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Research Report

Blending the physical and virtual: A hybrid model for the future of work

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Blending the physical and virtual: a hybrid model for the future of work

Monika Grzegorzcyk, Mario Mariniello, Laura Nurski and Tom Schraepen

Executive summary

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WITH THE ROLL-OUT of COVID-19 vaccines, countries are beginning to imagine a future in which workers' and employers' choices are not conditioned by the pandemic. The crisis hit everyone hard but also generated an opportunity. It has shown that workers with suitable jobs can efficiently work remotely, with no negative implications for their productivity or performance. Telework may even unlock new working processes with the ultimate effect of increasing productivity. The pandemic crisis has also emphasised the need for the creation of safeguards within the work environment to protect workers' well-being and to ensure an efficient blending of remote and on-site workers, with no differences in the way they are treated or their career opportunities.

FROM A EUROPEAN Union policy perspective, there is a clear opportunity to build on the lesson from the pandemic and create the conditions for hybrid work models within the single market. European trade unions and business federations should grab that opportunity and start an EU dialogue between employers, employees and governments. We recommend that the dialogue should lead to the adoption of a new Framework Agreement on Hybrid Work that would supersede the 2002 Framework Agreement on Telework. The new framework could set out the conditions for a general increase in teleworking.

THE FRAMEWORK AGREEMENT on Hybrid Work should not aim to dictate employers' internal work organisation or workers' choices. However, it should aim to facilitate the implementation of flexible working conditions, ensuring minimum protection levels for on-site and hybrid workers equally, while fostering harmonisation within the EU single market and making it easier for workers to be geographically mobile.



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1 Introduction

A great deal of attention has been focused on the concept of telework during the COVID-19 pandemic. The pandemic crisis has shown that:

- More flexible working conditions are possible without necessarily affecting workers' productivity or increasing costs. There is thus a potential new *supply* of opportunities from the employers' side.
- More flexible working conditions are desired by workers, insofar as embracing them does not put remote workers at a disadvantage or negatively affect their well-being. There is thus a potential new *demand* for flexible working arrangements.

In other words, the pandemic has opened-up an opportunity for significant value creation: the forced lock-down 'experiment' that pushed masses of workers to work remotely at the same time has reduced information asymmetries between them and their employers; it has shown that more coordination and improved working relationships and thus efficiency gains are possible. With the right conditions, matching increased supply and increased demand for flexible jobs can lead to a new economic equilibrium in which general welfare is higher.

The COVID-19 pandemic will end and it will be up to the public and the business sectors to develop efficient ways to retain and foster this positive transformation in labour markets that the crisis has prompted. A hybrid form of work may come to dominate: a model in which employees can work at the office or from home, or can mix it up during the working week. While some workdays may require the physical presence of all employees, other working time can be a mix of physical and virtual presence. Depending on the nature of their tasks and their own personal needs or preferences, workers and managers will need to find new ways of working that combine the benefits of face-to-face contact with the flexibility of telework.

Telework is certainly not good for everyone and many consider the amount of telework performed during the pandemic excessive. Often, however, what holds back workers and employers from increasing the amount of teleworked hours is not their preferences. Rather, telework is held back by frictions in the organisation of work that can be tackled. In this Policy Contribution we do not advocate a specific level of telework; rather, we focus on a lesson from the COVID-19 pandemic: there is an untapped potential, a possible efficiency gain that can be grabbed by employers and employees who are willing to telework more, if those frictions are addressed. As EU leaders stressed in a declaration on social policy issued in May 2021 (the Porto declaration), "*changes linked to digitalisation, artificial intelligence, teleworking and the platform economy will require particular attention with a view to reinforcing workers' rights, social security systems and occupational health and safety*"¹.

The end of the pandemic will offer a clear opportunity for European Union policymakers and EU social parties to steer the development of this new working relationship to the benefit of everyone in Europe. Hybrid work models will not only affect the organisations and workers that adopt them. The effect of hybrid work will spill over to the rest of the economy and society by fostering workers' national and, potentially, international mobility².

1 Point 8, see: <https://www.consilium.europa.eu/en/press/press-releases/2021/05/08/the-porto-declaration/>.

2 In this Policy Contribution, we do not discuss the macroeconomic implications of workers' increased geographical mobility. A forthcoming Bruegel paper will focus on this.

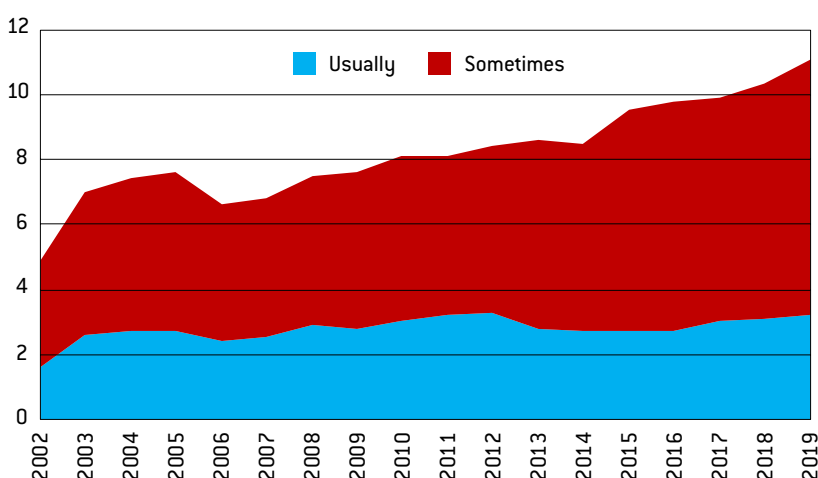
2 Teleworking before the pandemic

2.1 Definition and prevalence of telework

Most definitions of telework combine the idea of working off-site (ie not on employer premises) and the use of some form of information and communication technology to do so. Eurofound and the International Labour Organisation note that “*telework and ICT-based mobile work (TICTM) is a work arrangement characterised by working from more than one place, enabled by ICT*” (Eurofound, 2020a). The European Framework Agreement on Telework (2002) defines telework as “*a form of organising and/or performing work, using information technology, in the context of an employment contract/relationship, where work, which could also be performed at the employer’s premises, is carried out away from those premises on a regular basis*”. Telework may not fully overlap with the concept of ‘work from home’, as the latter is a subset of the former. Workers that telework do not necessarily work from the place where they usually reside. Where relevant, we specify the difference in the figures we quote.

