilation" aims to prevent discrimination when moving within the EU, including for cross-border workers. Similarly, the Regulation specifies the aggregation of insurance contribution periods, i.e. that social security benefits accrued should be exportable to other Member States. Lastly, the Regulation also states that workers should be subject to the social security scheme of "only one single Member State in order to avoid overlapping of the applicable provisions… and the complications which could result therefrom" (Recital 15).

The interpretation of Regulation (EC) No 883/2004 has particular significance in cases of teleworking, as organisational arrangements could possibly impact employees differently, depending on the country in which they find themselves. The nature and degree of the impacts that telework has on employers and employees depend, in turn, on the nature of the employment relationship: whether telework is employed temporarily; whether it is carried out in an exclusive way (i.e. full home office or remote work); or whether it is integrated with occasional presence in the workplace (hybrid teleworking arrangements). Examples could include instances in which a worker might be working from one Member State for an employer based in a different Member State (either on a full-time or freelance basis), or as a self-employed person working in two or more Member States (or in instances where workers domiciled in one Member State regularly commute to a different Member State and return at least once a week, i.e. 'frontier workers'). Article 12 of the Regulation on the coordination of social security systems also provides special rules for determining the applicable social security legislation of "posted workers" – workers who have an employment relationship in one Member State but are "posted" temporarily abroad for the purpose of performing work on the employer's behalf.

The social security scheme to which a worker is subject depends on a number of factors, such as the nature of the working arrangement, and where the worker carries out their work. The conflict rules under the Regulation determine which scheme is applicable, taking into account factors such as the place of work or working arrangements such as pluri-activity. In the case of posted workers, for example, the worker continues to be subject to the legislation of the posting state (i.e. the legislation of the Member State in which his employer is established). Notably, this arrangement is limited to a period of 24 months and provides that the worker is not sent to replace another posted person (Article 12(1) Regulation of (EC) No 883/2004). This rule also applies in the case of a self-employed person in one Member State who goes to pursue a similar activity in another Member State, with the Regulation stating that the worker continues to be subject to the legislation of the first

Member State, provided that the anticipated duration of such activity does not exceed 24 months (Article 12(2) Regulation of (EC) No 883/2004).

As discussed above, determining the location where work is performed is a significant element in determining the relevant national social security scheme to which a worker is subject.

Following the rise in working from home during the COVID-19 pandemic, the issue of the coordination of social security systems became more significant for cross-border workers. Specifically, workers who had formerly commuted across borders for employment purposes prior to the pandemic who made the switch to teleworking faced the possibility of having to change their affiliation to the social security system of the Member State in which they resided. While Regulation (EC) No 883/2004 provides that employees employed in a country other than that in which they live are affiliated to the social security system of their country of employment, Regulation (EC) No 987/2009 also specifies a threshold of 25%, which applies to both working time and/or remuneration within a 12-month period in their country of residence. Once this 25% threshold is exceeded in the country of residence, it begins to constitute a "substantial part" of the worker's activity for the purposes of the application of the Regulation, and a switch of social security affiliation may be triggered.

Prior to the pandemic, Advocate General Szpunar warned in the Opinion of Case C-570/15[171], which was referred to the CJEU, about the possibility for telework to change the applicable rule. In particular, he highlighted that teleworking "potentially undermines the concept of a particular place of employment, as a relevant factor for determining the Member State which has the closest link to the employment relationship." He noted that in the future, the Court would have to decide how this circumstance should be taken into account for the purposes of determining the applicable social security legislation (paragraph 38).

Until recently, short-term and temporary solutions have been employed to address the challenges with regard to workers' social security that emerged as a result of COVID-19. In June 2020, the Administrative Commission (AC) issued a Guidance note on the COVID-19 pandemic, which made particular mention of the ways in which pandemic restrictions impacted cross-border work (thus creating possible consequences for social security). The AC Guidance Note on the COVID-19 pandemic recommended a flexible approach to addressing issues that had emerged due to the pandemic, which could have implications for social security (for example, "posted workers whose term was expiring", or frontier workers who were stranded in their country of residence). Specifically, the Guidance note recommended that the application of the relevant rules of the Regulation[172] be temporarily suspended, with the effect that workers would remain attached to the social security scheme of their country of employment (even in cases where they might be teleworking from their country of residence or a different MS), in order to avoid situations in which restrictions on movement could change the country responsible for a worker's social security. The Guidance note was progressively extended throughout the pandemic until 30 June 2022, after which it was established that *force majeure* could no longer provide a legal basis.

In June 2022, the AC issued a new Guidance note on telework, which defined cross-border telework and set out guidelines for interpreting the relevant social security legislation (in particular, Articles 12 and 13 of Regulation (EC) No 883/2004).

The interpretation proposed in this note was due to be used from 1 July 2022 and to cover any telework organised from that date onwards. Nevertheless, because the previous guidance of the Administrative Commission has been applied for the previous two years,

[171] Case C-570/15: Opinion of the Advocate General Szpunar of 8 March 2017, *X v Staatssecretaris van Financiën*.

[172] Particularly relevant is the threshold of 25% working time, which normally applies to frontier workers working remotely from their country of residence, after which a change in the applicable social security legislation is triggered.

an abrupt change of applicable legislation on 1 July 2022 might have proved detrimental to a large number of teleworkers. Therefore, a short transition period of 6 months (until the end of December 2022) was initially recommended to avoid creating undue hardships for workers or enterprises; this was later on extended to 30 June 2023.

Short-term changes to the application of rules regarding the applicable social security system were in part motivated by the special circumstances of the COVID-19 pandemic (i.e. border closures and mandatory home working), with the aim of reducing administrative hurdles. However, as Verschureren (2022) notes, the challenges that emerged for cross-border teleworkers at the start of the pandemic may persist in the long term and may need to be ameliorated through greater coordination of national social security systems.

Identifying applicable tax systems

In the field of taxation, no rules exist at the EU level regarding the definition of cross-border workers, the division of taxation rights between Member States, or the tax rules to be applied. Neighbouring Member States often agree to special rules for cross-border workers in their bilateral double taxation conventions, which are concluded between pairs of bordering countries and can vary from Member State to Member State.[173] Depending on the rules that apply, such arrangements may provide that frontier workers are taxed in their state of residence, in the State where they work, or in both simultaneously (e.g. by agreement between Switzerland and Germany).[174]

In cases where an employee works in more than one country, specific steps must be followed in order to determine in which country the employee in question should be taxed. Usually, the employee pays income taxes in the Member State where s/he physically performs the work. A person who works from their residence or place of habitual abode is subject to unlimited tax liability in that country. In contrast, a person who resides in one Member State and commutes to another (daily or at least once a week) is understood to be a cross-border commuter and is therefore taxed in the country in which they regularly work and/or where their employer is located. In the case of frontier workers, depending on the applicable Double Taxation Convention, teleworking presents the risk of additional administrative and financial burdens to report to two separate tax authorities. To the extent of home office in the state of residence, there can be an apportionment of the income and a pro-rata attribution of the income to the state of residence.

During the COVID-19 pandemic, the rules governing the applicability of tax regimes for workers were temporarily suspended on the basis of bilateral memoranda of understandings between certain Member States, with “days spent working from home due to COVID-19 pandemic measures (as well as days spent at home without performing work activities but with continued payment due to COVID-19) will be deemed as spent in the source state” (Ammadeo 2022, p. 23). This *fictio iuris* created conditions for cross-border workers to satisfy the requirement to return home regularly and therefore continue to be fully taxed in the Member State in which they habitually reside (ibid.). Cross-border employment relationships continued to be governed by the bilateral double taxation conventions, established on a case-by-case basis between neighbouring MS.[175]

[173] See ‘Treaties for the avoidance of double taxation concluded by Member States’, Taxation and Customs Union, European Commission, https://taxation-customs.ec.europa.eu/treaties-avoidance-double-taxation-concluded-member-states_en.

[174] ‘Frontier Workers in the European Union’, Directorate General for Research Working Paper, Social Affairs Series, W16A Summary

[175] See ‘Cross-border workers’, Taxation and Customs Union, https://taxation-customs.ec.europa.eu/cross-border-workers_en

In all cases, EU regulations provide for the equal treatment of workers, with the intention that people "should be taxed in the same way as nationals of that country under the same conditions," regardless of the Member State in which they claim tax residency."[176] Moreover, CJEU decisions have confirmed that workers should be treated equitably in terms of both taxes levied and benefits accrued, such as in the case of *Finanzamt Köln-Altstadt v Roland Schumacker*. This case involved a worker who, while residing in Belgium, worked full-time in Germany and paid German income tax; however, upon application, the non-resident taxpayer was denied benefits that were available to resident taxpayers. The Court held that this differential treatment was likely to be "mainly to the detriment of nationals of other Member States," as non-residents are "in the majority of cases foreigners" (Judgment of the Court, 14 February 1995, Case C-279/93), and therefore may constitute "indirect discrimination by reason of nationality" (Article 29).

Posting of workers

The social security coordination of posted workers is regulated through Regulation (EC) No 883/2004 on the coordination of social security systems. However, the Posting of Workers Directive 96/71/EC provides for broader regulation of the terms and conditions of employment of posted workers. This Directive, which concerns "the posting of workers in the framework of the provision of service", was strengthened in 2014 by the Enforcement Directive.[177] The Enforcement Directive was specifically designed to strengthen the practical application of Directive 96/71/EC by addressing issues related to fighting fraud and the circumvention of rules, inspections and monitoring, and joint liability in subcontracting chains, among other issues. In 2018, the Posting of Workers Directive was further amended by Directive 2018/957/EU,[178] motivated by the perceived need to "strike the right balance between the need to promote the freedom to provide services and ensure a level playing field for service providers on the one hand and the need to protect the rights of posted workers on the other" (Recital 4). In this regard among others, the Directive introduced the obligation to pay remuneration and all of its mandatory elements to posted workers (instead of minimum wages). The Directive reiterated the temporary nature of posted workers (Recital 9), and introduced new rules for long-term posting, i.e. postings that last longer than 12 months (or 18 months in cases where a motivated notification is submitted). It also further strengthened the situations of posted temporary agency workers, as well as cooperation between competent authorities. The Directive entered into force in 2018 and was required to have been transposed by national legislation by 30 July 2020.

3.5.6 Conclusions

This section has analysed three Regulations that may be relevant to ensuring adequate rights for workers while they enjoy freedom of movement across the EU MS. Such Regulations also apply to teleworkers or, more generally, to employees engaging in flexible work arrangements: 1) Regulation (EC) No 593/2008 of the European Parliament and of the Council of 17 June 2008 on the law applicable to contractual obligations (Rome I Convention); 2) Regulation (EU) No 1215/2012 of the European Parliament and of the Council of 12 December 2012 on jurisdiction and the recognition and enforcement of

[176] See 'Income taxes abroad', Your Europe, European Union, https://europa.eu/youreurope/work/taxes/income-taxes-abroad/index_en.htm

[177] Directive 2014/67/EU of the European Parliament and of the Council of 15 May 2014 on the enforcement of Directive 96/71/EC concerning the posting of workers in the framework of the provision of services and amending Regulation (EU) No 1024/2012 on administrative cooperation through the Internal Market Information System ('the IMI Regulation').

[178] Directive (EU) 2018/957 of the European Parliament and of the Council of 28 June 2018 amending Directive 96/71/EC concerning the posting of workers in the framework of the provision of services.

judgments in civil and commercial matters (recast) (Brussels I Convention); and 3) Regulation (EC) No 883/2004 of the European Parliament and of the Council of 29 April 2004 on the coordination of social security systems**.**

The section has shown that the three Regulations contain provisions that are relevant to teleworkers:

- The Regulation on the law applicable to contractual obligations (Regulation (EC) No 593/2008 or "Rome I Convention") is relevant in establishing the law applicable to individual employment contracts;
- The Regulation on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters (recast) (Regulation (EU) No 1215/2012 or "Brussels I Convention") (among others) concerns jurisdiction over individual contracts of employment, which applies to both employees and employers; and
- The Regulation on the coordination of social security systems (Regulation (EC) No 883/2004), which coordinates social security systems in order to guarantee social security rights to persons moving between Member States.

This section also contains some remarks about tax law from the perspective of freedom of movement.

The mobility of cross-border teleworkers requires consideration to be given to certain interconnected aspects that cannot be easily determined. These include the competent legal jurisdiction and the labour, social security and tax law to be applied. These questions can constitute an obstacle to the freedom of movement of teleworkers within the EU. At the same time, such complexity also raises questions regarding the limitations of EU competence within the social sphere[179] and the future development of EU citizenship. According to Ferrera (2017),[180] EU citizenship confers horizontal rights to people to access the social rights of other Member States – in compliance with the principle of non-discrimination – but does not provide for redistribution in response to perceived or real burdens resulting from free movement. Other authors argue that free movement should be 'duty-free', while others focus more on the concept of 'solidarity'. [181] This debate appears particularly relevant to the coordination of social security systems in the context of telework, especially in those cases where a teleworker is free to work wherever s/he desires within the EU.

The Regulation on the law applicable to contractual obligations (Regulation (EC) No 593/2008 or "Rome I Convention") provides rules determining the law of which country governs an employment contract. However, the criteria it sets out are not always straightforward in application: determining the 'habitual place of work,' the 'place of business' or the place with the closest connection to the employee by taking into consideration all the circumstances as a whole can create problems of interpretation in their application. Such criteria appear particularly complicated to grasp in the case of cross-border telework.

The Regulation on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters (recast) (Regulation (EU) No 1215/2012 or "Brussels I

[179] Scharpf, F.W. (2022). 'The European Social Model: Coping with the challenges of diversity', MPIfG Working Paper No. 02/8; Weiss, M. (2017). 'The need for more comprehensive EU social minimum standards'. In: R. Singer, T. Bazzani (Eds.), *European Employment Policies: Current Challenges*, Berliner Juristische Universitätsschriften, Zivilrecht Band 76, 2017.

[180] Ferrera, M. (2017). 'Kick off contribution. Should EU citizenship be duty-free?'. In: M. Ferrera & R. Bauböck (Eds.), *Should EU citizenship be duty-free?,* European University Institute, Robert Schuman Centre for Advanced Studies, Global Governance Programme, GLOBALCIT, EUI Working Paper RSCAS 2017/60.

[181] Ferrera, M., & Bauböck, R. (Eds.) (2017). 'Should EU citizenship be duty-free?', European University Institute, Robert Schuman Centre for Advanced Studies, Global Governance Programme, GLOBALCIT, EUI Working Paper RSCAS 2017/60.

Convention") concerns jurisdiction over individual contracts of employment, i.e. the competent juridical forum in the case of disputes. An employer domiciled in one Member State may be sued in various juridical forums, which could also entail the need to interpret the concept of the employee's 'habitual place of work'. Instead, the employee may only be sued where s/he is domiciled or where the original claim is pending. In this case too, telework across borders within the EU can be problematic, because it is not always easy to determine where the teleworker is actually working.

Furthermore, Regulation (EC) No 593/2008 and Regulation (EU) No 1215/2012 do not provide a clear indication in the case of disputes that involve teleworkers working across borders within the EU. Resolving this issue would be an essential aspect of guaranteeing **clarity** to both employers and employees.

The Regulation on the coordination of social security systems (Regulation (EC) No 883/2004), sets out which national social security legislation must be applied to cross-border workers. As already mentioned, the main principle here is *lex loci laboris*, according to which the social security rules that apply are those of the Member State where the person is working. However, when the worker pursues his/her activities in two or more Member States, different rules apply, as already described in the corresponding section. From CJEU case law,[182] it is clear that the possibility to carry out work in the form of teleworking must be agreed with an employer in advance, in order for such work to counted within the 25% threshold necessary to determine the quantity of work carried out in the employee's country of residence. However, cases of cross-border telework are diverse and may also concern more complicated situations, involving work across more than two MS.

With regard to the coordination of social security systems, an increase in the amount of telework carried out by an employee could lead to undesirable outcomes with regard to the threshold specified in the Regulation, potentially leading to a switch in the employee's social security affiliation (or it could necessitate a derogation agreement between the social security institutions of more the relevant MSs).

Stakeholders do not always have a clear understanding of the overall rules applicable – social security rules, taxation regulations (for which no rules exist at EU level regarding the definition of cross-border workers), and rules for the determination of the applicable labour law or the appropriate juridical forum for bringing legal actions each present considerations that must be taken into account. This complexity could influence social partners in their autonomous activity of collective bargaining, potentially encouraging them to opt to limit the territorial scope of their collective agreements on telework to the national territory, as in the case study of Michelin Italiana (See Annex 5 for the full case study).

This analysis shows that, on the one hand, the complexity of regulations applicable to cross-border workers in different areas can limit **freedom of movement within the internal market** in the case of telework. On the other hand, it highlights the need to address issues that arise with respect to the **sustainability of social protection systems and tax systems within the internal market**, and their adaptation to foster the development of the European Union.

[182] i.e. Judgment of the Court (Third Chamber), 13 September 2017, *X v Staatssecretaris van Finaciën*, Case C---570/15, ECLI:EU:C:2017:674

3.6 Other considerations: efficiency and coherence

3.6.1 Efficiency

Legal regulations typically produce costs savings due to greater legal certainty with regard to obligations, rights and standards. Therefore, the assessment of the efficiency of the existing EU acquis focuses on whether the existing acquis produces savings (or costs) due to the degree of legal certainty (or lack thereof). In particular, it considers the following stakeholders:

- The national authorities in charge of implementing OSH policy;
- Companies that are engaged in design of teleworking policies;
- Social partners, in relation to the development of EU-level, national or sectoral agreements; and
- Parties involved in dispute resolution in the courts.

With regard to the costs incurred by firms, national authorities and social partners, the available evidence from interviews with national authorities and sectoral social partners at national level does not allow causal links to be made between the adoption of particular Directives and Regulations, and additional costs to public administrations, businesses and social partners. During the interviews, multiple national authorities recognised that transposition and implementation of the acquis involves various administrative costs for the authorities; however, this evidence is insufficient to claim that action at EU level incurs costs (e.g. extra workload) that are *additional* to the costs that would be incurred in implementing national policies. This situation can be explained by the following conditions:

- MS have significant discretion over how to implement the relevant Directives, which enables authorities to devise their own laws to achieve the goals in the Directives; also,
- It is highly likely that national legislation in the respective areas would already have existed even if the Directives and Regulations were not in place. This is evident from interviews with national authorities and sectoral social partners at national level, most of whom agreed that national policies, social partner agreements and the debates that surround these at national level are shaped by the existing EU labour acquis only to a small extent.

However, there are two main categories of costs that do relate to the existing EU acquis: costs arising from a lack of legal certainty, and the cost of litigation.

Lack of legal certainty. Several social partners indicated the lack of legal certainty as an issue. For example:

- A representative of OZ KOVO, a Slovak trade union covering several sectors, indicated that it is currently unclear who bears the responsibility for work-related injuries in case of teleworkers, as well as obligations to provide adequate equipment for home offices. Ambiguities surrounding responsibility for work-related injuries was also echoed by a sectoral trade union from Sweden. A representative from the Czech Republic who preferred to remain anonymous also highlighted that while so far, no disputes have arisen with regard to occupational accidents when working from home, the expansion of telework means that such problems could arise in the future, as employees have limited possibilities to ensure that the home offices of teleworkers comply with OSH requirements. In this regard, they stressed that the rights and responsibilities of the employer and employee when working from home will need to be better defined.

- One representative of a sectoral employers' association from an EU Member State that joined post-2004 indicated that their sector has seen anecdotal evidence of employers refusing employees' requests to work from abroad because it was unclear which tax rules would apply. This behaviour can be interpreted as companies wanting to shield themselves from liability, and refusing to take risks where it is unclear which rules would apply to them.
- A representative of a regional employers' association from an EU Member State that joined post-2004 also indicated that it is difficult to create employer policies with regard to teleworking due to a lack of legal certainty, as the taxation and labour law environment was "changing constantly during the pandemic".
- A representative of the Federation of Industrial Trade Unions (OVES) from Greece highlighted that employees were also generally affected by the lack of legal certainty, giving the example of privacy issues and the risk of liability should an employee inadvertently commit privacy violations because the necessary precautions were not taken while teleworking.

It can also be seen that in countries where the interview respondents did not expect collective bargaining to produce agreements between employers and employees, respondents called for greater legal certainty. At the same time, during interviews, some sectoral social partners from a variety of Member States advised against what they called 'over-regulation', or regulation that is too strict or too specific, highlighting that national and sectoral differences must be taken into account.

Cost of litigation. A couple of national authorities that preferred not to be identified indicated that the main category of cost in relation to the transposition and implementation of the acquis is the cost of litigation. As explained by a representative of a national authority from one of the EU-14 (the 14 countries who were member of the EU prior to 2004): "costs are mostly related to personnel who conduct litigation and investigation, and if the case goes to court it becomes more demanding." As an example, the respondent mentioned the various different workers who handled complaints that came via a dedicated phone line, looked into complaints from employees, and who dealt with general emails and open cases. In addition, a team of case managers handled investigations, dealt with inspections and coordinated matters such as preparing cases and evidence for court. Senior managers and lawyers also assisted in court cases. Reportedly, all of these workers dedicate all of their working time to matters relating to the transposition and implementation of the acquis – therefore, the workload and resources required to deal with litigation is perceived as non-negligible. However, it is important to highlight once more that the existence of such costs of litigation relating to enforcement of EU acquis does not provide evidence of costs that would be *additional* to the costs of implementing national policies, as disputes and court cases would still occur on the basis of national legislation.

3.6.2 Coherence

The assessment of the *internal coherence* of the EU acquis explores whether the relevant policies are complementary, creating synergies or, alternatively, result in duplications or contradictions. This study's analysis of the content of the Directives and Regulations, as laid out in Sections 3.1-3.5, indicates that there are no duplications or contradictions in the relevant acquis. In addition, no evidence was gathered during the stakeholder interviews that would point to any such duplications or contradictions. Nevertheless, some gaps do exist in the relevant EU acquis that are currently not sufficiently covered or addressed, as discussed extensively in the section on the effectiveness of the Directives and Regulations.

The assessment of *external coherence* focuses on the complementarities/synergies /duplications/contradictions between social partner agreements, international documents (e.g. ILO guidelines) and national legislation, where relevant. In particular, the analysis of

internal and external coherence looks at possible complementarities/contradictions in defining specific target groups in relation to teleworking, as well as in the objectives of the intervention, and the content of the legislation and the actions undertaken.

As indicated by the analysis of the relevant EU acquis in Sections 3.1.-3.5, and of national legislation and social partner agreements in Sections 3.7 and 3.8, respectively, the objectives of the EU acquis, national legislation and social partner agreements at EU level are, for the most part, coherent. In other words, social partners share an interest in clearly establishing how existing legislation might apply to telework (i.e. to the rights and responsibilities of both employers and employees). However, some lack of agreement still exists regarding how to classify the employment status of certain teleworkers (see "Analysis of social partners' agreements at the EU level," below).

Although significant variation exists between national approaches to regulating telework and the right to disconnect (e.g. legal definitions of telework and the right to disconnect), there is currently no Directive or Regulation at EU level that would require a harmonisation of these approaches. In those areas in which such issues are regulated at EU level (e.g. working time), Directives permit some variation by enabling Member States to decide freely how to transpose the relevant Directives into national law.

3.7 Overview of national regulations and social partner agreements

This section provides an overview of national regulations and social partner agreements regarding telework and the right to disconnect. Evidence in this section is mainly based on desk research (Dagnino, 2020; EU-OSHA, 2021a; Zucaro, 2021; Eurofound, 2022b). Additional information has been gathered from interviews conducted with national stakeholders within the framework of the project, and from an expert workshop on the right to disconnect.

3.7.1 Telework

As detailed in Chapter 2, telework entails crucial changes to the physical work environment and the organisation and management of work, all of which are key aspects determining working conditions and performance. Positive or negative outcomes for workers and employers depend on how telework is arranged, as well as other cultural, organisational and individual factors (Allen et al., 2015; Beauregard et al., 2019; Rimbau-Gelabert and Pasamar, 2022). At the same time, political and institutional factors can also contribute to mitigating drawbacks and fostering high-quality and productive teleworking arrangements (Chung, 2022).

This subsection reviews the regulation of telework in the EU countries:

- First, it identifies the main regulatory sources that address telework;
- Second, it compares statutory definitions and analyses the extent to which these give proper coverage to all kinds of telework arrangements (hybrid work, etc.);
- Third, it compares developments with regard to the regulation of the 'right to request' in the context of recent debates about the potential of telework to ensure work-life balance;
- Fourth, it analyses the existing regulation of working time as it relates to teleworkers; and
- Fifth, it analyses the regulation of OSH in relation to telework.

Under each of the headings, the report identifies policies and legislation that have been developed in both pandemic and post-pandemic contexts. It describes the objectives, scope and main provisions of each of these new initiatives.

Statutory regulation vs. regulation resting on collective bargaining

In EU MS, telework can be regulated through statutory legislation or by social dialogue and collective bargaining (Visser and Ramos Martín, 2008; Eurofound, 2010, 2020c; EU-OSHA, 2021a; Eurofound, 2022b). On the basis of previous research, two main groups of countries can be distinguished:

- Countries with statutory definitions and specific legislation on telework (Austria, Belgium, Bulgaria, Czechia, Spain, Estonia, Germany, France, Greece, Hungary, Croatia, Italy, Lithuania, Luxembourg, Latvia, Malta, the Netherlands, Poland, Portugal, Romania, Slovenia and Slovakia)
    - In most of these countries, statutory legislation is complemented by cross-sectoral, sectoral and/or company collective agreements. Only in Croatia, Latvia and Poland is statutory legislation the sole source of regulation (developed through individual agreements between employers and employees).
- Countries without statutory definitions and specific legislation addressing telework, or where teleworking arrangements are dealt with in various laws relating to data protection, safety and health, working time and general labour law (Cyprus, Denmark, Finland, Ireland and Sweden).
    - In the Nordic countries, telework is mainly regulated through sectoral collective bargaining (Finland) or through sectoral and company collective agreements (Denmark and Sweden).
    - In Cyprus and Ireland, regulation is mainly achieved through individual negotiations or company collective agreements. However, in the case of Ireland, statutory regulation regarding the right to request telework has been passed in November 2022 (Visser and Ramos Martín, 2008; Eurofound, 2010, 2020c; EU-OSHA, 2021a; Eurofound, 2022b).

Legal definition

Telework arrangements vary in terms of:

- location: whether it is predominantly home-based telework or mobile telework, carried out from multiple locations;
- intensity: the share of a person's working time that is spent teleworking;
- pattern: whether it is carried out regularly, or on *ad hoc* basis;
- mobility: whether telework is ICT-enabled and, accordingly, could also be performed at the employer's premises, or whether it entails work mobility that is required by the labour process (e.g. mobile health workers).

As shown in Table 0-3 below, statutory definitions vary between countries, particularly with regard to certain dimensions such as intensity/patterns.

Table 0-3. Statutory definitions of telework in EU countries

Location	Only home-based telework: Germany Workplaces other than the employer's premises: all EU countries except Germany
Intensity/pattern	Only telework carried out on a regular/predominant basis: Austria, Germany, Spain, Croatia, Lithuania, Latvia, Malta, the Netherlands, Poland, Romania and Slovakia Also including occasional telework: Belgium, Bulgaria, Czechia, Estonia, France, Greece, Hungary, Italy, Luxembourg, Portugal and Slovenia
Mobility: only ICT-enabled arrangements	Austria, Belgium, Bulgaria, Germany, France, Hungary[183], Italy, Lithuania, Luxembourg, Latvia, Malta and Slovakia

Source: EU-OSHA (2021a); Eurofound (2022b); interviews

With regard to location, statutory definitions of telework in all countries except Germany include alternative workplaces other than the employer's premises.

Differences also exist between EU countries in terms of how statutory definitions define the intensity and patterns of telework. As discussed in Chapter 2, previous research has shown a general preference for hybrid work arrangements and occasional home-based telework arrangements. However, several of the Member States that have statutory definitions of telework still follow an approach similar to that adopted in the EU Framework Agreement on Telework, in terms of intensity and patterns. Thus, they only cover telework that is carried out on a regular and/or 'predominant' basis. This applies to Austria, Germany, Spain, Lithuania, Latvia, Malta, the Netherlands, Poland, Romania and Slovakia (Eurofound, 2022b).

Conversely, in a number of countries, statutory categories of telework also include occasional telework (Belgium, Bulgaria, Croatia, Czechia, Estonia, France, Greece, Hungary, Italy, Luxembourg, Portugal and Slovenia). Moreover, in Belgium and Italy, the relevant legislation makes a distinction between two different categories, with different legal frameworks applying to each:

- In Belgium, a distinction is made between 'structural' and 'occasional' telework. The difference is that structural telework is performed on a regular basis (i.e. following a specific pattern), whereas occasional telework is performed irregularly or sporadically. An employee is entitled to do occasional telework in the event of *force majeure* or for personal reasons (Eurofound, 2020).
- In Italy, the flexible determination of space-time factors distinguishes 'smart work' from telework. Smart work is defined as a more flexible arrangement in which work takes place partly at the company's premises and partly outside them, with no constraints in terms of place of work or working time but having to comply with maximum limits on daily and weekly working hours (Dagnino, 2020; Zucaro, 2021).

It is worth noting, however, that the aspect of "regularity" is not specifically defined in most statutes, and can therefore be interpreted in various ways, either in terms of intensity or patterns of work (i.e. regularity as the prevalence of work provided outside employer's premises, or regularity in terms of its continuity and frequency) (Dagnino, 2017; Eurofound

[183] In Hungary, the original passages of the country's Labour Code defined telework as ICT-enabled, but temporary COVID-19 legislation now says it can also be non-ICT-enabled.

2022). Only in Luxembourg, the Netherlands (under the Framework Agreement) and Spain (modified in 2020 through Royal Decree-Law 28/2020) is 'regularity' clearly defined as a minimum proportion of the employee's working time that has to be performed remotely. In other countries, statutory definitions have modified the requirement for regularity in various ways. In France, legislation passed in September 2017 through Ordinance no. 2017-1387 deleted references to the 'regular' nature of telework, thus opening up the possibility of occasional telework based, for example, on family status, temporary personal constraints and similar factors. Moreover, this French legislation gave occasional telework the same legal status as regular telework (Sajous, 2019)

In terms of mobility, in 12 countries, telework is exclusively understood as involving ICT-enabled arrangements that cover stationary jobs which could also be performed at the employer's premises, in line with the EU Framework Agreement. These countries are Austria, Belgium, Bulgaria, Germany, France, Hungary,[184] Italy, Lithuania, Luxembourg, Latvia, Malta and Slovakia (EU-OSHA, 2021a; Eurofound, 2022b). In the remaining countries, the issue of mobility is either not specified or is only dealt with in collective bargaining definitions (see the box below).

Mobile work

Mobile work is generally excluded from statutory definitions of telework. However, some social partner agreements now regulate this category. At EU level, the Joint Declaration on Telework in the Telecom Sector referred to 'mobile working' as a more flexible alternative to regular telework. In Germany, some company collective agreements have introduced the category of 'mobile work'. Furthermore, in late 2020, Germany's Ministry of Labour and Social Affairs proposed Mobile Work Act 35, which included the right to telework for 24 working days a year (with a five-day week). This draft bill did not obtain a consensus within the former grand coalition government between Social Democrats (SPD), Christian Democratic Union and Christian Social Union in Bavaria (CDU/CSU), owing to strong opposition by the CDU/CSU. One of the purposes of this draft bill was to regulate mobile working arrangements in a comprehensive way, overcoming the divide between 'telework' as defined by statutory legislation and 'mobile work', which is not regulated directly by legislation but by agreements between work councils (EU-OSHA, 2021; Eurofound, 2022d).

Legislative developments in statutory definitions in pandemic and post-pandemic contexts

Since the outbreak of the pandemic crisis, changes to the statutory definition of telework have been made in six countries:

- In Austria, the so-called 'Home Office Law' came into effect on 1 April 2021, following consultation with social partners, who had been asked by the government to begin negotiating a package of measures for home office working in September 2020. It is not a standalone law, but rather a package of measures that amended several pieces of legislation (for example, the Employment Contract Law and the Employee Liability Act). The legislation is very broad and only addresses specific aspects in relation to the provision of infrastructure/reimbursement for the purchase of office furniture and questions of liability in the event of an accident. Accordingly, key

[184] In Hungary, the original passages of the Labour Code defined telework as ICT-enabled, but the temporary COVID-19 legislation now says it can be non-ICT-enabled as well.

aspects of the regulation of telework are still left to social partners. In terms of definition, the law introduced for the first time in Austria a legal definition of working from home or home office work. An employee is considered to be working from home if she/he performs work at home (Section 18c paragraph 1 of the Employment Agreement Law Adaptation Act (AVRAG). Work performed at a secondary residence or in the home of a close relative or partner also counts as working from home.

- In Croatia, national legislation has been updated through amendments to the country's Labour Act that were passed on 16 December 2022 and entered into force on 1 January 2023. In addition to traditional telework, the new legislation has introduced the possibility of remote work, under which the employees can freely determine their place of work.
- In Portugal, Law No. 83/2021 of 6 December 2021 modified several aspects of the regulation of telework in response to an increase in its use. The new law was adopted following parliamentary debates on various bills submitted to the Labour and Social Security Commission and was also influenced by the 'green paper on the future of work' (Moreira et al, 2021). It was subject to consultation with social partners on Standing Committee for Social Concertation, which included guidelines in relation to the implementation of telework (Eurofound, 2022b). Under this law, telework is defined as work performed under a regime of legal subordination, in a place not determined by the employer, through the use of ICT. It includes work carried out as part of a mixed/hybrid regime in which telework and on-site work alternate. Compared with previous definitions, the main change was that the requirement of regularity ('habitualidade') was removed from the statutory definition.
- In Romania, Telework Law No. 81/2018 was amended through Governmental Emergency Ordinances Nos. 192/2020 and 36/2021 following the rapid increase in telework arrangements seen during the pandemic. Prior to this regulation, telework was defined in Law no. 81/2018 as a kind of working arrangement through which the employee, regularly (at least one day a month) and voluntarily, fulfils his/her duties at a place other than at the workplace organised by the employer, using ICT. The only change introduced into the definition concerns the criterion of regularity. The condition of regularity has been kept in the new definition, but no longer includes a requirement for a certain number of days to be worked remotely.
- In Slovakia, the amendment to the Labour Code of March 2021 brought several changes with regard to working from home and teleworking. Although the new legislation was not the outcome of tripartite agreement, the government took into consideration most of the social partners' demands (Eurofound, 2022b). In terms of its definition, the main change was that the condition of 'regularity' was added and has therefore become a defining feature of telework. However, this feature is not precisely defined and can include, for instance, an agreement to work remotely for a specified number of days during the week, such as one or two days.
- In Spain, the government passed a new regulation through Royal Decree-Law 28/2020 of 22 September 2020 on remote work, which was the result of a tripartite agreement with social partners. This introduced provisions in several fields (OSH and working time, in particular). In terms of a definition, the new legislation specifies the feature of 'regularity', according to which the telework legislation only applies when teleworkers work at least 30% of their total working hours remotely over a three-month period.

Table 0-4. Changes to statutory definitions of telework in EU countries in pandemic and post-pandemic contexts

Country	New definition	Main change compared with the previous definition
Austria	An employee is considered to be working from home if she/he performs work at home (Section 18c paragraph 1 of the Employment Agreement Law Adaptation Act (AVRAG)). Work performed at a secondary residence or in the home of a close relative or partner also counts as working from home.	Prior the new regulation, no statutory definition existed.
Croatia	New legislation has introduced the possibility of remote work, under which employees can freely determine their place of work.	Telework has been flexibilised. Employees can freely determine their place of work.
Portugal	Work performed under a regime of legal subordination, in a place not determined by the employer, through the use of ICT, including work done in a mixed/hybrid regime in which telework and on-site work alternate.	The requirement of regularity (habitualidade) was removed from the statutory definition.
Romania	A work arrangement under which the employee, regularly and voluntarily, fulfils his/her duties at a place than the workplace organised by the employer, through the use of ICT.	There is no longer a requirement for a certain number of days to be worked remotely.
Slovakia	A labour relationship under which an employee performs work for the employer according to the conditions defined in the employment contract, at home or at any other agreed place, using ICT and during working hours that he or she allocates.	The condition of regularity was added to the previous definition.
Spain	Work carried out by an employee outside the workplace, provided that it represents at least 30% of the working day and is carried out over a period of at least 3 months.	The new legislation specifies the definition of regularity, according to which telework legislation only applies when teleworkers work at least 30% of their total working hours remotely over a three-month period

Source: authors' own elaboration, based on desk research (EU-OSHA, 2021a; Eurofound, 2022b; etc.) and interviews.

Telework access and the right to request

The extension of telework and the expectation that a large proportion of employers and employees would be willing to implement some type of teleworking arrangements raises questions with regard to the regulation of access to telework.

Prior to the pandemic crisis, most EU legal systems followed the 'voluntary principle' set out in the EU Framework Agreement on Telework. Thus, an employee's access to telework was based on an agreement between the employee and the employer, usually following a request by the employee. Moreover, most EU legal frameworks required that the telework regime be set out in the employee's contract of employment or in an individual written agreement (EU-OSHA, 2021b; Eurofound, 2022b).

In recent years, the right of workers to request and gain access to teleworking arrangements have been the subject of debates at policy level (see Table 0-5 below) and among scholars (Cooper and Baird, 2015; Koslowski et al., 2021; Chung, 2022). These debates call into question previous regulatory approaches that were exclusively based on the voluntary principle recognised in the EU Framework Agreement.

Table 0-5. Right to request in EU countries

Right to request: main approaches	Countries
An employer's decision in response to a telework request must be justified or reasoned, particularly when it affects workers with caregiving needs.	France, Croatia, Greece, Ireland, Lithuania, the Netherlands, Portugal
Workers are able to freely decide when and where they work for at least half of their working time.	Finland
Ongoing debates	Czechia, Germany, the Netherlands

Source: authors' own elaboration, based on desk research (Chung, 2022; Eurofound, 2022; etc.) and interviews

As pointed out in the previous sections on the EU acquis, the right to request flexible working arrangements is laid down in the EU Work-Life Balance Directive. Several EU countries have also regulated the right to request, following similar approaches. In France, Greece (modified in 2022), Ireland (modified in 2022), Lithuania, the Netherlands and Portugal (modified in 2021), legislation provides that the employer's decision following a telework request must be justified or reasoned, particularly when it affects workers with caregiving needs (Eurofound, 2022b). While the provisions in these countries grant workers the right to request telework, such requests can be rejected by managers for a number of reasons. Thus, they may be insufficient to ensure workers' access to flexible working arrangements, as has been argued in the UK (Chung, 2022).

A more ambitious approach has been taken in Finland. In March 2019, Finland passed a new Working Hours Act (in force since January 2020), which updated the rules governing working hours. This Act included stronger rights for workers to work flexibly. The key innovation here was that the new law changed the concepts of 'workplace' and 'working time'. 'Workplace' was modified to 'working place', meaning that work is no longer related to a specific location, but can be done anywhere. Working time, similarly, has been changed to the simpler definition of 'time spent working'. Furthermore, the law specifically states that workers are able to freely decide when and where they work for at least half of their working time, with the employer deciding on the rest (up to 49%). According to Chung (2022), "this regulation effectively gives workers the right to decide when and where they work, as long as the worker works the agreed (weekly) working hours" (p. 27).

Legislative developments regarding telework access in pandemic and post-pandemic contexts

Croatia, Greece, Ireland and Portugal have all passed legislation on the right to request telework in the post-pandemic context:

- In Croatia, since 1 January 2023, employees have the right to request to work temporarily outside the employer's premises in statutorily pre-defined cases (e.g. pregnancy, personal care for a family member, etc.) The employer must consider such a request and provide the employee with a substantiated response within 15 days.
- In Greece, the right to request telework has recently been regulated in situations where there is a documented risk to the worker's health. This right was provided through a ministerial decision issued in November 2022 (based on Law 4808/2021 Article 67 on telework), which took effect from 1 January 2023. The new rules provide a list of 60 diseases that entitle employees to request teleworking for as long as the risk persists. Employees who suffer from these diseases can make a request to their employer for the provision of telework, at the same time submitting a Medical Opinion by the competent Health Committee. After these have been submitted, the employer must respond to the employee as quickly as possible, but in any case, no later than 10 days after receiving the request. If the employer does not respond within this period, the request is deemed to have been accepted. If the employer rejects the request, it must justify such a decision on the basis of either the special nature of the employee's duties (owing to which a telework arrangement is not appropriate) or the lack of a documented risk to the employee's health that could be avoided through teleworking. In cases of dispute, the employee can request a resolution from the Labour Inspectorate.
- In Ireland, the government published the Right to Request Remote Working Bill 2022. The Bill sets out a legal framework for employees and employers to negotiate remote working conditions. The proposed legislation was aimed at requiring employers to consider requests by employees to work from home. It also aimed to put in place an appeals procedure for workers to pursue access to working-from-home arrangements should their initial request be rejected. Any employee who has worked for a company more than six months will be able to submit a request, which employers must respond to within 12 weeks. The Bill set out 13 possible grounds for refusing a request, including potentially negative impacts on performance or concerns over internet connectivity at the suggested home working location. In November 2022, the Irish government finally approved the integration of the right to request remote work for all workers into the Work-Life Balance and Miscellaneous Provisions Bill. According to the Ministry for Enterprise, Trade and Employment (consulted on 5 December 2022),[185] integrating the right to request remote work for all workers into the Work-Life Balance Bill means that employee will make, and employers will now consider, requests for flexible or remote working under a single piece of legislation and one Code of Practice, to be developed by the Workplace Relations Commission (WRC). This will streamline the process and help to avoid inconsistencies and confusion. Under the new legislation, employees will have a legal right to request remote working from their employer. In addition, employers will now be required to give regard for the Code of Practice when considering requests. The Code of Practice will be established on a statutory basis and is expected to

[185] See https://enterprise.gov.ie/en/news-and-events/department-news/2022/november/202211092.html

include guidance for employers and employees as to their obligations with regard to compliance.

- Portugal regulated the right to request telework in December 2021. According to Law No. 83/2021 6 December 2021, if the functions performed by the employee requesting telework are compatible with a telework regime, the employee's request can only be refused by the employer in writing and with a justification for such refusal. The recent nature of the legislation means that the outcomes of its implementation are yet to be determined; however, it is expected that it could contribute to ensuring workers' equal access to telework. In addition, the same law created the right to telework for workers with children up to 8 years of age in specific situations. In such cases, the employer cannot oppose a request for telework. Workers with informal care responsibilities (cuidadores informais) are also entitled to request telework, except when they work in micro-companies.

It is also worth mentioning the case of Romania, which has approved a right to request flexitime. On 17 October 2022, Romania approved Law no. 283/2022, amending and supplementing Law no. 53/2003 – the Labour Code, and the Government Emergency Ordinance no. 57/2019 on the Administrative Code. The new legislative amendments establish the right of employees to request 'individualised work schedules', as well as the corresponding obligation of employers to justify in writing any refusal within five working days of receiving the request.

Legislative developments may also soon occur in Czechia, Germany and the Netherlands. In Czechia, interviews with national stakeholders revealed that a proposal for an amendment to the Labour Code is currently under discussion. This aims to establish clear rules and conditions for telework. The proposal includes new criteria to ease access to telework for workers with children aged up to 8 years old, as well as other care needs. The proposal also enables employers to require employees to telework in writing under exceptional circumstances (e.g. by order of public authorities).

In Germany, the Ministry of Labour proposed Mobile Work Act 35 in late 2020. This included the right to telework for 24 working days a year (with a five-day week). This Bill did not achieve a consensus within the grand coalition government between the Social Democrats (SPD) and Christian Democrats (CDU), owing to strong opposition from the CDU. A second draft Bill was prepared, which establishes that employees may ask to work remotely, but the draft Bill does not contain a legal entitlement for the employer in this regard. The employer can reject the request for operational reasons but needs to explain any refusal. Generally speaking, the Confederation of German Employers' Associations (BDA) rejected the draft Bill – especially its introduction of a legal right to home office solutions. The Confederation of German Trade Unions (DGB), on the other hand, welcomed such a step. More recently, the new coalition government agreement included a proposal to regulate the right to request. This stated that "Employees in suitable jobs are given the right to request remote work and working from home. Employers can only object to employees' wishes if operational concerns conflict with them" (Coalition Government Agreement, p. 54).

In the Netherlands, changes to the Flexible Working Law that had already been introduced in 2016 extended the existing right of workers to request changes to their work schedules and place of work. One request can be made within a 12-month period, and workers must have been employed by the organisation for the previous 26 weeks before making such a request (Chung, 2022). Moreover, on 5 July 2022, the lower house of the bicameral Parliament of the Netherlands approved legislation that obliges employers to consider employees' requests to work from home as long as the employee's occupation allows it. The so-called 'Work Where You Want Act' must be approved by the Dutch senate before

its final adoption.[186] A senate committee to hold a preliminary investigation took place on 27 September 2022. This resulted in a proposed amendment stating that an employer should in principle grant a request to change the workplace, if the desired place of work is (1) located within the territory of the European Union, and (2) is the home address of the employee, or (3) is a place of work suitable for employment, from which work for the employer is usually performed (e.g. company site(s); flexible working locations used by the employer), unless the employer has an interest that outweighs the employee's desire, according to the standards of reasonableness and fairness. Factors that come into play here include the preservation of social cohesion in the workplace, if working outside the business location would place a particularly heavy burden on the employer in proportion to the work carried out at home or from another work location.[187]

Working time

As discussed in Section 2.3, the relationship between telework and working time has been explored extensively. While telework has the potential to reduce commuting times or ensure work-life balance, there is also evidence of its negative impacts in terms of informal overtime, irregular schedules or shorter rest periods. In line with such evidence, it is crucial to analyse how EU countries regulate, through statutory legislation, the organisation of teleworkers' patterns of working time, and its recording, measuring and monitoring.

Patterns of working time

Previous comparative research has shown that there no clear regulation/guidance exists regarding what constitutes 'working time' for teleworkers. Even though empirical research has shown that teleworkers are more likely to work during their free time or to work overtime (see Section 2.3), legislation in most EU countries only establishes that the general regulation of working time also applies to teleworkers (Austria, Finland, Germany, Denmark, Croatia, Latvia, Luxembourg, Sweden); or that the general legislation applies unless collective agreements or individual written agreements set up specific conditions for teleworkers or employees under flexible work arrangements (Belgium, Estonia, Hungary, Malta). In Hungary, for instance, flexible working time agreements are based on an agreement between the employer and the employee. If both parties agree to flexible working time arrangements, no compulsory monitoring or recording of working time is carried out for teleworkers (interview, national authority representative, Hungary). The cases of Poland, Portugal, and Slovenia follow a similar approach, given the lack in these countries of any specific legislation on this issue (Eurofound, 2022 b; country interviews).

Conversely, legislation exists in seven countries which establishes that teleworkers can organise their own working time, in line with Article 9 of the EU Framework Agreement on Telework (Czechia, Italy [only for agile/smart work], Lithuania, the Netherlands, Romania, Slovakia [modified in 2021], and Spain [modified in 2020]). In Bulgaria and France, legislation confers autonomy on teleworkers to organise their breaks and rest periods during working time. In the absence of other protective measures, this autonomy can result in negative effects on working conditions, as has been shown by previous empirical research (Chung, 2022).

[186] See https://www.bloomberg.com/news/articles/2022-07-05/dutch-parliament-approves-to-make-work-from-home-a-legal-right

[187] See https://www.dentons.com/en/insights/alerts/2022/september/1/dutch-employment-law-update-latest-developments-over-the-summer

Table 0-6. Working time patterns in EU countries

Working time patterns: main approaches	Countries
General working time regulation applies to teleworkers	Austria, Belgium, Croatia, Denmark, Estonia, Finland, Germany, Hungary, Latvia, Luxembourg, Malta, Sweden
Teleworkers can organise their own working time	Czechia; Italy [only for agile/smart work]; Lithuania, the Netherlands; Romania; Slovakia [modified in 2021]; Spain [modified in 2020];
Teleworkers can organise their breaks and rest periods	Bulgaria and France

Source: authors' own elaboration, based on desk research (Chung, 2022; Eurofound, 2022b; etc.) and interviews.

Recording, measuring and monitoring working time

Specific legislation on the recording, measuring and monitoring of working time does not exist in all countries. Based on previous comparative research (EU-OSHA, 2021a; Eurofound, 2022b), two types of provisions can be distinguished.

First, provisions that require employers (in line with CJEU case law) to set up procedures for recording working time. Provisions specifically targeting teleworkers exist in only a few countries. In Bulgaria, for instance, the working time of remote workers must be reflected in a document approved by the employer on a monthly basis; however, the employee is responsible for the accuracy of the data (Labour Code Article 107l, paragraph 5). In Croatia, a law provides that the employer must properly monitor and keep records of working hours for teleworkers (Eurofound, 2022 b).

Second, provisions that impose certain limits on the employer's capacity to record, measure and monitor working time. These provisions exist in several countries:

- In Austria, the Data Protection Act 201816 (specifically, Section 96a), within the Labour Constitution Act (ArbVG), lays down important provisions with regard to employers' capacity to record and monitor teleworkers' working time. It establishes that the works council (and also the employer) have the right to demand a company collective agreement for the introduction or implementation of the following data processing projects: projects related to the installation of any technological facilities at work, which are (potentially) likely to monitor employees and affect human dignity (Sect. 96 (1) No. 3 ArbVG); any system for the computerised collection, handling and processing of employees' personal data that exceeds the collection of general data regarding the person and their qualifications (Sect. 96a (1) No. 1 ArbVG); and any system for employee evaluation, if it collects data that is not justified by the company's operational needs (Sect. 96a (1) Nr. 2 ArbVG (EU-OSHA, 2021b)).
- In Malta, telework legislation states that any monitoring system must be compatible with safety and health requirements for work with display screens (Eurofound, 2022b).
- In Belgium, Malta, Romania and (recently) Slovakia, legislation provides that written consent is required prior to the implementation of any monitoring system, through its inclusion into individual agreements or telework contracts (EU-OSHA, 2021a; Eurofound, 2022b).

Table 0-7. Recording of working time in EU countries

Working time patterns: main approaches	Countries
Provisions laying down procedures for the recording of working time specifically targeted towards telework	Bulgaria, Croatia and Spain
Provisions that impose certain limits on employers' capacity to record, measure and monitor working time	Austria, Belgium, Malta, Romania, Slovakia

Source: authors' own elaboration, based on desk research (Chung, 2022; Eurofound, 2022b; etc.) and interviews.

Legislative developments in working time in pandemic and post-pandemic contexts

This research has identified two countries that have introduced changes with regard to the regulation of working time in the context of telework:

- In Slovakia, the amendment to the Labour Code of March 2021 provides that the employer and employee can agree as to whether the employee can set his/her own working time, or if the work will be carried out during flexible working hours.
- In Spain, specific legislation on telework (Article 14 of Royal Decree-Law 28/2020 on distance work) provides that the system for recording work regulated by the Workers' Statute (Article 34.9) should accurately reflect the working time of teleworkers. Without limiting flexibility over working time, this recording system must include, among other aspects, the start and end of daily working time. In addition, this law confers on teleworkers the right to flexible working time.

Specific evaluations that have measured the impact of the provisions above were have not been identified in either of these two countries.

In addition, interviews with national authorities revealed that in Czechia, a legislative proposal is underway, aimed at regulating the working time patterns of teleworkers. The proposed law would impose an obligation to conclude an agreement on telework between the employee and the employer. This agreement should address various aspects of work organisation, such as the location and extent of remote work, and the method used to schedule working hours (i.e. whether working hours are scheduled by the employer, or whether the employee manages their own hours). If the employee has autonomy to organise his/her working time, a special working time regime will apply. This special working time regime will mean that certain provisions of the Labour Code regarding absence for personal obstacles at work and remuneration for overtime work would not apply to teleworkers.

Occupational safety and health

Telework entails crucial changes to the physical work environment and the organisation and management of work, which are key aspects in addressing psychosocial risks and the impact of work on well-being and health (Eurofound, 2020b; EU-OSHA, 2021a).

As explained in Section 2.3, the literature suggests that psychosocial risks are the most prevalent health risks associated with telework (Oakman et al., 2020; Eurofound, 2020b; EU-OSHA, 2021a). However, there is increasing evidence that teleworkers – or at least some subsets of teleworkers – are particularly exposed to musculoskeletal disorders (MSDs). Accordingly, it is crucial to understand how legislation is responding to these problems.

Although various legislative measures (e.g. the right to disconnect) can contribute to mitigating the negative impacts of telework on OSH outcomes, this subsection focuses exclusively on specific legislation on OSH. In particular, it analyses specific legislation that deals with risk assessments, OSH legislation designed to prevent MSD and psychosocial risks to teleworkers, and enforcement mechanisms specifically designed for telework situations.

Risk assessments

Statutory telework legislation generally acknowledges the equal rights of both teleworkers and employees who work at the employer's premises in relation to OSH. Thus, the general rules on OSH are applicable to teleworkers. However, a few countries also have specific provisions in place relating to risk assessment. In at least six countries, legislation establishes risk assessment as a precondition for an employee being allowed to telework (or else, the legislation requires that a risk assessment be mandatory in the case of telework). These countries are Belgium, Croatia (only in the case of regular telework), Germany, Greece, the Netherlands, and Spain.

In the case of Hungary, Act XCIII of 1993 on Labour Safety (Chapter VII/A, Section 86/A) provides that a risk assessment is mandatory only in the case of work performed from home with no ICT support (interview, national authority representative, Hungary).

Prevention of MSD and eye stream

Musculoskeletal disorders (MSDs) refer to health problems that affect the musculoskeletal system (i.e. muscles, tendons, ligaments, nerves, discs, blood vessels, etc.). This term encompasses a wide range of mobility problems, as well as multiple or localised pain syndromes affecting the extremities of the upper limbs, the neck and shoulders, the lower back area, and the lower limbs (EU OSHA, 2021b). Historically, efforts to reduce the risk of MSDs in the workplace have focused on physical factors. However, the relationship between MSDs and psychosocial factors such as an excessive workload or a lack of support from colleagues or managers also appear to be crucial.

As described in Section 2.3, previous research has found that certain types of teleworkers, such as regular home-based teleworkers, can be more exposed to certain MSDs such as upper-limb pain (Eurofound, 2020b). MSD problems among teleworkers are related to poor ergonomic conditions at home and the experience of stressful working conditions or working longer hours (EU-OSHA, 2021b).

Despite growing evidence of teleworkers' exposure to MSDs and eye strain, specific legal provisions relating to these have only been identified in a few countries (see Table 0-8 below).

Table 0-8. Legal provisions preventing the risk of MSDs and eye strain

Provisions	Countries
Legislation that addresses prevention policies with regard to visual hazards linked to display screens.	Belgium, France (ANI, 2005), Italy (under general legislation), the Netherlands
Obligation to include ergonomic risks linked to teleworking into the company's OSH prevention strategy.	Spain, the Netherlands
Amendment to telework legislation to provide a new definition of the workplace, for the purposes of accidents.	Portugal

Source: EU-OSHA, 2021a; Eurofound, 2022b; interviews with national authorities

Listed below are some examples of countries in which there is legislation that specifically regulates MSD prevention for teleworkers:

- In Belgium, legislation provides that prevention entails the provision of information on how to optimise the workstation, as well as the correct positioning and use of screens.
- In Spain, legislation establishes the obligation to include ergonomic risks linked to teleworking into a company's OSH prevention strategy.
- In France, ANI 2005 obliges the employer to inform the teleworker of the company's policy on health and safety at work; in particular, its rules on the safe use of display screens.
- In Italy, Title VII of the Law for Safety at Work also applies to teleworkers ("subordinate workers who carry out continuous work at a distance, by means of information and communication technologies"). Title VI regulates the performance of work activities that require the use of video terminals, and imposes a series of obligations on the employer, including assessment of the risks associated with carrying out the activity and the adoption of measures aimed at reducing those risks. This title also recognises a series of workers' rights, such as the right to take breaks of 15 minutes after every 120 minutes of work, and to undergo periodic health checks in relation to risks to the vision and the musculoskeletal system.
- In the Netherlands, legislation provides the obligation to minimise risks for those working from home (*Arbeidsomstandighedenbesluit*, Article 5.3a, 5.9). In particular, Article 5.9 of the Working Conditions Decree states that in the risk assessment and evaluation, specific attention should be given to visual hazards that result from working with a video display unit (VDU). Based on the outcomes of such risk assessment and evaluation, effective measures should be taken to overcome the respective hazards, which should take into account the consequences of those hazards and their mutual correlation. Each employee working with a VDU for the first time should be given the opportunity to receive a suitable health examination of his or her eyes and vision before commencing such work, and from time to time thereafter. The employee should be given the opportunity to take an examination if he/she is suffering from visual disorders that might be the result of working with VDUs.
- In Portugal, Article 170 (Law no. 7/2009) obliges the employer to provide the worker with "good working conditions from a physical point of view". New Law 8/2021, passed at the end of 2021, introduced amendments with respect to teleworking regimes, with a new definition of 'workplace' for the purposes of accidents. However, the extent to which this extended definition entails new health and safety obligations for employers is a controversial issue.

Prevention of psychosocial risks

Section 2.3 showed that, despite some evidence supporting a positive relationship between telework and employees' well-being, empirical research also points to the importance of psychosocial risks that can lead to negative health outcomes in terms of anxiety or a reduction in well-being.

Recent research (EU-OSHA, 2021b; Eurofound, 2022b) shows that in most EU countries, OSH legislation is aimed at preventing isolation and its implications for employees' psychosocial well-being. The most common provisions tend to follow the guidelines in the EU Framework Agreement, which recommends in Section 9 that "the employer ensures

that measures are taken preventing the teleworker from being isolated from the rest of the working community in the company, such as giving him/her the opportunity to meet with colleagues on a regular basis and access to company information." In line with this, national legislation requires companies to:

- create conditions for employees to have periodic meetings at the employers' premises with colleagues and managers (Belgium [temporary legislation], Bulgaria, France, Greece, Italy, Luxembourg, Malta, Portugal, Romania and Slovakia). In the case of Portugal, a recent law (2021) specifically defines the maximum time intervals between face-to-face contacts (not exceeding two months);
- create conditions that support teleworkers' access to company information (Bulgaria Greece, Italy, Luxembourg, Malta); and
- create conditions that support teleworkers' communication and cooperation with other employees and with employee representatives (Bulgaria, France, Ireland [not legally binding], Lithuania).

Only in Spain and the Netherlands does legislation mention other psychosocial risks. In Spain, legislation approved in 2020 acknowledged risks to teleworkers in relation to overtime, permanent availability and irregular schedules, in line with evidence from empirical research (Eurofound, 2020b; EU-OSHA, 2021a). In the Netherlands, Article 5.9 of the Working Conditions Decree requires companies to minimise psychological stress that results from working with VDUs (Eurofound, 2022b).

Enforcement

Enforcing OSH standards is more problematic when employees work outside their employers' premises. Under telework arrangements, employer responsibility for the protection of an employee's OSH is more challenging and can be legally constrained due to employees' privacy rights. Similarly, labour inspectorates and workers' representatives may experience limitations and difficulties in verifying that the relevant safety and health provisions have been correctly applied. Evidence of these limitations was illustrated in an interview with the national authority from Spain, where labour inspections must obtain the express consent of the employee. This can be easily obtained when a complaint has been filed by the employee concerned. However, in the event of an intervention led by the labour inspectorate following complaints made by persons other than the teleworker, judicial authorisation may be necessary.

Only in a few Member States (namely, Belgium, Bulgaria, Croatia and Portugal) does legislation provide labour inspectorates, employers (or safety and health experts) and/or workers' representatives with access to teleworkers' workplaces to inspect the worker's compliance with OSH, subject to certain limits. In Poland, employers' representatives are allowed to carry out inspections only at the teleworker's request and with prior consent in writing. In Czechia and Bulgaria, telework agreements can grant employers' representatives access to inspect OSH conditions and investigate accidents upon prior notice.

In most MS, legislation does not entitle the employer, employee representatives or enforcement agencies to inspect teleworkers' workplaces (mainly when the teleworker's home is used as a workplace). In some countries (e.g. Denmark, Norway and Sweden), such inspections are subject to prior notification of the employee and their consent or agreement.

Legislative developments in Occupational Safety and Health in pandemic and post-pandemic contexts

Research has identified five countries that have developed new regulations on telework and OSH since the outbreak of the pandemic crisis:

- Austria: an amendment to the Employee Liability Act was approved through the so-called Home Office Law, which came into effect on 1 April 2021. According to this amendment, an employer's accident insurance must cover teleworkers, as well as certain accidents that occur outside of the worker's home.
- Croatia: Article 17(b) (6) of the new Act of 16 December 2022 amending of Labour Code allows the employer to enter the employee's home or other premises for the purpose of supervising the employee's working conditions, provided that this has been contractually agreed.
- Greece: Law No. 4808-19-06-2021 provides that the employer must inform the teleworker regarding its policy on health and safety at work, including specifications for areas where telework is permitted, rules for the use of visual display screens, breaks, as well as organisational and technical means.
- Portugal: Law No. 83/2021 of 6 December 2021 modified several aspects of the country's OSH legislation with regard to telework. First, the regulation forbids telework in relation to activities involving the use or contact with substances and materials hazardous to the health or physical integrity of the employee, except if carried out in facilities certified for this purpose. Second, the regulation obliges employers to comply with minimum health and safety requirements regarding work and equipment with display screens. Third, the regulation obliges the employee to provide access to the place where he/she works to professionals designated by his/her employer who are responsible for the evaluation and control of health and safety conditions at work, during a previously agreed period, between 9 a.m. and 7 p.m., always within the working schedule.
- Spain: Royal Decree-Law 28/2020 of 22 September 2020 on remote work has strengthened existing provisions regarding risk assessment in the context of telework. The regulation obliges the employer to carry out a risk assessment of the place of telework (e.g. a residence or other place selected by the teleworker), and to inform the employee of the risks that exist in their place of telework. To obtain information about occupational risks, the company (or OSH-related services) may visit the place of work chosen by the teleworker (only with the teleworker's permission, if they work from home). Risk assessment relates only to the space used for telework. If permission is not granted, a risk assessment should be carried out on the basis of information collected from the teleworker, in accordance with the operating instructions for risk prevention. In addition, the law establishes that the employer must also take protective measures to support particularly vulnerable employees, such as pregnant employees.

No evaluations measuring the impact of the above reforms have been identified.

Interviewees from Czechia and Estonia also revealed that there were ongoing discussions in their countries with regard to such matters. In Czechia, a recent Bill contains new definitions governing the rules for ongoing inspections of the workplace, including the employer's access to the employee's home (prior to beginning work and for *ad hoc* inspections).

On 9 May 2022, Estonia's parliament discussed draft legislation, specifying that while OSH standards must be followed, in the case of telework, the employee is also responsible for ensuring a healthy workplace. The employer is obliged to guide the employee, explain risks

and provide explanations as to how the employee can follow OSH rules at home. However, the employer is not obliged to visit the employee's home to check her/his setup (interview, national authority representative, Estonia).

3.7.2 The right to disconnect

In the framework of the implementation of the WTD at national level, all EU Member States have laws that guarantee workers the right to compulsory rest periods outside their working hours. Moreover, several EU countries have also developed regulations to govern the recording working of time, which supports the enforcement of and compliance with working time regulations.

However, there are debates as to whether it is enough to apply the traditional right to rest provided by labour regulations and to ensure that employers make appropriate use of ICT devices and 'flexible working arrangements', thus allowing employees to plan their own working hours and leisure time effectively (Bell et al., 2021; Lerouge and Trujillo Pons, 2022). There is legal discussion of whether emails and other communication outside of working time may count as interruptions to the statutory rest period (Bell et al., 2021). Moreover, only in exceptional cases does national legislation on telework include provisions aimed at protecting teleworkers against the risk of permanent connectivity, even though these workers are more likely to work longer and to be contacted outside working time.

In a context characterised by the extension of 'flexible work arrangements' that rely on ICT (particularly telework), several countries have regulated the right to disconnect to enhance work-life balance rights and to better protect workers' safety and health against the adverse effects of an 'always on culture.'

The right to disconnect, broadly defined as the "workers' right not to engage in work-related activities or communications outside working time, by means of digital tools, such as phone calls, emails or other messages" (EP, 2021), has been regulated through statutory legislation in eight EU Member States. Sectoral and company-level collective bargaining have addressed the right to disconnect in several other countries that lack statutory legislation on this (e.g. Germany). Moreover, debates (including legislative bills) regarding the right to disconnect are ongoing in several more EU countries.

This subsection of the report reviews and compares regulation on the right to disconnect across the EU countries, namely by:

- comparing statutory legislation regarding the right to disconnect in terms of its definition, legal coverage, approach to implementation, and enforcement;
- reviewing previous research that explores the regulation of the right to disconnect through social partner agreements at different levels; and
- identifying those countries in which policy debates are underway.

Statutory legislation

Legislation on the right to disconnect has been passed in Belgium, Croatia, France, Greece, Ireland (Code of Practice), Italy, Portugal, Slovakia and Spain, through various means:

- In Belgium, the right to disconnect was introduced within an Act regarding the strengthening of economic growth and social cohesion of 26 March 2018. In September 2022, the federal government came to an agreement to implement changes on the right to disconnect as of 1 January 2023. In February 2022, a new law was introduced to regulate the right to disconnect for civil servants.

- In Croatia, the right to disconnect was regulated via amendments to the Labour Act that were passed on 16 December 2022, and which entered into force on 1 January 2023
- In France, the issue was addressed within the framework of a law that addressed the modernisation of social dialogue and the securing of professional life (Law no. 2016-1088, of August 8, 2016 on work).
- In Greece (Law No. 4808-19-06-2021) and Slovakia ((76/2021), the right to disconnect was introduced as part of comprehensive labour market reforms.
- In Ireland, a Code of Practice for Employers and Employees on the Right to Disconnect was approved in 2021. According to the Irish legislation, in any proceedings before a Court, a Code of Practice shall be admissible in evidence and its provisions will be considered in determining relevant questions.
- In Italy, the right to disconnect was established by Law 81 of 22 May 2017, which laid down a new framework for flexible ('smart' or 'agile') work.
- In Portugal, the right to disconnect was regulated as part of a law that modified the legal regime concerning telework (Law no 83/2021, of 6 December 2021).
- In Spain, regulation of the right to disconnect resulted from the transposition into national law of the EU General Data Protection Regulation (GDPR) in 2018. Moreover, the 2020 national law on telework (Royal Decree Law 28/2020) has strengthened Spain's pre-pandemic provisions concerning the right to disconnect (mainly in terms of risk prevention and psychosocial risks).

Definition

Table 0-9 shows how the right to disconnect is defined in the statutory legislation of those eight countries in which regulations are currently in force.

Table 0-9. Legal definitions of the right to disconnect

	Definition
Belgium (private sector)	No precise definition. National regulation only encourages employers to consult at "regular intervals" with the Committee for Prevention and Protection at Work on the topic of "disconnection and the use of digital devices", at the request of staff representatives. Since January 2023, employers with 20 or more employees are also obliged to work out the modalities of a right to disconnect at a company level.
Croatia	The employer should not contact the employee outside working hours, unless in regard to an urgent matter, if this is required due to the nature of the work, or if such a possibility has been envisaged under a collective agreement or individual employment agreement.
France	No precise definition. Article L2242-17 simply requires annual negotiations between employers and employees to determine the limits between work and personal lives.
Greece	The right to completely refrain from carrying out any work-related activities and, in particular, the right not to communicate online, and not to respond to calls, emails or communication of any other nature outside the employee's work schedule or during his/her leave.
Ireland	Imposes an obligation on employers to allow employees to disconnect, e.g. reminders not to check work emails outside working hours.

Italy	"The agreement relating to agile working [...] identifies [...] the rest times of the worker, as well as the technical and organisational measures necessary to ensure the disconnection of the worker from the technological tools" (Article 19, paragraph 1 of law no. 81/2017).
Portugal	Employers must refrain from contacting any employee, regardless of where he/she works, during rest periods, except in cases of *force majeure* (new Article 199-A of the Labour Code).
Slovakia	Employees working from home are entitled not to use work equipment (i.e. not to be logged in or connected) during their daily rest periods or holidays.
Spain	Employees have the right to digital disconnection in order to guarantee, outside the working time established by law or by agreement, respect for their rest time, leave and holidays, as well as their personal and family privacy (Art, 88, Law 3/2018 o).

Source: EU-OSHA, 2021a; Eurofound, 2022b; Zucaro, 2021; interviews with national authorities; expert workshop.

As shown in Table 0-9 above, the right to disconnect is not defined precisely in several of the EU countries that have already passed legislation.

- In Belgium, France, Italy and Ireland, there is no precise definition of the right to disconnect. In the case of Belgium, it has been argued that prior to the new regulation which entered into force in January 2023 (the so-called 'Labour Deal'), rather than providing a strict right to disconnect, legislation relating to the private sector only established a "right to discuss the matter" within health and safety committees (Kéfer, 2021). According to the national authorities interviewed, this approach is preferred, as it offers the possibility to develop solutions that are tailored to specific situations: "We did not call it a 'right to disconnect' as such. This is because within a company, there are also different functions which will all have different needs. For example, a manager or someone who receives [an] extra bonus for being available can be expected to work more than someone in a lower grade. That doesn't mean to me that efforts shouldn't be made to respect the manager's rest time during holidays and weekends, but agreements can be made about their availability" (interview, national authority representative, Belgium). As of January 2023, employers with 20 or more employees are obliged to work out the modalities of a right to disconnect at company level. The Labour Deal provides a minimum framework employers must follow when implementing their right to disconnect policies, based on three pillars (more details of which are provided below, under the heading 'Approach to implementation'). In France, legislation only requires negotiations between employers and employees to set up limits between employees' work and personal lives. In Italy, regulations require employers to arrange rest times for 'smart workers', as well as technical and organisational measures to ensure disconnection; however, the legislator does not explicitly qualify disconnection as a right (Zucaro, 2021).
- In Spain, the right to disconnect is defined according to its purposes, i.e. guaranteeing respect for workers' rest time, leave and holidays, as well as their personal and family privacy.
- In Greece, the definition resembles the wording used in the European Parliament's definition of the right to disconnect (2021) – that is, a worker's right to completely refrain from carrying out any work-related activities or communication outside working time.
- In Croatia and Portugal, the right to disconnect is defined as duty to abstain from contact by the employer (Pinto Ramos, 2022), even though the term 'right to disconnect' is not explicitly mentioned in Portugal.

Legal coverage

Formal coverage of the right to disconnect varies among the eight countries that have so far passed legislation in relation to it. As shown in **Error! Not a valid bookmark self-reference.** below, two main groups of Member States can be distinguished: those in which the right to disconnect is provided by law only in regard to telework or related categories (e.g. 'smart working' in Italy), and those in which the right to disconnect does not apply exclusively to teleworkers.

Table 0-10. Right to disconnect: legal coverage

Legal coverage	Countries
The right to disconnect is provided by law only in relation to telework or related categories of flexible work	Greece, Italy* and Slovakia
The right to disconnect formally applies to all employees	Belgium, Croatia, France, Ireland, Portugal and Spain

Notes: In Italy, Decree Law No. 30 of 13 March 2021, after being converted into law, conferred the status of a right to disconnect from digital devices for smart agile work, in respect of agreements already signed. For the civil service, this regulation applies without prejudice to rules established by national collective agreements.
Source: EU-OSHA, 2021a; Eurofound, 2022b; Interviews with national authorities.

However, even among those Member States in which the right to disconnect formally applies to all employees, differences exist between countries:

- In Belgium, the right to disconnect applies to employers that fall within the scope of the law on collective bargaining agreements, i.e. employers in the private sector (the public sector has its own regulation regarding the right to disconnect). According to regulation that has been in force since January 2023, all the employers with 20 or more employees are obliged to work out the modalities of a right to disconnect at company level.
- In France, the right to disconnect applies to all employees in the private sector except senior executives, who are not subject to working time law. In practice, however, its scope may be narrower because the country's labour code contains specific provisions regarding the negotiation or consultation of the right to disconnect in companies with more than 50 workers – and, in certain circumstances, companies with more than 11 workers (i.e. those companies which can have a works council; see below under 'Approach to implementation'). Nevertheless, case law (e.g. judgment no. 01-45889) has recognised the right to disconnect as a universal right (Lerouge and Trujillo Pons, 2022).
- In Ireland, the Code of Practice on the right to disconnect applies to all types of employees, regardless of arrangements or type of contract.
- In Portugal, the right to disconnect formally applies to all employees. However, there are also specific provisions for teleworkers. In this regard, Law 83/2021 of 6 December 2021establishes that under the regime of telework, "the employer has the duty to refrain from contacting the employee during the rest period, except in situations of *force majeure*" (Article 169ºB). These telework provisions also apply to the self-employed, whenever they are considered to be economically dependent on the beneficiary of the activity (Labour Code, Article 165, paragraph 2).
- In Spain, the right to disconnect formally applies to all the workers, although the law (Article 88 Law 3/2018) points out that it applies in particular to regular or occasional distance workers and home-based teleworkers.

Approach to implementation

Three different approaches to implementing the right to disconnect can be distinguished:

- *Collective bargaining*: in Spain and France, the legislation leaves the implementation of the right to disconnect to collective bargaining (or agreements between employers and workers' representatives) at sectoral and company levels:
    - In Spain, the right to disconnect is subject to the collective bargaining dispositions or agreements between employers and workers' representatives and should be oriented towards the improvement of work-life balance. The employer, after hearing from the employees' representatives, must prepare an internal policy for employees, including those in management positions, which defines the modalities used to exercise the right to disconnect, as well as training and awareness-raising actions for staff regarding the reasonable use of ICT (Article 88, Law 3/2018 of 5 December 2018).
    - In France, employers with 50 or more workers must negotiate agreements with unions that allow employees to disconnect from work technology after hours. However, the employer is not compelled to sign such an agreement. In the absence of an agreement, particularly in companies with more than 11 employees, the employer draws up a 'charter' after consulting with the social and economic committee (company level body). This charter defines the terms and conditions for exercising the right to disconnect (Lerouge and Trujillo Pons, 2022).
- *Individual agreements*: in Italy, the right to disconnect must be agreed between the employer and the employee ('smart worker');
- *Company policies*: in Ireland, the Code of Conduct says that employers should draw up a policy on the right to disconnect in consultation with staff. In Belgium, the so-called 'New Deal' (in force since January 2023) provides a minimum framework that employers must implement in their policies. This framework comprises three pillars: an overview of practical modalities for the application of the right to be unavailable outside working hours; guidelines for using digital tools in such a way as to safeguard rest periods and holidays; education and awareness campaigns for employees regarding the appropriate use of digital tools and the risks associated with an 'always on' culture.

In contrast, in Croatia, Greece, Portugal and Slovakia, national legislation does not establish procedures for implementing the right to disconnect. In Greece, further development of the regulation will address aspects of implementation (Eurofound, 2022b).

Enforcement

Only in Spain, Greece and Portugal do regulations include sanctions or dedicated enforcement actions that could improve compliance with the right to disconnect.