Remote work is not a new phenomenon, although it was never performed on this scale before. In 2019, according to Eurostat, about 3 percent of the EU workforce usually worked from home and 8 percent of workers sometimes worked from home. Still, this left almost nine out of ten employees who never worked from home (Figure 1).

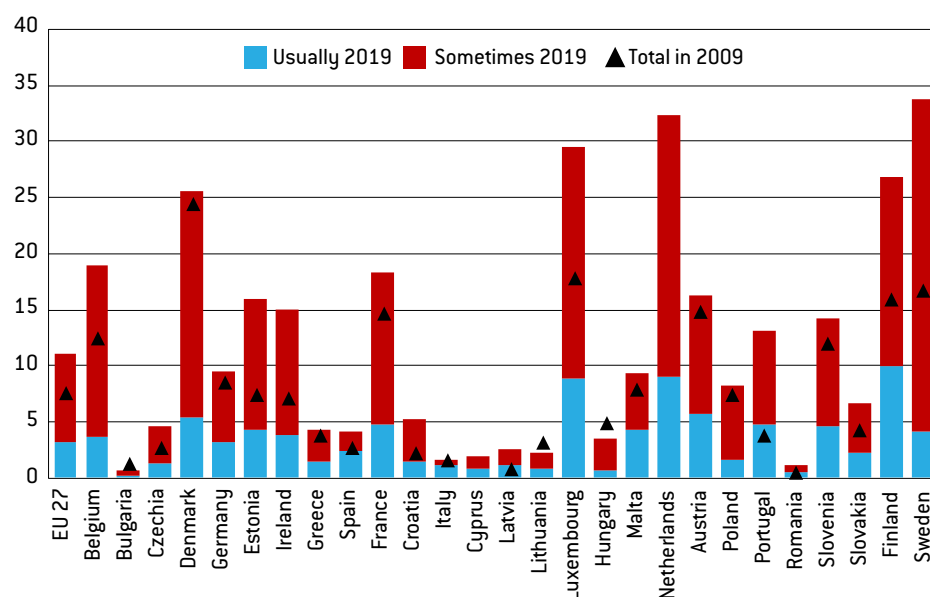
Figure 1: Employees working from home in the EU (% of total employment)



Source: Bruegel based on Eurostat, online data code: lfsa_ehomp.

Eurostat data also shows large regional differences in the uptake of telework in Europe, ranging from less than 5 percent in Bulgaria, Romania and Cyprus, to more than 35 percent in the Netherlands and Sweden (Figure 2). Differences in industrial structures are one of the main factors explaining the varying prevalence of telework in different EU countries, but other explanations include differences within sectors, the distribution of employment by firm size and workers’ digital skills (Sostero *et al*, 2020).

Figure 2: Telework in EU countries (% of total employment)



Source: Bruegel based on Eurostat, online data code: lfsa_ehomp.

Telework has several benefits for both employees and employers. According to Eurofound (2020a), teleworkers generally have greater autonomy and better work-life balance, and are more productive and spend less time commuting. Employers can cut back on office costs and attract talent from a larger labour market. The drawbacks of telework for workers include the tendency for longer working hours, interference of work in personal life and higher workloads. A highly relevant finding from Eurofound (2020a) is that workers who benefit most from telework are those who do it occasionally. For this group of workers, telework generally results in better working conditions, better work-life balance and improvements in some aspects of health and well-being.

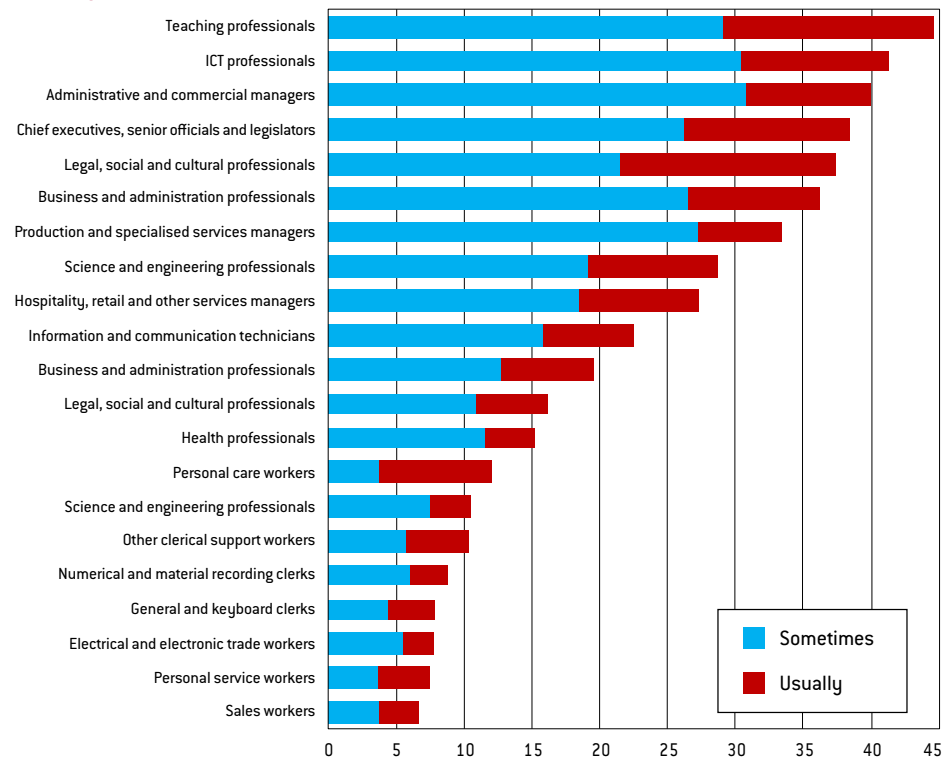
2.2 Pre-pandemic constraints on telework