In Greece, the law posits the creation of a special monitoring division for teleworking at the Labour Inspectorate, which could improve enforcement of the right to disconnect. Moreover, the 'digital work card' used to monitor employees' working hours in real time could also improve the enforcement of the right to disconnect (see Annex on working time).

In Portugal, failure to comply with the employer's obligation to refrain from contacting the employee during rest periods can be considered an administrative offence. Moreover, any less favourable treatment by the employer of a worker for exercising their right to a rest

period, in particular with regard to working conditions and career advancement, is considered discrimination (Lerouge and Trujillo Pons, 2022).

In Spain, a company's failure to develop a right to disconnect policy can lead to two types of sanctions. On the one hand, sanctions for non-compliance with working conditions and legal obligations, which are serious infractions, are punishable with fines of up to EUR 6,250. On the other hand, failure to have in place a disconnection policy can be sanctioned from the standpoint of preventing occupational risks, if there is a connection between the lack of such a protocol and psychosocial risks such as burnout, stress and related impacts.

In the remaining MS, no sanctions are in force. In the case of France, the absence of such sanctions has been assessed as limiting the effective implementation and enforcement of this right (Lerouge and Trujillo Pons, 2022). This was confirmed in interviews conducted with national authorities and social partners in France. As one employer representative put it:

"*There are blatant cases of non-compliance with the right to disconnect with abusive solicitations from the employer. Court decisions show this clearly. But in practice, this subject poses few problems. When I am called upon to deal with a question related to the non-respect of the right to disconnect by a member of our employers' organisation, it is always linked to a wider dispute, for example a dismissal where an employee will contest the reasons for the dismissal and claim compensation for unpaid overtime, for example, and for the non-respect of the right to disconnect*." (interview, employer representative, France).

Regulation via collective bargaining

Research regarding collective bargaining and the right to disconnect is particularly scarce. The few existing studies that have explored agreements on the right to disconnect have mainly concentrated on those pioneer countries regulating telework through statutory legislation – namely, France, Belgium, Italy and Spain – and to a lesser extent on other countries that lack statutory legislation – in particular, Germany (Sanz de Miguel, 2020; Eurofound, 2021; EU-OSHA, 2021d; Zucaro, 2021). In this regard, research has shown that in Italy, collective agreements at company level had already begun to experiment with the regulation of smart working by 2012 (Zucaro, 2020).

By 2019, several company agreements in the financial and insurance sectors in Spain had already regulated the right to disconnect (e.g. at Telefónica, AXA, Banco Santander) (Sanz de Miguel, 2020). Later, the right to disconnect was also regulated by certain sectoral collective agreements (e.g. the financial sector). Since 2022, the right to disconnect has been regulated via the first collective agreement involving a digital labour platform company (Just Eat).

In France, calculations carried out for this study on the basis of data from the report 'Bilan de la Négociation Collective 2022' [Collective Bargaining Statement 2022] reveal that only around 1% of collective agreements concluded in 2020 regulate the right to disconnect.[188] According to Eurofound research which analysed social dialogue/collective bargaining practices at company level (Eurofound, 2021a), assessments carried out by social partners that had already implemented the right to disconnect at company level revealed that both employers and workers' representatives agreed it had led to positive changes in company culture. It therefore appears that the right to disconnect has contributed to extending

[188] This information was gathered from the expert workshop on the right to disconnect.

telework while raising awareness that such working arrangements should not lead to an expectation that workers will be constantly available. The Eurofound research also showed a trend towards 'soft' regulatory approaches, and away from trade unions' preferences for hard law (Eurofound, 2021). The preference among trade unions for 'hard law' regulation was also identified in EU-OSHA research (EU-OSHA, 2021d).

Some research has also identified interventions by companies that enable their employees to disconnect from work (see, for example, Mattern, 2020). However, such research has not distinguished between interventions on the basis of the role played by social dialogue or by collective bargaining.

Recent policy debates

The right to disconnect is a current topic of discussion for social partners and/or policymakers.

In Cyprus, a process of social dialogue is ongoing with regard to the regulation of telework in the public sector, including the right to disconnect. According to country interviews, discussions are being held within the Labour Consultative Body with a view to preparing a draft Bill on the right to disconnect. At the moment of this report, the final draft has not yet been released for open dialogue with social partners. So far, discussion has been limited to the technical committee, which was assigned the responsibility of preparing the draft document.

In Croatia, the trade union Sindikat naftnog gospodarstva (SING – Oil Economy Trade Union) has initiated certain actions with regard to the right to disconnect.

In Germany, debates have been raised concerning the adequacy of existing working time regulations with regard to the new, more flexible patterns of working time adopted by teleworkers. According to interviews with sectoral social partners, employers' associations have called for an exemption from statutory periods of rest between working days, arguing that these are detrimental to the autonomy and latitude of teleworkers to adapt their working schedules according to their own needs or preferences. Similar views were shared by employers' representatives from other countries. In most cases, employers do not see the need for further regulation on the right to disconnect, as they believe that agreement regarding availability times is better achieved via company-level or individual bargaining. Employees also need to be trusted in their capacity to decide on the urgency required in attending to the demands of their job. Some employer representatives did not even consider this to be an issue.

In the Netherlands, a proposal was submitted in 2020 by the opposition party PvdA (the Labour Party) to amend the Law on Working Conditions (*Arbeidsomstandighedenwet*), by adding a sentence to Article 3 stating that employers and employees must come to an agreement regarding the hours during which employees have the right to disconnect.

In Romania, trade unions have called for legislation to complement telework by ensuring the employee's right to disconnect, with the problem of undeclared overtime already being considered a widespread issue. Although some collective bargaining agreements already contain provisions relating teleworkers' right to disconnect, in the view of one trade union representative interviewed, a statutory regulation imposing the automatic disconnection of digital tools after regular working hours would be a more efficient way to guarantee the right to disconnect.

Lastly, in Luxembourg, Bill no. 7890 modifying the Labour Code was submitted to the Chamber of Deputies on 28 September 2021. Reflecting the opinion of the Economic and Social Council, this Bill aims to introduce a provision regarding the right to disconnect. In particular, Section 8 of the Bill, entitled 'Respect for the right to disconnect' would oblige

employers to define a specific regime that ensured respect for the right to disconnect in situations where employees use digital tools for professional purposes. According to interviews with country representatives, the proposal states that the implementation of the right to disconnect is to be accomplished through collective bargaining. In the absence of such agreement, it should be defined at company level in accordance with the remit of workers' representatives. The disconnection regime should also address the technical arrangements used to guarantee the right to disconnect, as well as other awareness-raising measures. The proposal also sets out administrative fines in the event of infringements.

3.8 Analysis of social partner agreements at EU level

3.8.1 Social partner agreements

Over the last two decades, social partners have reached several agreements at EU level on issues relevant to digitalisation and teleworking. In July 2002, social partners adopted a Framework Agreement on Telework, the first of its kind at EU level (ETUC et al., 2002). The framework agreement formally defined telework and affirmed that teleworkers had the same rights as other employees with regard to issues ranging from data protection and privacy to occupational safety and health standards. The Agreement highlights the social partners' mutual priority of protecting the rights of employers and employees in teleworking roles, but "also identifies the aspects that are specific to distance working and which call for adaptation or special attention," including "employment conditions, data protection, privacy, equipment, health and safety, organisation of work, training and collective rights" (European Commission, 2008).

In 2004, EU social partners also signed a framework agreement focusing on work-related stress, with the aim of "increas[ing] awareness and understanding of work-related stress amongst employers, workers and their representatives," highlighting work-related stress as a potential threat to the health and safety of employees. In the agreement, social partners noted that work-place stress was a concern for both employers and employees, and delegated implementation to the individual Member States (ETUC et al., 2004).

In 2020, EU social partners adopted a framework agreement on digitalisation with the aim of addressing emergent issues relevant to telework. The framework agreement reiterated the importance of establishing clear guidelines and communication channels between employers and employees to navigate new working modalities. Among the issues highlighted by the social partners was the need to clearly identify both employers' and employees' expectations with regard to how teleworkers are connected (and disconnected) from work. The text of the framework agreements largely places the onus on employers to cultivate an internal work culture that respects non-working time and the privacy of their teleworking employees. For example, businesses are encouraged to "create a culture that avoids out-of-hours contact" and to "alert and support procedures in a no-blame culture to find solutions and to guard against detriment for workers for not being contactable" (ETUC et al., 2020).

The COVID-19 pandemic has played a significant role in shaping social partners' priorities with regard to negotiating agreements on telework and the right to disconnect. The unprecedented rise in teleworking across many sectors since 2020 has brought new regulatory challenges, and in some cases has magnified existing issues previously highlighted by social partners at EU level. In 2022, EU-level cross-industry social partners

expressed their intention to revisit and update the original 2002 agreement, to be put forward for adoption in the form of a legally binding agreement via a Directive[189].

With respect to potential future discussions relating to telework and the right to disconnect, EU social partners appear to have a common interest in establishing clear guidelines for policies relating to telework, as well as ensuring that implementation is carried out in a way that benefits both employers and employees (EBF-BCESA et al., 2018). In particular, there is a mutual understanding between the social partners that teleworking involves unique health and safety risks, and that greater clarity is needed to determine employers' responsibilities and obligations in implementing initiatives to address these issues.

The next subsection of this report details some of the ways in which these social partner agreements have been implemented at national and sectoral levels, highlighting emerging issues and grounds for future dialogue.

3.8.2 Issues covered by social partner agreements

A number of key issues have emerged from dialogue between EU-level social partners in recent years, reflecting different positions on key issues relating to the topic of telework. Among other topics, these include occupational safety and health, data protection, equal access and gender equality, privacy, the psychosocial impacts of telework, opportunities for training and professional development, work-life balance, and the recording of working time.

Risks to physical and psychosocial well-being are a key issue under the broader umbrella of the occupational safety and health concerns emphasised by EU-level social partners. As discussed in other sections of this study, teleworking presents new kinds of risks to employees' safety and health (e.g. musculoskeletal disorders, stress, etc). While some of the risks of telework are not 'new' (i.e. they are shared with traditional office work), new working modalities pose a new challenge to employers in addressing these concerns from a distance.

The Framework Agreement on Work-Related Stress (2004) makes it clear that employers have a legal obligation to protect the safety and health of their workers, including mitigating the risks of stress through certain management policies or communication strategies. While the Framework Agreement does not focus on specific stressors or situations that produce workplace stress, it does highlight (among other possible issues) working time arrangements, the degree of autonomy, workload, and emotional and social pressures. The open-ended nature of the agreement has resulted in somewhat inconsistent implementation of its guidelines (Prosser, 2011), with decisions regarding best practices left up to individual companies (such as providing ergonomic workspaces in the home, or managing employee expectations related to remote working and flexible working time).

Occupational safety and health risks have remained a key issue in social partners' positions on the right to disconnect. However, their positions differ with respect to the degree of responsibility that employers should bear in mitigating workplace stress and psychosocial issues as a component of OSH measures, particularly after the onset of the COVID-19 pandemic. For example, the ETUC and related trade union organisations have pointed to the prevalence of musculoskeletal disorders (MSDs) due to the intensification of work and lack of appropriate equipment since at least 2012 (ETUC et al., 2012).[190] At the same time, BusinessEurope has said that topics such as ergonomics or psychosocial issues require "a holistic approach across policy areas as they are not only work-related," and as such,

[189] Negotiations between EU cross-industry social partners began in October 2022 and were still ongoing by the completion of this study.

[190] This position was repeated in a position paper on the EU Strategic Framework on Health and Safety at Work (ETUC, 2021a).

suggested that they should not be the responsibility of the employer alone. For example, BusinessEurope's response to the public consultation on the Strategic Framework for Health and Safety at Work (BusinessEurope, 2021b) highlights the subjective parameters that determine stressful working environments and calls for business- and industry-specific solutions rather than EU-level Directives.

The social partners have a shared interest in fostering inclusiveness and equal access in the promotion of teleworking roles and have expressed a commitment to addressing issues such as gender equality in future agreements. Gender is a cross-cutting issue that amplifies a number of pre-existing risks: as noted by the ETUC and the European Trade Union Institute (ETUI), women workers experience more injuries and musculoskeletal disorders as a result of poor ergonomic support (ETUC, 2021b), and are subject to stressors such as workplace violence and sexual harassment (ETUI, 2021). Meanwhile, BusinessEurope notes that in addition to taking on a greater share of caregiving responsibilities, women workers are overall less likely to be employed, and more likely to work part-time and to live longer, resulting in the under-utilisation of pension systems (owing to the fact that such workers do not contribute fully into the pension system over the course of their working life) (BusinessEurope 2021a). In this respect, EU social partners reflect an understanding of gender-based discrimination (among other social issues) as highly multi-dimensional, intersecting with multiple shared priorities for future agreements.

Questions of equal access (both to the internet and digital services more broadly, and to teleworking roles more specifically) remain key concerns in social dialogue. Opportunities for teleworking are not necessarily available in all sectors and to all types of workers. For example, telework (enabled by and involving ICT) is more prevalent in certain countries (e.g. Nordic countries, the Netherlands, Luxembourg, France and Estonia) (Samek Lodovici et al., 2021). These differences in teleworking rates and forms of employment across countries reflect not only variations in industrial digital infrastructures, but also differing organisational/work cultures across the EU. Gschwind and Vargas (2019) note a "strong split across Europe" when it comes to workplace flexibility: while some countries place "a greater emphasis on presenteeism" and in-person interaction and management styles, others value working cultures that allow for "flexible coordination between work and private life" (p.39). These differing workplace norms are accompanied by concomitant differences in the adoption of telework: for example, Gschwind and Vargas (2019) note that the uptake of telework has been relatively slow in Spain compared with Germany (or, to an even greater extent, Sweden).

Due to the complex and multi-dimensional nature of many of these core issues – including those relating to public health, sociocultural norms and patterns (e.g. working arrangements or gender roles), and the risks and benefits of emerging technologies (e.g. privacy and surveillance) – EU social partners have adopted different stances on the best way to implement the agreements. The following subsections highlight how the implementation of these agreements has been structured and evaluated, as well as the shared priorities and points of concern identified by different social partners in relation to future negotiations.

The emergence of new issues that relate to teleworking (especially following the COVID-19 pandemic) also reveals areas in which collective agreements could be revisited to ensure their continuing relevance in light of stark shifts in the world of work. In the 2002 Framework Agreement on Telework, for example, the EU cross-industry social partners emphasised the "voluntary nature" of the Agreement on Telework, in the sense that teleworking only "modifies the way the work is performed," and not the worker's employment status. The agreement notes that teleworking arrangements can be mutually accepted or rejected by workers or employers, with workers "returning to work at the employers' premises" at the request of either party (ibid.)

This point has taken on new relevance in the context of rising teleworking rates following the COVID-19 pandemic, as well as the increasing intensity and 'always on, always

connected' nature of digital work. However, this latter consideration has not yet been explicitly addressed by framework agreements or in social partners' position papers. For instance, concerns over environmental sustainability, which have been a critical part of social partners' dialogues on other topics, have gained relevance in the context of teleworking. This is because teleworking reduces emissions from commuting, but also changes patterns of energy usage as more workers work from home instead of the office (see Belzunegui-Eraso and Erro-Garcés, 2020). Who should be responsible for bearing the rising costs of this energy usage is still not a settled issue – they have not yet been explicitly addressed in existing agreements, nor discussed in detail in position papers.

3.8.3 Implementation of social partner agreements

The aforementioned agreements on telework and work-related stress represent the "first European inter-sector social partner agreements to be implemented through the non-legally binding implementation route", delegating their implementation to individual Member States and sectoral social partners, rather than through the model of a legally binding directive (Prosser, 2011). The adoption of this implementation scheme is notable because it has allowed national-level social partners to interpret the agreements within the frame of their own "procedures and practices specific to management and labour" (ETUC et al., 2002). In addition, it has enabled sectoral-level social partners to devise relevant policies and procedures that are contextually relevant. Larsen and Andersen (2007) note that this implementation scheme reflected "the social partners' common wish to achieve increased autonomy from the European Commission and to show that they still had a role to play" (p. 184), despite previously unsuccessful attempts at reaching consensus on other topics.

The implementation of the 2002 Framework Agreement on Telework was a collective undertaking. Both EU- and country-level social partners worked on the implementation of the agreement, with German social partners even organising a transnational conference on implementation together with Danish, Austrian and French employers' confederations. Similarly, telework was a point of discussion during the integration procedures for new members in 2004, which helped to kick off negotiations on the telework agreement in countries such as Latvia.

In 2006 and 2008, the EU social partners and the European Commission respectively published reports on the success of the implementation of the 2002 Framework Agreement on Telework. Both reports discussed country-level implementation policies and key issues that arose during the implementation process. The report by social partners suggests that the impressive number of implementation initiatives indicates the ability of local social partners across the EU to "successfully come to grips with an important issue for the future in autonomous negotiations" (ETUC et al. 2006, p. 29). Similarly, the 2008 European Commission report argues that the implementation of the Framework Agreement "may be considered a success", and that it had "clearly contributed to the Lisbon goals of modernising labour markets" (European Commission 2008, p. 54).

Overall, EU-level social dialogue has achieved a significant impact by building awareness of key issues related to teleworking, and by offering guidance to stakeholders on how measures might be implemented in line with other Member States. In an evaluation of the subsequent impacts of the social partner agreements, Prosser (2011) argues that in the countries studied,[191] "the telework agreement often added markedly to the content of national and sectoral regulation" (p. 255). For instance, prior to the 2002 Framework Agreement on Telework, the Czech Republic "had almost no 'soft policy' or collective

[191] Belgium, Denmark, the Czech Republic and the United Kingdom.

regulation on the topic of teleworking,"[192] and the "absence of prior regulation was a major motivating factor for Czech social partners during the process of implementation" (Prosser, 2011, p. 255). Similarly, in Finland and Spain, the Framework Agreement on Telework was implemented via a general social partner agreement. Although such an agreement is not legally binding in the same way as a collective agreement, in these countries, "the social partner agreement reached at national levels [also] prompted the signature of collective agreements at sectoral or company levels" (ETUC et al., 2006). In this respect, agreements between EU-level social partners (even those that are more 'informal' or not legally binding) still appear to have had a positive influence on dialogue between social partners at country level.

Even so, the European Commission (2008) noted that there had been an uneven uptake of the Framework Agreement in different Member States, adding that the differing implementation procedures used in each Member State meant that "uniform outcomes [in implementation] cannot be expected" (p. 48). Different countries chose different measures to implement the Agreement, including national social partner agreements, legally binding collective agreements, or changes to legislation (see Figure 3-1). Prosser (2011) notes that in Denmark, the telework agreement was implemented by social partners across multiple sectors (e.g. industrial, commerce, finance, state and local government); in some cases, little was needed to formally comply with the agreement, as pre-existing legislation in the local government and state sectors was already sufficiently compliant with the agreement (p. 250). In other countries, implementation involved lateral adaptations to existing policies: in the Czech Republic, changes to the Labour code were required, and in Belgium, implementation was carried out by extending an inter-sectoral agreement through the National Labour Council to all private sector employees (Prosser, 2011, p. 251). In some instances, there was little to no uptake of the non-binding guidelines in particular sectors and countries: in the UK banking and local government sectors, neither agreement was implemented due to a "lack of interest" and lack of recognition of its relevance (Prosser 2011, p. 252).

Most scholars, as well as the social partners themselves, argue that these diverse implementation results have been caused by the Member States' differing "industrial relations systems" (Larsen and Andersen, 2007, p. 195). The differing implementation routes were also determined by the "power struggle between unions, employers and the state" (Larsen and Andersen, 2007, p. 181). Other issues pertaining to implementation at the national level are related to the historical cooperation between social partners and national governments (ibid., p. 183). In Denmark, for example, most private sector unions and associations had chosen not to implement the telework agreement as of 2007, with ministries instead choosing to include a mention of the Framework Agreement in their existing agreements on telework, on the grounds that telework was already regulated in the Danish public sector. However, it is questionable whether this counts as implementing the Agreement through collective agreement (Larsen and Andersen, 2007, p. 186). Overall, these differences in relations between social partners, as well as differences between existing national agreements, contributed heavily to the differences in the uptake of the EU Framework Agreement in Member States.

Similarly, a 2008 report by the European Commission noted that while all Member States had adopted the same terminology of 'teleworker', this term was interpreted in different ways in different country contexts. For instance, Hungary defined a teleworker as someone "who communicates the result of [their] work via electronic devices," while the definition in the Framework Agreement says nothing about communication modalities. Italy defined two different types of teleworkers: teleworkers working from home and those working from a

[192] Apart from loosely related sections of the Labour Code that "referenced only the matter of employees who worked away from the site of employers" Prosser (2011, p. 255).

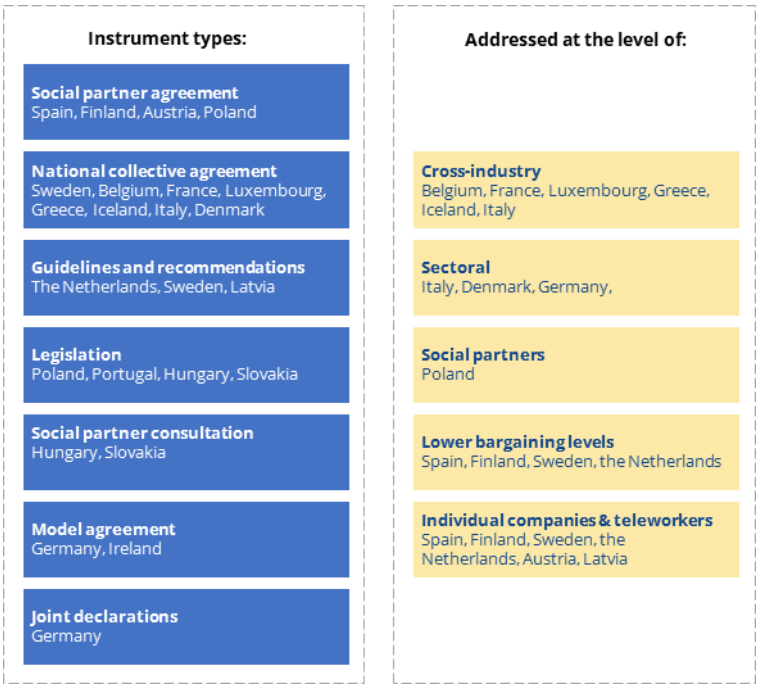
distance. In Ireland, meanwhile, a ‘teleworker’ was equated with an ‘e-worker’, and the provisions of the framework were also applied to telecommuters and mobile e-workers (ETUC et al., 2006).

These differences in terminology had consequences for how teleworking was incorporated into existing legislation and regulatory frameworks at national level. For example, countries took different approaches to interpreting the relationship between telework and homework or remote work (an issue that had already been addressed by labour legislation in various countries), thus producing various outcomes in terms of implementation (Visser, 2008, p. 25). In Belgium, the Act on Homework does not apply to teleworkers, while Slovenia explicitly amended its Labour Relations Act to count teleworkers as homeworkers (Visser, 2008) This distinction is important, because if homeworkers and teleworkers are different, their cost reimbursement structures and protections might also be different. Similarly, on the question of data protection, the approaches adopted towards implementation followed the various national data protection rules rather than some uniform solution for all (Visser, 2008, p. 28-29). Despite adopting some of these various definitions, some countries, including Latvia, Lithuania, Estonia, Malta, Cyprus, Bulgaria and Romania, had still not fully implemented the Framework Agreement on Telework by the time the European Commission had published its implementation report (Commission 2006).

Practical and logistical difficulties also arose in the implementation of policies or guidelines due to the differing ways in which Member States have integrated telework into national labour policies, social security infrastructures and tax law. For instance, while Ireland has devised a strategy to develop infrastructure for remote workers that includes plans to construct remote workspace hubs, as well as investing in high-speed internet (Samek Lodovici et al., 2021), employers in Germany are grappling with how to update management practices that focus on presenteeism or ensuring access to proper work technology for teleworkers (Junge, 2021). Various framings of telework at national level (as a social issue, a taxation or social security issue, or a combination of the two) have resulted in a patchwork of approaches and solutions that are not easily compiled into a coherent regulatory framework on a broader level.

The final subsection within this chapter of the report explores the current positions and key priorities of social partners relevant to future negotiations on the topic of digitalisation and teleworking.

Figure 0-18. Types of implementation instruments chosen by MS



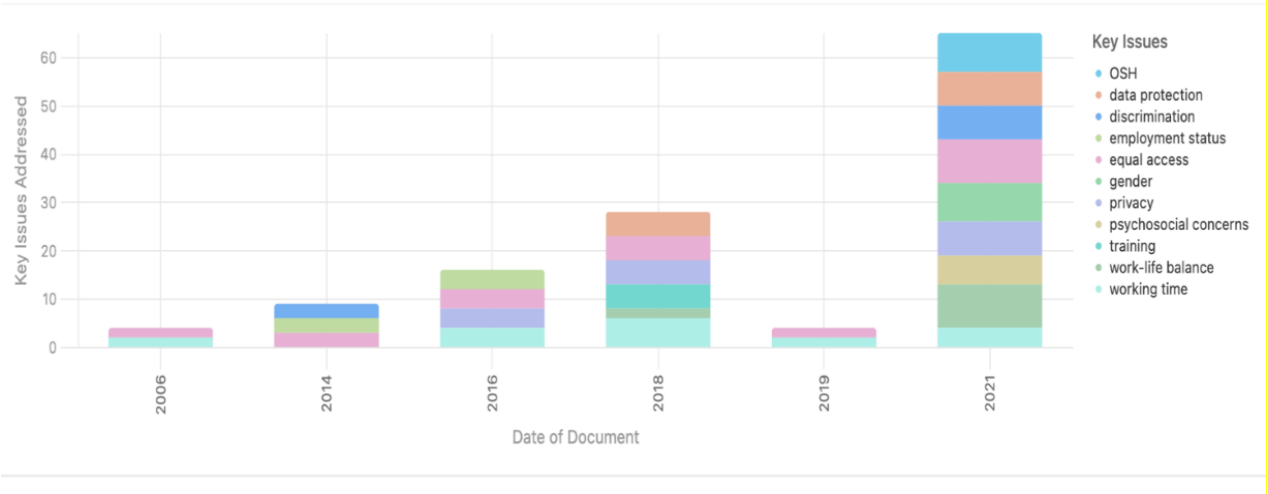
Source: adapted from the implementation reports by the social partners (2006) and the European Commission (2008).

3.8.4 Analysis of social partners' priorities and positions

EU-level social partners have differing perspectives with regard to teleworking legislation, both in terms of the key issues and priorities to be addressed, as well as the types of legal instruments used for its implementation (see Figure 0-19). While direct consultation (i.e. interviews and surveys) with social partners at the national and EU level was beyond the scope of this study, this subsection provides a general analysis of the positions of social partners in light of the ongoing discourse regarding directives related (in a direct or ancillary way) to the issues of teleworking and the right to disconnect.

The previously agreed upon Framework Agreement on Telework (2002) retains a certain amount of relevance with regard to the ongoing issues surrounding telework, especially in laying the groundwork for understanding the obligations of both employers and employees in practising telework, as well as to identify and address key connections between telework and other social issues (including occupational safety and health, gender equality, psychosocial impacts, etc.). However, significant changes in the world of (tele)work over the last two decades (and especially since the outbreak of the COVID-19 pandemic) have revealed opportunities for addressing social issues targeted by the initial Framework Agreement with greater specificity, as well as addressing new and emerging issues.

Figure 0-19. Key issues addressed by social partners in position papers referenced by the present study, 2002-2022



Source: authors' own elaboration, based on selected position papers of social partners, 2016-2020

The rapid uptake of telework since the start of the COVID-19 pandemic has presented a range of challenges and new risks to employers and employees alike. However, social partners differ as to the degree to which these issues are already addressed by existing agreements. For example, SGI Europe argued in 2021 that the 2020 Digitalisation Agreement "already included modalities for connecting and disconnecting," and that the EU bodies should merely help to implement these autonomous agreements (see Guerra, 2021). Likewise, BusinessEurope noted in a 2021 survey that the increase in teleworking had only "slightly increased" concerns over OSH as a result of the COVID-19 pandemic, adding that rather than focusing on risks, "future EU policy should balance this with OSH opportunities [from] e.g. teleworking."[193]

Other social partners have expressed the need for more direct intervention, such as the ETUC's calls for an EU-level directive on the right to disconnect (ETUC, 2021a). In its Position on the Right to Disconnect (ETUC, 2021a), the ETUC noted that the threats facing modern workers included expectations (either implicit or explicit) that employees be "always available and connected for work purposes" (ETUC, 2021a). Furthermore, in its position on the EU Strategic Framework on Health and Safety at Work, the ETUC urged greater action by the Commission to address "hazards to psychosocial well-being," highlighting the need for EU-level legislative action as opposed to national- or company-level interventions (ETUC, 2021b). Future priorities for the ETUC include a formalised description of the right to disconnect, limits to the use of digital surveillance and monitoring tools, and the extension of the right to disconnect to all workers, irrespective of employment status or sector (ETUC, 2021b).

Social partners have highlighted the relevance of employment (and employment status) in maintaining robust social protection systems. For example, BusinessEurope (2021a) has called on Member States to "modernise their social protection systems" to account for the structural inadequacies revealed by the COVID-19 pandemic, including the gender gap in employment, the high costs and taxes associated with labour, and outmoded pension systems. From BusinessEurope's perspective, regulation at regional and national levels is preferable to an EU-level directive, so as not to create undue burdens on and barriers to

[193] See the BusinessEurope reply to the public consultation on EU Strategic Framework on Health and Safety at Work (2021), https://www.businesseurope.eu/sites/buseur/files/media/position_papers/social/2021-02-25_hs_strategic_framework_-_reply_to_consultation.pdf

cross-border e-commerce (BusinessEurope, 2021a). In contrast, the ETUC has argued for the need to frame teleworkers as employees (rather than as self-employed), which would make them subject to the same rights and guarantees as employees working at the employer's premises. Specifically, the ETUC (2022) noted its intention to secure this presumption of an employment relationship as a guarantee for all digital workers.

In terms of the effectiveness of the 2002 Framework Agreement on Telework, EU-level social partners have expressed different priorities with regard to the necessity for, and the reach of, legislative instruments to address these key issues. The ETUC has called unequivocally for an EU-level directive touching on the right to disconnect, specifically calling on the Commission to "launch without further delay a legislative initiative in the form of a European Directive" that develops measures for workers to effectively assert their right to disconnect without threat of discrimination or retribution (ETUC, 2021a). Conversely, BusinessEurope (2021b) has argued against "one-size-fits-all legislative solutions" to address the occupational safety and health challenges that arise from increased digitalisation. BusinessEurope argues that "national context, i.e. economic situation, industrial relation systems, [and] sectors of economic activity" influence the nature of the OSH issues that need to be addressed. This lack of agreement signifies a current gap between the positions of the social partners as to how to legally frame and effectively execute an implementation strategy. Employers' organisations maintain that the involvement of EU institutions and legislative instruments should be limited to the implementation of the autonomous framework agreements already concluded by the social partners on related topics. SGI Europe (2021), for instance, argues that further legislative intervention would complicate how provisions from the social partners' framework agreements are interpreted at national level.

Past agreements concluded by EU-level social partners were coherent with the aims of respective EU Directives to which they are linked. Similarly, the shared priorities of social partners towards topics such as gender equality or managing the risks of privacy and surveillance indicate some degree of internal coherence between their positions. Thus, while the social partners have expressed different priorities and positions on issues relating to telework – as might be expected – such differences proceed from internally coherent premises. In other words, while the social partners may have different understandings of the specific responsibilities of employers and employees in teleworking relationships, existing social partner agreements exhibit a shared orientation towards resolving the issues that have emerged as teleworking has become increasingly normalised.

Lastly, the Framework Agreement on Telework (2002) has been effective in the sense that it was implemented directly by the members of the various social partners, in line with the procedure outlined in Article 139 of TFEU and has contributed to collective agreements and/or legislation in 15 Member States. The Framework Agreement has also had the effect of highlighting emerging issues in the social sphere and has strengthened social dialogue at both EU and national levels. However, the effectiveness of the Framework Agreement has been slightly weakened by differing interpretations and uptake on the part of the social partners, owing to differences in the scope of the coverage of social dialogue.

The commitment of EU social partners to revisit topics addressed in previous framework agreements represents an opportunity to implement policies that respond to emergent challenges, while also ensuring protection for employees and employers alike. The prevalence of teleworking following the COVID-19 pandemic (which is likely to continue to rise) signals new risks and challenges for workers, as well as opportunities for further discussion.[194]

[194] At the time of conducting this study, negotiations by EU cross-industry social partners on the review and update of the 2002 Framework Agreement on Telework are ongoing.

4. FUTURE TRENDS, CHALLENGES AND OPPORTUNITIES

Key findings:

- Projections suggest that in 2030, we can expect between 12% and 22% of employees in the EU-27 to be working from home sometimes or usually, with a baseline estimate of 17%.
- Cross-national differences in the shares of employees working from home are likely to remain in the future.
- Future growth in the prevalence of telework may lead to cost savings, support workplace innovation and digitalisation, and result in higher levels of employment (including of disadvantaged groups) and better work-life balance.
- Yet, future growth in share of employees working from home poses a number of risks and challenges, including negative impacts on mental and physical health of some groups of employees, higher administrative burdens for businesses if the current legal status quo is maintained.

The overall objectives of this chapter's future-focused analysis are as follows:

- to identify key drivers of likely future evolution in the prevalence of telework;
- to provide quantitative forecasts of the prevalence of telework in the short (2 years), medium (5 years) and long (10 years) term. These forecasts are structured around three scenarios: baseline, low growth, and high growth of telework. The forecasts include aggregate estimates, as well as estimates disaggregated by intensity of telework (full-time vs hybrid work), Member State, sector, occupation, age, gender and other relevant characteristics. In addition, assessments are made of the likely economic, social and environmental impacts under alternative scenarios.

4.1. Methodological considerations and assumptions

Forecasting future social trends and examining their likely impacts is always challenging. In addition to standard issues and uncertainties regarding the future, this assignment faced additional hurdles:

- Forecasting typically relies on the analysis of past trends. This is challenging, however, if external shocks create significant discontinuities. Trends in the prevalence of telework recently faced two such shocks: a) work-from-home mandates imposed due to COVID-19 in 2020 and 2021; and b) back-to-the-office policies adopted by most organisations at the end of 2021 and in 2022.
- At the time of writing, aggregate EU-level data from the Labour Force Survey (LFS) are available for 2021. However, micro-data – which are key to forecasts such as this – are only available for 2020.
- There are virtually no data available at the moment of writing this report for 2022, which impairs the analysis in two respects. First, 2022 data should reflect the impacts of back-to-the-office policies; second, 2022 would be the ideal starting point for forecasts.

Due to the above limitations, this future-oriented analysis relies on a combination of two approaches. First, the study team has developed qualitative scenarios for the future evolution of telework. Each of these scenarios aims to depict a probable future in terms of key drivers (what factors would lead towards this scenario?); probable outcomes (what would be the prevalence of telework?); and likely socioeconomic impacts. The scenarios were developed using the following methodologies:

- A review of the literature on future trends likely to affect the future prevalence of telework.
- A Delphi survey of experts and researchers. This type of survey aims to collect views and opinions from experts on possible future developments, to build consensus on contested issues and test key assumptions. The Delphi survey carried out for this study included questions on the likely key drivers behind either a higher or lower prevalence of telework, as well as questions regarding likely future levels of prevalence of telework.
- An expert workshop involving the participants of the Delphi survey, with the aim of further refining the list of key drivers behind each scenario, as well as to better understand their likely socioeconomic impacts.

Second, to produce quantitative forecasts underpinning the scenarios, we carried out econometric modelling by running ARIMA (autoregressive integrated moving average) models. Such models are widely used in econometrics to better understand past trends, and to obtain quantitative estimates for the future based on observable trends in the past. We ran the models using two external predictors – pandemic (a dummy variable with 1 indicating the presence of a pandemic), and the proportion of employed persons in ISCO categories 1-4 (managers, professionals, technicians and associate professionals, and clerical support workers). The latter variable was estimated using Cedefop figures on employment structure by occupation. For aggregate country-level analysis, Eurostat data on working from home were used because they involved crucial figures for 2021. In addition, micro-level LFS data were used to generate forecasts according to the following characteristics: working pattern (full-time/part-time), gender, age, occupation, economic sector, and size of firm.

The forecasting procedure consisted of two steps. First, ARIMA models were run using past data to identify observable trends in telework figures and to estimate the coefficients of the two external predictors. In each case, optimal ARIMA model parameters (i.e. the number of lags, the number of differences needed to make the time series stationary, and the number of lagged forecast errors) were identified using the Akaike information criterion (AIC) and Bayesian information criterion (BIC). Second, the model specifications identified by ARIMA were used to predict telework rates in the short, medium and long term. In each case, forecasts were generated for two response variables according to the regularity of working from home: namely, the proportion of employees working from home *usually* and *sometimes*.

Key assumptions behind the analysis are as follows:

- Telework is and will remain a voluntary work regime, driven by employees' preferences, employers' incentives and the technical feasibility of performing work remotely.
- No pandemic-related lockdowns or similar shocks are expected in the near future. It is virtually impossible to forecasts such events with any degree of certainty. However, should such shocks occur, they would clearly alter the estimated trajectories in the prevalence of telework.

4.2. Future trends in telework

This section aims to provide three scenarios for future changes in the prevalence of telework. Analytically, the construction of these scenarios assumes that future levels of telework will depend on three groups of drivers:

- **Changes in the teleworkability of jobs**. Teleworkability is defined as the technical possibility of providing labour input remotely into a given economic process (Sostero et al., 2020). It acts as a constraint on what the upper bound of the prevalence of telework could be.
- **Willingness of employees** who are in teleworkable jobs, to adopt teleworking arrangements.
- **Incentives of employers** to accommodate teleworking arrangements. While employees in teleworkable jobs may request to work from home, companies may or may not accommodate such work regimes.