The reasons for low levels of telework before COVID-19 generally fall into three categories of constraints: (1) the underlying structures and features of jobs and tasks; (2) infrastructure and technology; and (3) market failures in work organisation.

Job and task structures and features

The first barrier to telework is the nature of the tasks that workers must perform. Some tasks cannot be performed remotely, given current production processes. This is reflected in the prevalence of telework across occupational groups in the EU in 2018 (Figure 3). Telework uptake varies between 45 percent for teachers and ICT professionals, to less than 10 percent for sales and service workers. Overall, the prevalence of telework was estimated to be less than 50 percent in each of the occupational groups and did not exceed 20 percent for most occupations.

Figure 3: Prevalence of telework by occupation, 2018, EU27 (% of total employment)

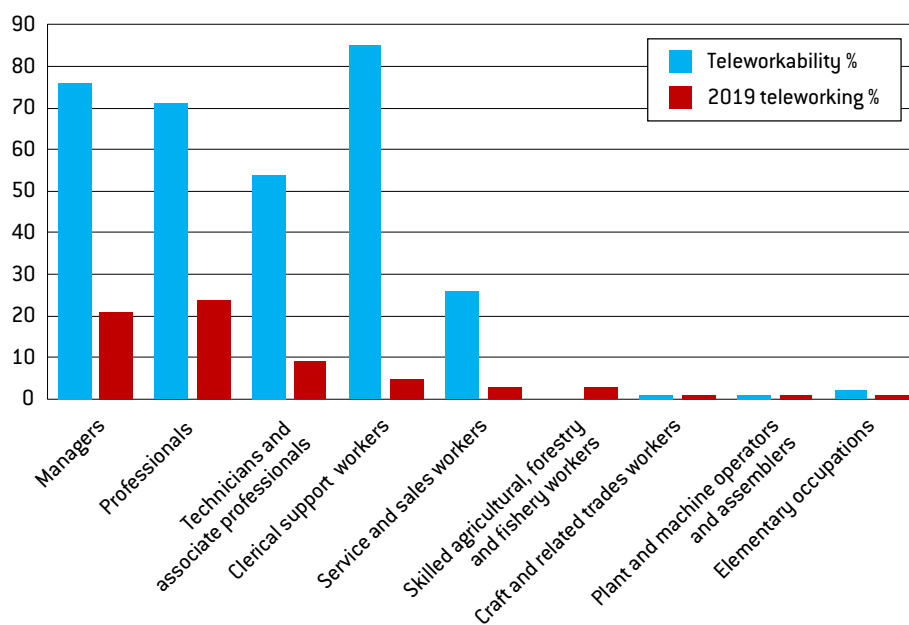


Source: Sostero *et al* (2020).

Sostero *et al* (2020) provided a ‘teleworkability’ index to identify whether a job can be performed remotely and whether that might affect the quality of job outcomes. The index is based on the framework and taxonomy of tasks for occupational analysis developed in Bisello and Fernández-Macías (2020). The framework covers three elements of jobs: (1) the task contents of work (physical, intellectual and social interaction tasks); (2) the methods of work; and (3) the tools of work. This framework is operationalised in two teleworkability indices: (1) a technical teleworkability index (based on the presence of physical tasks); and (2) a social interaction index that further qualifies jobs that are technically teleworkable but might benefit from on-site presence. Occupations are classified as non-teleworkable whenever any of the technical indicators are above a certain threshold. Otherwise, occupations are technically teleworkable.

Figure 4 shows technical teleworkability and actual teleworking uptake pre-pandemic by broad occupational group. It shows that before COVID-19, telework was not taken up to its full potential. Furthermore, the discrepancy between teleworkability and the actual uptake of telework is bigger for clerical support workers than for managers and professionals. This points to a ‘hierarchy effect’; before the pandemic, “access to telework depended more on occupational hierarchy and associated privileges than the task composition of the work” (Sostero *et al*, 2020).

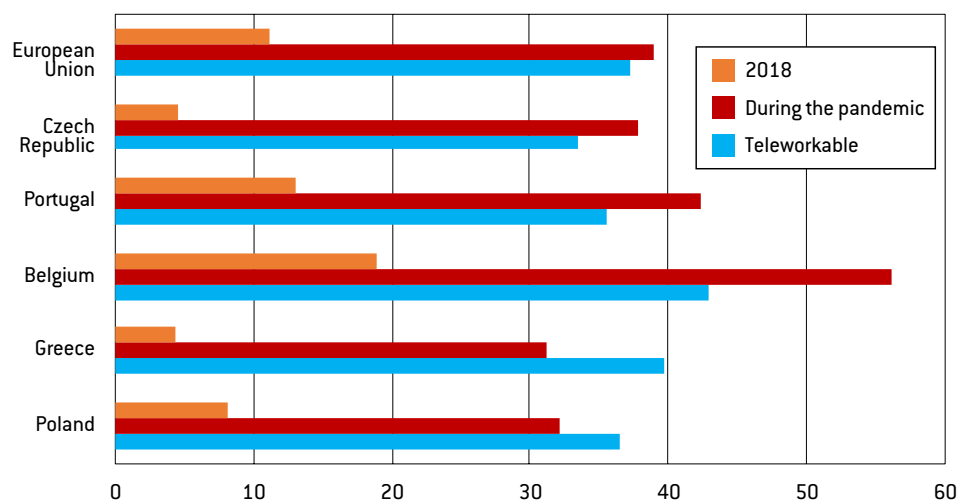
Figure 4: Teleworkability and actual teleworking among employees by broad occupation group



Source: Sostero et al (2020).