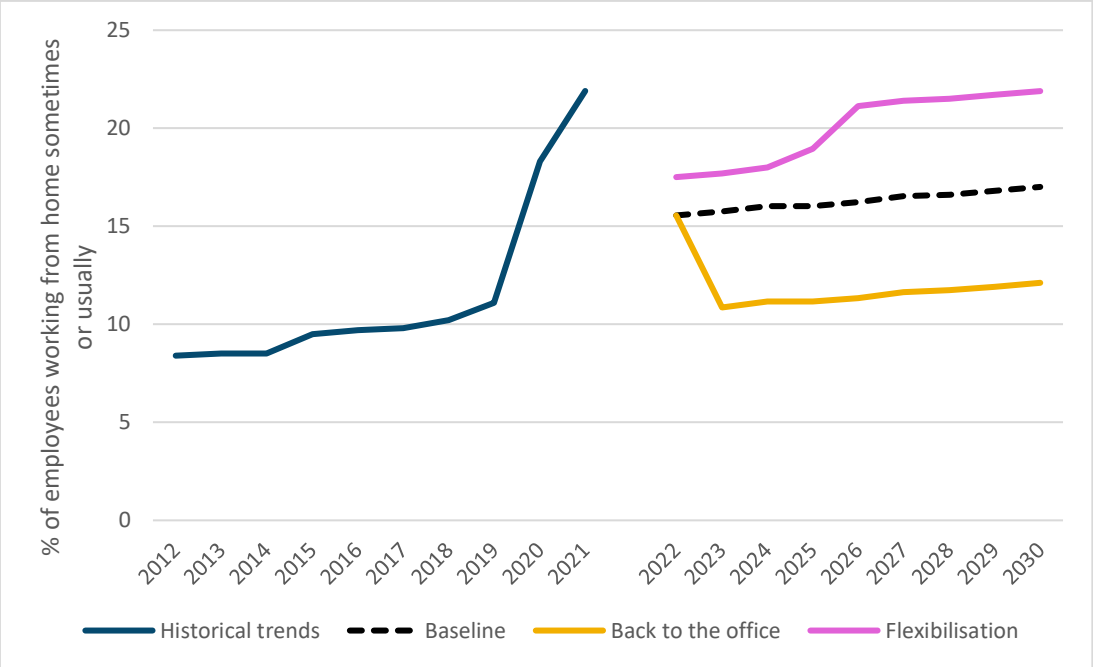
The three scenarios are as follows:

- The baseline scenario assumes that in the short term, the prevalence of telework will decline from the highs of the pandemic due to back-to-the-office mandates. However, in the medium term, the share of employees working from home will increase, since employers and employees have learned to appreciate the benefits and deal with the challenges of teleworking during the pandemic. In the long term, further growth in telework will be driven by the changing structures of EU economies.
- A pessimistic 'back to the office' scenario assumes a significant drop in teleworking due to upcoming 'stagflation' (high inflation combined with low economic growth) and strict back-to-the-office policies. In the medium and long term, further growth in the share of employees working from home will be constrained by factors such as the entrenchment of management practices, flexibility stigma, and negative career outcomes.
- An optimistic 'flexibilisation: work from anywhere, anytime' scenario projects significantly faster growth in the prevalence of telework. This is due to two drivers: increasingly widespread adoption of digital technologies and business models, as well as the demise of the office as the main place of everyday work.

Figure 4-1 below provides a comparison of estimated trends under all three scenarios. The projected share of employees working from home in 2030 in each of the three scenarios differs significantly. However, all of them suggest that the share of employees working from home for at least some of the time will increase in comparison to pre-pandemic levels.

Which scenario is the most likely? Our analysis of data and literature suggest that the baseline scenario is the most likely. The stakeholders and experts consulted tended to be fairly evenly divided between the flexibilisation and baseline scenarios.

Figure 4-1. Share of employees working from home: comparison of three scenarios



Source: Visionary Analytics forecasts, based on Eurostat and Cedefop labour demand and supply projections.

The subsections below discuss each of these scenarios in further detail. The presentation of each scenario begins with an explanation of the short-, medium- and long-term drivers (or reasons) that would explain why this scenario might be likely to take place. This analysis is then followed by quantitative projections. Together, these aim to illustrate how the share of employees working from home could evolve from now until 2030.

4.2.1 Baseline scenario

Short term drivers: back-to-office mandates after mandatory working from home

In the short term, the share of employees working from home is likely to decline from its pandemic peak. This is due to the following factors:

- Work-from-home mandates were largely involuntary: once these ended, at least some bounce back to working from the office is likely in the short term (i.e. during 2022 and 2023). This is driven by the longing for a “return to normality” after the psychological and physical trauma caused by the pandemic and lockdowns.
- Teleworking proved difficult in some jobs and/or led to a loss of quality in work performance due to the inherent characteristics of the work (e.g. primary education) or due to company policies.
- While the worst fears associated with telework proved to be largely overblown, companies nevertheless face a number of challenges, as discussed in Chapter 2, as well as risks relating to a lack of legal certainty, as discussed in Chapter 3. Some companies are therefore likely to pursue full-time or hybrid back-to-the-office policies.
- Some employees may prefer to return to the office full-time or to adopt hybrid working arrangements due to the desire to socialise, difficulties in setting up a high-quality home office or other personal circumstances. For example, according to a

McKinsey survey carried out in 2021, 61% of respondents preferred hybrid arrangements, while 24% did not want to work from home at all (McKinsey, 2021).[195]

Medium-term drivers: COVID-19 learning effects

Due to changing employment structures, it is likely that the share of employees teleworking would have slowly grown between 2020 and 2030, even without COVID-19-induced lockdowns. However, these lockdowns unleashed new workplace dynamics that are likely to have long-lasting effects. In particular:

- Employers "learned to deal" with telework. Organisations have altered their internal processes and invested in new technologies to accommodate teleworking. Furthermore, some have downsized their office spaces, provided support for employees in setting up home offices, and begun hiring cross-border teleworkers – each of these practices involving "lock-in" effects (Barrero et al. 2020). In addition – and perhaps more importantly – employers have learned that teleworking does not automatically lead to the lower productivity, employee disengagement, higher absenteeism, etc. In other words, the worst fears associated with telework proved to be largely overblown.[196]
- Employees learned the value of flexibility in their working time, as well as saving the costs and time involved in their daily commutes and enjoying other benefits of telework, as discussed in Chapter 2. This is likely to have incentivised a number of employees, including those who had not considered telework prior to the pandemic, to make use of such opportunities after work-from-home mandates were lifted.

These lessons imply that there is "no way back" to the pre-COVID world of work, as expressed by numerous participants in our Delphi survey and expert workshop. Hence, the overall prevalence of telework between 2022 and 2030 is likely to remain elevated in comparison to pre-pandemic trends.

Long-term drivers: the changing structure of EU economies

The prevalence of telework before the pandemic can be characterised by two stylised facts. First, the share of employees working from home has been growing steadily by an average of 2.7% per annum over the past decade. Second, there was significant cross-national variation in this pattern: prior to the pandemic, over 25% of employees in the Nordic countries and the Netherlands worked from home at least sometimes, while less than 5% did so in a number of Southern and Eastern European countries in 2019. Both of the stylised facts above can be explained by the structure of the economies concerned, among other factors (such as regulation, workers' preferences, etc.).

A growing share of persons employed as managers, professionals, associate professionals and clerical support workers (ISCO-08 occupation groups 1-4) is associated with a higher propensity to telework. This is because:

- a larger share of work in these occupations is teleworkable (Sostero et al., 2020; Eurofound, 2022)
- these occupations typically employ more highly educated workers, who express stronger preferences with regard to working time flexibility and telework (see Chapter 2 for an overview of the evidence on this).

[195] The survey covered the following EU Member States: France, Germany and Spain.

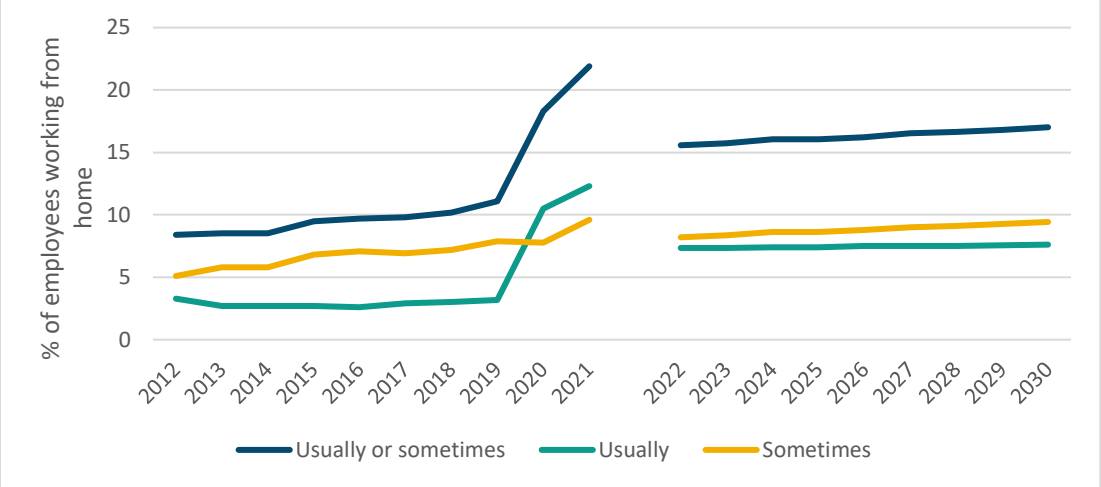
[196] It should be noted here that discussion is ongoing as to the conditions under which the risks of telework might materialise, and that the effects of telework vary significantly between companies, in large part due to the specificity of the work involved and company policies – see Chapter 2 for a more in-depth discussion.

Cedefop labour supply and demand forecasts suggest that the share of ISCO-08 occupation groups 1-4 is likely to gain further weight in the structure of EU economies in the period up to 2030. Accordingly, this this is likely to lead to lead to further growth in the share of employees who telework.

Estimates

Figure 0-2 provides overall forecasts of the prevalence of telework under the baseline scenario (more detailed breakdowns are included in Annex 7). In the short term, the share of employees working from home is likely to decrease due to the 'back to the office' policies implemented by a number of organisations in 2022; however, this drop is unlikely to be large due to the "lessons learned" by employers and employees (discussed above). In the long term, telework will become more prevalent due to overall changes in the structure of the economy. These estimates are based on the ARIMA models, as discussed in Section 4.1.

Figure 0-2. Share of employees working from home: historical data and baseline forecasts



Source: Visionary Analytics forecasts, based on Eurostat and Cedefop labour demand and supply projections

Under the baseline scenario, most teleworkers will work from home sometimes. This is in line with the results of the Delphi survey and the workshop with experts. Academics also point to the higher likelihood of hybrid work arrangements, rather than full-time telework. Similarly, most of the existing literature (e.g., Criscuolo et al., 2021; Microsoft Work Trend Index, 2021 and 2022) points to employees' preference for hybrid work arrangements or for working occasionally from home on an on-demand basis as the main choice for balancing the potential positive and negative outcomes of telework.

4.2.2 Back-to-the-office scenario

Short-term drivers: back-to-the-office mandates and stagflation

Similarly to the baseline scenario, back-to-the-office mandates after the pandemic will be the main driver in the short run. However, under this 'pessimistic' scenario, we expect a significantly larger share of former teleworkers to return to the office. This is due to looming stagflation, which will enable employers to enforce such mandates more vigorously due to stronger bargaining power.

Recent years have witnessed a growth in the bargaining power of employees, due to economic growth and historically low levels of unemployment. Many open vacancies have remained unfilled, which has pushed employers to offer more flexible working conditions.

Workers in sought-after occupations have enjoyed significant leeway in negotiating their desired working conditions, which typically include flexibility over working time and place.

At the time of writing in 2022, the labour market remains tight – that is, job openings are relatively plentiful, while available workers are scarce – but multiple economic forecasts suggest that growing price pressures may lead to stagflation, i.e., a period of high inflation and mild recession or absence of economic growth. In order to exit stagflation, the European Central Bank would need to raise interest rates, which could cause a contraction in economic activity, and growing unemployment. A resulting drop in the number of open vacancies and a higher share of unemployed persons may reduce the bargaining power of employees (Belzunegui-Eraso & Erro-Garcés, 2020). Thus, workers may have no other choice than to return to the office at the request of their employers.

Other economic factors could also support a return to the office:

- possible recession and energy crises might force employees to go back to the office in the short term in order to save on heating and electricity costs at home.
- Rising real estate prices could also lead to workers giving up having a physical workspace at home and returning to the office.

Medium-term drivers: work culture and entrenched management approaches

It is likely that the share of teleworking employees will grow slowly in the medium term; however, work culture could stunt this growth for several reasons. Positive (or at least non-negative) experiences with telework during the lockdowns have contributed to the more positive perceptions of working from home. However, it takes a long time for significant shifts in work culture to take place. Some managers might wish to maintain the practices that existed prior to the COVID pandemic and tell employees to come to the office. There are several reasons for this:

- First, management issues are the main barrier to executive support for teleworking. This is largely related to trust in employees' skills and the desire to micromanage. Managers who rely on employees' skills (e.g. ICT management skills, problem-solving or autonomous work) perceive telework as a useful practice and something that should be maintained (Alejandro, 2019). However, if trust is low, managers prefer to see employees in the office.
- Second, managers may try to maintain employees' presence in the office for reasons relating to company culture – for example, on-boarding junior employees, the importance of in-person meetings for collaboration on certain projects, and/or cohesion between work teams.
- Lastly, some managers tend to think that employees are more productive in the office (flexibility stigma); thus, they prefer to see employees working at the employer's premises (Chung, 2020; 2022).

A number of other concerns employers could also limit further growth in the prevalence of telework:

- **OSH concerns.** During the pandemic, companies focused their efforts on preventing the spread of the virus at the workplace. Physical and psychosocial risks in relation to working from home (see Chapter 2) were not perceived as a key challenge in the face of the largest public health crisis of the 21st century. Now that fears concerning the pandemic have receded and companies have exited 'crisis mode', the OSH risks posed by telework have gained greater visibility among employees and employers alike. **Cybersecurity, privacy, productivity** and other concerns. At the start of pandemic, work-from-home mandates were largely unexpected. Some employers viewed this as an opportunity, and invested in new technologies and work processes to facilitate the transition. Nevertheless, as our

surveys and interviews suggest, concerns remain with regard to teleworkers' security of communications, the proper enforcement of GDPR rules, and the recording of working time. These concerns are greater still in companies that viewed lockdowns as a temporary 'bump' and refrained from making such investments.

The majority of experts who responded to our Delphi survey think that negative perceptions among employers constitute the most important factor in the reduction in the prevalence of telework seen since the pandemic restrictions were dropped. The experts also highlighted that it appears unlikely that the majority of employers will continue to provide the option for workers to work remotely on a regular basis ('usually'), given the fact that all public health measures have now been lifted.

Furthermore, while the baseline scenario discusses the COVID-19 learning effect as a way for companies to see the positive sides of telework, it also revealed its drawbacks. For instance:

- The flexibility paradox – flexible working arrangements can lead to employees working harder and longer hours due to their willingness "to go the extra mile" to prove their worth (Chung, 2022).
- Employees might feel isolated at home, and may thus prefer to come more often to the office (Golden, 2012). A survey conducted in Belgium showed that more than half of respondents reported that telework harms their relationships with colleagues (Moens, 2022). Our Delphi survey experts highlighted that after the pandemic, employees were eager to return to work and started valuing human interactions more. This is especially important for young people who had missed out on so much during their most formative years (including opportunities for education and developing employment skills).
- Employees' concentration and abilities might be negatively impacted by the environment at home (interruptions, noise, etc). This can reduce self-efficacy and even cause anxiety. Thus, the adoption of telework may, in some cases, increase stress for both employees and employers (Alejandro, 2019; Prodanova, 2021; Weber et al., 2022).

Long-term drivers: flexibility stigma and negative career outcomes

In the last 10 years, the prevalence of telework has grown steadily by an average by 2.7% per annum. However, retrospectively, the expectations of a rapid growth in teleworking over the past decade have not materialised, if one discounts the impact of the pandemic (Belzunegui-Eraso & Erro-Garcés, 2020).

One of the reasons for this is the so-called 'flexibility stigma' – the belief that employees who work from home are not as committed and productive as those who work in the office (Chung, 2020, 2022). Based on Eurobarometer (2018) data, one-third of the EU working population thinks that flexible work is associated with negative career outcomes, and that it is perceived badly by colleagues. However, differences exist between countries: for example, Scandinavian countries generally perceive flexible work more positively than Southern European ones (Chung, 2022). If employees believe that telework will hinder their career opportunities (for example, not getting an interesting project to work on or not getting a promotion, since employees in the office are more 'visible'), they may refrain from teleworking (Lott and Abendroth, 2020; Moens, 2022; Thébaud and Pedulla, 2022).

Flexibility stigma is experienced by both women and men. For men, this is because they may be seen as more responsible for earning the household income and may therefore be disinclined to telework out of concern for the potential financial implications. For women, working-from-home arrangements are often assumed to be associated with caregiving and household duties (e.g. taking care of children or older relatives, or running errands), which

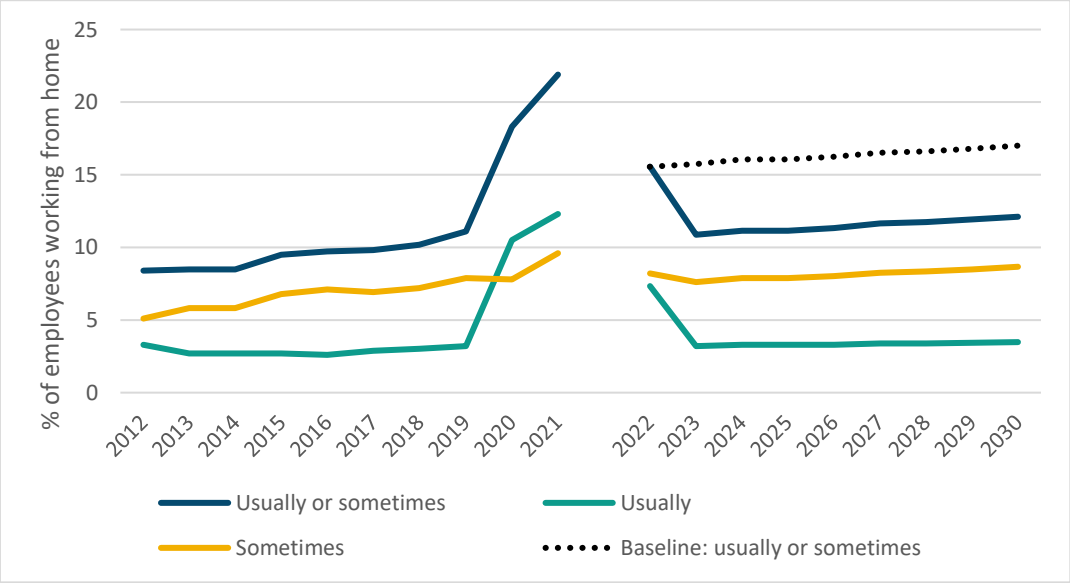
can have negative impacts on the views of employers and co-workers with regard to women's productivity when working from home (Chung, 2020; 2022).

Flexibility stigma is especially visible when employees lose bargaining power (Chung, 2022). Over the past decade, Europe's economy has grown and unemployment has declined, accompanied by an increase in the bargaining power of employees, which has enabled more workers to be able to work from home if they wished to do so. This bargaining power could, however, decline if the risks of stagflation or economic contraction materialise. Such a loss of bargaining power could slow growth in the prevalence of telework from now until 2030.

Estimates

Figure 0-3 provides overall forecasts regarding the prevalence of telework under the back-to-the-office scenario (more detailed breakdowns are included in Annex 7). For the purposes of comparison, it also covers projections under the baseline scenario (the dotted line). As in the baseline scenario, the share of teleworking employees is likely to decrease in the short term due to back-to-the-office policies. However, in the pessimistic back-to-the office scenario, the drop in the share of employees is larger than in the baseline scenario due to possible stagflation, a wider scope of back-to-the-office mandates, and the additional impacts on work culture discussed above. This drop is mainly associated with a decrease in the share of employees who 'usually' telework: from 12.3% in 2021 to pre-pandemic levels of 3.2% in 2023. In the long term, the prevalence of telework will increase slightly due to changes in the structure of the economy; however, this increase will be minor due to the flexibility stigma discussed above, reaching a level of 12.1% of employees who 'usually' or 'sometimes' telework in 2030. The share of employees 'usually' teleworking is likely to remain stable between 2023 and 2030, while the share who 'sometimes' telework is likely to grow slowly.

Figure 0-3. Share of employees working from home: historical data and back-to-the-office scenario



Note: the dotted line represents the baseline scenario, which is included to facilitate comparisons.
Source: Visionary Analytics forecasts, based on Eurostat and Cedefop labour demand and supply projections.

4.2.3 Flexibilisation: work from anywhere, any time

Short-term drivers: desire to reap the benefits of investments in telework

In contrast to the scenario discussed above, a large-scale return to the office may not materialise in the short term. This could be explained by the following factors:

- **Sunk investments.** Employers have already invested in technologies and processes that support working from home. Furthermore, some employers have already cut down on office space, which would make a return to pre-pandemic practices problematic. Similarly, employees who teleworked during the pandemic have already set up their home offices. Some workers have moved out of city centres with the aim of improving their quality of life. Strict back-to-the-office mandates would render such investments by employers and employees obsolete.
- **Inertia**. Abrupt changes in work organisation practices lead to lower short-term productivity due to interruptions in the workflow. Hence, employers may be reluctant to introduce strict back-to-the-office mandates in order to avoid disruptions.
- **COVID-19 learning effects**. As discussed under the baseline scenario, employers and employees have learned to appreciate the benefits of working from home.

Hence, employers and employees may seek to reap the benefits of investments in telework and avoid short-term disruptions. If this is the case, the scale of return to the office may be significantly lower than under both the baseline and return-to-the-office scenarios discussed above.

Medium- to long-term drivers: demise of the office as the primary place of work

This driver emerges from a combination of two trends: redesign in work management systems, and growing cost pressures. Previously, since the industrial revolution, work has been closely linked with an employee's physical presence in a workplace at a pre-determined time. This has resulted in the development of employee management systems which critically rely on physical presence. Examples include check-in and check-out cards to monitor absenteeism and working time, or the observation of the speed of work and the calculation of throughput to measure productivity, among others. However, such systems are not adequate for the growing knowledge economy, in which work processes are not easily observable and the products of work are typically intangible. As a result, an increasing number of organisations in a variety of sectors have shifted towards performance management, which focuses on outcomes rather than inputs such as working time), processes (e.g. speed of movement) or intermediate outputs. This shift has allowed a decoupling of management systems from employees' physical presence at work and, by extension, a decoupling of work from a physical workplace. In the past couple of decades, these trends have facilitated a growth in the number of freelancers, an increased prevalence of outsourcing and offshoring work, the emergence of digital labour platforms, and growth in the prevalence of telework.

While the above megatrend can explain the gradual growth in telework, cost pressures could accelerate the demise of the office in the short to medium term. These cost pressures arise from:

- the risk of economic stagnation or recession in the coming years, which put pressure on companies to cut down on non-essential expenditure such as office rental and equipment;
- growth in wages and the costs of inputs results in higher prices for producers (which companies in competitive industries have difficulties in passing on to consumers), in turn providing a strong impetus towards cost savings;

- ‘reshoring’ and an emphasis on resilience in global supply lines due to geopolitical uncertainties, resulting in previously offshored manufacturing and services being increasingly moved back to the EU, creating cost pressures for the associated companies;
- steep growth in real estate prices incentivises organisations to cut down on office space or move offices to less prestigious locations; and an
- energy crunch and resulting growth in the cost of utilities.

The decoupling of work from a physical workplace, in combination with growing cost pressures, is leading increasing numbers of organisations to adopt a variety of telework-friendly strategies (World Economic Forum, 2022). These include:

- reducing office space, with the view that only a fraction of full-time employees will be in the office at any given point;
- abandoning offices altogether and periodically using co-working spaces or meeting spots around core transport hubs to facilitate face-to-face meetings of teams;
- hiring globally from a pool of cross-border teleworkers or global digital nomads; or
- outsourcing work to freelancers or workers via global labour platforms.

Long-term drivers: digital business models and technologies

At present, significant further growth in the prevalence of telework is constrained by the limited teleworkability of many jobs. Shopkeepers, waiters and hotel receptionists need to physically meet and greet their customers; doctors and nurses need to provide care in person; factory or warehouse workers need to physically manipulate the machines they operate; agricultural workers need to operate equipment, or in some cases even manually harvest crops or tend animals. A significant share of these jobs could be performed remotely through the use of new business models and technologies that already exist and have rapidly proliferated, but have not yet been fully scaled-up.

The emergence of new business models tends to dramatically restructure the process of provisioning services or manufacturing goods. Over the past decade, most new digital business models have tended to be either telework-positive or neutral, while none has favoured more intensive office work. Prominent examples include:

- The emergence of e-commerce, which had already made a large positive impact on the teleworkability of jobs in retail. Further growth in e-commerce will affect trends in telework through two causal mechanisms. First, it increases the teleworkability of jobs in the retail sector, largely because most of the tasks involved can be performed remotely (e.g. setting up and servicing an e-shop). This contrasts with the need for physical presence when setting up and running a physical shop. Second, the rise of e-commerce has significantly reduced foot-traffic in physical shops. This has subsequently led to the loss of non-teleworkable jobs in retail sector, which in the past had relied primarily on bricks-and -mortar shops.
- The increasing prominence of food delivery platforms, which is already changing the business models of catering services. Some providers no longer have physical restaurants, but rather rent premises outside city centres and provide delivery-only catering services, or work as private caterers, where meal preparation is performed from the home kitchen. Similarly to e-commerce, these business models involve greater teleworkability of jobs (e.g. chefs) and the loss of employment in previously non-teleworkable jobs (e.g. waiters); however, they also signal a potential increase in new teleworkable jobs (e.g. those who handle orders, and client service online/on the phone), as well as non-teleworkable jobs (e.g. delivery drivers).

- The emergence of apartment rental platforms (e.g. Airbnb) and business models, which typically involve hosts who never meet their customers, and who can therefore work from anywhere. Some traditional hotels have also increasingly introduced electronic check-in and check-out systems, thus reducing the need for receptionists. Nevertheless, some tasks (e.g. cleaning, maintenance) still need to be performed on-site (although the increased use of automated systems, such as autonomous vacuum cleaners, may make those jobs obsolete as well).
- Telemedicine and online tutoring, which gained prominence during the pandemic. In the short run, these services could contract following the lifting of stay-at-home mandates. However, the pandemic provided a proof-of-concept for such services (Oliveira, et al., 2021), incentivising further investments and facilitating the removal of regulatory obstacles which had until then constrained the widespread adoption of telemedicine (Seivert and Badowski, 2021); this has also led to the creation of dedicated business ecosystems, as well as the launch of multiple global and local start-ups. It is therefore highly likely that telemedicine and online tutoring are here to stay.
- The growing prominence of remote work platforms (e.g. Amazon Mechanical Turk, GitHub Jobs, Upwork, etc.). This suggests that some jobs which were in principle teleworkable, but were nevertheless still carried out in the office, may only be performed from home in the future.

While such business models (among many others) already exist, they have not yet reached peak adoption. As these models further expand into new sectors, the teleworkability of jobs is likely to further grow in the medium-to-long term. However, we do not expect such trends to have an immediate and significant impact in the short term (i.e. in the next few years). The adoption of new business models and the demise of old ones takes time, spanning decades rather than years (Schirtzinger, 2019).

Changing business models tend to have a profound impact on the process of service provision, in turn creating demand for teleworkable jobs while at the same time destroying previously non-teleworkable jobs. However, the teleworkability of jobs could also increase due to the wider adoption of new technologies (which do not necessarily lead to a wholesale change in task content of those jobs). Some of these mega-trends include:

- Greater automation of service delivery and production. This is likely to have two impacts:
    - Automation is likely to enable the remote execution of tasks currently requiring on-site presence. For instance, fully automated production lines require remote computer-assisted labour inputs (e.g. programming, calibration, problem solving, etc.). The presence of workers on assembly lines in such factories is not only unnecessary, but is also undesirable due to the likelihood of human errors, risks of contamination, interference with the movement trajectories of robots and the resulting risks to safety and health and the smooth operation of the machines. Other trends in automation that are telework-friendly include cashier-less shops, GPS-guided tractors and other agricultural equipment, self-driving trucks, robotic warehouses, military drones, etc.
    - Automation is also likely to result in a structural decline in demand for plant and machine operators, craft and related trades workers, skilled agricultural workers, and services and sales workers (ISCO-08 major occupation groups 5-8). Routine-biased technical change hypothesis (Goos et. al., 2014; Acemoglu & Autor, 2011, among others) argues that these workers tend to perform routine manual and cognitive tasks. Since it is relatively easy to automate such tasks, further technological advancement is likely to erase a

significant share of these jobs. Importantly, these occupations are currently not easily teleworkable. Hence, a decline in the share of persons employed in ISCO-08 major occupation groups 5-8 is likely to reduce the share of persons not working from home due to limited teleworkability.

- Increased use of extended reality (XR) and virtual reality (VR) technologies, which allow a variety of activities to be carried from a distance, from the manipulation of equipment to meeting with colleagues or clients in a metaverse. While such technologies have so far not been widely adopted, they offer huge transformational potential across a variety of sectors. For instance, a recent report by Visionary Analytics (2022) argues that the XR market in Europe alone could reach EUR 100 billion by 2030, and outlines numerous applications in the education and healthcare sectors.

While the mega-trends discussed above are likely to lead to the greater prevalence of telework in the long term, several caveats are in order:

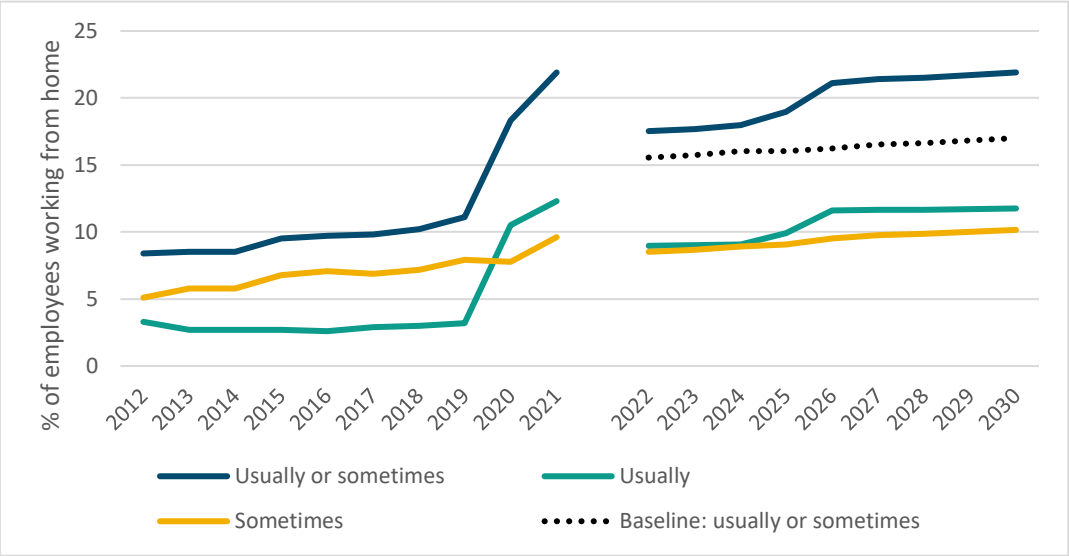
- It will take time for new business models and automation to reach their peak. Hence, a significant impact should not be expected in the short run.
- While new business models and technologies either make some occupations teleworkable or destroy non-teleworkable jobs, demand for labour in some non-teleworkable occupations will remain.

Estimates

Figure 0-4 illustrates overall forecasts regarding the prevalence of telework under the flexibilisation scenario (more detailed breakdowns are included in Annex 7). For the purposes of comparison, it also covers projections under the baseline scenario (dotted line). In the short term, the share of teleworking employees is likely to decrease slightly compared with the peak period of COVID-19 lockdowns (from 21.9% in 2021 to 17.5% in 2022, due to back-to-the-office policies). It will then maintain slow growth over the next few years. Increased growth is likely to be seen in the medium term rather than in the short term – a factor due to demise of offices, as well as new business models and technologies that have not yet reached peak adoption. These estimates are based on the ARIMA models, as discussed in Section 4.1.

In contrast to the other two scenarios, the flexibilisation scenario projects that in the long run, a larger share of teleworkers will work from home on a regular basis (‘usually’), rather than ‘sometimes’. This is due to the demise of the office (which makes hybrid work arrangements more difficult), as well as new business models and technologies that reduce the need for on-site work and meetings.

Figure 0-4. Share of employees working from home: historical data and flexibilisation scenario



Note: the dotted line represents the baseline scenario, which is included to facilitate comparisons.
Source: Visionary Analytics forecasts, based on Eurostat and Cedefop labour demand and supply projections.

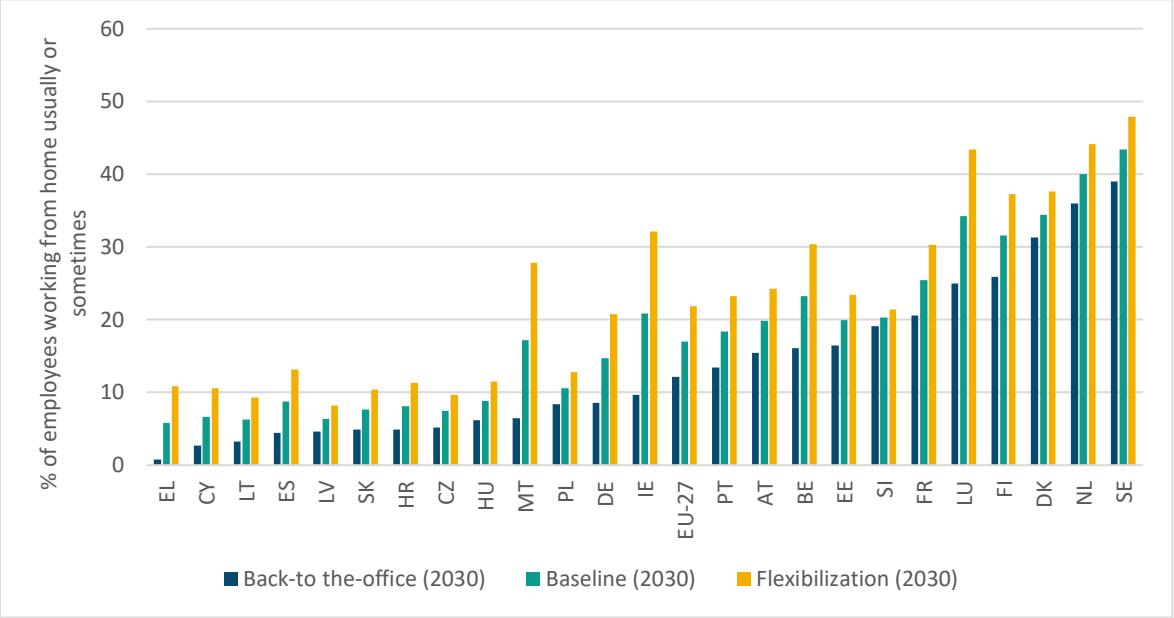
4.3. Disaggregation of projections

Aggregate EU-wide data and projections tend to conceal important differences between countries, occupations, sectors, genders, establishment sizes and other features. Therefore, this section provides disaggregated projections for each of the three scenarios discussed above. The methodology, data sources and assumptions behind these estimates are the same as for aggregate forecasts (see Section 4.1).

4.3.1 Cross-country differences

Irrespective of which scenario transpires in the future, significant cross-national differences are likely to remain between EU Member States. As Figure 4-5 suggests, the Nordic countries, as well as the Netherlands and Luxembourg, are likely to witness the highest shares of employees working from home under all three scenarios. Conversely, the lowest shares are likely to be found in the Southern and Eastern European countries. These country-specific path dependencies (Pierson, 2020) largely reflect the different structures of the economies, work organisation practices and work cultures, i.e. the factors that largely explained pre-pandemic differences.

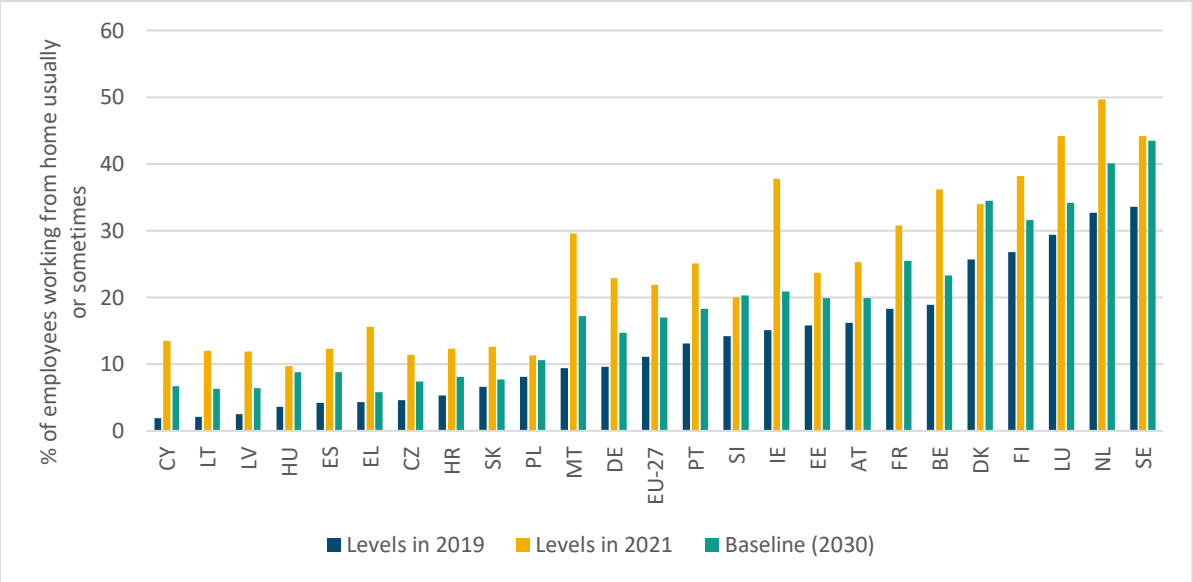
Figure 4-5. Projections of the share of employees working from home 'sometimes' or 'usually' in 2030, by Member State and scenario



Note: the model did not provide valid estimates for BG, RO and IT.
Source: Visionary Analytics forecasts, based on Eurostat and Cedefop labour demand and supply projections.