Comparing the uptake of telework in 2019 with its uptake during COVID-19 and the potential uptake, or teleworkability (Figure 5), in different sectors, it becomes clear that pre-pandemic levels of telework were systematically too low, while they have been too high during the pandemic. This evidence suggests that the optimal level maybe somewhere in-between. Some countries, including Greece and Poland, have not exceeded their teleworkability capacities during the pandemic. Various reasons explain this, including the number of COVID-19 cases, the strictness of measures and the infrastructure at employees' home and at national level.

Figure 5: Shares of the workforce that teleworked in 2018, during the pandemic and that could telework, EU and selected countries



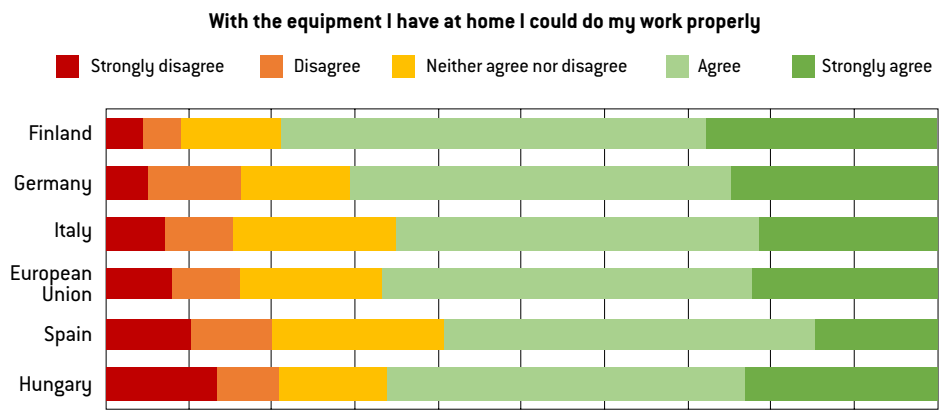
Source: Bruegel based on Sostero et al (2020).

Infrastructure and technology

A second category of constraints relates to the technical obstacles to remote work faced by employers and employees in jobs that are in principle teleworkable. These obstacles include access to high-speed internet and IT equipment for workers, adoption of digital collaboration tools by employers, and employees' skillsets, eg their ability to deal with increased autonomy and to master digital technologies while collaborating with colleagues remote.

Reliable internet connection for workers is a core requirement to work from home. Even in advanced economies, not all workers enjoy uninterrupted periods of connectivity. A Waveform report in 2020 revealed that during the pandemic more than 15 percent workers in the US experienced connection problems every day, 22 percent did so weekly and another 15 percent monthly (Waveform, 2020). A Eurofound survey (2020b) showed that in the EU more than 15 percent of remote workers cannot work from home properly because of equipment problems (Figure 6). Almost 37 percent of respondents answered negatively (disagree or strongly disagree) when asked if "my employer provided all the equipment I need to work from home".

Figure 6: Responses to the question: To what extent do you agree or disagree with the following statements about working from home during the COVID-19 pandemic?



Source: Bruegel based on Eurofound (2020b).

To make teleworking possible, employers also need to adopt online workspaces that include digital collaboration and communication tools. Adoption of digital tools has been notoriously low. Even the uptake of very basic systems for the digitalisation of internal processes, including customer relationship management and enterprise resource planning systems, hovered around 33 percent and 36 percent respectively in the EU27 in 2019 (Eurostat, online data code: isoc_eb_iip). Only 3 percent of an estimated 33 million meeting rooms worldwide are equipped with video conferencing tools (Frost & Sullivan, 2019).

Telework also requires workers to possess the necessary skillsets. Teleworking typically comes with more autonomy for workers (Eurofound, 2020b). With more autonomy, teleworkers need more personal skills to manage their work, compared to on-premises workers. For example, they need to respond in a timely way to communications sent at various times, and they need to schedule their tasks during the workday (Nakrošiene *et al*, 2019). This need for more self-management skills is shown by the 88 percent growth in demand for these types of online courses in 2020 (World Economic Forum, 2020). In addition to self-management skills, digital skills are necessary for successful teleworking. Digital skills include the ability to use online communication tools such as web conferencing, and online collaboration tools such as cloud-based file storage and project management. Eurostat estimates that in 2019, 32

percent of French individuals had low overall digital skills (online data code: *isoc_sk_dskl_i*)³, while the *Future of Jobs Survey 2020* estimated that around 57 percent of workers in France have sufficient digital skills (World Economic Forum, 2020)⁴.

Market failures in work organisation

A final category of obstacles that may hold back employers and employees from telework relates to workplaces' organisational cultures, including the presence or absence of mechanisms that enhance reciprocal trust: vertically, between employers and their employees, and horizontally: between colleagues.

A 'market failure' is defined as a market's inability to converge to an equilibrium where available resources are exploited optimally, in other words, a situation in which the market generates all the value it can generate. In the case of labour markets, the number of hours teleworked is less than the number of hours that could be teleworked profitably.

Two main channels contribute to this market failure: (1) employers' concerns about employees' moral hazard when they telework and cannot be monitored; and (2) employees' concerns that, if teleworking, they will be left behind by on-site colleagues. As we show below, the outbreak of the pandemic has helped organisations overcome those market failures.