Figure 4-6 provides a comparison of baseline projections for 2030 with pre-pandemic (2019) and peak-pandemic (2021) shares of employees working from home 'usually' or 'sometimes'. For most countries, the projected prevalence of telework under the baseline scenario in 2030 will be significantly higher than pre-pandemic levels, but somewhat lower than the levels witnessed in 2021.

Figure 4-6. Comparison of historical data and baseline projections of the share of employees working from home 'sometimes' or 'usually', by Member State



Note: the model did not provide valid estimates for BG, RO and IT.
Source: Visionary Analytics forecasts, based on Eurostat and Cedefop labour demand and supply projections.

Interpretation of the above projections should take account of two contradictory hypotheses. On the one hand, the **convergence hypothesis** suggests that over time, the prevalence of

telework in different Member States will become somewhat more similar. The following arguments support this hypothesis:

- Countries that exhibited a high prevalence of telework are likely to reach some natural limits in terms of its growth in the future, due to the limited teleworkability of jobs in a number of occupations.
- Countries that exhibited a low prevalence of telework will have significant room to catch up, as employees and employers learn the benefits of telework and develop capacities to deal with its challenges.

On the other hand, the **limited catch-up hypothesis** suggests that differences between the Member States will remain. The underlying logic behind this hypothesis is premised on the understanding that:

- past and current differences between Member States can be explained by structural factors (such as the structure of the economy and employment or work culture) – and these will not change dramatically over the next 5-10 years; and
- the impact of the pandemic shock on convergence was mixed: in percentage terms, the prevalence of telework grew most in those countries with limited past experience of working from home, but significant differences remained.

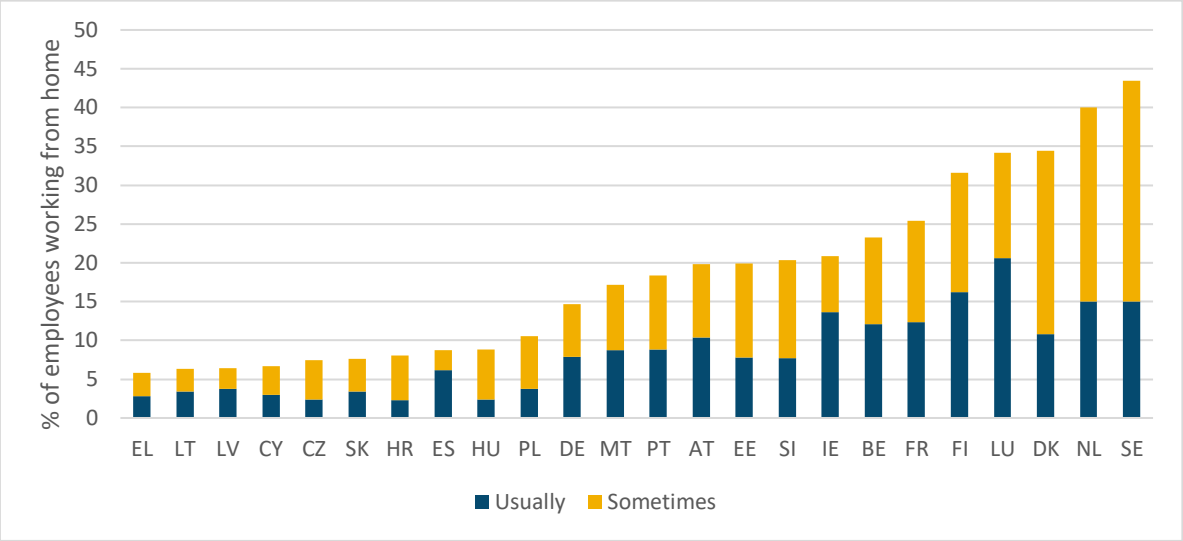
Which hypothesis is more likely to be true? If the first hypothesis were correct, we should have seen significant convergence between EU Member States at the height of the pandemic. However, this did not happen: cross-country variation in the shares of employees teleworking largely mirrored pre-pandemic differences (see Figure 4-6). Given the lack of evidence indicating otherwise, we do not expect convergence in the prevalence of telework between Member States over the next decade.

Nevertheless, three countries stand out. Before the pandemic, the share of employees teleworking in Malta, Belgium and Ireland was close to the EU average. In all three, this share increased significantly during the pandemic (see Figure 4-6). This can be explained by the structure of these three economies, which encompass a large share of teleworkable jobs. Owing to this factor, we can expect these countries to converge with the Nordic countries under the flexibilisation scenario.

4.3.2 Intensity of telework by EU Member State

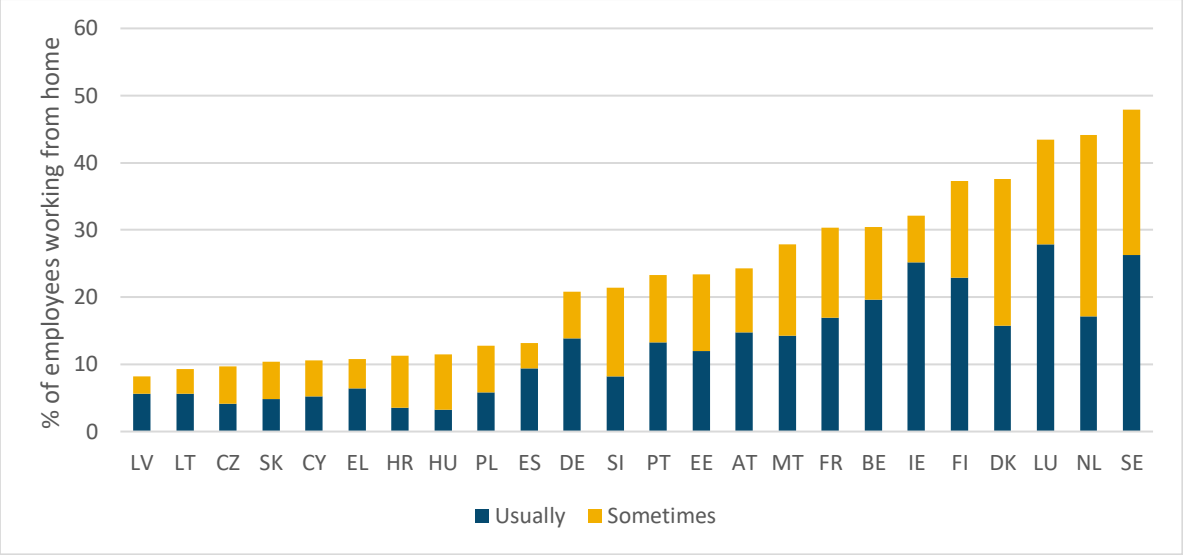
These aggregate trends are also pronounced when analysing the likely prevalence of telework across EU Member States. Under the baseline scenario, most EU Member States are likely to witness fairly similar shares of employees working from home ‘usually’ and ‘sometimes’ (see Figure 4-7). Denmark, the Netherlands and Sweden are likely to be the main outliers with the largest shares of employees teleworking sometimes. However, under the flexibilisation scenario, a large majority of teleworkers are likely to do so ‘usually’ in 2030 across most EU Member States (see Figure 4-8).

Figure 4-7. Baseline scenario: projected share of employees working from home 'usually' and 'sometimes' in 2030, by EU Member State



Note: the model did not provide valid estimates for BG, RO and IT.
Source: Visionary Analytics forecasts, based on Eurostat and Cedefop labour demand and supply projections.

Figure 4-8. Flexibilisation scenario: projected share of employees working from home 'usually' and 'sometimes' in 2030, by EU Member State



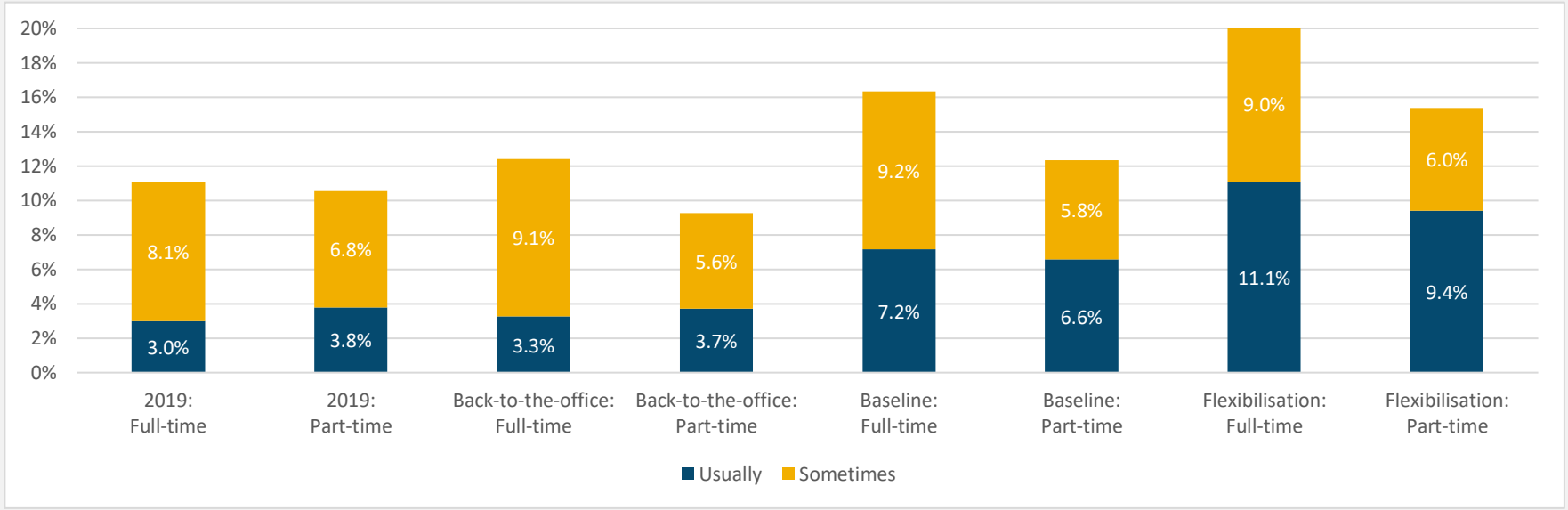
Note: the model did not provide valid estimates for BG, RO and IT.
Source: Visionary Analytics forecasts, based on Eurostat and Cedefop labour demand and supply projections.

4.3.3 Disaggregation by gender, occupation, sector, and other dimensions

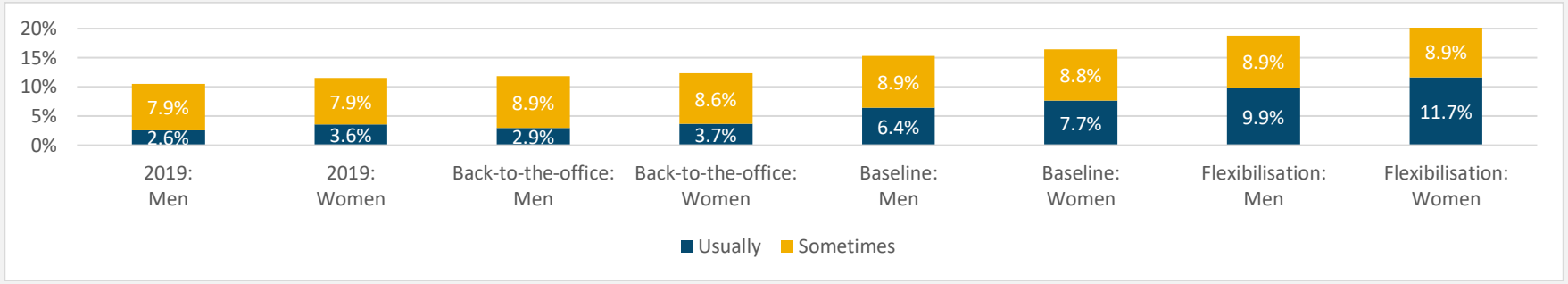
The graphs below provide projections for teleworkers in 2030 under the alternative scenarios, disaggregated by type of employment contract, gender, sector, occupation, size of organisation within which they are employed, and age. See Annex 7 for more detailed data and forecasts. For the purposes of comparison, the figures also include historical data for 2019, which were obtained from EU LFS micro-data. Since the projections rely on databases regarding structure of employment, we provide estimates on forecasted shares of teleworkers by organisation size. However, the available data sources do not allow us to forecast the numbers of organisations affected by size.

Table 0-11. Who is likely to be affected by alternative future scenarios

Who is likely to be affected	Alternative future scenarios			
	Historical data (2019)	Back-to-the-office	Baseline	Flexibilisation
Employees by type of contract (EU-27)	Share of full/part-time teleworking employees teleworking 'sometimes' or 'usually' in 2019: Full-time: 11.1% Part-time: 10.6%	Share of full/part-time teleworking employees teleworking 'sometimes' or 'usually' in 2030: Full-time: 12.4% Part-time: 9.3%	Share of full/part-time teleworking employees teleworking 'sometimes' or 'usually' in 2030: Full-time: 16.4% Part-time: 12.4%	Share of full/part-time teleworking employees teleworking 'sometimes' or 'usually' in 2030: Full-time: 20.1% Part-time: 15.4%

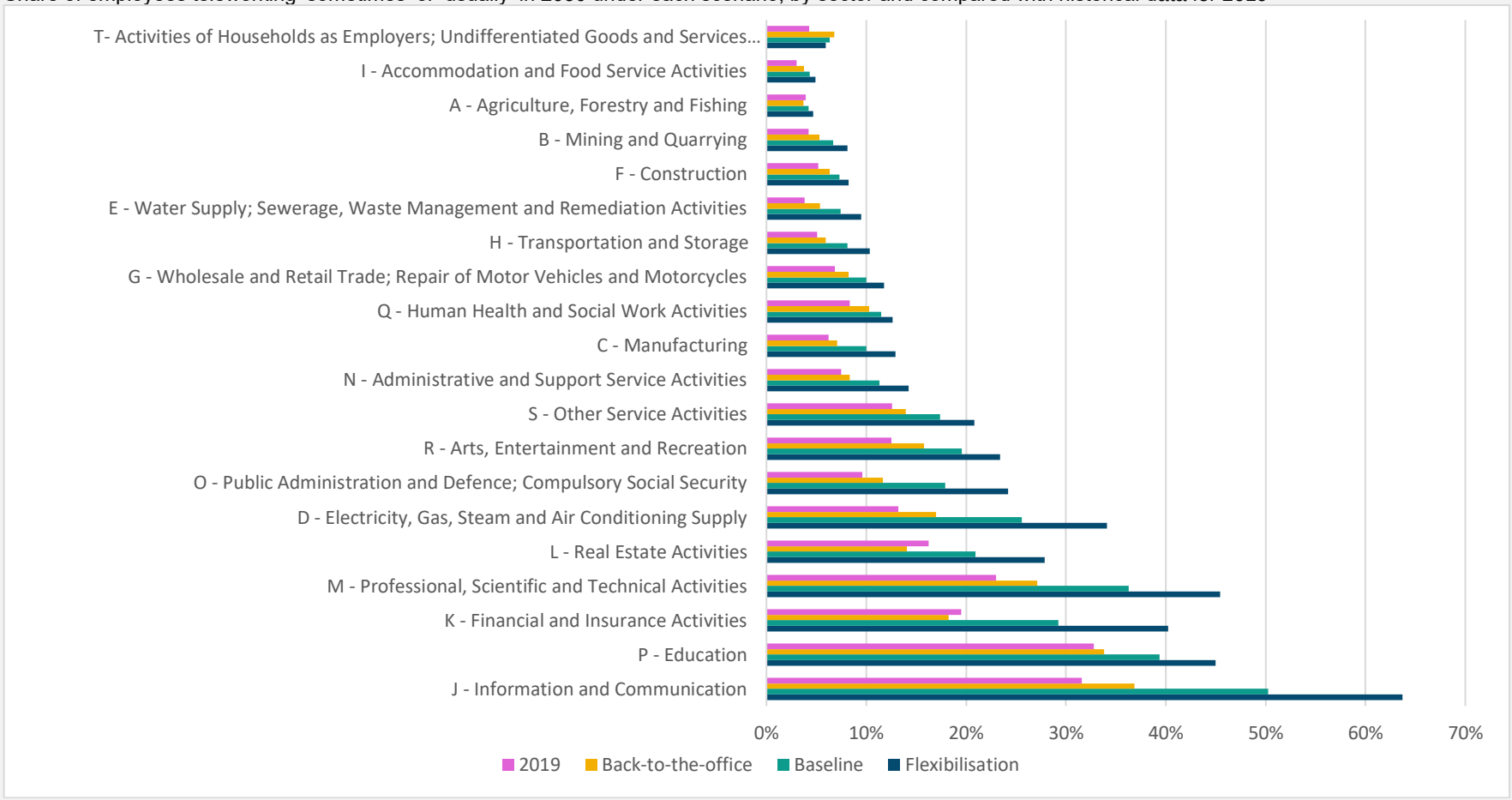


Who is likely to be affected	Alternative future scenarios			
	Historical data (2019)	**Back-to-the-office**	**Baseline**	**Flexibilisation**
Gender	Share of men/women teleworking 'sometimes' or 'usually' in 2019: Men: 10.5% Women: 11.5%	Share of men/women teleworking 'sometimes' or 'usually' in 2030: Men: 11.8% Women: 12.3%	Share of men/women teleworking 'sometimes' or 'usually' in 2030: Men: 15.3% Women: 16.5%	Share of men/women teleworking 'sometimes' or 'usually' in 2030: Men: 18.8% Women: 20.6%
Type of sector (NACE rev.2)	In 2019, the highest percentages of employees teleworking 'sometimes' or 'usually' was seen in the following sectors: • Education (32.8%) • Information and Communication (31.6%) • Professional, Scientific and Technical Activities (23%) • Financial and Insurance Activities (19.5%).	The figure below illustrates the forecasted share of employees teleworking 'sometimes' or 'usually' in each sector under the three future teleworking scenarios. In 2030, we estimate that the highest percentages of employees teleworking are likely to be in following sectors: • Information and Communication (37-64%, depending on scenario) • Professional, Scientific and Technical Activities (27-46%, depending on scenario) • Education (34-45%, depending on scenario) • Financial and Insurance Activities (18-40%, depending on scenario) • Electricity, Gas, Steam and Air Conditioning Supply (17-34%, depending on scenario) • Real Estate Activities (14-28%, depending on scenario)		



Agriculture, Forestry and Fishing, as well as Accommodation and Food Services Activities, remain among the sectors in which the share of teleworking is expected to be lowest. Furthermore, the share is unlikely to vary significantly under the different scenarios.

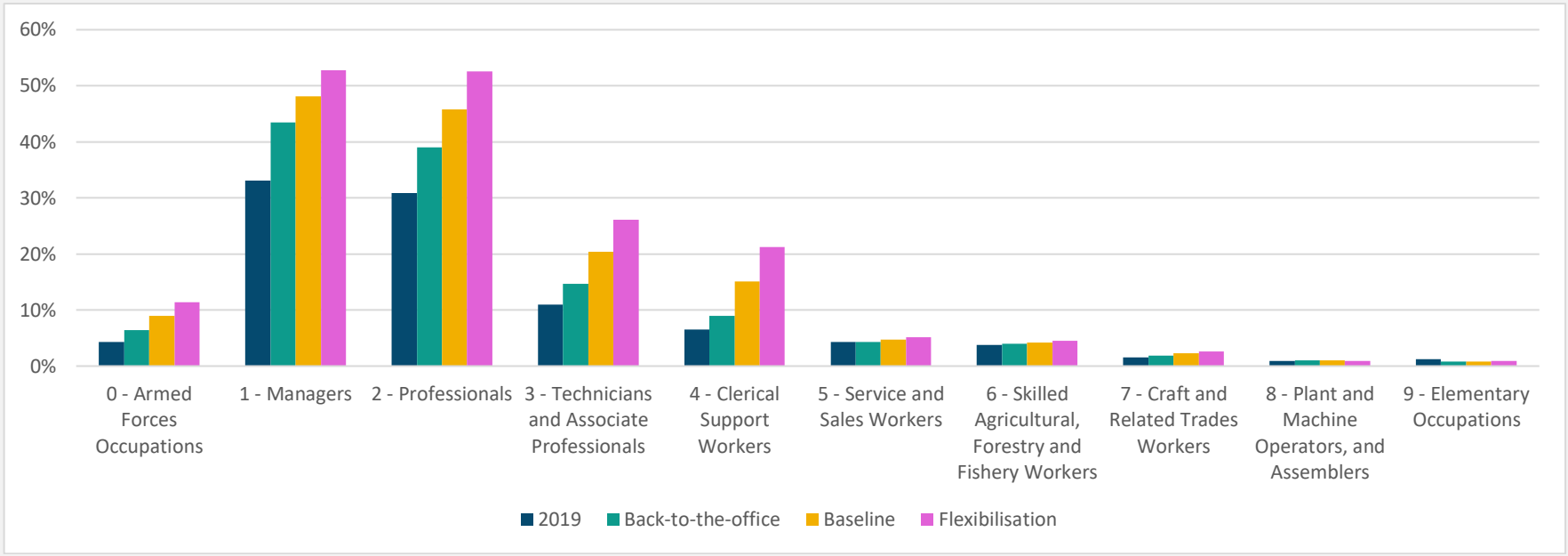
Share of employees teleworking ‘sometimes’ or ‘usually’ in 2030 under each scenario, by sector and compared with historical data for 2019



In 2019, the highest percentage of employees teleworking ‘sometimes’ or ‘usually’ was seen in Managerial (33%) or Professional (31%) occupations. Elementary occupations (1%) and Plant and Machine Operators and Assemblers (1%) were among the occupations with the least teleworking.

The figure below shows the share of employees teleworking ‘sometimes’ or ‘usually’ in 2030, by occupation (ISCO classification). In all three scenarios, we estimate that the groups containing the highest share of employees teleworking ‘sometimes’ or ‘usually’ are Managers (43-53%, depending on scenario) and Professionals (39-53%, depending on scenario). High-skilled occupations are more likely to be teleworkable in comparison to low-skilled occupations. Here, we forecast that the lowest share of employees teleworking will be in Elementary occupations (1%) and Plant and Machine Operators and Assemblers (1%).

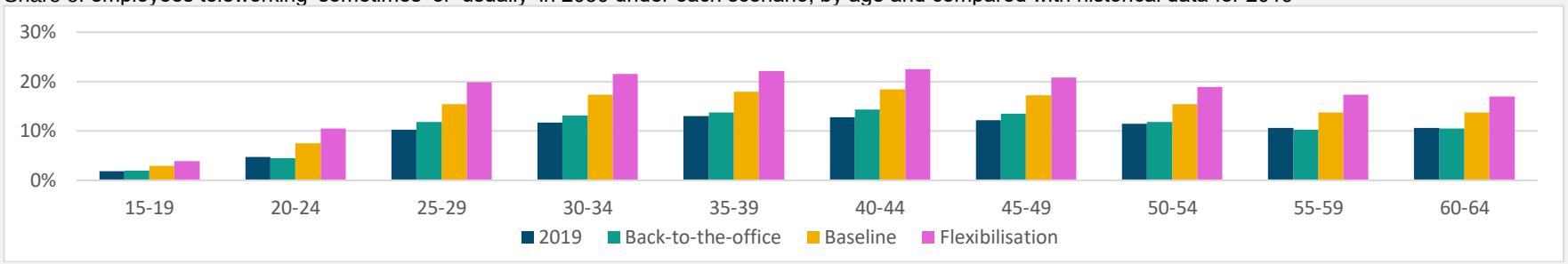
Share of employees teleworking ‘sometimes’ or ‘usually’ in 2030 under each scenario, by occupation and compared with historical data for 2019



Age

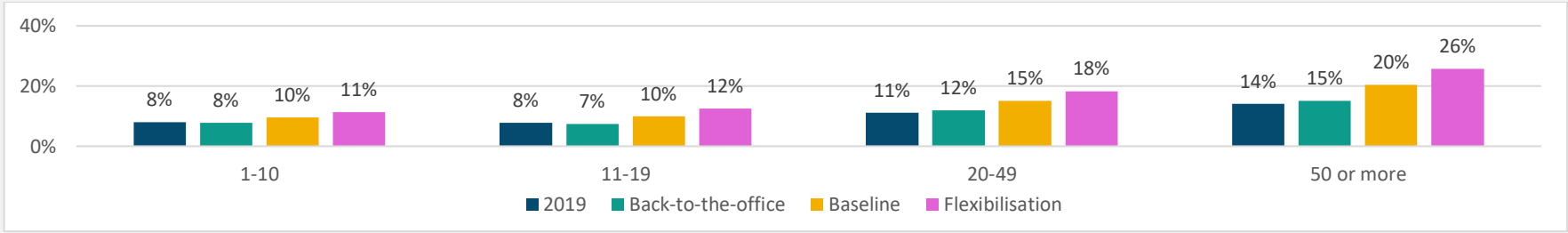
The figure below illustrates the share of employees teleworking 'sometimes' or 'usually' in 2030, disaggregated by age. The share of employees teleworking is estimated to be fairly low among young people (2-4% in the 15-19 age group) and to grow significantly with each age group, reaching its peak in the 40-44 age group (14-22%). Beyond that peak, rates of teleworking are then estimated to decline slightly with age, reaching 11-17% in the group aged 60-64 years old. Similar trends were seen in 2019 (historical data), although the peak age range for teleworking employees was 35-39 years old.

Share of employees teleworking 'sometimes' or 'usually' in 2030 under each scenario, by age and compared with historical data for 2019



Teleworking employees by firm size

The graph below shows the share of employees teleworking 'sometimes' and 'usually', disaggregated by the size of the they are working in. In all three scenarios, we estimate that the highest share of teleworking employees is likely to be in medium and large companies (50 employees or more).[197] Similar trends can be seen in 2019.



Source: Visionary Analytics forecasts, based on LFS micro-data and Cedefop labour demand and supply projections.

[197] Forecasting did not include "do not know but less than 10 persons" and "do not know but more than 11 persons" in the analysis due to a lack of clarity. If the "do not know but less than 10 persons" results were added to the 1-10 group, the results for that group would be as follows: 2020 – 26%; Back-to-the-office – 21%; Baseline – 25%; Flexibilisation – 28%. Source:

4.4. Likely social, economic and environmental effects of further growth in telework

This section of the report aims to assess the economic, social and environmental effects of the new work regimes discussed so far.

Methodological considerations

The analysis of the likely impacts of further growth in the prevalence of telework is challenging for three reasons. First, it is unclear to what extent the positive and/or negative impacts of telework have already materialised during the pandemic. On the one hand, one might argue that employers and employees have already adapted to the new realities of working from home – i.e. investments have been made and benefits are being enjoyed by companies and employees who are willing to telework at least sometimes. In this regard, no significant impacts should be expected in 2030. On the other hand, a significant share of employees and employers have probably treated lockdowns as a temporary state of affairs, e.g. by deferring the necessary investment or prioritising measures aimed at containing the spread of the virus within the workplace rather than focusing on the management of OSH-related risks connected to working from home. The analysis below takes into consideration both of these arguments. In particular, a small increase in the prevalence of telework is not likely to yield significant positive or negative impacts: employers and employees of organisations engaging in teleworking have already adapted to this new reality. This refers in particular to the back-to-the-office scenario. However, significant further growth in telework (even if somewhat below the levels seen during the peak of the pandemic) is likely to have non-trivial impacts under both the baseline and the flexibilisation scenarios.

Second, it is important to take account of cross-national differences. Under all scenarios, the Nordic countries and the Netherlands are likely to witness significantly higher shares of employees teleworking compared with Southern and Eastern European Member States, However, should the flexibilisation scenario materialise, countries with a lower past prevalence of telework are likely to witness faster growth in the shares of teleworking employees in relative terms (even if they do not catch up by 2030). As a result, the scale of positive and negative impacts is likely to differ across the EU Member States.

Third, the quantification of impacts is problematic. While academic and policy interest in telework and its impacts have boomed over the past three years, it remains a relatively new area of research. Hence, quantitative data is only starting to become available on this topic. Furthermore, the future impacts of telework should be compared against the post-pandemic "new normal" – that is, 2022 should be taken as the point of comparison. However, at the time of writing, such data do not exist. Hence, these assessments are of a qualitative nature and are relative to the situation that existed in 2021.

Economic impacts

This subsection focuses on the likely key economic impacts under the three scenarios: back-to-the office, baseline and flexibilisation. Overall, both positive and negative impacts of the back-to-the-office scenario are likely to be small. This is because employers and employees have already largely adapted to the new work regimes that became more widespread during the COVID-19 lockdowns. However, in the case of the flexibilisation scenario, we expect more pronounced positive impacts due to learning effects and the reduced marginal costs associated with telework. Furthermore, while SMEs (small and

micro-companies in particular) face disproportionately higher costs associated with telework, they could also be among the biggest winners if the prevalence of telework in the future remains high. The analysis below discusses these impacts in more detail.

Impacts on administrative burdens (in particular, those faced by small and medium-sized enterprises (SMEs)).

Assuming a legal and policy *status quo*, businesses are likely to face a lack of legal certainty in determining employees' eligibility for teleworking, complying with working time and OSH regulations for teleworkers, dealing with the tax and social security implications of hiring cross-border teleworkers and compensating the costs incurred by teleworkers (among many other issues), as discussed in Chapters 2 and 3 of this report. These costs per teleworker are significantly higher for SMEs (when compared with large enterprises) – especially for small and micro-enterprises which, due to their size, cannot exploit economies of scale.

While medium and large organisations may develop teleworking procedures, guidelines and rules for tens, hundreds or sometimes thousands of employees willing to work from home, small and micro-enterprises may make similar kinds of investments for just a few. In addition to disproportionate costs, small and micro-enterprises have fewer overall resources to manage issues that arise from telework, such as seeking consultation over legal or tax matters, or providing employees with suitable home office setups.

In the case of the back-to-the-office scenario, additional administrative burdens on SMEs are likely to be negligible. This is because most of the SMEs that provided employees with the opportunity to telework during the pandemic have already made such investments. Under the baseline and flexibilisation scenarios, administrative burdens for SMEs are likely to increase proportionately.

Cost savings for employers and employees

As discussed in Chapter 2, discussion is still ongoing as to whether telework actually leads to cost savings. On the one hand, employees save on commuting costs, while employers save on the costs of renting office space and on utility bills. On the other hand, telework necessitates up-front investments (e.g. changing company procedures and work organisation, the setting up of home offices), meaning that potential savings may not be as high as initially expected. Workers face higher utility costs when working from home, and employers' savings on office space may not be large, if an office is retained in order to accommodate hybrid working arrangements. Overall, it is the intensity of telework that matters. Cost savings for employees and employers are largest in the case of full-time or frequent telework, and lower under hybrid arrangements involving only one or two days of telework per week.

To illustrate the above logic, let's consider two areas in which costs savings might be realised: office space and utilities for employers, and time savings on the daily commute for employees.[198] Estimates of time savings rely on findings that teleworking Europeans[199] on average spend 55 minutes on their commute when not working from home (Aksoy et al., 2022). The estimates in Table 0-12 below suggest that under the baseline scenario, EU teleworkers would save 4.2 million hours annually on daily commutes in 2030. Although under the baseline scenario, more employees telework 'sometimes' rather than 'usually', the latter would save 3 million hours annually, while persons working from home sometimes

[198] In addition to saved time, saved costs for transport are also very important. However, we cannot quantify these savings within a reasonable margin of error due to lack of data.

[199] The data is based on a survey carried out in AT, FR, DE, EL, HU, IT, NL, PL, ES and SE. 55 minutes per day is an unweighted average. This covers estimates of time commuting to and from work.

would save just 1.2 million hours in 2030. This is because persons teleworking 'usually' do not travel to work as frequently as those who telework 'sometimes'.

Table 0-12. Estimated time savings for teleworkers (thousand hours)

		Back-to-the-office scenario	Baseline scenario	Flexibilisation scenario
No. of employees working from home in 2030 (thousands)	Usually	6,904	14,992	23,080
	Sometimes	17,162	18,563	20,121
Time savings per week of employees working from home (thousands of hours)	Usually (assumption: 4 days per week)	28,585	62,070	95,555
	Sometimes (assumption: 1.5 days per week)	23,685	25,617	27,768
Time savings per annum of employees working from home (thousands of hours). Assumption: 48 working weeks a year	Usually (assumption: 4 days per week)	1,372,073	2,979,359	4,586,645
	Sometimes (assumption: 1.5 days per week)	1,136,861	1,229,639	1,332,871
Total estimated time savings in 2030. (thousands of hours)		2,508,934	4,208,998	5,919,516

Source: Visionary Analytics estimates.

To estimate cost savings for employers across the EU in relation to office rent and utilities, we assume an average monthly cost per employee of EUR 504.96. This is based on an estimate that 1m^2 of office in the EU costs EUR 31.56 per month,[200] and one employee on average needs 16 m^2.[201] The average monthly cost per employee in 2030 equals EUR 682.7, assuming 10% inflation in 2022, 7% for 2023 and 2% for the remaining years. Actual cost savings would depend on the strategy taken by employers:

- **"No empty desks" strategy:** employers optimise office space and expenses to take account of different hybrid working arrangements and ensure that all in-office workers have a desk, but none are left empty. Arguably, this is a very difficult strategy in practice, especially in smaller organisations.
- **"Some empty desks" strategy:** employers manage to plan office space and work so that half of workstations are always occupied (as in the "no empty desk" strategy), but the remaining half of workstations remain non-optimised, i.e. they are only sometimes occupied, depending on the frequency of teleworkers' in-office presence. This appears to be the more realistic strategy.

[200] This is an average price for co-working space in 26 major European cities. Costs of co-working space are used because these include rent, utilities, equipment and other services (cleaning, security, etc.). Source: Colliers international (2020) Flex World: The Flexible workspace report 2020 EMEA. Available here: https://www.colliers.com/en-lt/research/the-flexible-workspace-report-2020

[201] Source: EAW (2021). How Resilient Are European Offices To Working From Home?. Available at: https://www.aew.com/research/strong-resilience-for-regional-european-offices

Table 0-13 below provides estimates of yearly cost savings under both strategies for the three scenarios. Under the baseline scenario, annual savings in 2030 are expected to be between EUR 71.9 billion and EUR 143.9 billion. Again, the biggest cost savings are due to employees working from home usually, rather than sometimes.

Table 0-13. Estimated savings on office costs in 2030 due to telework

		Back-to-the-office scenario	Baseline scenario	Flexibilisation scenario
Office cost savings under "no empty desk" strategy (annually, million EUR)	Usually (assumption: 4 days per week)	45,252	98,262	151,272
	Sometimes (assumption: 1.5 days per week)	45,624	45,624	49,454
	Total	**90,876**	**143,886**	**200,726**
Office cost savings under some empty desks strategy (annually, million EUR)	Usually (assumption: 4 days per week)	22,626	49,131	75,636
	Sometimes (assumption: 1.5 days per week)	22,812	22,812	24,727
	Total	**45,438**	**71,943**	**100,363**

Source: Visionary Analytics.

Competitiveness and productivity. As discussed in Chapter 2 of this report, the overall impacts of telework on productivity and competitiveness are still subject to debate. To a large extent, these impacts will depend on company-level practices and individual circumstances, and we therefore expect mixed impacts depending on the company strategies and practices in place.

Workplace innovation and digital transition. As discussed in Chapter 2, there is a clear and positive relationship between the practice of teleworking and workplace innovations, including the development and adoption of digital tools. Hence, the greater the prevalence of telework, the larger the positive impacts.

Economic development of non-metropolitan areas. As teleworkers seek to improve quality of life and/or save on accommodation, they tend to move from expensive metropolitan areas to suburbs or non-metropolitan areas that are endowed with good digital and transport infrastructure (see Chapter 2). This has significant implications: among other impacts, the movement out of downtown/urban environments of relatively well-off teleworkers has already increased the demand for and prices of real estate and services, while municipalities have witnessed shifts in their tax bases (Barrero et al., 2021; Bloom and Ramani, 2021; Bergeaud et al., 2022;).

For example, "[the] average price of apartments in Paris barely changed between the beginning of 2020 and the beginning of 2022, while it increased by more than 8% in Île-de-France excluding Paris, and 15% for France outside Île-de-France. This marked a change in dynamic from previous years." (Drut, 2022, p.1).