Moral hazard and productivity

A first market failure results from managers' lack of trust in workers. From an employer's perspective, telework can be perceived as risky because of a loss of control and reduced coordination. The fear of potential moral hazard on the part of employees, who arguably could reduce their productivity by working less when not on-site, may hold back employers from offering teleworking opportunities. A survey carried out by the Centre for Transformative Work Design (2020) showed that 38 percent of managers suspected remote workers of performing less well than people who work in an office setting (Parker et al, 2020). This distrust is also reflected in the hierarchy bias in telework uptake compared to actual teleworkability by occupational group (Figure 4), with more telework reserved for managerial roles and high-skilled professionals, and less for support staff. Another indication comes from the correlation between seniority and telework: in 2019 in Europe, only 2.1 percent of young workers teleworked regularly (age bracket: 15-24). Older workers (50-64 years old) were more than three times as likely to usually telework (6.6 percent usually teleworked in 2019) (Eurostat, 2021). Arguably, managers tend to place more trust in workers with more work experience.

Most evidence on the productivity effects of telework pre-pandemic, however, shows no or little effect (for example, Bergeaud and Cette, 2021). Monteiro *et al* (2019) suggested that telework may raise firm productivity, although the effect depends on job characteristics, with more creative jobs, rather than routine tasks, seeing greater productivity from telework. Eurofound (2020a) showed that fear of lower performance is generally unfounded as teleworkers have higher levels of engagement, working longer hours, and they are more likely to learn new things at work compared to office workers.

The insight that workers' moral hazard and employers' productivity concerns are unfounded appears strongly supported by emerging evidence related to the COVID-19 pandemic. While it may still be too early to disentangle productivity effects related to telework

- 3 Digital skills indicators are composite indicators based on selected activities related to internet or software use, performed by individuals aged 16-74 in four specific areas (information, communication, problem-solving, software skills). It is assumed that individuals who performed certain activities have the corresponding skills. Therefore, the indicators can be considered as a proxy for the digital competences and skills of individuals. Based on the component indicators, the overall digital skills indicator is calculated as a proxy of the digital competences and skills of individuals ('no skills', 'low', 'basic' or 'above basic').
- 4 Score computed based on the average response of companies operating in this country to the survey question "In your country, to what extent does the active population possess sufficient digital skills (eg computer skills, basic coding, digital reading)?" [1 = not all; 7 = to a great extent]. Results converted to a 0-100 score called the 'progress score', with 100 corresponding to the best possible frontier and 0 to the worst possible frontier.

from those related to the broader economic rupture generated by the pandemic, surveys of employers and employees indicate clearly that telework did not reduce workers' productivity. PwC (2021), for example, carried out a number of surveys throughout the pandemic. In December 2020, 83 percent of employers said the shift to remote work has been successful for their company.

A teleworker's prisoner's dilemma

The second source of market failure relates to the relationships between colleagues at the same hierarchical level. Even if employees are willing to increase the number of hours they telework, they may refrain from doing so for fear they will be left behind by colleagues that work on-site. It is a form of prisoner's dilemma: if workers are unable to coordinate so that all opt to telework some of the time, they converge on an equilibrium in which they all telework less than they would like (Box 1).

In many pre-pandemic working environments, teleworkers ran a high risk of falling outside their companies' work organisational flows. Team meetings normally take place in closed rooms with no connection to the outside world. Colleagues have informal chats that help shape the organisation of work and allocation of tasks; even casual jokes might have an impact on performance, triggering new ideas or ways to approach a work puzzle (see section 3). In other words, a worker who is the only one who teleworks can be left out of the organisational process. That can have a significant impact on the teleworker's productivity, independently of her will to exert the same effort she would if she worked on-site. Golden and Veiga (2008) stressed the relevance of teleworkers' concern about social isolation in relation to their job satisfaction, suggesting such concerns can only be overcome if the teleworker has a high-quality relationship with her manager. Nakrošiene *et al* (2019) found that reduced communication with co-workers and the trust and support of a supervisor are among the most important factors impacting different telework outcomes.

Additionally, the teleworker in a pre-pandemic scenario could be put at a disadvantage in her career. By asking for more flexibility, the teleworker sends a signal that her manager may interpret as negative with respect to her commitment to her job and her employers' goals. She also has fewer opportunities to engage informally with her manager and might have a very low visibility compared to her peers. Maruyama and Tieze (2012) and Khalifa and Davison (2000) found that teleworkers are concerned their career opportunities will suffer because of decreased visibility. Nakrošiene *et al* (2019) reported significant negative correlations between telework and teleworkers' subjective assessments of their career opportunities.

Conversely, the worker that remains on-site has a clear advantage over teleworking colleagues in promotion and career development. Workers who opt to be physically present when others are teleworking have more control of the flow of information within the office; they can more easily send signals to the management about how much work they do and quality of their performance; and they can build informal networks that can help them progress in their career.

By forcing widespread teleworking, the COVID-19 pandemic has helped workers coordinate on a cooperative equilibrium in which they are better off (even if the likely desirable amount of telework from the perspective of single workers is between the pre-pandemic and pandemic equilibria). Note, however, that once the pandemic is over, the prisoner's dilemma incentivising workers to be on-site is likely to re-emerge. In May 2021, Sandeep Matharani, CEO of WeWork (a real estate company that provides flexible shared workspaces), said that to spot the most engaged employees it is enough to check those who want to come back to the office: "*Those who are least engaged are very comfortable working from home*" (Dill, 2021).