A study on Los Angeles also points to this dynamic: growth in the prevalence in teleworking has led to a sharp growth in prices in the least-populated and more remote suburbs, coupled with a decline in the most densely populated areas (Delventhal et al., 2022). Metropolitan areas also benefit in terms of a reduction in congestion, pollution, higher quality of life, and lower real estate prices (Delventhal et al., 2022). However, we do not expect that further

large-scale relocation of teleworkers will take place under the back-to-the-office or baseline scenarios. It is likely that those who could easily move, will have already done so. For the remaining teleworkers, moving may be problematic due to a partner's work patterns, children's schools and other commitments or preferences for continuing life in a metro area. Furthermore, the potential real estate cost savings for future teleworkers are not as large, since the movement of the first wave of teleworkers during the COVID-19 has already pushed up overall real estate prices. In their study of real estate prices in the US, Mondragon and Wieland (2022) find that "after controlling for net migration, an additional percentage point of remote work in 2020 increases house price growth from December 2019 to November 2021 by 0.93 percentage point. This implies that the majority of the increase in house prices caused by remote work is due to the shift in housing demand." (p. 4).

However, under the flexibilisation scenario, further movement of labour from large cities to non-metropolitan areas could be expected. Key drivers include:

- **Growing connectivity and quality of life** in non-metropolitan areas. Faced with an influx of relatively well-paid teleworkers, local authorities and businesses are likely to invest in the quality and accessibility of public and private services and infrastructure (e.g. schools, cultural venues, medical care facilities, transportation). This should further encourage the relocation of other teleworkers.
- **Both partners teleworking.** Growth in the overall prevalence of telework increases the chances that both partners will adopt full-time or hybrid telework regimes. This solves the 'coordination problem', whereby a family cannot relocate due to the work commitments of a non-teleworking partner.
- **Growth in the share of full-time teleworkers**. Full-time teleworkers can take advantage of cheaper real estate and other cost differences in remote areas: since they do not need commute to work several days a week, they can be more flexible in their choice of place to live.

Hiring talent worldwide and cross-border teleworking. On the one hand, telework during and immediately after the pandemic has resulted in a significantly larger number of companies seeking talent globally (see Chapter 2 and the respective deep dive in Annex 10). A survey by KPMG International (2021) found that around 9% of companies in Europe, the Middle East and Africa were considering or had already introduced global recruitment strategies. Previously, such recruitment strategies were the domain of large multi-national corporations. Since the pandemic, however, SMEs have also increasingly begun to pursue such recruitment strategies, in part due to tight labour markets as well as the emergence of the new telework-friendly systems and processes introduced during the lockdowns.

Those companies and workers who started teleworking across borders during the lockdowns tended to do so out of necessity and faced significant up-front costs and hurdles. Hence, while companies that already have the required processes in place will continue to hire globally, high up-front costs are likely to deter efforts to implement new global teleworking policies, especially for smaller companies. Similarly, those who currently work as cross-border teleworkers may be able to continue working from home, but the scope for the growth of such practices is limited. In 2020, during the lockdowns, 1.1% of employed persons in the EU worked across borders, but only 0.21% were engaged in cross-border teleworking (see Annex 10A for further discussion). This suggests that there are significant obstacles to teleworking across borders. Based on the above considerations, we expect the following:

- **Back-to-the-office and baseline scenarios**: the share of cross-border teleworkers is unlikely to increase significantly in the future. The administrative burdens of dealing with the tax and social security implications of hiring cross-border teleworkers are likely to be among the key obstacles discouraging more companies from pursuing such strategies.

- **Flexibilisation scenario**: an increase in cross-border teleworkers is likely in the future, due to two factors. First, as more companies support telework and search for talent, the marginal costs of hiring globally and dealing with administrative hurdles will decrease. Second, as an increasing number of full-time teleworkers relocate outside metropolitan areas, it is likely that at least some of them will move to another country (due to the cost of living, climate, family or for other reasons).

Table 0-14 summarises the points discussed above.

Table 0-14. Economic impacts of telework under the alternative scenarios

Impacts on:	Back-to-the-office	Baseline	Flexibilisation: work from anywhere, any time
Administrative burdens faced by SMEs	Negligible	Medium	Medium to high
Cost savings for employers and employees	Mixed: some will experience small savings, while others – small increased costs	Medium cost savings	Large cost savings
Competitiveness and productivity	Still subject to debate, depending on company-level practices and individual circumstances		
Workplace innovation and digital transition	Negligible	Medium	High
Economic development of non-metropolitan areas	None – low	Small positive	Large positive
Hiring talent worldwide and cross-border teleworking	None – low	Small positive	Medium-to-large positive

Source: Authors' own elaboration.

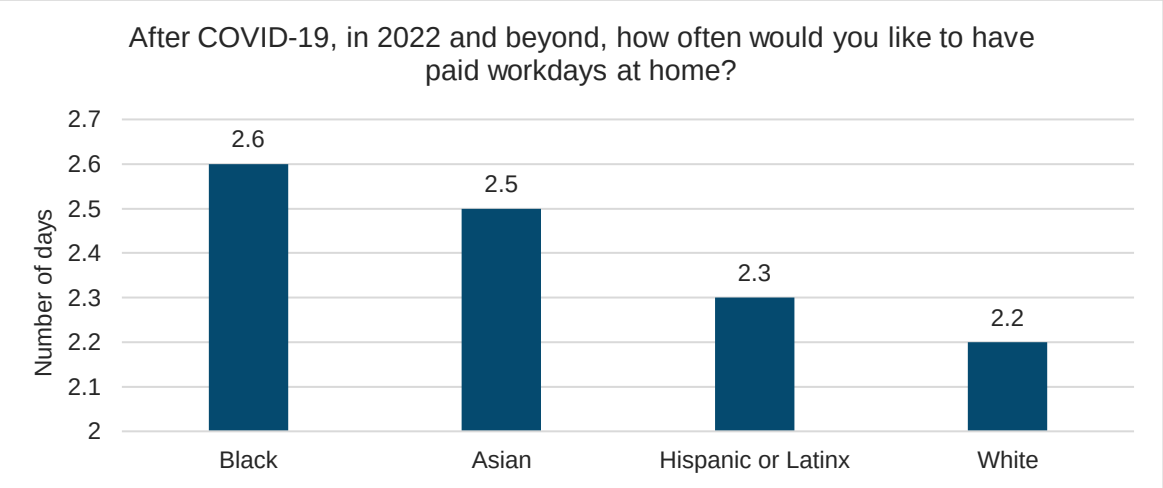
Social impacts

***Impacts on employment levels and access to the labour market for disadvantaged workers*.** Overall, the higher the prevalence of telework, the larger its positive impacts. Key mechanisms explaining this include the following:

- Telework contributes to the reduction of labour market frictions and facilitates a matching of geographically remote demand and supply;
- Telework provides flexibility in terms of the time and place of performance of work, which facilitates access to the labour market by disadvantaged groups, such as persons with caring responsibilities, persons with disabilities, and others;
- Cost savings strengthen incentives to work for the lower-income workforce, who can save time and money they would otherwise have spent on long commutes, office attire, out-of-home daily lunches, short-term childcare expenses, etc.;
- Due to the nature of online meetings and greater autonomy in carrying out tasks, telework may reduce the incidence of social prejudices with regard to various cultural and ethnic backgrounds, race, gender, etc. This could explain why ethnic minorities in the US more often prefer to telework than white workers (see Figure 4-

5). Working from home can have an "equalising" effect, however, only if all employees telework. Otherwise, cleavages may appear between teleworkers from groups historically marginalised in the labour market, and other workers who do not telework.

Figure 0--5. Preferred number of teleworking days, by ethnic group in the US



Source: Barrero et al. (2021), based on a monthly survey of more than 10,000 Americans conducted July 2020–July 2021.

Work-life balance of employees. As discussed in Chapter 2, telework may have positive and negative impacts on the work-life balance of employees. To reiterate, telework may have positive impacts, because it facilitates flexibility with regard to when and where work is performed. Furthermore, time saved on commuting can be used to attend to personal matters. On the other hand, telework can also have a negative impact because teleworkers tend to work longer hours, face difficulties in disconnecting from work, as well as experiencing the pressure of being 'always-on'. Hence, the impacts are likely to be mixed, and will depend on the existing legal framework, social partner agreements, company policies and the capacities of each individual to balance its benefits and drawbacks.

Psychological impacts and mental health, including burn-out among employees. As discussed in Chapter 2, there is sufficient evidence to claim that telework can have a negative impact on employees' mental health, due to a lack of socialisation, burn-out, an 'always-on' culture, etc. While appropriate legal frameworks and (especially) company practices can mitigate these negative effects, a higher prevalence and intensity of telework associated with the flexibilisation scenario may lead to a greater incidence of negative impacts.

Physical health and safety of employees. Telework may have negative impacts on employees' physical health and safety due to non-ergonomic home offices, and because it is overall more challenging for employers to ensure adherence to OSH policies when employees work from home (see Chapter 2). Lower-income employees face significantly higher risks due to the costs of setting up ergonomic home offices.

Income inequality. The impacts of telework on income inequality are likely to be mixed. On the one hand, telework may reduce income inequality by facilitating the access of disadvantaged persons to the labour market (particularly during periods of economic growth and tight labour markets). On the other hand, as discussed in Chapter 2, teleworkers could experience lower chances of promotion and training as well as the higher likelihood of losing their jobs compared with non-teleworking colleagues (particularly during economic recessions).

Gender equality in the labour market. As discussed in Chapter 2 and the respective deep dive (see Annex 10B), the impacts of telework on gender equality in the labour market are mixed. On the one hand, telework facilitates access to the labour market by women, who

are more likely than men to take on caring responsibilities. On the other hand, there is a risk of entrenching social stigma and the development of secondary labour markets, whereby teleworking women are offered lower pay and face lower chances of promotion. The existing legal framework, social norms and company policies in place each have a large role to play in managing these risks.

Table 0-6 summarises the point discussed above.

Table 0-6. Social impacts of telework under alternative scenarios

Impacts on:	Back-to-the-office	Baseline	Flexibilisation: work from anywhere, any time
Higher overall levels of employment	Negligible	Medium	Large
Access to the labour market by disadvantaged groups	Negligible	Medium	Large
Work-life balance of employees	Mixed, positive and negative	Mixed, positive and negative	Mixed, positive and negative
Psychological impacts and mental health, including burn-out among employees	Negligible, negative	Medium negative	Large negative
Physical health and safety of employees	Negligible, negative (particularly for lower-income employees)	Medium negative (particularly for lower-income employees)	Large negative (particularly for lower-income employees)
Income inequality	Mixed, depends on economic cycle	Mixed, depends on economic cycle	Mixed, depends on economic cycle
Gender equality in the labour market	Mixed	Mixed	Mixed

Source: Authors' own elaboration.

Environmental impacts

As discussed in Annex 11, experiences during pandemic-induced telework produced no clear answers in terms of the direction and scale of the environmental impacts of telework. As a large-scale literature review by Eurofound (2022d) argues, significant uncertainties persist, owing to the following factors:

- Telework may reduce greenhouse gas emissions due to less frequent commutes to work; however, this impact varies depending on the frequency of telework, the mode(s) of transport used, and the distance and duration of commute. However, reduced work-related commutes may be substituted by more frequent trips for non-work purposes, such as child transport, grocery shopping, etc. Furthermore, if teleworkers move to more remote areas, work-related and non-work commutes may be fewer, but longer, and may actually lead to higher emissions.
- Telework may lead to lower energy use in the office, but this depends on the frequency of telework, the source(s) of energy used, and the efficiency of office heating/cooling, office space management adopted by the company, etc.

- Telework may lead to higher home energy use, but again the scale of impacts will depend on the frequency of telework, the source(s) of energy and efficiency of office heating/cooling, size of the dwelling, etc.
- Lastly, overall environmental impact will depend on the extent to which the three groups of factors above counterbalance one another.

Therefore, we follow the conclusions by Eurofound (2022d) that "each of the above climate impacts is influenced by (the interplay of) a range of context-specific factors, which may increase or decrease the emissions linked to it, to a varying degree. As a result, calculating the magnitude of such impacts is complex, which challenges the final assessment of the direction of the overall climate impact of teleworking" (p. 40).

4.5. The role of public policy in shaping the likely scenarios

The scenarios and likely impacts discussed above assume the policy status quo (i.e. no further policy change at EU or national levels). It is, however, likely that policies to address the existing negative impacts and/or challenges would support further growth in telework (although this would not be the main driver). As discussed throughout this report:

- Employers need legal certainty in determining employees' eligibility for teleworking, as well as compliance with working time and OSH regulations for teleworkers, dealing with the tax and social security implications of hiring cross-border teleworkers, and when compensating the costs incurred by teleworkers (among other factors); further,
- Employees need safeguards against the key risks of telework, in particular with regard to work-life balance, the blurring of boundaries, psychological and mental well-being and burn-out. Researchers and experts who participated in our Delphi survey largely argued that the establishment of the right to disconnect across all EU Member States would have a high positive impact on employees' willingness to telework, as well as on their psychological and mental well-being.

How large are the expected impacts of policy change on the prevalence of telework? At EU level, there is currently no single piece of legislation that is directly related to telework. Hence, this report has attempted to explore the relationship between national policies and the prevalence of telework. However, this analysis cannot provide any meaningful conclusions.

First, due to the shock of the pandemic, the relationship between cause and effect was inverted – i.e. countries aimed to regulate telework and the right to disconnect in response to the growing prevalence of telework, rather than the reverse. Second, the EU Member States have adopted a variety of approaches, ranging from social partner agreements to dedicated legislation and/or reliance on a broader legal framework. Given that such approaches are deeply embedded within the broader legal and collective action frameworks and traditions of individual Member States, they are not easily replicable. This makes it difficult to draw far-reaching conclusions. Nevertheless, policies that address the challenges and reduce the costs of telework are still expected to facilitate further growth in telework arrangements.

In addition to policies regulating telework and the right to disconnect, other policies could also play a supportive role:

- ***Transport policies and investments in digital infrastructure*** will play an important in facilitating hybrid and full-time teleworking arrangements. This is due to the willingness of teleworkers to move from big cities/metropolises to suburbs or

even more remote places, where housing costs are lower (Moeckel, 2017; Hensher et al., 2021).

- ***Energy policies***. The energy crisis incentivises employers to cut back on office space and utility bills – and thus, presumably, to support telework. Yet, in the absence of compensation mechanisms, employees will be ones footing higher utility bills. To address this, there is a need for policies that incentivise employers to cover some of the extra costs (or at least provide employers with guidance as to how to do this, and whether or not such transfers are taxed as income). Furthermore, the jobs paying the lowest wages often cannot be performed remotely, so these workers will continue to spend more on their commutes while workers in white-collar jobs will save money thanks to remote work. This calls for energy policy to address the challenge of rising inequalities.
- ***Family policies***. The stigmatisation of teleworkers with caregiving responsibilities (typically women) has deep cultural roots. Targeted family policies can facilitate changes in established views and norms. For example, generous paid long-term paternity leave, which helps fathers to become more involved in childcare during the first year of a child's life, can help to reshape some of the gender inequality patterns that may arise due to an increase in home and hybrid working (Chung, 2022; Chung et al., 2022).

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

Conclusion 1. Telework is here to stay.

Between 2019 and 2021, the share of employees working from home in the EU-27 almost doubled, from 11.1% to 21.9%. This sudden shift occurred due to COVID-related concerns over public health and consequent work-from-home mandates. As immediate concerns over the pandemic have begun to fade and a number of organisations consider a return to the office or impose back-to-the-office policies, the share of employees teleworking is likely to decline somewhat during 2022 and 2023. However, a return to the lower levels of teleworking seen pre-pandemic is not expected. The results of the surveys, interviews, literature review and expert discussions carried out for this study point to the same conclusion – telework is here to stay.

Our projections suggest that in 2030, we can expect between 12% and 22% of employees in the EU-27 to be working from home sometimes or usually, with a baseline estimate of 17%. The experts and stakeholders consulted consider the baseline and upper estimates (i.e. 17–22%) to be the most likely.

Historically, there have been significant cross-national differences in the shares of employees working from home. These country-specific path dependencies are likely to remain in the future. Irrespective of scenario, EU Member States in Northern and Western Europe are likely to witness a significantly higher prevalence of telework than most Member States in Southern and Eastern Europe. This is due to differences in the structures of economies, the teleworkability of jobs, work organisation practices, the preferences of both employees and employers, and other factors.

Conclusion 2. Future growth in the prevalence of telework may lead to cost savings, support workplace innovation and digitalisation, and result in higher levels of employment and better work-life balance.

Prior to the pandemic, telework was mostly concentrated within the group of highly skilled professionals and managers, as an occasional work pattern. During the pandemic, a significantly wider range of employers and employees experienced the potential benefits of working from home – while some of the worst fears of employers, such as declining productivity and absenteeism, did not materialise. For employers, future growth in the prevalence of telework is likely to facilitate staff retention, promote cost savings, foster workplace innovation and digitalisation, and enable them to hire talent worldwide. Meanwhile, a growing share of employees are also likely to experience multiple benefits as a result of teleworking. These include cost and time savings due to a reduced number of commutes (although these may perhaps be offset by higher utility bills due to working from home); better work-life balance; and lower barriers to accessing the labour market, particularly among disadvantaged groups. Furthermore, continued growth in telework is likely to support the economic development of non-metropolitan areas, increasing levels of employment. Hence – somewhat unsurprisingly, and in line with other studies – a survey carried out for this study found that 48% of respondents representing employers intend to provide more freedom to telework, while 52% of employee respondents would welcome greater freedom to telework.

To achieve the broad range of potential benefits that telework could bring to both employers and employees, a number of key challenges and risks associated with telework need to be addressed. These challenges are discussed in the remaining conclusions.

Conclusion 3. There is a need to ensure work-life balance in the context of telework and mitigate the risks of flexible working time arrangements, by preventing overtime as well as work requests outside of working time.

Prior to the pandemic, flexible working arrangements – including telework – were closely associated with a worker's extended availability to attend to work requests outside of normal working time (according to the EU-LFS, in 2019, 14% of employees in the EU-27 reported being contacted several times for work-related purposes, while 23% were contacted occasionally). Teleworkers were more likely to work longer hours and under more irregular schedules than their counterparts who worked at their employers' offices. As a result, evidence is mixed with regard to the potential contribution of telework to work-life balance. In the context of the pandemic, data from the European Working Conditions Survey (EWCS) 2021 suggest that teleworkers are still more likely to work overtime than their on-site counterparts, and several national studies show an increase of extended availability during the pandemic.

Beyond technological change, a major driver explaining this situation is the so-called 'autonomy paradox'. This results from the internalisation of a particular work ethic which leads workers in highly competitive and demanding professions, who presumably enjoy high levels of autonomy, to work long hours and be 'always on'. Cultural ideas about passion at work are also at play in this phenomenon. However, research highlights that economic pressures leading to staff shortages and downsizing are also a key driver of work intensification and an 'always-on' culture. Lastly, extensive evidence suggests that the prevailing work culture in a company (as well as in the country in which it operates) is also crucial in explaining differences with regard to flexible work arrangements and the extent of an 'always-on' culture. Some countries and companies may have a pronounced 'ideal worker' culture, under which workers are expected to prioritise work above all else by working long hours and remaining virtually available outside of working hours. Other organisations or countries may be more supportive of employees' autonomy over their working time and work-life balance. Studies have found that these underlying cultural norms determine whether teleworking and flexible working time arrangements will have positive or negative outcomes in terms of work-life balance. Overall, a pattern of long working hours and extended availability is especially detrimental to low-status workers (who have little autonomy to manage such demands) as well as mothers and other workers with family responsibilities (who face time constraints, resulting in work-life conflict and/or loss of career opportunities).

The right to disconnect refers to a worker's right not to engage in work-related activities or communications outside of working time by means of digital tools, such as phone calls, emails or other messages. This right is not explicitly established in the EU acquis. Furthermore, the analysis undertaken in this report shows that in the EU acquis (specifically, the Working Time Directive, 2003/88/EC) there is some uncertainty regarding:

- the difference between 'working time' and 'rest time' under non-standard arrangements such as standby responsibilities, which lack a common European legal definition; and

- the more concrete measures to guarantee the recording of working time, which could be essential in dispute resolution regarding the proper implementation of obligations relating to working time and rest time.

With regard to work-life balance, it is unclear whether the Work Life Balance Directive (EU 2019/1158) provides a strong and enforceable legal entitlement to telework for parents or caregivers.

At national level, the analysis of working time regulations shows wide variation with regard to practices of recording working time, as well as other enforcement actions. Moreover, not all countries define standby time, or do so only through collective bargaining.

The analysis also shows that in several countries, the right to disconnect appears to be the main measure aimed at protecting workers from excessive overtime and problems relating to permanent connectivity. Although legislation regarding the right to disconnect has been

only passed in nine countries (Belgium, Croatia, France, Greece, Ireland[202], Italy, Portugal, Spain and Slovakia), the topic is being discussed by social partners and/or policymakers or is regulated through collective bargaining in several other countries (Cyprus, Germany, the Netherlands, Luxembourg and Romania). Moreover, the results of a survey conducted for this study reveal that a relatively large share of companies surveyed had adopted policies and/or agreements on the right to disconnect: around a half of respondents representing employers (49%) stated that some kind of right to disconnect arrangement operated within their organisation. Similar results are seen among employees, with 45% of respondents reporting such an arrangement in their workplace. However, still significant gaps still exist in the regulation of the right to disconnect at national level. For example, as this report illustrates, only a few countries have developed enforcement measures aimed at ensuring compliance with legislation on the right to disconnect, such as new sanctions or a special monitoring division within the Labour Inspectorate (such as in Greece, Spain and Portugal). As a result, doubts have arisen in certain countries (e.g. France) as to the effectiveness of the implementation of this right. The right to disconnect is more often regulated through soft regulatory approaches (e.g. non-binding agreements, codes of good practices, etc.), although trade unions would prefer hard law approaches (i.e. statutory legislation or legally binding collective agreements), as indicated in the interviews, case studies, and literature.

Policy pointer 1. The right to rest should be ensured for all workers.

A review of the literature and primary data analysis (i.e. surveys and interviews) show that telework can support workers in achieving better work-life balance if:

- Employers dedicate greater efforts to preventing the spread of unpaid overtime and extended availability by making changes to the organisation of working time practices and the distribution of workload,
- Employers and managers dedicate efforts to removing the stigma that surrounds flexible working for caregiving or for other non-job related purposes;
- Workers learn to develop clear strategies to manage the boundaries between work and private life;
- Normative and cultural views concerning work-life balance and gender (in general, and in the workplace) are reshaped so that gender imbalances in family responsibilities decrease; and
- Employers address the spread of a culture of working long hours by finding new ways to measure productivity and commitment, as well as developing new criteria for deciding promotions.

In line with these findings, the **main indication for policy intervention** in this field is to lower the barriers to flexible work arrangements while simultaneously protecting workers against the risks of permanent connectivity and long working hours.

The evidence analysed indicates that policy intervention can achieve an effective balance between these two outcomes by:

- Ensuring compliance with working time regulation through effective enforcement actions;
- Implementing policy initiatives to support joint efforts by employers and workers to address the potential risks of an ‘always-on’

[202] Code of Practices.

Conclusion 4. There is a need to better assess the specific psychosocial and physical risks to teleworkers, and to implement more effective prevention measures.

Evidence before and during the pandemic shows that teleworkers might be exposed to specific psychosocial risks. The most significant drivers of stress among these workers are economic pressures leading to work intensification (including extended availability), as well as isolation. Awareness of these psychosocial risks is increasing among both national authorities and sectoral social partners. However, as yet there is little awareness about the importance of emerging risks linked to the intensive use of ICT for teamwork in the context of hybrid telework arrangements (for example, information overload and non-verbal overload).

Teleworkers are also exposed to greater physical risks than workers in similar occupations who work at their employers' premises. The main reason for this is that working from home makes it more complex to carry out risk assessments and enforce health and safety requirements, whether this is undertaken by the company, by workers' representatives or by state authorities such as the labour inspectorate. Furthermore, not all would-be teleworkers have access to an adequate workspace and or suitable equipment for performing their work at home. In addition, telework often entails working longer hours and according to more irregular schedules – working patterns that are related to the higher prevalence of physical problems. The main physical problems affecting teleworkers are musculoskeletal disorders (MSDs), eye strain and headaches.

The analysis of the EU acquis contained in this report reveals that while the OSH Framework Directive (Directive 89/391/EEC) covers telework, protecting workers' safety and health can be challenging in the context of rapid changes in technology and the increased dematerialisation of the workplace. This issue will be addressed in the ongoing review of the Directive on the Minimum Safety and Health Requirements for the Workplace (Council Directive 89/654/EEC).

Most countries lack legal provisions that are specifically designed to explicitly address health and safety risks raised by telework. Moreover, the enforcement of OSH legislation at national level (whether this is general or specifically targeted at teleworkers) is particularly challenging in the context of telework. In particular, experts and national stakeholders emphasised the issues involved in conducting inspections in private homes, whether carried out by state authorities, companies or workers' representatives.

Policy pointer 2. OSH policies should be adapted to teleworking arrangements, and enforcement mechanisms should be made more effective.

The literature and data analysis show that teleworkers' health and safety outcomes could be improved if:

- Hybrid work arrangements are promoted to prevent the risk of isolation;
- Employers dedicate greater organisational efforts and finances to carrying out risk assessments (including psychosocial risks and physical risks related to working away from the employer's premises), as well as adopting preventive and protective measures;
- Organisations develop transparent guidelines and rules for communication, and provide compensation for overtime and extended availability;
- Work is organised to ensure congruence between workload and the number of work hours;
- Employers provide teleworkers with adequate equipment, or fair compensation/reimbursement for equipment purchased by these employees;
- Managers are trained to avoid emerging risks linked to digital communication technologies and to provide better support in the context of telework; and

- Employees increase their participation in risk assessment practices and maintain self-compliance with OSH standards and procedures.

In line with these findings, the challenge of improving the occupational safety and health of teleworkers is closely related to preventing an 'always-on' culture and improving work-life balance.

Accordingly, the **main indication for policy intervention** in this area is to promote flexible work arrangements while preventing work intensification, isolation, emerging psychosocial risks linked to digital communication, and ergonomic risks.

The evidence analysed indicates that policy intervention can achieve an effective balance between these two outcomes by:

- Promoting and supporting hybrid work arrangements to increase socialising among workers and prevent isolation, while respecting autonomous negotiations between employers and employees regarding telework arrangements;
- Encouraging greater participation among workers and trade unions with regard to risk assessment and OSH policies in the context of telework; and
- Encouraging companies and workers to take advantage of new ICT for the purposes of communication and team coordination, while at the same time preventing the psychosocial risks linked to both information and non-verbal overload.

Conclusion 5. Adaptations should be made to management approaches aimed at assessing worker performance, taking account of issues including data protection and privacy, as well as the use of control, surveillance and monitoring performance systems.

Evidence shows that the impact of telework on workers' performance depends on work organisation practices and the existence of support systems. First, the intensity of telework may be detrimental to individual and team performance if managers do not address its potential drawbacks. These include a potential reduction in performance feedback and a decrease in face-to-face interactions with co-workers and supervisors which, in turn, may limit the transfer of tacit knowledge within organisations. Second, hybrid work organisation contexts entail new challenges – notably for line managers, in terms of ensuring effective team coordination and knowledge transfer. Lastly, directive or behavioural control measures have negative effects on teleworkers' individual performance. Traditionally, managers have employed output controls with respect to teleworkers, because these allow the teleworker a degree of autonomy in the way they complete tasks, while still allowing a degree of control. The development of new systems for digital control, surveillance and monitoring of workers' performance offers new possibilities for managerial control in the context of flexible working time arrangements and telework. However, these technologies entail significant risks in terms of workers' right to privacy, the protection of their personal data, working conditions, and overall well-being. Furthermore, evidence also highlights that such monitoring systems may be counterproductive to individual performance, especially when there is lack of transparency on the part of the employer concerning how and why employees are monitored. Even though there is little conclusive evidence regarding the expansion of digital monitoring to teleworkers since the outbreak of the pandemic, concerns about protection of workers' privacy rights are widespread.

Analysis of the EU acquis has revealed that the GDPR provides a relevant and effective approach to safeguarding workers' personal data. However, interviews and surveys conducted for this study indicate concerns on the part of both employers and employees about a lack of clarity and guidance to ensure full compliance with the GDPR's transparency obligations (Articles 13-14 GDPR). Furthermore, as new technologies continue to be developed, the protection of privacy and personal data may become yet more challenging. For example, in the future it may be more difficult for both employees and employers to

understand when personal data is being processed (and when it is not), and thereby to properly ensure the transparency of digital monitoring/surveillance systems.

Policy pointer 3. Workers' right to privacy and data protection should be guaranteed.

Literature review and data analysis show that telework can improve workers' performance and productivity if:

- It is based on hybrid work arrangements that acknowledge the importance of face-to-face interaction with managers and co-workers, which in turn facilitates teleworkers' access to tacit knowledge and encourages socialisation among workers both on- and off-site;
- It relies on managerial approaches which combine output control methods that allow a high degree of work autonomy for teleworkers, with managerial support measures to prevent work intensification; and
- It avoids the use of digital monitoring/surveillance systems (as they are deemed largely ineffective), or at least ensures that they are implemented transparently, through the provision of information and communication with workers and/or their representative bodies, in line with transparency obligations under the GDPR.

In line with these findings, the **main indication for policy intervention** in this field is to support flexible work arrangements and managerial approaches that are effective in improving individual and team performance, including the transparent implementation of digital monitoring.

Evidence analysed indicates that policy intervention can achieve an effective balance between these outcomes by:

- Promoting and supporting hybrid work arrangements while respecting autonomous negotiations between employers and workers regarding telework arrangements; and
- Supporting employers' need for efficient coordination, monitoring and evaluation of workers' performance, while guaranteeing workers' right to privacy, protection of their personal data, and fair employment and working conditions.

Conclusion 6. All types of gender and social bias should be avoided in the implementation of telework and flexible work arrangements, including access to such work arrangements and future career prospects.

Cultural norms and work organisation practices can either enhance the inclusiveness of telework and flexible work time arrangements, or reinforce existing social inequalities through stigma and discrimination. Pre-pandemic evidence suggests that the use of telework and flexible working time arrangements was biased in terms of gender and status. In the post-pandemic scenario, there is evidence of certain positive trends in terms of equal treatment and non-discrimination: flexible arrangements, including telework, are being offered to more diverse groups of workers, while flexibility stigma has decreased. Furthermore, issues relating to material support and compensation for costs incurred when working from home are gaining visibility. Achieving telework practices that are inclusive is also crucially linked to challenges in the fields of working time, work-life balance and health and safety, which allow the better alignment of organisations' performance goals with workers' goals of work-life balance and well-being.

Evidence shows that national contexts play a crucial role in reducing stigma and supporting more inclusive flexible working arrangements through the implementation of a wide range of social and labour policies aimed at reducing gender, social class and other social

inequalities. Inclusiveness is achieved by extending equitable and universal flexible working arrangements, and ensuring a work culture that supports work-life balance and gender equality.

Analysis of the EU acquis (Employment Equality Directive, 2000/78/EC) and national regulations has revealed the lack of an enforceable legal entitlement to telework for workers with disabilities. Analysis of the Work Life Balance Directive (Directive (EU) 2019/1158) also reveals the lack of an enforceable legal entitlement to telework for caregivers. In contrast, there is evidence that the possibility to combine telework, on-site work and flexible time arrangements can have a markedly positive impact on labour market participation and future career prospects for workers with disabilities and workers with caregiving responsibilities.

Furthermore, the analysis of national regulations indicates important differences between EU Member States with regard to two further regulatory aspects: namely, the type(s) of teleworking arrangement covered by statutory definitions and/or collective bargaining (e.g. only 'regular'/'frequent' telework); and the establishment of a 'right to request' telework (which currently only exists in Greece, Finland, Ireland, France, Portugal and Lithuania).

Policy pointer 4. Support should be given to inclusive flexible work arrangements.

Based on the literature review and data analysis, the shift to telework during the pandemic provides new opportunities to extend more inclusive work arrangements, provided that:

- Employers and employees agree on and guarantee access to teleworking and flexible working time arrangements in an objective, transparent and non-discriminatory manner; and
- Employers and managers dedicate efforts to removing the stigma surrounding flexible working for caregiving or other non-job related purposes.

In line with these findings, the **main indication for policy intervention** in this field is to support inclusive working arrangements through a wide range of social and labour policies aimed at reducing social inequalities and promoting work-life balance.

Conclusion 7. Geographical mobility should be facilitated, with a focus on cross-border telework.

Data available from the EU Labour Force Survey (EU-LFS) show that between 0.17% and 0.21% of employed persons in the EU-27 (roughly 330,000 to 400,000 people) engaged in cross-border teleworking either 'usually' or 'sometimes' in 2020. This share of cross-border teleworkers is expected to grow in the future, in part because it offers significant benefits for employees and employers alike. Cross-border telework helps employers to overcome regional skills bottlenecks, while it enables employees to access better-quality jobs while living where they wish. However, both employers and employees face a lack of legal certainty and high administrative burdens when it comes to dealing with the tax and social security systems applicable in different Member States. As a result, employers may restrict access to telework for existing cross-border workers in order to avoid the burden of having to deal with tax and social security systems applicable in a worker's country of residence. This could result in the unequal treatment of cross-border workers who wish to telework. Furthermore, this situation also reduces incentives for organisations to hire teleworkers across borders and thus alleviate skills demand and supply imbalances.

Policy pointer 5. Supportive legal framework for cross-border telework.

The literature review and data analysis show that:

- Cross-border telework is becoming increasingly feasible for a higher proportion of white-collar professionals, technicians with specialised knowledge and managers;
- It is fostered by new recruitment policies by employers who see cross-border telework as a new competitive factor and, to this end, may even subcontract the services of new companies that specialise in helping them to address the administrative burdens; and
- Cross-border teleworking arrangements may be restricted by the interplay between the coordination of social security systems at EU level and the labour laws and taxation rules of different EU Member States. These may create administrative difficulties for companies and workers and, in some cases, can favour differential access to telework between workers with residence in the country in which the company is located, and those with residence in neighbouring countries.

In line with these findings, the **main indication for policy intervention** in this field is to design a supportive legal framework for cross-border teleworkers that enhances employers' recruitment capacity and job opportunities and flexibility for workers, while also preventing the risk of unfair competition and social dumping.

5.2. Future research needs

Research need 1. More refined measures of the intensity of telework.

The EU-LFS aims to differentiate between persons working from home 'usually', 'sometimes' and 'never.' 'Usually' is defined as "working at home half of the days worked in a reference period of four weeks preceding the end of the reference week." Meanwhile, 'sometimes' is defined as "working at home less than half of the days worked, but a least one hour in a reference period of four weeks preceding the end of the reference week" (EUROSTAT, 2018, p. 72-73). In practical terms, these definitions entail that 'sometimes' captures elements of both ends of the spectrum: persons teleworking for only one hour, and persons teleworking 10 days a month (assuming 21 working days in a month). Similarly, the category 'usually' could capture both persons teleworking full-time, as well as those who work from home for a good deal of the time, but not constantly (e.g. 12 days a month). Such a distinction is not very useful for research and policy purposes, as it does not accurately cover all configurations of employed persons who work from home all the time, or of persons who work from home very rarely. A more fruitful distinction should cover the following categories of workers who telework 'rarely' (e.g. 1 day per week); 'sometimes' (e.g. 2-3 days per week); usually (e.g. 4 days per week); all of the time (e.g. 5 days per week).

Research need 2. Measuring the extent of 'always-on' culture.

The new guidelines for implementing the EU-LFS, applicable in 2021 (Eurostat, 2021, p. 135-136), include a new variable allowing analysis of the extent of flexible working time arrangements, as well as improvements to several variables which make it easier to distinguish between contractual hours and overtime. However, the survey does not enable a distinction to be made between paid and unpaid overtime. Furthermore, no reference is made in the survey to work-related requests outside working hours (as in the EU-LFS ad-hoc module 2019[203]). As discussed above, this information is important for understanding developments in relevant workplace practices and should be included in future surveys. In

[203] EU-LFS ad-hoc module 2019 on working time flexibility and work-related requests during leisure time.

addition, the guidelines for implementing the EU-LFS state that “if the respondent only checks emails or answers phone calls occasionally in the evenings, this should not be considered as working during the evenings. Only work that is also normally done at the workplace or counted as working time should be taken into consideration” (Eurostat, 2021, p. 214); however, no precise definition is provided of ‘occasionally’ vs. ‘normally’. Other EU-level surveys, such as the ECS and the EWCS, should include more detailed questions aimed at gathering information about flexible work arrangements, overtime and requests for extended availability. Similarly, more research needs to be carried out on how flexible working is related to a higher intensity of work, as current data offer only limited insights into fully understanding this phenomenon.

Research need 3. To better understand the impacts of telework on energy use and climate.

Research conducted to date has provided inconclusive results with regard to the impacts of telework on energy use and meeting other sustainability targets. This is an emerging research topic, and most studies so far have focused on the impacts of pandemic-induced stay-at-home mandates. Nevertheless, given the importance to the current policy agenda of climate change and the energy crisis, it will be crucial to assess whether telework can in fact provide a tangible contribution to meeting key climate targets, including those related to traffic congestion, emissions and pollution.

Research need 4. To better understand the impact of teleworking on inequalities in the labour market.

Although there is some evidence that telework enables women, persons with disabilities, and caregivers to access employment, more concrete evidence is needed to understand the extent to which this is the case, and which specific arrangements or organisational contexts can yield positive outcomes in relation to accessibility. In addition, this study has shown how flexible working can potentially lead to negative career outcomes for historically marginalised workers. In part, this is due to biases against such workers held by managers and co-workers. More evidence is needed, not only to explore how the increase in home and hybrid working will result in potential career impacts on certain groups of workers across the lines of gender, race and ethnicity, but also – more importantly – on how policy contexts can help to change or moderate these outcomes. In combination, these results could help to better understand the consequences an increase in teleworking might have on labour market inequalities in the future.

Research need 5. To better understand the impacts of telework on care and the division of labour within households.

Increasing the equal sharing of care responsibilities between parents has been one of the leading drivers of the development of the right to flexible working across Europe. However, evidence shows that while women currently make greater use of flexible working arrangements for caregiving purposes (and are expected to continue doing so), men may not (or may not implicitly be expected to). If these trends continue, they could further worsen disparities in the division of labour within households, in turn compounding the potential biases and negative career outcomes that women teleworkers may face. Further research is needed to determine whether the post-pandemic rise in teleworking and hybrid working has changed these dynamics, and if so, in which countries and/or cultural contexts. This type of analysis will also help to better understand what policy tools are needed to ensure that the rise of teleworking can result in better work-life balance and well-being outcomes for all workers, regardless of gender.

Research need 6. To better understand the impacts of telework on geographical inequalities and communities.

This report has highlighted the potential for the rise of teleworking to not only address geographical inequalities within a region, but also across countries and potentially across Europe. This could be accomplished in part by opening up opportunities for workers to

detach their work location from their home location. More research is needed to examine how, as teleworking patterns become more stable and more companies opt for fully remote options, these new workplace norms influence geographical inequalities or the regeneration of rural or disconnected regions and districts. Furthermore, as the number of employees teleworking increases, we can expect to see a growth in regional economies and communities, as workers are more likely to spend their time and their money closer to home. Research into how such a change could influence regional economic growth, and also growth in the voluntary sector (e.g. community organisations), would be particularly interesting.

Research need 7. To better understand the various regulatory approaches to telework and the right to disconnect at meso and micro level, and their impact on adequate working conditions.

Statutory legislation and cross-border collective agreements on telework and working time (including the right to disconnect) must be complemented with sectoral and company regulations providing tailor-made solutions to different business realities. Research into these practices currently remains scarce. In this regard, this report has analysed several case studies which illustrate different approaches towards the regulation of telework and the right to disconnect at company level. However, further research is needed to explain how approaches at sectoral and company level differ, as well as explore their respective impacts on adequate working conditions for teleworkers and, more generally, employees engaging in flexible work arrangements.

REFERENCES

Abendroth, A.-K., & Reimann, M. (2018). “Telework and Work–Family Conflict across Workplaces: Investigating the Implications of Work–Family-Supportive and High-Demand Workplace Cultures”. In: Blair, S.L., & Obradovic, J. (Eds.), *The Work-Family Interface: Spillover, Complications, and Challenges*, Emerald Insight, 323-348

Abraha, Halefom H. 2022. “A Pragmatic Compromise? The Role of Article 88 GDPR in Upholding Privacy in the Workplace.” *International Data Privacy Law* 12 (4): 276–96. https://doi.org/10.1093/idpl/ipac015.

Acemoglu, D., & Autor, D. (2011). “Chapter 12 – Skills, Tasks and Technologies: Implications for Employment and Earnings”. In: Card, D., & Ashenfelter, O. (Eds.), *Handbook of Labour Economics*, Vol. 4, Part B, pp. 1043-1171.

Adecco Group (2021). Resetting normal: Defining the new era of work, available at: https://www.adeccogroup.com/future-of-work/latest-research/resetting-normal-2021/

Aglietta, M. (1979). Regulación y crisis del capitalismo. Siglo XXI.

Aksoy, C.G., Barrero, J.M., Bloom, N., Davis, S.J., Dolls, M., & Zarate, P. (2022). Working from home around the world (No. w30446). National Bureau of Economic Research.

Allen, J.A., Lehmann-Willenbrock, N., Meinecke, A.L., Landowski, N., Rogelberg, S.G., Lucianetti, L., Tong, J., & Madrid, H.P. (2021), “The Ubiquity of Meeting Lateness! A Cross-Cultural Investigation of the Small to Moderate Effects of Workplace Meeting Lateness”. *Cross-Cultural Research*, 55(4), 351–381.

Allen, T.D., Golden, T.D., & Shockley, K.M. (2015), “How Effective Is Telecommuting? Assessing the Status of Our Scientific Findings”, *Psychological Science in the Public Interest*, Vol. 16, No. 2, pp. 40-68.

Aloisi, A., & De Stefano, V. (2022). Essential jobs, remote work and digital surveillance: Addressing the COVID-19 panopticon”, *International Labor Review*, 161(2).

Anitha, J. (2014). “Determinants of Employee Engagement and Their Impact on Employee Performance.” *International Journal of Productivity and Performance Management*, 63, 308-323. https://doi.org/10.1108/IJPPM-01-2013-0008

Antonio, A., & Tuffley, D. (2014), “The Gender Digital Divide in Developing Countries”, *Future Internet*, 6(4), 673-687. https://doi.org/10.3390/f6040673

Anugrahsari, S., Abbas, H., & Suryadi, (2021). “Physical activity and daily exercise-related social distance policy during covid-19 pandemic: A systematic literature review”, *Journal of Physical Education and Sport*, 21, 2240-2446.

Arntz, M., Ben Yahmed, S., & Berlingieri, F. (2019). “Working from home: Heterogeneous effects on hours worked and wages”. ZEW Discussion Papers, No.19-015, ZEW – Leibniz-Zentrum für Europäische Wirtschaftsforschung, Mannheim

Bailenson, J.N. (2021). “Nonverbal overload: A theoretical argument for the causes of Zoom fatigue”, *Technology, Mind, and* Behavior, 2(1), 1-6.

Ball, K. (2021), “Electronic Monitoring and Surveillance in the Workplace. Literature review and policy recommendations”, Publications Office of the European Union, Luxembourg.

Barbier, J.C. (2013). “A conceptual approach of the destandardization of employment in Europe since the 1970s”. In: Koch, M. & Fritz, M. (Eds.), Non-Standard Employment in Europe: Paradigms, Prevalence and Policy Responses (pp. 13-28), Palgrave Macmillan. https://doi.org/10.1057/9781137267160_2

Barrero, J.M., Bloom, N. & Davis, S.J. (2020). Why working from home will stick, Becker Friedman Institute for Economics Working Paper, (2020-174), Chicago, IL: University of Chicago

Barrero, J.M., Bloom, N., & Davis, S.J. (2021). “Don’t Force People to Come Back to the Office Full Time”, *Harvard Business Review*, 24 August.

BAuA. (2020). BAuA-Arbeitszeitbefragung: Vergleich 2015 – 2017 – 2019. Dortmund.

Beauregard, T.A., & Henry, L.C. (2009). Making the link between work-life balance practices and organizational performance. *Human Resource Management Review*, 19(1): 9-22.

Beauregard, T.A., Basile, K.A., & Canónico, E. (2019). "Telework: Outcomes and facilitators for employees". In: Landers, R.N. (Ed.), The Cambridge handbook of technology and employee behaviour, p. 511-543. Cambridge: Cambridge University Press.

Bechter, B., Brandl, B., & Lehr, A. (2022). "The role of the capability, opportunity, and motivation of firms for using human resource analytics to monitor employee performance: A multi-level analysis of the organisational, market, and country context", *New Technology, Work and Employment*. https://doi.org/10.1111/ntwe.12239

Beckel, J.L.O., & Fisher, G.G. (2022). "Telework and Worker Health and Well-Being: A Review and Recommendations for Research and Practice", *International Journal of Environmental Research and Public Health*, 19(7),

Belkin, L.Y., Becker, W.J., & Conroy, S.A. (2020). "The Invisible Leash: The Impact of Organizational Expectations for Email Monitoring After-Hours on Employee Resources, Well-Being, and Turnover Intentions", *Group and Organization Management*, 45(5), 709-740.

Bell, M., Lasek-Markey, M., Eustace, A., & Pahlen, T. (2021). A Right to Disconnect: Irish and European Legal Perspectives [Report]. Covid-19 Law and Human Rights Observatory, Trinity College Dublin. http://www.tara.tcd.ie/handle/2262/96632

Belzunegui-Eraso, A., & Erro-Garcés, A. (2020). "Teleworking in the Context of the Covid-19 Crisis." *Sustainability*, 12 (9): 3662.

Bennett, A.A., Campion, E.D., Keeler, K.R., & Keener, S.K. (2021). "Videoconference Fatigue? Exploring Changes in Fatigue After Videoconference Meetings During COVID-19", *Journal of Applied Psychology*, 106(3), 330–344

Bergeaud, A., Eymeoud, J.B., Garcia, T., & Henricot, D. (2022) "Working from home and corporate real estate", VoxEU.org, 22 January. Available at: http://longtermproductivity.com/perso/ABGH_main.pdf

Bernhardt, A.; Kresge, L., & Suleiman, R. (2021). "Data and algorithms at work. The Case for Worker Technology Rights", UC Berkeley Labour Center, November 2021. Available at: https://laborcenter.berkeley.edu/data-algorithms-at-work/

Biron, M., & Veldhoven, M.V. (2016), "When control becomes a liability rather than an asset: Comparing home and office days among part-time teleworkers", *Journal of Organisational Behavior*, Vol. 37, No. 8, pp.1317-1337.

Bjursell, C., Bergmo-Prvulovic, I., & Hedegaard, J. (2021). "Telework and lifelong learning", Frontiers in sociology, 6, 642277.

Blagoev, B., & Schreyogg, G. (2019). "Why do extreme work hours persist? Temporal uncoupling as a new way of seeing", *Academy of Management Journal*, 62(6),1818-1847.

Blagoev, B., Muhr, S.L., Ortlieb, R., & Schreyögg, G. (2018). Organizational working time regimes: Drivers, consequences and attempts to change patterns of excessive working hours. *German Journal of Human Resource Management*, 32(3-4), 155-167.

Blaskó, Z., Papadimitriou, E., & Manca, A.R. (2020). How will the COVID-19 crisis affect existing gender divides in Europe. JRC Science for Policy Report, Publications Office of the European Union, Luxembourg.

Bloom, N., & Ramani, A. (2021). "The doughnut effect of COVID-19 on cities", VoxEU.org, 28 January.

Bloom, N., Liang, J., Roberts, J., & Ying, Z.J. (2015). Does working from home work? Evidence from a Chinese experiment. *Quarterly Journal of Economics*, 130(1): 165-218.

Boyer, R. (1986). La flexibilidad del trabajo en Europa: un estudio comparativo de las transformaciones del trabajo asalariado en siete países, entre 1973 y 1985. Ministerio de Trabajo y Seguridad Social.

Brandl, B., & Braakmann, N. (2021). "The effects of collective bargaining systems on the productivity function of firms: An analysis of bargaining structures and processes and the implications for policy making", *Industrial Relations Journal*, 52(3), 218-236.

Brauner, C., Wöhrmann, A.M., & Michel, A. (2022). “Work availability types and well-being in Germany–a latent class analysis among a nationally representative sample”, *Work & Stress*, 36(3), 251-273.

Brussevich, M., Dabla-Norris, M.E., & Khalid, S. (2020). “Who will bear the brunt of lockdown policies? Evidence from tele-workability measures across countries.” International Monetary Fund, WP/20/08. https://doi.org/10.5089/9781513546285.001

Büchler, N., ter Hoeven, C.L., & Van Zoonen, W. (2020). “Understanding constant connectivity to work: how and for whom is constant connectivity related to employee well-being?”, *Information and Organization*, 30(3), 100302.

BusinessEurope (2021a). Adapting social protection systems to demographic change, modern labour markets and diverse life phases and choices - a Business Europe policy orientation paper, https://www.businesseurope.eu/publications/adapting-social-protection-systems-demographic-change-modern-labour-markets-and-diverse

BusinessEurope. (2021b). EU Strategic Framework on Health and Safety at Work - BusinessEurope Reply to the Public Consultation, https://www.businesseurope.eu/sites/buseur/files/media/position_papers/social/2021-02-25_hs_strategic_framework_-_reply_to_consultation.pdf.

Camacho, S., & Barrios, A. (2022). “Teleworking and technostress: early consequences of a COVID-19 lockdown”, *Cognition, Technology & Work*, 1-17.

Capital Media (2021). “Повечето служители харесват дистанционната работа, но разбират недостатъците ѝ’” news article, 17 April.

Carillo, K., Cachat-Rosset, G., Marsan, J., Saba, T., & Klarsfeld, A. (2020). “Adjusting to epidemic-induced telework: empirical insights from teleworkers in France.” *European Journal of Information Systems*, 1-20, 69-88.

Castells, M. (1996). *La era de la información I. La sociedad red*, Alianza, Madrid.

CBRE Research (2020). The future of the office in the COVID-19 era. https://www.cbreim.com/-/media/project/cbre/bussectors/cbreim/im/future-of-office/future-of-office.pdf

Černe, M., & Aleksić, D. (2020), ‘Ko prožno delo postane nuja’, *HRM*, Vol. 29, No. 6, pp. 27–29.

Chai, D.S., & Park, S. (2022). “The increased use of virtual teams during the Covid-19 pandemic: Implications for psychological well-being”, *Human Resource Development International*. https://doi.org/10.1080/13678868.2022.2047250

Charalampous, M., Grant, C., Tramontano, C., & Michailidis, E. (2019). “Systematically reviewing remote e-workers” well-being at work: A multidimensional approach”, *European Journal of Work and Organizational Psychology*, Vol. 28, No. 1, pp. 51-73.

Chirico, F., Zaffina, S., Di Prinzio, R.R., Giorgi, G., Ferrari, G., Capitanelli, I., Sacco, A., Szarpak, L., Nucera, G., Taino, G., Afolabi, A., & Ilesanmi, O. (2021). “Working from home in the context of COVID-19: A systematic review of physical and mental health effects on teleworkers”, *Journal of Health and Social Sciences*, 6(3), 319–332.

Choroszewicz, M., & Kay, F. (2020). “The use of mobile technologies for work-to-family boundary permeability: The case of Finnish and Canadian male lawyers”, *Human Relations*, 73(10), 1388-1414.

Chung, H. (2020). "Gender, flexibility stigma and the perceived negative consequences of flexible working in the UK." *Social Indicators Research* 151.2 (2020): 521-545.

Chung, H. (2022). The Flexibility Paradox. Why Flexible Working Leads to (Self-)Exploitation, Bristol University Press.

Chung, H., & Van der Horst, M. (2018). “Women’s employment patterns after childbirth and the perceived access to and use of flexitime and teleworking”, *Human Relations*, 71(1): 47-72.

Chung, H., & van der Lippe, T. (2020). “Flexible Working, Work–Life Balance, and Gender Equality: Introduction”, *Social Indicators Research*, 151(2).

Chung, H., Seo, H., Forbes, S., & Birkett, H. (2020). ”Working from home during the COVID-19 lockdown: Changing preferences and the future of work”, University of Kent. Available at:

https://www.birmingham.ac.uk/Documents/college-social-sciences/business/research/wirc/epp-working-from-home-COVID-19-lockdown.pdf

Colliers international (2020). Flex World: The Flexible workspace report 2020 EMEA. Available at: https://www.colliers.com/en-lt/research/the-flexible-workspace-report-2020

Contreras, F., Baykal, E., & Abid, G. (2020). "E-leadership and teleworking in times of COVID-19 and beyond: what we know and where do we go." *Frontiers in Psychology*, 11, 3484.

Cooper, R., & Baird, M. (2015). Bringing the "right to request" flexible working arrangements to life: From policies to practices. *Employee Relations*, 37(5), 568-581. https://doi.org/10.1108/ER-07-2014-0085

Cóppulo, S., & Palau, E. (2021). La Desconnexió Digital, un Dret Laboral imprescindible per a la Salut. Anàlisi de la situació en les empreses a Catalunya [Digital disconnection, a basic right for health. An analysis of the situation in Catalan companies], Barcelona School of Management, Pompeu Fabra University.

COVID-HAB (2020). "Confinamiento, Vivienda y Habitabilidad." Available at: https://covidhab.ietcc.csic.es/avances-de-resultados/

Criscuolo, C., Gal, P., Leidecker, L., Losma, F., & Nicoletti, G. (2021). "The role of telework for productivity during and post COVID-19: Results from an OECD survey among managers and workers", OECD Productivity Working Papers, 2021-31, Paris: OECD Publishing.

Cuerdo-Vilches, T., Navas-Martín, M.Á., March, S., & Oteiza, I. (2021). "Adequacy of telework spaces in homes during the lockdown in Madrid, according to socioeconomic factors and home features", *Sustainable Cities and Society*, 75.

Dagnigno, E. (2020). 'Working Anytime, Anywhere' and Working Time Provisions. Insights from the Italian Regulation of Smart Working and the Right to Disconnect. *E-Journal of International and Comparative Labour Studies*, 9(3), 1-19.

Daly, Patrick, and Darius Whelan. 2021. "Disability in Employment Equality Law: A Reappraisal of the Reasonable Accommodation Duty and Issues Arising in Its Implementation." *Maastricht Journal of European and Comparative Law* 28 (6): 744–59. https://doi.org/10.1177/1023263X211035268.

DARES (2018) "Quels liens entre les usages professionnels des outils numériques et les conditions de travail?", DARES analyses, 29. Available at: https://dares.travail-emploi.gouv.fr/sites/default/files/pdf/2018-029.pdf

Davis, K.G., Kotowski, S.E., Daniel, D., Gerding, T., Naylor, J., & Syck, M. (2020). 'The home office: ergonomic lessons from the new normal." *Ergonomics in Design*, 28(4), 4-10.

De Stefano, V. & Taes, S. (2021). "Algorithmic management and collective bargaining." Foresight brief. European Trade Union Institute, https://www.etui.org/publications/algorithmic-management-and-collective-bargaining

DeFilippis, E., Impink, S.M., Singell, M., Polzer, J.T., & Sadun, R. (2020). "Collaborating during coronavirus: The impact of COVID-19 on the nature of work", Working Paper N. 27612, National Bureau of Economic Research, Massachusetts.

Degryse, C. (2016). "Digitalisation of the Economy and its Impact on Labour Markets", ETUI Research Paper – Working Paper 2016.02, available at SSRN: https://ssrn.com/abstract=2730550 or http://dx.doi.org/10.2139/ssrn.2730550

Delventhal, M.J., Kwon, E., & Parkhomenko, A. (2022). How do cities change when we work from home?, *Journal of Urban Economics*, Vol. 127. doi.org/10.1016/j.jue.2021.103331

Dén-Nagy, I. (2014), "A double-edged sword? A critical evaluation of the mobile phone in creating work-life balance", *New Technology, Work and Employment*, 29(2), 193-211.

DESI (2021). The Digital Economy and Society Index, available at: https://digital-strategy.ec.europa.eu/en/policies/desi

Dewan, S., & Riggins, F.J. (2005). "The digital divide: current and future research directions", *J. Assoc. Inf. Syst.* 6 (12), 298–337.

DiMaggio, P., Hargittai, E., Celeste, C., & Shafer, S. (2004). “From unequal access to differentiated use: a literature review and agenda for research on digital inequality”, *Soc. Inequality,* 1, 355–400.

Dingel, J.I., & Neiman, B. (2020). “How many jobs can be done at home?”, *Journal of Public Economics*, 189, 104235.

DLA Piper. (2020, December 21). Recording Working Hours: Requirements across the European Union. Insights, available at: https://www.dlapiper.com/en/uk/insights/publications/2020/12/recording-working-hours-requirements-across-the-european-union/

Dolce, V., Vayre, E., Molino, M., & Ghislieri, C. (2020). “Far Away, So Close? The Role of Destructive Leadership in the Job Demands–Resources and Recovery Model in Emergency Telework”, *Social Sciences*, 9(11), 19.

Döring, N., De Moor, K., Fiedler, M., Schoenenberg, K., & Raake, A. (2022). “Videoconference Fatigue: A Conceptual Analysis”, *International Journal of Environmental Research and Public Health*, 19(4).

Drut, B. (2022), The Impact of remote working on real estate prices is far from trivial, CPR Asset management, available at: https://www.cpr-am.lu/retail/Local-Content/Actualites/The-impact-of-remote-working-on-real-estate-prices-is-far-from-trivial

EAW (2021). How Resilient Are European Offices To Working From Home?, available at: https://www.aew.com/research/strong-resilience-for-regional-european-offices

EBF-BCESA, ESBG, EACB, & Uni Global Union (2018), Joint Declaration on the Impact of Digitalisation on Employment, available at: https://www.ebf.eu/wp-content/uploads/2018/12/EBF_035086-JD-on-Digitalisation-30-November-2018-Signed.pdf

EIGE (2021). Gender equality and the socio-economic impact of the COVID-19 pandemic, European Institute for Gender Equality, Vilnius. Available at: https://eige.europa.eu/publications/gender-equality-and-socio-economic-impact-covid-19-pandemic

Emmanuel, N., & Harrington, E. (2020). Working remotely? Selection, treatment and the market provision of remote work, available at: https://scholar.harvard.edu/files/eharrington/files/remote_work.p

ETUC (2016). “ETUC Resolution on Digitalisation towards Fair Digital Work”, available at: https://www.etuc.org/sites/default/files/document/files/en-resol.digitalisation_adopted.pdf

ETUC (2021a). ETUC Position on the Right to Disconnect, available at: https://www.etuc.org/en/document/etuc-position-right-disconnect#:~:text=Description%20of%20the%20right%20to,or%20collectively%20agreed%20working%20time.

ETUC (2021b). ETUC Position on the EU Strategic Framework on Health and Safety at Work 2021-2027, available at: https://www.etuc.org/en/document/etuc-position-eu-strategic-framework-health-and-safety-work-2021-2027

ETUC (2022). “European Unions and Employers Sign Historic Deal”, available at: https://www.etuc.org/en/pressrelease/european-unions-and-employers-sign-historic-deal

ETUC (2022). Resolution on the Proposal of the European Commission of a Directive on Improving Working Conditions in Platform Work and Way Forward Ahead of the Ordinary Legislative Procedure, available at: https://www.etuc.org/en/document/etuc-resolution-proposal-european-commission-directive-improving-working-conditions

ETUC, ETUI, EPSU, Uni Global Union, & EFBWW (2012). ETUC Demands EU Action on MSDs, available at: https://www.etuc.org/sites/default/files/MSDs_-_ETUC-ETUI-EPSU-UNI-EFBWW_statement_1.pdf

ETUC, UNICE, UEAPME, & CEEP (2002). Framework Agreement on Telework, available at: https://resourcecentre.etuc.org/sites/default/files/2020-09/Telework%202002_Framework%20Agreement%20-%20EN.pdf

ETUC, UNICE, UEAPME, & CEEP (2004). Work-Related Stress: Framework Agreement on Work-Related Stress, available at: https://resourcecentre.etuc.org/sites/default/files/2019-09/Work-related%20Stress%202004_Framework%20Agreement%20-%20EN.pdf

ETUC, UNICE, UEAPME, & CEEP (2006). “Implementation of the European Framework Agreement on Telework: Report by the European Social Partners”, available at: http://erc-online.eu/wp-content/uploads/2014/04/2006-01429-EN.pdf

ETUC, UNICE, UEAPME, & CEEP (2020). Framework Agreement on Digitalisation, available at: https://www.etuc.org/system/files/document/file2020-06/Final%2022%2006%2020_Agreement%20on%20Digitalisation%202020.pdf

ETUI (2021). “How the pandemic has worsened work-related psychosocial risks”, available at: https://www.etui.org/news/how-pandemic-has-worsened-work-related-psychosocial-risks

EU-OSHA (2021). Regulating telework in a post-COVID-19 Europe. Luxembourg: Publications Office of the European Union, available at: https://doi.org/10.2802/125499

EU-OSHA (2021a). Regulating telework in a post-COVID-19 Europe, European Agency for Safety and Health at Work, Luxembourg: Publications Office of the European Union,.

EU-OSHA (2021b). Telework and health risks in the context of the COVID-19 pandemic: evidence from the field and policy implications, European Agency for Safety and Health at Work, Luxembourg: Publications Office of the European Union.

EU-OSHA (2021c). Home-based teleworking and preventive occupational safety and health measures in European workplaces: evidence from ESENER-3, European Risk Observatory, European Agency for Safety and Health at Work. Luxembourg: Publications Office of the European Union.

EU-OSHA (2021d). Teleworking during the COVID-19 pandemic: risks and prevention strategies. European Risk Observatory, European Agency for Safety and Health at Work. Luxembourg: Publications Office of the European Union.

EU-OSHA (2022). Teleworking regulations are changing – so what do employers need to know? Retrieved from: https://healthy-workplaces.eu/en/media-centre/news/teleworking-regulations-are-changing-so-what-do-employers-need-know

Eurofound (2015). Opting out of the European Working Time Directive. Luxembourg: Publications Office of the European Union, available at: https://data.europa.eu/doi/10.2806/380

Eurofound (2015). Opting out of the European Working Time Directive. Luxembourg: Publications Office of the European Union, https://data.europa.eu/doi/10.2806/380

Eurofound (2019). Rest breaks from work: Overview regulations, research and practice. Luxembourg: Publications Office of the European Union, https://doi.org/10.2806/659134

Eurofound (2019). Rest breaks from work: Overview regulations, research and practice. Luxembourg: Publications Office of the European Union,. https://doi.org/10.2806/659134

Eurofound (2020). Regulations to address work-life balance in digital flexible working arrangements (New forms of employment series). Luxembourg: Publications Office of the European Union, https://www.eurofound.europa.eu/publications/report/2020/regulations-to-address-work-life-balance-in-digital-flexible-working-arrangements

Eurofound (2020a). Telework and ICT-based mobile work: Flexible working in the digital age. Luxembourg: Publications Office of the European Union.

Eurofound (2020b). Living, working and COVID-19, COVID-19 series. Luxembourg: Publications Office of the European Union.

Eurofound (2020c). Employee monitoring and surveillance: The challenges of digitalisation. Luxembourg: Publications Office of the European Union.

Eurofound (2020d). Regulations to address work-life balance in digital flexible working arrangements (New forms of employment series). Luxembourg: Publications Office of the European Union, https://www.eurofound.europa.eu/publications/report/2020/regulations-to-address-work-life-balance-in-digital-flexible-working-arrangements

Eurofound (2021). Right to disconnect: Exploring company practices. Luxembourg: Publications Office of the European Union.

Eurofound (2021). Working time in 2019–2020. Luxembourg: Publications Office of the European Union, https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef21038en.pdf

Eurofound (2021a). The digital age: Implications of automation, digitisation and platforms for work and platforms for work and employment. Luxembourg: Publications Office of the European Union, available at: https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef21007en.pdf

Eurofound (2021c). Working time in 2019-2020. Luxembourg: Publications Office of the European Union, available at: https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef21038en.pdf

Eurofound (2022a). Overtime in Europe: Regulation and practice. Luxembourg: Publications Office of the European Union.

Eurofound (2022b). Telework in the EU: Regulatory frameworks and recent updates. Luxembourg: Publications Office of the European Union, available at: https://www.eurofound.europa.eu/publications/report/2022/telework-in-the-eu-regulatory-frameworks-and-recent-updates

Eurofound (2022c). People with disabilities and the COVID-19 pandemic: Findings from the Living, working and COVID-19 e-survey, COVID-19 series. Luxembourg: Publications Office of the European Union.

Eurofound (2022d). Telework and teleworkability during COVID: An analysis using LFS data. Working paper. Available at: https://www.researchgate.net/publication/361851823_Telework_and_teleworkability_during_COVID_An_analysis_using_LFS_data

Eurofound (2022d). Working conditions and sustainable work. Is telework really 'greener'? An overview and assessment of its climate impacts. Luxembourg: Publications Office of the European Union.

Eurofound (2022f). Social dialogue and collective bargaining in the hospital sector during the COVID-19 pandemic. Luxembourg: Publications Office of the European Union.

Eurofound (2022g). The rise in telework: Impact on working conditions and regulations. Luxembourg: Publications Office of the European Union.

Eurofound (forthcoming b). Telework during the pandemic: Prevalence, working conditions and regulations. Luxembourg: Publications Office of the European Union.

European Commission (2008). Report on the Implementation of the European Social Partners' Framework Agreement on Telework, available at: http://erc-online.eu/wp-content/uploads/2015/03/LexUriServ.do_.pdf

European Commission (2017). Report from the Commission to the European Parliament, the Council and the European Economic and Social Committee. Report on the implementation by Member States of Directive 2003/88/EC concerning certain aspects of the organisation of working time. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52017DC0254&qid=1653909370065

European Commission (2019). Report of the high-level expert group on the impact of the digital transformation of the EU labour markets. Luxembourg: Publications Office of the European Union.

European Commission, Directorate-General for Employment, Social Affairs and Inclusion (2021). Employment and social developments in Europe 2021 : towards a strong social Europe in the aftermath of the COVID-19 crisis : reducing disparities and addressing distributional impacts : annual review. Luxembourg: Publications Office of the European Union, available at: https://data.europa.eu/doi/10.2767/57771

European Commission, Directorate-General for Employment, Social Affairs and Inclusion (2022). Employment and social developments in Europe 2022: Young Europeans: employment

and social challenges ahead. Luxembourg: Publications Office of the European Union, available at: https://ec.europa.eu/social/BlobServlet?docId=25875&langId=en

Fana, M., Francesco Sabato, M., & Moro, A. (2021). “Autonomy and control in mass remote working during the Covid-19 pandemic: Evidence from a cross-professional and cross-national analysis”, LEM Working Paper Series, 2021/28, Scuola Superiore Sant”Anna, Laboratory of Economics and Management (LEM), Pisa.

Fana, M., Milasi, S., Napierala, J., Fernández-Macías, E., & González Vázquez, I. (2020a). Telework, work organisation and job quality during the COVID-19 crisis. A qualitative Study. JRC Working Papers Series on Labour, Education and Technology, 2020/11.

Farré, L., Fawaz, Y., González, L., & Graves, J. (2020). “How the COVID-19 lockdown affected gender inequality in paid and unpaid work in Spain”, IZA Institute of Labor Economics, Discussion Papers Series, No. 13434. Available at: http://ftp.iza.org/dp13434.pdf

Felstead, A., & G. Henseke (2017). “Assessing the Growth of Remote Working and Its Consequences for Effort, Well-being and Work-life Balance”, *New Technology, Work and Employment,* 32, 195-212.

Felstead, A., Jewson, N., & Walters, S. (2003). “Managerial control of employees working at home”, *British Journal of Industrial Relations*, 41(2), 241-264.

Fernandes, N. (2020). “Economic effects of coronavirus outbreak (COVID-19) on the world economy.” Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3557504

Fernández-Macías, E., & Bisello, M. (2022). “A comprehensive taxonomy of tasks for assessing the impact of new technologies on work”, *Social Indicators Research*, 159(2), 821-841.

Fukushima, N., Machida, M., Kikuchi, H., Amagasa, S., Hayashi, T., Odagiri, Y., & Inoue, S. (2021). “Associations of working from home with occupational physical activity and sedentary behavior under the COVID-19 pandemic”, *Journal of Occupational Health*, 63(1).

Gadeyne, N., Verbruggen, M., Delanoeije, J., & De Cooman, R. (2018). “All wired, all tired? Work-related ICT-use outside work hours and work-to-home conflict: The role of integration preference, integration norms and work demands”, *Journal of Vocational Behavior*, 107, 86-99.

García González, G. (2020). El derecho a la desconexión digital de los empleados públicos: alcance y significado de un derecho emergente en el contexto de la crisis sanitaria. Available at: https://dialnet.unirioja.es/servlet/articulo?codigo=7672989

Gardner, D.M., Lauricella, T., Ryan, A.M., Wadlington, P., & Elizondo, F. (2021). “Managing boundaries between work and non-work domains: Personality and job characteristics and adopted style”, *Journal of Occupational and Organizational Psychology*, 94(1), 132-159.

Garrote, D.G., Parra, N.G., Ozden, C., & Rijkers, B. (2020). “Which jobs are most vulnerable to COVID-19? What an analysis of the European Union reveals.” World Bank Research and Policy Briefs, 34. https://doi.org/10.1596/33737

Ghislieri, C., Molino, M., Dolce, V., Sanseverino, D., & Presutti, M. (2021). “Work-family conflict during the Covid-19 pandemic: Teleworking of administrative and technical staff in healthcare. An Italian study. *La Medicina Del Lavoro*, 112(3), 229-240. https://doi.org/10.23749/mdl.v112i3.11227

Ghobadi, S., & Ghobadi, Z. (2015). How access gaps interact and shape digital divide: A cognitive investigation. *Behaviour & Information Technology*, 34(4), 330-340. https://doi.org/10.1080/0144929X.2013.833650

Gibbs, M., Mengel, F., & Siemroth, C. (2021). “Work from home and productivity: Evidence from personnel and analytics data on IT professionals, Becker Friedman Institute for Economics Working Paper (2021-56), Chicago, IL: University of Chicago.

Glass, J.L., & Noonan, M.C. (2016). “Telecommuting and Earnings Trajectories Among American Women 1998-2008”, *Social Forces*, Vol. 95, No. 1, pp. 217-250.

Golden, T. (2012). “Altering the Effects of Work and Family Conflict on Exhaustion: Telework During Traditional and Nontraditional Work Hours”, *Journal of Business Psychology*, Vol. 27, No. 3, pp. 255-269.

Golden, T.D., & Eddleston, K.A. (2020). “Is there a price telecommuters pay? Examining the relationship between telecommuting and objective career success”, *Journal of Vocational Behavior*, 116.

Golden, T.D., & Gajendran, R.S. (2019). “Unpacking the role of a telecommuters’ job in their performance: examining job complexity, problem solving, interdependence, and social support. *Journal of Business and Psychology*, 34(1), 55-69.

Goos, M. & Manning, A., & Salomons, A. (2009). “Job Polarization in Europe”, *American Economic Review*, 99(2) 58-63

Goos, M., Manning, A., & Salomons, A. (2014). “Explaining job polarization: Routine-biased technological change and offshoring”, *American Economic Review*, 104(8), 2509-26.

Greer, T.W., & Payne, S.C. (2014). Overcoming telework challenges: Outcomes of successful telework strategies. *Psychologist-Manager Journal*, 17(2), 87.

Grzegorczky, M., Nurski, L., & Schraepen, T. (2022). “Cross-border telework in the EU: fab or fad? Bruegel Blog, 12 September 2022, https://www.bruegel.org/blog-post/cross-border-telework-eu-fab-or-fad

Grzegorczyk, M., Mariniello, M., Nurski, L., & Schraepen, T. (2021). “Blending the physical and virtual: a hybrid model for the future of work”, Policy Contribution 14/2021, Bruegel.

Gschwind, L., & Vargas, O. (2019). “Telework and its effects in Europe”. In Messenger, J.C. (Ed.), *Telework in the 21st century: an evolutionary perspective*, Edward Elgar Publishing.

Guerra, V. (2021). Right to disconnect – SMEunited calls on the European Parliament to respect the role of Social Partners, available at: https://www.smeunited.eu/news/smeunited-calls-on-the-european-parliament-to-respect-the-role-of-social-partners

Hargittai, E. (2002). Second-level digital divide: differences in people’s. Online Skills. First Monday 7. Available at: http://www.firstmonday.org/issues/issue7_4/hargittai

Helmerich, K. (2021, September 24). Germany: Time recording at work – Works council’s right of initiative? Simmons & Simmons. https://www.simmons-simmons.com/en/publications/ckty6x3ea1p100a06s2ur9dhx/germany-time-recording-at-work---works-council-s-right-of-initiative

Hensher, D.A., Beck, M.J., & Wei, E. (2021). Working from home and its implications for strategic transport modelling based on the early days of the COVID-19 pandemic. *Transportation research. Part A, Policy and practice*, 148, 64–78. https://doi.org/10.1016/j.tra.2021.03.027

Hesselberth, P. (2018). “Discourses on disconnectivity and the right to disconnect”, *New Media & Society*, 20(5), 1994-2010.

Hirsch-Kreinsen, H., & ten Hompel, M (2020) Digitalisierung industrieller Arbeit Entwicklungsperspektiven und Gestaltungsansätze. In: Vogel-Heuser, B. et al. (Eds.), *Handbuch Industrie 4.0*, Springer NachschlageWissen, 1-18.

Huws, U., Spencer, N.H., & Syrdal, D.S. (2018). “Online, on call: The spread of digitally organised just-in-time working and its implications for standard employment models”, *New Technology, Work and Employment*, 33(2), 113-129. https://doi.org/10.1111/ntwe.12111

Hyman R. (1991). “Plus ça change? The theory of production and the production of theory”. In: A. Pollert (Ed.) (1991), *Farewell to flexibility?* , pp. 259-283. Blackwell.

IDEWE (2021). NWOW en werknemerswelzijn: IDEWE-onderzoek legt opvallende inzichten bloot, web page, available at https://www.idewe.be/resultaten-studie-new-way-of-working, accessed 26 August 2022.

Igeltjørn, A., & Habib, L. (2020). “Homebased telework as a tool for inclusion? A literature review of telework, disabilities and work-life balance”. In: International Conference on Human-Computer Interaction, Springer, 420-436.

ILO (2016). Non-standard employment around the world. Understanding challenges, shaping prospects. Geneva, Switzerland: International Labour Office.

ILO (2016). Remembering rest periods in law: Another tool to limit excessive working hours. Geneva, Switzerland: International Labour Office

Ingusci, E., Signore, F., Giancaspro, M.L., Manuti, A., Molino, M., Russo, V., Zito, M., & Cortese, C.G. (2021). "Workload, Techno Overload, and Behavioral Stress During COVID-19 Emergency: The Role of Job Crafting in Remote Workers", *Frontiers in Psychology*, 12.