Box 1: Illustrating the prisoner's dilemma of the teleworker

A simple game involving two workers can illustrate the general dynamic that contributes to lower-than-desirable levels of telework. Consider two workers, A and B, who are very similar in terms of educational background, skills and experience. They hold the same hierarchical position in the organisation where they work and earn the same salary. They also share similar ambitions and goals. A and B are candidates for a salary and career upgrade, but only one can get it, because of their employer's policy and resource constraints (a very common scenario). Finally: both A and B would enjoy working from home two or three days per week, if that would not entail a reduction in their performance levels or in their career prospects.

Table 1 shows the consequences for each worker, depending how the scenario plays out. If worker A chooses to be on-site and worker B chooses to telework, A has a welfare level of €60, while B has a welfare level of €30 (for the sake of representing the dilemma, we assume that welfare levels can be translated into monetary terms⁵).

Table 1: A teleworker's prisoner dilemma

		Worker B	
		Telework	On-site
Worker A	Telework	50,50	30,60
	On-site	60,30	40,40

Source: Bruegel.

If A and B both work full-time on-site (Table 1, bottom right), they each enjoy a base welfare level of €40 euro⁶. Both would experience greater welfare if they can both work from home two or three days per week (Table 1, upper left). In that case, we assume for each a welfare level of €50, with the additional €10 attributable to the benefit to the workers of increased work flexibility. But if one of the two workers opts for a flexible work arrangement while the other does not, their welfare levels diverge. The worker who switches to teleworking has a drop of welfare to €30, while the worker who stays on-site has a welfare level of €60. The drop in welfare experienced by a worker when she is the only one teleworking can be explained by the fact that she is falling out of the work process which is carried on by workers on-site. That impacts her outcomes and career prospects. Meanwhile, the worker who is on-site has more control over the process and is more likely to be promoted than the teleworker. That explains her higher welfare level⁷.

By comparing the outcomes of the different choices workers A and B could make (Table 1), it is easy to see that the welfare level is highest for the worker who chooses to be on-site, unless both workers telework at the same time. Thus, if both workers decide independently, they converge to an equilibrium in which they are both on-site⁸.

5 In microeconomics terminology, a worker's welfare corresponds to 'total utility', which includes salary and non-monetary elements, including the pleasure derived from performing a certain task or the cost of dealing with an annoying colleague.

6 This could be interpreted as the hourly wage under ordinary conditions. The number was chosen as a baseline reference to illustrate the workers' game. However note that researchers often attempt to convert non-monetary effects into monetary terms. Barrero *et al* (2021), for example, surveyed workers and asked them to choose between a pay rise or telework flexibility.

7 This is based on the assumption that the increased likelihood of promotion and a pay rise may be valued more than the flexibility of occasional teleworking. Barrero *et al* (2021) found that a significant proportion of workers consider teleworking less beneficial than a pay rise, even in a post-pandemic scenario.

8 In game-theory, being on-site is a 'dominant strategy'. That means that, no-matter what the other worker chooses to do (to telework or to be on-site), each worker's best independent response is to be on-site.

2.3 Lessons from the COVID-19 pandemic

The force majeure of the pandemic has been a stress test for employers and employees. It has shown where more investment is needed to improve connectivity or upskilling of workers. It has also contributed to greater manager-employee and employee-employee trust, mitigating potential market failures in labour markets. The COVID-19 pandemic has pulled down psychological and cultural barriers to telework. It has forced both employers and employees to overcome their previous reluctance about remote work.

Based on our analysis of constraints to telework, we can say that the pre-pandemic level of telework was suboptimal: workers as well as employers would have benefited from more teleworking. Both employers and employees are now showing a preference for a higher share of teleworking hours compared to pre-pandemic levels. A survey by Baker *et al* (2020) found that 64 percent of workers reported positive feelings about working from home two or three days a week. On the demand side, an UpWork survey of 1,000 United States hiring managers indicated that the number of remote workers in the next five years is expected to nearly double (Ozimek, 2020). Big tech companies are leading the way in increased remote working. Most notably, 50 percent of the Facebook workforce could work entirely remotely within the next five to ten years (Ghaffary, 2020), while Twitter CEO Jack Dorsey will let employees work from home “forever” (Christie, 2020).

On the other hand, on-site working cannot disappear completely. First, analysis of teleworkable jobs shows that some tasks still need to be performed on-site given current technological constraints. But most importantly, while workers themselves express a clear desire to telework two or three days per week, for many of them permanent telework, even if feasible, would not be preferable. A qualitative study of job quality and mental health during COVID-19-related telework confirmed previous findings suggesting that telework improves job quality mostly when it takes place as a part-time work arrangement (Fana *et al*, 2020). Employers tend to agree with that (Behrens *et al*, 2021).

Employers may also still see a benefit in regularly bringing together their employees in a common space or base, to ensure that team-building, knowledge exchange and corporate cultures do not suffer.

Thus, on the basis of current evidence, we expect that employers and employees will converge on telework levels that are between pre-pandemic and pandemic levels.

However, convergence on this hybrid model depends crucially on overcoming the internal organisational frictions that lead labour markets to fail (section 2.2). Without a change in the organisation of work, the lessons learned from the pandemic are likely to fade soon and, in the long-term, sub-optimal too-low teleworking levels might prevail.

3 A successful hybrid model of work

For the purposes of our analysis, we envisage the creation of a well-defined contractual category of employment: the hybrid model. In a hybrid model, workers can telework for a proportion of their contracted working hours within the limits of individually or collectively negotiated work arrangements. Those limits could be well set to 100 percent, ie it may be possible to envisage hybrid workers who permanently telework, interacting with colleagues who adopt a different mix between time spent working on-site and time spent working remotely.

- Hybrid work arrangements should contain (on top of regular contractual terms), the following agreements on flexibility in terms of the place and time of work:
- Workspace flexibility. Minimum and/or maximum amounts of time spent working remotely or at the office, including specifications of where the remote workplace may be located geographically (nationally or internationally).

- Work time flexibility. Minimum and/or maximum amounts for time spent during or outside of office hours.
- Frameworks for fixing and tracking space and time flexibility. Timeframes for calculating the amounts spend working remotely or asynchronously (weekly, monthly, quarterly or yearly), and constraints for the individual to take into account, including fixed office days for teams, departments or whole organisations.
- Provisions for the remote workplace. To ensure that the telework space is safe and healthy.
- Provisions for work-life balance. To ensure that boundaries between work time and personal time are respected.

Introducing the BBBB challenge: Hybrid models pose critical organisational challenges for employers, related to the smooth blending of on-site and remote workers. Those challenges are often grouped into three categories: bricks, bytes and behaviour, ie the space, tools and culture of remote work. To these three categories, we add a fourth: blueprint, or the allocation and coordination of tasks, roles and people in the new hybrid environment.

3.1 Bricks: the space(s) of hybrid work

Hybrid work will move people out of traditional offices at least part of the time. Consequently, employers can reduce the required office space and save on infrastructure, utility and maintenance costs. However, offices will not disappear completely, so employers are rethinking how much and what kind of office space they will retain, and how to make sure the remote workspace is equally healthy.

Rethinking the central office

First evidence indicates businesses are thinking about smaller but higher quality office spaces (*Bounds and Hammond, 2021*). In a hybrid model, necessary office capacity might vary strongly over time, depending on the need for employees to be on-site. Flexible office space, partly owned and partly rented, might be a good solution to cope with this variability and allow companies to hedge against the risks associated with workforce dispersion. Flexible office spaces already grew in popularity at a significant rate before the pandemic and may become even more desirable as companies try to cope with the uncertainty of events such as lockdowns. According to a survey of 80 companies conducted by Coldwell Banker Richard Ellis (CBRE), in September 2020, 86 percent of respondents said they will use flexible office space in the future, an increase from 73 percent in June 2020 (CBRE, 2020).

While it is unlikely that offices will disappear altogether, their character will certainly change. Offices can become “*workplace ecosystems*” (Molla, 2020) where people go for “*learning development, collaborating, mentoring, socialising*”, ie offices should support interactions that cannot be as easily done remotely. Given the nature of the pandemic, offices will likely have larger rooms and more outside meeting spaces. In the hybrid model, companies will need to look at which activities require workers’ on-site presence and adjust the office to suit those needs. In such activity-based workspaces, the office will have coffee corners and seating areas for informal networking, creative spaces for brainstorming and educational spaces for training. PwC (2021) found that half of executives had considered increasing investment in communal office space and unassigned seating in the office.

Ensuring a healthy and safe remote workspace

Hybrid workers will also have a second workplace, at their home or at any other location they wish to work from. Telework and ICT use entails some ergonomic risks when employees do not have proper equipment, such as proper chairs, desks and screens, resulting in musculoskeletal disorders in the upper limbs, neck and back (EU-OSHA, 2018). To ensure employees have comfortable and healthy second workspaces, companies should accommodate these needs and provide assistance in purchasing or renting the necessary tools, infrastructure and digital security at home.

When work takes place at the worker's home, concerns rise about the impact on work-life balance. According to Eurofound (2020a), teleworkers generally have better work-life balance (because of higher productivity and less commuting time), but also show a tendency towards longer working hours, interference of work in personal life, and higher workloads. The negative effect of working from home on the work-family conflict can be moderated by the organisational context, especially when cultures are supportive and family-friendly and when flexible working is normalised (van der Lippe and Lippenyi, 2018).

3.2 Bytes: the tools of hybrid work

Digital tools help create a digital office environment in which communication, collaboration, productivity and learning are key aspects. In a hybrid model in particular, with workers seamlessly switching between on-site and remote presence, this digital environment can help diminish the boundaries between the physical office and the online office. Organisations face two challenges related to digital collaboration tools: providing the right assortment of tools and setting the rules of engagement.

Providing the right assortment of tools

Digital collaboration tools are essential for smooth blending of physical and remote work. The main tools include cloud storage for documents and data, cloud software, online whiteboards for collaboration and digital wikis for knowledge building and exchange. This move from physical to digital collaboration has led newspapers to state that “*data centres are the new offices*” (Nuttall, 2021).

For many organisations, COVID-19 forced hurried adoption of these technologies. Surveys by the World Economic Forum (2020) and McKinsey Global Institute (2020) reported that more than 80 percent to 85 percent of employers plan to accelerate the digitalisation of work processes (eg use of video conferencing and digital collaboration tools) compared to pre-COVID-19 trends. PwC's survey of 133 executives found a large majority plan to increase investment in digital tools to support virtual collaboration and creativity, as well as investment in areas that support hybrid working models, including apps to reserve office seating. Companies should be careful however not to overload employees with too many different applications, as studies show that diversity in tools (and switching between them) is a source of collaboration stress (Teevan *et al*, 2021).

Setting healthy rules of engagement

After selecting the right assortment of tools, the next challenge is making sure there are clear expectations for the frequency, timing and purpose of use of each tool, both for synchronous and asynchronous communication. Increased videoconferencing led to a widely reported ‘Zoom fatigue’ during the pandemic. Fauville *et al* (2021) identified several mechanisms induced by video-specific non-verbal communication that predict Zoom fatigue: mirror anxiety (or self-consciousness), being physically trapped, hyper gaze from a grid of staring faces⁹, and the cognitive load from producing and interpreting non-verbal cues. In a synthesis of over 50 studies, Teevan *et al* (2021) further identified several reasons why video conference meetings may cause fatigue, including reduced nonverbal cues, the need for sustained attention, low media quality, and cognitive multitasking. Finally, the quantity and stacking of online meetings without breaks contributed even more to fatigue. To mimic natural breaks in offline meetings (due to physically moving between rooms, for example), researchers suggest micro-breaks between online meetings to similarly allow switching and transitioning between meetings.