Ius Laboris (2018, June 6). EU Countries Apply Working Hour Directive Similarly. https://iuslaboris.com/insights/eu-countries-apply-working-hour-directive-similarly/

Ius Laboris (2020, November 24). Time Recording in the EU. https://iuslaboris.com/insights/eu-time-recording-obligations/

Ius Laboris (2021, March 18). When does stand-by time count as working time? The European Court of Justice clarifies. https://iuslaboris.com/insights/when-does-stand-by-time-count-as-working-time-the-european-court-of-justice-clarifies/

Jeske, D. (2022), "Remote workers' experiences with electronic monitoring during Covid-19: Implications and recommendations", *International Journal of Workplace Health Management*. https://doi.org/10.1108/IJWHM-02-2021-0042

Jostell, D., & Hemlin, S. (2018). "After hours teleworking and boundary management: Effects on work-family conflict", *Work*, 60(3): 475-483.

Junge, K. (2021). "The impact of teleworking and digital work on workers and society – Case study on Germany (Annex IV)., available at: https://www.europarl.europa.eu/RegData/etudes/STUD/2021/662904/IPOL_STU(2021)662904(ANN02)_EN.pdf

Kalischko, T., & Riedl, R. (2021). "Electronic performance monitoring in the digital workplace: conceptualization, review of effects and moderators, and future research opportunities", *Frontiers in Psychology*, 1457.

Kao, K.-Y., Chi, N.-W., Thomas, C.L., Lee, H.-T., & Wang, Y.-F. (2020). "Linking ICT Availability Demands to Burnout and Work-Family Conflict: The Roles of Workplace Telepressure and Dispositional Self-Regulation", *Journal of Psychology: Interdisciplinary and Applied*, 154(5), 325–345.

Karimikia, H., Singh, H., & Joseph, D. (2021). "Negative outcomes of ICT use at work: Meta-analytic evidence and the role of job autonomy", *Internet Research*, 31(1), 159-190.

Kéfer, F. (2021, May). The Right to Disconnect. A Response to One of the Challenges Raised by the Digital Transition? European and Belgian perspectives. https://orbi.uliege.be/handle/2268/259740

Kelliher, C. & de Menezes, L.M. (2019). Flexible Working in Organisations: A Research Overview, Abingdon: Routledge.

Kelliher, C., & Anderson, D. (2010). "Doing more with less? Flexible working practices and the intensification of work", *Human Relations*, 63(1), 83–106. https://doi-org.are.uab.cat/10.1177/0018726709349199

Kellogg, K.C., Valentine, M.A., & Christin, A. (2020). Algorithms at work: The new contested terrain of control. *Academy of Management Annals*, 14(1), 366-410.

Kelly, E.L., & Moen, P. (2020). Overload. How good jobs went bad and what we can do about it. Princeton and Oxford: Princeton University Press.

Kertész. G. (2019). Slavery Act: Modification of the Hungarian Labour Code – Legal Analysis. *Management Studies*, 7(4), 338-345.

Keyriläinen, M. (2021), Working Life Barometer 2020, 2021:36, Helsinki: Ministry of the Economic Affairs and Employment.

Khilnani, A., Schulz, J., & Robinson, L. (2020). "The COVID-19 pandemic: new concerns and connections between eHealth and digital inequalities", *Journal of Information, Communication and Ethics in Society*, 18 (3), 393-403.

KIM (Kennisinstituut voor Mobiliteitsbeleid) (2020), Thuiswerken en de coronacrisis: Een overzicht van studies naar de omvang, beleving en toekomstverwachting van thuiswerken in coronatijd, The Hague.

Kim, T., Mullins, L.B., & Yoon, T. (2021). "Supervision of Telework: A Key to Organizational Performance", *American Review of Public Administration*, 51(4), 263–277.

Knardahl, S., & Christensen, J.O. (2022). “Working at home and expectations of being available: Effects on perceived work environment, turnover intentions, and health”, *Scandinavian Journal of Work, Environment and Health*, 48(2), 99–108. https://doi.org/10.5271/sjweh.3996

Koohsari, M.J., Nakaya, T., McCormack, G.R., Shibata, A., Ishii, K., & Oka, K. (2021). ‘Changes in workers’ sedentary and physical activity behaviors in response to the COVID-19 pandemic and their relationships with fatigue: longitudinal online study.” *JMIR Public Health and Surveillance*, 7(3), e26293.

Koslowski, A., Blum, S., Dobrotic, I., Kaufman, G., & Moss, P. (2021). 17th International Review of Leave Policies and Related Research.

KPMG (2021). Barometer on working conditions in the COVID-19 era.

KPMG International (2021) “Work from Anywhere: Insights from the research and government perspective”, Global Webcast Participant Survey, 28 September 2021

Kratzer, N. (2020). “Arbeitsintensität und Arbeitsintensivierung”, *WSI Mitteilungen,* 73 (1), 3-10.

Krause, A., Berset, M., & Peters, K. (2015). “Interessierte Selbstgefährdung- von der direkten zur indirekten Steuerung”, *Arbeitsmedizin Sozialmedizin Umweltmedizin*, 50 (3), 163-170.

Kuhn, K.M. (2022), “The constant mirror: Self-view and attitudes to virtual meetings”, *Computers in Human Behavior*, 128.

Kunze, F., Hampel, K., & Zimmermann, S. (2020), Homeoffice in der Corona-Krise – eine nachhaltige Transformation der Arbeitswelt? Konstanz: University of Konstanz.

Laker, B., Godley, W., Patel, C., & Cobb, D. (2020). “How to monitor remote workers ethically”, MIT Sloan Management Review. Available at: https://centaur.reading.ac.uk/93709/

Larsen, T.P., & Andersen, S.K. (2007). A New Mode of European Regulation? The Implementation of the Autonomous Framework Agreement on Telework in Five Countries. *European Journal of Industrial Relations*, 13(2), 181-198. https://doi.org/10.1177/0959680107078252

Laß, I., & Wooden, M. (2022). “Weekend work and work–family conflict: Evidence from Australian panel data”, *Journal of Marriage and Family*, 84(1), 250-272.

Leccese, V. (2022). Monitoring working time and Working Time Directive 2003/88/EC: a purposive approach. 14.

Lee, J. (2016), “Drivers and Consequences in Transforming Work Practices”, in Lee, J. (Ed.) The Impact of ICT on Work, pp. 71-92. Singapore: Springer.

Lerouge, L. (2020). “The right to disconnect from the workplace: Strengths and weaknesses of the French legal framework”. In: Hall, C., & Mella, L. (Eds.), *Labour Law and the Gig Economy: Challenges posed by the digitalisation of labour processes*, p. 222–229, New York: Routledge,.

Lerouge, L., & Trujillo Pons, F. (2022). Contribution to the study on the ‘right to disconnect’ from work. Are France and Spain examples for other countries and EU law? *European Labour Law Journal*, 13(3), 450-465. https://doi.org/10.1177/20319525221105102

Liebermann, S.C., Blenckner, K., Diehl, J.-H., Feilke, J., Frei, C., Grikscheit, S., Hünsch, S., Kohring, K., Lay, J., Lorenzen, G., & Reinhardt, J. (2021). “Abrupt Implementation of Telework in the Public Sector during the COVID-19 Crisis: Challenges to Transformational Leadership”, *Zeitschrift Fur Arbeits- Und Organisationspsychologie*, 65(4), 258-266.

Litchfield, I., Shukla, D., & Greenfield, S. (2021). “Impact of COVID-19 on the digital divide: a rapid review”, *BMJ Open*, 11(10), e053440.

Lott, Y. (2018). “Does flexibility help employees switch off from work? Flexible working-time arrangements and cognitive work-to-home spillover for women and men in Germany”, *Social Indicators Research*, 1-24.

Lott, Y., & Abendroth, A.K. (2020). “The non-use of telework in an ideal worker culture: why women perceive more cultural barriers”, *Community, Work & Family*, 23(5), 593-611.

Lund, S., Madgavkar, A., Manyika, J., & Smit, S. (2020). “What’s next for remote work: An analysis of 2,000 tasks, 800 jobs, and nine countries.” *McKinsey Global Institute*, 1-13.

Magnavita, N., Tripepi, G., & Chiorri, C. (2021). “Telecommuting, off-time work, and intrusive leadership in workers” well-being”, *International Journal of Environmental Research and Public Health*, 18(7). https://doi.org/10.3390/ijerph18073330

Magnusson, C. (2019). “Flexible time–but is the time owned? Family friendly and family unfriendly work arrangements, occupational gender composition and wages: a test of the mother-friendly job hypothesis in Sweden”, *Community, Work & Family*, 1-24.

Masoodi, M.J., Abdelaal, N., Tran, S., Stevens, Y., Andrey, S., & Bardeesy, K. (2021). Workplace Surveillance and Remote Work: Exploring the Impacts and Implications Amidst Covid-19 in Canada. Retrieved from: https://www.cybersecurepolicy.ca/workplace-surveillance

Mazmanian, M., Orliowski, W., & Yates, J. (2016). “The autonomy paradox: the implications of mobile email devices for knowledge professionals”, *Organization Science*, 24(5), 1337-1357.

McDaniel, B.T., O’Connor, K., & Drouin, M. (2021). “Work-related technoference at home and feelings of work spillover, overload, life satisfaction and job satisfaction”, *International Journal of Workplace Health Management*, 14(5), 526-541.

McDonald, K.S., Hite, L.M., & O’Connor, K.W. (2022), “Developing sustainable careers for remote workers”, *Human Resource Development International*, 25(2), 182-198.

McKinsey (2020), “Executive views on the future of work”, available at: https://covid.mckinsey.com/future-of-work

Mercier, M., Vinchon, F., Pichot, N., Bonetto, E., Bonnardel, N., Girandola, F., & Lubart, T. (2021). “COVID-19: A Boon or a Bane for Creativity?”, *Frontiers in Psychology*, 11. https://doi.org/10.3389/fpsyg.2020.601150

Messenger, J.C., & Gschwind, L. (2016). “Three generations of Telework: New ICT s and the (R) evolution from Home Office to Virtual Office”, *New Technology, Work and Employment*, 31(3), 195-208.

MITES (2022). “Algorithmic information in the workplace. Guide to corporate obligations on the use of algorithmic information in the workplace and instrument for practical application”, Ministerio de Trabajo y Economía Social. Retrieved from: https://www.lamoncloa.gob.es/serviciosdeprensa/notasprensa/trabajo14/Documents/2022/100622-Guia_algoritmos.pdf

Moens, E., et al. (2022). The COVID-19 crisis and telework: a research survey on experiences, expectations and hopes." *European Journal of Health Economics* 23.4 (2022): 729-753.

Mondragon, J.A., & Wieland, J. (2022). Housing Demand and remote work, NBER Working Paper No. 30041, available at http://www.nber.org/papers/w30041

Moon, N.W., Linden, M.A., Bricout, J.C., & Baker, P. (2014). Telework rationale and implementation for people with disabilities: Considerations for employer policymaking. *Work*, 48(1), 105-115.

Moretti, A., Menna, F., Aulicino, M., Paoletta, M., Liguori, S., & Iolascon, G. (2020), ‘Characterization of home working population during COVID-19 emergency: a cross-sectional analysis.” *International Journal of Environmental Research and Public Health*, 17(17), 6284.

Mullan, K., & Wajcman, J. (2019). ‘Have mobile devices changed working patterns in the 21st century? A time-diary analysis of work extension in the UK’, *Work, Employment and Society*, 33(1), 3-20.

Munsch, C.L. (2016). “Flexible work, flexible penalties: The effect of gender, childcare, and type of request on the flexibility bias”, *Social Forces*, 94(4), 1567-1591.

Nagel, L. (2020). “The influence of the COVID-19 pandemic on the digital transformation of work”. *International Journal of Sociology and Social Policy*, 40(9–10), 861-875.

Nikos Poulantzas Institute (2021). Working conditions in Greece: Experiences and attitudes concerning the labour market.

Nowak, T. (2018). The turbulent life of the Working Time Directive. *Maastricht Journal of European and Comparative Law*, 25(1), 118-129. https://doi.org/10.1177/1023263X18760547

Oakman, J., Kinsman, N., Stuckey, R., Graham, M., & Weale, V. (2020). “A rapid review of mental and physical health effects of working at home: how do we optimise health?”, *BMC Public Health*, 20(1), 1825.

OECD (2001). "Understanding the Digital Divide", OECD Digital Economy Papers, No. 49. Paris: OECD Publishing, https://doi.org/10.1787/236405667766.

Ojala, S., & Nätti, J. (2014). “Informal overtime at home instead of telework: increase in negative work-family interface”, *International Journal of Sociology and Social Policy*, 34 (1-2), 69-87.

Okabe-Miyamoto, K., Durnell, E., Howell, R. T., & Zizi, M. (2021), “Did zoom bomb? Negative video conferencing meetings during COVID-19 undermined worker subjective productivity”, *Human Behavior and Emerging Technologies*, 3(5), 1067-1083.

Oksanen, A., Oksa, R., Savela, N., Mantere, E., Savolainen, I., & Kaakinen, M. (2021). “COVID-19 crisis and digital stressors at work: A longitudinal study on the Finnish working population”, *Computers in Human Behavior*, 122.

Ono, H. (2022). “Telework in a Land of Overwork: It”s Not That Simple or Is It?”, *American Behavioral Scientist*, 00027642211066038, https://doi.org/10.1177/00027642211066038

Ono, H., & Mori, T. (2021). “COVID-19 and Telework: An International Comparison”, *Journal of Quantitative Description: Digital Media*, 1. https://doi.org/10.51685/jqd.2021.004

Owl Labs (2021). “State of Hybrid Work: Europe Edition”, available at: https://resources.owllabs.com/state-of-hybrid-work/2021/europe

Pak, S., Kramer, A., Lee, Y., & Kim, K.-J. (2021). “The impact of work hours on work-to-family enrichment and conflict through energy processes: A meta-analysis”, *Journal of Organizational Behavior.* https://doi.org/10.1002/job.2595

Pansu, L. (2018). “Evaluation of “Right to Disconnect” Legislation and Its Impact on Employees’ Productivity”, *International Journal of Management and Applied Research*, 5(3), 99-119.

Park, Y., Liu, Y., & Headrick, L. (2020). “When work is wanted after hours: Testing weekly stress of information communication technology demands using boundary theory. *Journal of Organizational Behavior*, 41(6), 518–534

Perrigino, M.B., & Raveendhran, R. (2020). “Managing remote workers during quarantine: Insights from organizational research on boundary management. *Behavioral Science and Policy*, 6(2), 87-94.

Pfaffinger, K.F., Reif, J.A., & Spieß, E. (2020). “When and why telepressure and technostress creators impair employee well-being”, *International Journal of Occupational Safety and Ergonomics*, 28(2), 958-973.

Pfnür, A., Gauger, F., Bachtal, Y., & Wagner, B. (2021), “Homeoffice im Interessenkonflikt. Ergebnisbericht einer empirischen Studie”. In: Pfnür, A. (Ed.), *Arbeitspapiere zur immobilienwirtschaftlichen Forschung und Praxis*, Vol. 41, Darmstadt: Technische Universität Darmstadt.

Pinto Ramos, M. et al. (2022, March 9). The right to disconnect – Or as Portugal calls it – The duty of absence of contact. *Global Workplace Law & Policy*. Available at: http://global-workplace-law-and-policy.kluwerlawonline.com/2022/03/09/the-right-to-disconnect-or-as-portugal-calls-it-the-duty-of-absence-of-contact/

Plets, I. (2019). Stand-by Time Outside the Workplace: Working and/or Paid Time? *International Labor Rights Case Law*, 5(3), 361-365. https://doi.org/10.1163/24056901-00503021

Pollert, A. (Ed.) (1991). *Farewell to flexibility?* Blackwell.

PricewaterhouseCoopers (2021). “Hopes and fears 2021: The views of 32,500 workers”, available at: https://www.pwc.com/gx/en/issues/upskilling/hopes-and-fears.html

PricewaterhouseCoopers. (2020, February 18). Periods of stand-by as working time – The Brussels Labour Court rules in the Matzak case, https://www.pwclegal.be/en/news/periods-of-stand-by-as-working-time---the-brussels-labour-court-.html

Prieto, C. (2014). “From flexicurity to social employment regimes.” In: Keune, M., & Serrano, A. (Eds.), *Deconstructing flexicurity and developing alternative approaches*, pp. 47-67. Routledge.

Profesia (2021), 'V práci nie sme samotári: Po roku a pol s pandémiou chce pracovať z domu iba 8% Slovákov', 23 September. Available at: https://firma.profesia.sk/v-praci-nie-sme-samotari-po-roku-pol-s-pandemiou-chce-pracovat-z-domu-iba-8-percent-slovakov/

Prosser, T. (2011). "The Implementation of the Telework and Work-Related Stress Agreements: European Social Dialogue through 'Soft' Law?" *European Journal of Industrial Relations*, 17 (3): 245-60.

Qiu, F., & Dauth, T. (2022). "Virtual work intensity, job satisfaction, and the mediating role of work-family balance: A study of employees in Germany and China", *German Journal of Human Resource Management*, 36(1), 77–111.

Ragnedda, M. (2017). *The third digital divide: A Weberian approach to digital inequalities*. Routledge.

Ramsetty, A., & Adams, C. (2020). "Impact of the digital divide in the age of COVID-19", *Journal of the American Medical Informatics Association*, 27(7), 1147-1148.

Randstad Greece (2021). "Randstad Workmonitor 2021: Αισιοδοξία για τους Έλληνες εργαζόμενους για την μετά Covid-19 εποχή", web page. Available at https://www.randstad.gr/h-randstad/deltia-typou/randstad-workmonitor-2021-aisiodoksia-gia-toys-ellines/.

Ravid, D.M., White, J.C., Tomczak, D.L., Miles, A.F., & Behrend, T.S., (2022, in press). "A meta-analysis of the effects of electronic performance monitoring on work outcomes." *Personnel Psychology*. Retrieved from: https://osf.io/ef43u/download

Reissner, S.C., Izak, M., & Hislop, D. (2021). "Configurations of Boundary Management Practices among Knowledge Workers", *Work, Employment and Society*, 35(2), 296-315.

Riekhoff, A.J., Krutova, O. & Nätti, J. (2019). "The 24/7 economy and work during unsocial hours in Europe: Examining the influence of labor market dualization, regulation and collective bargaining." *Economic and Industrial Democracy*, 42(4), 1080-1104. https://doi.org/10.1177/0143831X19846330

Rimbau-Gilabert, E., & Pasamar, S. (2021). "New Forms of Work", Santana, M. and Valle-Cabrera, R. (Ed.) New Directions in the Future of Work, pp. 55-76. Bingley: Emerald Publishing Limited.

Robinson, L., Ragnedda, M., & Schulz, J. (2020). "Digital inequalities: contextualizing problems and solutions". *Journal of Information Communication and Ethics in Society*,18 (3), 323-327.

Rodríguez-Nogueira, Ó., Leirós-Rodríguez, R., Benítez-Andrades, J.A., Álvarez-Álvarez, M.J., Marqués-Sánchez, P. & Pinto-Carral, A. (2020). "Musculoskeletal pain and teleworking in times of the COVID-19: analysis of the impact on the workers at two Spanish universities." *International Journal of Environmental Research and Public Health*, 18(1), 31.

Rohwer, E., Flöther, J.-C., Harth, V., & Mache, S. (2022). "Overcoming the "Dark Side" of Technology – A Scoping Review on Preventing and Coping with Work-Related Technostress", *International Journal of Environmental Research and Public Health*, 19(6), 3625. https://doi.org/10.3390/ijerph19063625

Roquelaure, Y. (2018), "Musculoskeletal disorders and psychosocial factors at work", ETUI Research Paper – Report 142. Available at: https://ssrn.com/abstract=3316143 or http://dx.doi.org/10.2139/ssrn.3316143

Rubery, J., Grimshaw, D., Keizer, A., & Johnson, M. (2018). "Challenges and Contradictions in the 'Normalising' of Precarious Work", *Work, Employment and Society*, 32(3), pp. 509-527.

Samek Lodovici, M., et al. (2021). "The Impact of Teleworking and Digital Work on Workers and Society." Policy Department for Economic, Scientific and Quality of Life Policies Directorate-General for Internal Policies. https://www.europarl.europa.eu/RegData/etudes/STUD/2021/662904/IPOL_STU(2021)662904_EN.pdf

Sanz de Miguel, P. (2020). "DEEP VIEW Final Report. Exploring the contribution of social dialogue and collective bargaining in the promotion of decent and productive virtual work", Available at: https://drive.google.com/file/d/1JrHgEDU9swF4KM5H74gOJ0-u_hptKIXK/view

Sanz de Miguel, P. (2020). Exploring the contribution of social dialogue and collective bargaining in the promotion of decent and productive virtual work. Final report. VP/2017/004/0050. DeepView project.

Sanz de Miguel, P., Welz, C., Caprile, M., & Rodríguez Contreras, R. (2020). Industrial democracy in Europe: A quantitative approach. *Labour and Industry*, 30(2), 101-132. https://doi.org/10.1080/10301763.2020.1774101

Sardeshmukh, S.R., Sharma, D., & Golden, T.D. (2012), "Impact of telework on exhaustion and job engagement: A job demands and job resources model", *New Technology, Work and Employment*, 27(3), 193-207.

Schall, M.C., Jr., & Chen, P. (2021), "Evidence-based strategies for improving occupational safety and health among teleworkers during and after the coronavirus pandemic." *Human Factors*, 0018720820984583.

Schmitt, J.B., Breuer, J., & Wulf, T. (2021). "From cognitive overload to digital detox: Psychological implications of telework during the COVID-19 pandemic", *Computers in Human Behavior*, 124.

Schoukens, P., & Barrio, A. (2017). "The changing concept of work: When does typical work become atypical?", *European Labour Law Journal*, 8(4), 306-332.

Selwyn, N. (2004). "Reconsidering political and popular understandings of the digital divide", *New Media Soc*., 6 (3), 341-362.

Sewell, G., & Taskin, L. (2015). "Out of Sight, Out of Mind in a New World of Work? Autonomy, Control and Spatiotemporal Scaling in Telework", *Organization Studies*, Vol. 36, No. 11, pp. 1507-1529.

SGI Europe (2021). Working Time Directive: Contribution to the European Commission's consultation on the transposition and practical implementation. https://sgieurope.org/files/SGI%20Europe%20-%20Contribution%20to%20the%20implementation%20report%20on%20WTD.pdf

Shockley, K.M., Allen, T.D., Dodd, H., & Waiwood, A.M. (2021a). "Remote Worker Communication During COVID-19: The Role of Quantity, Quality, and Supervisor Expectation-Setting", *Journal of Applied Psychology*, 106(10), 1466-1482.

Shockley, K.M., Clark, M.A., Dodd, H., & King, E.B. (2021b). "Work-family strategies during COVID-19: Examining gender dynamics among dual-earner couples with young children", *Journal of Applied Psychology*, 106(1), 15–28.

Silva-C, A. "The attitude of managers toward telework, why is it so difficult to adopt it in organizations?." *Technology in Society,* 59 (2019): 101133.

Smite, D., Tkalich, A., Moe, N.B., Papatheocharous, E., Klotins, E., & Buvik, M.P. (2022)/ "Changes in perceived productivity of software engineers during COVID-19 pandemic: The voice of evidence", *Journal of Systems and Software*, 186.

Snir, R. (2014). "Workaholism, HWI subtypes and beyond – Towards a general model of work investment". In: Harpaz, I., & Sir, R. (Eds.), *Heavy Work Investment. Its Nature, Sources, Outcomes and Future Directions*, London and New York: Routledge.

Sostero, M., Milasi, S., Hurley, J., Fernandez-Macias, E., & Bisello, M. (2020). "Teleworkability and the COVID-19 crisis: a new digital divide?", JRC Working Papers Series on Labour, Education and Technology 2020/05, JRC121193, European Commission.

Spagnoli, P., & Molinaro, D. (2021a). "Negative (Workaholic) emotions and emotional exhaustion: Might job autonomy have played a strategic role in workers with responsibility during the COVID-19 crisis lockdown?", *Behavioral Sciences*, 10(12).

Spilker, M.A., & Breaugh, J.A. (2021). "Potential ways to predict and manage telecommuters" feelings of professional isolation", *Journal of Vocational Behavior*, 131.

Steffensen, D.S., McAllister, C.P., Perrewé, P.L., Wang, G., & Brooks, C.D. (2022). "You've Got Mail": A Daily Investigation of Email Demands on Job Tension and Work-Family Conflict", *Journal of Business and Psychology*, 37(2), 325-338.

Stern, M.J., Adams, A.E. & Elsasser, S. (2009). “How levels of internet proficiency affect usefulness of access across rural, suburban, and urban communities”, *Sociological Inquiry*, 79 (4), 391-417.

Supiot, A. (2001). *Beyond employment: Changes in work and the future of labour law in Europe*. Oxford University Press.

Swedbank (2020). Remote work: How does it affect us in the Baltics? Stockholm.

Swedish Agency for Work (2022). *Remote work – review of international research on work environment and health, work-life balance and productivity before and after the COVID-19 pandemic with particular consideration for conditions for women and men* (Report No. 2022:22), available at: https://sawee.se/publications/remote-work-review-of-international-research-on-work-environment-and-health-work-life-balance-and-productivity-before-and-after-the-covid-19-pandemic-with-particular-consideration-f/

Taib, M.F.M., Bahn, S., & Yun, M.H. (2016). “The effect of psychosocial stress on muscle activity during computer work: comparative study between desktop computer and mobile computing products”, *Work*, 54(3), 543-555.

Taser, D., Aydin, E., Torgaloz, A.O., & Rofcanin, Y. (2022). “An examination of remote e-working and flow experience: The role of technostress and loneliness”, *Computers in Human Behavior*, 127.

Taskin, L., & Bridoux, F. (2010). “Telework: a challenge to knowledge transfer in organizations”, *International Journal of Human Resource Management*, 21 (13), 2503-2520.

ten Brummelhuis, L.L., ter Hoeven, C.L., & Toniolo-Barrios, M. (2021). “Staying in the loop: Is constant connectivity to work good or bad for work performance?”, *Journal of Vocational Behavior*, 128, 103589.

Teodorovicz, T., Sadun, R., Kun, A.L., & Shaer, O. (2021). ‘How does working from home during COVID-19 affect what managers do? Evidence from time-Use studies’, *Human–Computer Interaction*, 1-26.

Thörel, E., Pauls, N., & Göritz, A.S. (2020). “Are the Effects of Work-related Extended Availability the Same for Everyone?”, *Journal of Work and Organizational Psychology*, 36(2), 147-156.

Thulin, E., Vilhelmson, B., & Johansson, M. (2019). “New telework, time pressure, and time use control in everyday life”, *Sustainability*, 11(11), 3067.

Tomei, M. (2021). “Teleworking: a curse or a blessing for gender equality and work-life balance?”, *Intereconomics*, 56(5), 260-264.

Tsai, J., & Wilson, M. (2020), “COVID-19: A potential public health problem for homeless populations”, *The Lancet Public Health*, 5(4), e186–e187.

UGICT-CGT (2021). “Télétravail, je t’aime, moi non plus. Rapport d’enquête et dossier de presse”, available at: https://ugictcgt.fr/dossier-presse-enquete-teletravail/

UGICT-CGT (2021). Enquête nationale sur le télétravail 2021.

Valenduc, G., & Vendramin, P. (2017). “Digitalisation, between disruption and evolution”, *Transfer: European Review of Labour and Research*, 23(2), 121-134.

van der Lippe, T., & Lippényi, Z. (2019). “Co-workers working from home and individual and team performance”, *New Technology, Work and Employment*, 35(1), 60-79.

van der Lippe, T., & Lippényi, Z. (2020). “Beyond Formal Access: Organizational Context, Working From Home, and Work-Family Conflict of Men and Women in European Workplaces”, *Social Indicators Research*, 151(2), 383–402.

van Deursen, A., & Van Dijk, J. (2013). “The digital divide shifts to differences in usage”, *New Media & Society*,16(3), 507-526. https://doi.org/10.1177/1461444813487959https://doi.org/10.1177/1461444813487959

van Deursen, A., & van Dijk, J. (2014). *Digital Skills. Unlocking the Information Society*. Palgrave Macmillan.

van Deursen, A.J., & van Dijk, J.A. (2015). “Internet skill levels increase, but gaps widen: A longitudinal cross-sectional analysis (2010–2013) among the Dutch population”, *Information, Communication & Society*, 18(7), 782-797.

van Deursen, A.J., & van Dijk, J.A. (2019). “The first-level digital divide shifts from inequalities in physical access to inequalities in material access”, *New Media & Society*, 21(2), 354-375.

van Deursen, A.J., & van Dijk, J.A., & Helsper, E.J. (2014). “Investigating outcomes of online engagement”, Media@LSE Working Paper Series (28). Department of Media and Communications, London School of Economics and Political Science, London, UK. Available at: http://eprints.lse.ac.uk/59994/

van Dijk, J. (2020). *The digital divide*. John Wiley & Sons.

van Dijk, J., & Hacker, K. (2003). “The digital divide as a complex and dynamic phenomenon”, *Inf. Soc.,* 19 (4), 315-326.

van Dijk, J.A. (2005). The Deepening Divide: inequality in the Information Society. Sage Publications.

van Lancker, W., & Parolin, Z. (2020). “COVID-19, school closures, and child poverty: a social crisis in the making”, *The Lancet Public Health*, 5(5), 243-244.

Van Zoonen, W., & Sivunen, A.E. (2021). “The impact of remote work and mediated communication frequency on isolation and psychological distress”, *European Journal of Work and Organizational Psychology*, 1-12.

van Zoonen, W., Sivunen, A., & Rice, R.E. (2020). “Boundary communication: How smartphone use after hours is associated with work-life conflict and organizational identification”, *Journal of Applied Communication Research*, 48(3), 372-392.

van Zoonen, W., Sivunen, A., & Treem, J.W. (2021). “Why people engage in supplemental work: The role of technology, response expectations, and communication persistence”, *Journal of Organizational Behavior*, 42(7), 867-884.

Vartiainen, M. (2021). Telework and remote work. In: *Oxford Research Encyclopedia of Psychology*.

Vatcha, A. (2020). “Workplace Surveillance Outside the Workplace: An Analysis of E-Monitoring Remote Employees.” *iSChannel*, 15(1), available at: https://ischannel.lse.ac.uk/articles/abstract/170/

Vayre, E., & Vonthron, A.-M. (2019). “Identifying Work-Related Internet’s Uses – At Work and Outside Usual Workplaces and Hours – And Their Relationships With Work-Home Interface, Work Engagement, and Problematic Internet Behavior”, *Frontiers in Psychology*, 10.

Vieten, L., Wöhrmann, A.M., & Michel, A. (2022). “Boundaryless working hours and recovery in Germany”, *International Archives of Occupational and Environmental Health*, 95(1), 275-292.

Visionary Analytics (2022). Extended reality: opportunities, success stories and challenges (health, education), Vilnius.

Visser, J., & Ramos Martin, N. (2008). Expert report on the implementation of the social partner’s Framework Agreement on Telework, Amsterdam Institute of Advanced Labour Studies. Amsterdam: University of Amsterdam.

Vobruba, G. (2006). Grundlagen der Soziologie der Arbeitsflexibilität. *Berliner Journal für Soziologie,* 16, 25-35 (2006). https://doi.org/10.1007/s11609-006-0003-7

Waizenegger, L., McKenna, B., Cai, W., & Bendz, T. (2020). “An affordance perspective of team collaboration and enforced working from home during COVID-19”, *European Journal of Information Systems*, 29(4), 429-442.

Wang, B., Liu, Y., Qian, J., & Parker, S.K. (2021). “Achieving effective remote working during the COVID-19 pandemic: A work design perspective”, *Applied Psychology*, 70(1), 16-59.

Wang, Z., & Tang, K. (2020). “Combating COVID-19: health equity matters”, *Nature Medicine*, 26(4), 458-458.

Weber, C., et al. (2022). "Future teleworking inclinations post-COVID-19: examining the role of teleworking conditions and perceived productivity." *Frontiers in Psychology* (2022): 1907.

Weinert, C., Maier, C., & Laumer, S. (2015). “Why are teleworkers stressed? An empirical analysis of the causes of telework-enabled stress”. In: Thomas, O., & Teuteberg, F. (Eds.): *Proceedings der 12. Internationalen Tagung Wirtschaftsinformatik (WI 2015),* Osnabrück, S. 1407-1421.

Wenham, C., Smith, J. and Morgan, R. (2020), “COVID-19 : The gendered impacts of the outbreak”, The Lancet, 395, 846–848

Williams, J., Blair-Loy, M., & Berdahl, J.L. (2013). “Cultural schemas, social class, and the flexibility stigma”, *Journal of Social Issues*, 69(2), 209-234.

Wontorczyk, A., & Rożnowski, B. (2022). “Remote, Hybrid, and On-Site Work during the SARS-CoV-2 Pandemic and the Consequences for Stress and Work Engagement”, *International Journal of Environmental Research and Public Health*, 19(4),

Work Trend Index (2021). “The Next Great Disruption is Hybrid Work – Are We Ready?”, Microsoft Worklab, available at: https://ms-worklab.azureedge.net/files/reports/hybridWork/pdf/2021_Microsoft_WTI_Report_March.pdf

Work Trend Index (2022). “Great Expectations: Making Hybrid Work Work”, Microsoft WorkLab, Available at: https://www.microsoft.com/en-us/worklab/work-trend-index/great-expectations-making-hybrid-work-work

Wulff, S., & Vernon, V. (2022). “Telework, wages, and time use in the United States”, *Review of Economics of the Household*, 20, 687-734.

Yang, L., Holtz, D., Jaffe, S., Suri, S., Sinha, S., Weston, J., Joyce, C., Shah, N., Sherman, K., Hecht, B., & Teevan, J. (2022a). “The effects of remote work on collaboration among information workers”, *Nature Human Behaviour*, 6(1), 43-54.

Yang, L., Murad, M., Mirza, F., Chaudhary, N. I., & Saeed, M. (2022b). “Shadow of cyber ostracism over remote environment: Implication on remote work challenges, virtual work environment and employee mental well-being during a Covid-19 pandemic”, *Acta Psychologica*, 225.

Yavorsky, J.E., Qian, Y., & Sargent, A.C. (2021), “The gendered pandemic: The implications of COVID-19 for work and family.” *Sociology Compass*, 15(6).

Zucaro, R. (2021). Technology and new emerging rights: The right to disconnect in the Italian framework and comparative perspective. *Revista General de Derecho Público Comparado*, 29, 1-20.

Annex 1. Methodology

Submitted as a separate file.

Annex 2. Analysis of case law

Submitted as a separate file.

Annex 3. National regulation of working time

Submitted as a separate file.

Annex 4. Synopsis report covering all stakeholders consultations

Submitted as a separate file.

Annex 5. Case studies

Submitted as a separate file.

Annex 6. Country fiches

Submitted as a separate file.

Annex 7. Data for future scenarios

Annex 7A. Back-to-the-office scenario, by country

Submitted as a separate file.

Annex 7B. Baseline scenario, by country

Submitted as a separate file.

Annex 7C. Flexibilisation scenario, by country

Submitted as a separate file.

Annex 7D. Back-to-the-office scenario, breakdowns

Submitted as a separate file.

Annex 7E. Baseline scenario, breakdowns

Submitted as a separate file.

Annex 7F. Flexibilisation scenario, breakdowns

Submitted as a separate file.

Annex 8. Factual summary of each consultation activity

Annex 8A. Weighted employee survey results

Submitted as a separate file.

Annex 8B. Weighted employer survey results

Submitted as a separate file.

Annex 8C. Overview of results of interviews with national stakeholders

Submitted as a separate file.

Annex 8D. Overview of results of expert interviews

Submitted as a separate file.

Annex 8E. Delphi survey results

Submitted as a separate file.

Annex 8F. Summaries of workshops

Submitted as a separate file.

Annex 9. Questionnaires

Annex 9A. Employee survey questionnaire

Submitted as a separate file.

Annex 9B. Employer survey questionnaire

Submitted as a separate file.

Annex 9C. Delphi survey questionnaire

Submitted as a separate file.

Annex 9D. National stakeholders interview questionnaire

Submitted as a separate file.

Annex 9E. Expert interview questionnaire

Submitted as a separate file.

Annex 10. Three deep-dive studies

Annex 10A. Deep-dive study on cross border telework

Submitted as a separate file.

Annex 10B. Deep-dive study on gender equality

Submitted as a separate file.

Annex 10C. Deep-dive study on privacy and surveillance

Submitted as a separate file.

Annex 11. Environmental issues

Submitted as a separate file.

Annex 12. Summaries of selected research projects

Submitted as a separate file.

Annex 13. Raw and cleaned survey data

Annex 13A. Employee survey raw data

Submitted as a separate file.

Annex 13B. Employer survey raw data

Submitted as a separate file.

Annex 13C. Employee survey cleaned data

Submitted as a separate file.

Annex 13D. Employer survey cleaned data

Submitted as a separate file.

.

GETTING IN TOUCH WITH THE EU

In person

All over the European Union there are hundreds of Europe Direct information centres. You can find the address of the centre nearest you at: https://europa.eu/european-union/contact_en

On the phone or by email

Europe Direct is a service that answers your questions about the European Union. You can contact this service:

- by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),
- at the following standard number: +32 22999696 or
- by email via: https://europa.eu/european-union/contact_en

FINDING INFORMATION ABOUT THE EU

Online

Information about the European Union in all the official languages of the EU is available on the Europa website at: https://europa.eu/european-union/index_en

EU publications

You can download or order free and priced EU publications at: https://op.europa.eu/en/publications. Multiple copies of free publications may be obtained by contacting Europe Direct or your local information centre (see https://europa.eu/european-union/contact_en).

EU law and related documents

For access to legal information from the EU, including all EU law since 1952 in all the official language versions, go to EUR-Lex at: http://eur-lex.europa.eu

Open data from the EU

The EU Open Data Portal (http://data.europa.eu/euodp/en) provides access to datasets from the EU. Data can be downloaded and reused for free, for both commercial and non-commercial purposes.

Publications Office
of the European Union