Digital communication might become increasingly asynchronous in the hybrid model especially if workers reside in different time zones or enjoy the benefits of flexible working hours. But asynchronous communication comes with its own challenges, as experience of the

9 Hyper gaze refers to the experience of constantly having peoples' eyes in your field of view.

use of email has shown. Despite its goal of making communication faster, email has often had the opposite effect: endless email threads causing a distraction during work. With the increasing availability of other communication tools and apps, this overload grows. In a hybrid model, the approach to communications and messages needs to change. Companies could, for example, limit the time for reading messages to, for example between noon and 4pm, and could communicate this in the feedback that senders receive when the message is delivered at other time (Thorne, 2020).

3.3 Behaviour: the culture of hybrid work

Organisational culture is the set of shared beliefs, values and ways of interacting that shape the social environment of an organisation. In Edward T. Hall's cultural iceberg model, only a few elements of corporate culture are visible (such as the vision and mission statement, corporate policies and external presentation), while most elements are invisible below the waterline (including unwritten rules, relationships and status in the office). Employees learn about the invisible part of an organisation's culture by observing the interactions and behaviour of colleagues. But when interactions are conducted through screens, much of this observation is lost as body language is less visible and accidental or informal communication decreases.

One way to overcome the physical distance is to make sure the visible part of the corporate culture stays equally visible in the hybrid environment, for example by featuring the company's vision, mission statement, goals and values prominently in the digital office space (such as on intranets, internal newsletters or screen savers). Another way is to still encourage spontaneous or informal communication through digital channels. Nevertheless, the hybrid model poses two particular challenges for corporate culture: leadership must move from control to trust, and special attention must go to the fair inclusion of remote workers.

From control and monitoring to trust-based leadership

Trust and autonomy are essential parts of a hybrid working culture. When workers become less visible to management, leaders might fall into the trap of setting up remote monitoring systems to compensate for the lack of visibility and to keep productivity high. However, most research on the productivity effects of telework shows no notable negative effect (Eurofound, 2020a), meaning that productivity concerns are generally unfounded. Teleworking seems to have a positive impact on productivity if workers are engaged, adequately prepared and trained and have the appropriate equipment and a suitable working environment at home (Bergeaud and Cette, 2021). Distrust might naturally ease over time when learning effects are at play: with telework experience growing over time, more survey respondents (both on the employer and employee side) reported improved productivity in PwC's sequential survey waves.

Hybrid work does require a shift in management from input and process control to output monitoring. When inputs such as face time and working hours are invisible, and processes such as work methods and procedures cannot be observed, managers need to manage differently by focussing on performance outcomes and steering the results (Pyöriä, 2011). Firms with a participative culture are more likely to have teleworking policies and to be successful at it. Evidence shows that firms with flatter hierarchies and network structures favour telework over others (Ollo-López *et al*, 2020).

Fair inclusion of remote workers

The individual flexibility of hybrid work has a negative externality effect when it cuts off remote workers from the informal communication and interaction of on-site workers. Granovetter (1973) claimed that we underestimate the value of the so-called "weak ties": those we make accidentally, for example, while waiting for a lift in an office building. Such weak ties give us ideas and information and also provide bridges to other people. Teevan *et al* (2021) found that as the pandemic has persisted, stronger ties have seemed to endure and weaker ties have seemed to atrophy. The lack of informal interactions can hit junior workers hard-

est when they have not yet developed these informal relationships (Mull, 2021). Also, Zoom fatigue impacts women more than men because of gender differences in non-verbal communication¹⁰ (Fauville et al, 2021). Therefore employers must ensure that hybrid work does not further hold back women's participation in the workplace.

However, the active involvement of management can prevent the collapse of weak ties while paying special attention to the inclusion of remote workers. For example, company events which include remote workers in the on-site part of the contract, or rewarding grass-roots initiatives can lead to more engagement in interacting with employees beyond the job. Another way that accidental communication works on-site is through walking into a colleague's office to see if they are free for a quick chat. These types of interactions can be simulated with online consultation hours: like a professor at a university is available at certain times to students, employers can be available to their employees at a certain time (Thorne, 2020). Similarly, to simulate teams' informal ways of aligning their work on-site, employers could formally organise this alignment virtually, for example by organising daily digital 15-minute stand-ups where team members share what they did the day before and what they will work on that day, signalling roadblocks and reaching out for help from team members (Newport, 2019). Finally, in hybrid meetings where some employees participate on-site and some call in remotely, meeting organisers should pay special attention to inclusion of remote participants in the discussion and decision-making process.

3.4 Blueprint: allocation and coordination of tasks and people

One underexposed, but equally essential, aspect of hybrid working is the configuration of people and their tasks within certain timeframes and taking account of different locations. Organisations need to collectively optimise the coordination of individual flexibility to keep teams and departments running smoothly. To avoid a chaotic assembly of individual choices, organisational guidelines can be put in place about who can work remotely on which tasks, taking into account the tasks of others that depend on them.

Assessing the potential for individual flexibility

Determining the potential for hybrid work at the individual level often starts with the roles that people take up in the organisation. Roles that require physical interactions with things or humans, or social interactions, are typically considered unsuited for remote or asynchronous work. Technological progress has opened up more roles to flexible work, but organisations typically show a 'hierarchy' bias in which flexibility is reserved for high-skilled professionals or managerial roles, while support staff are expected to work on-site.

Organisations can reach more flexibility when it is based on specific tasks instead of whole roles. Measures that classify entire roles as non-teleworkable fall short of the full hybrid potential, since most roles have at least some activities or tasks that can be performed remotely (McKinsey Global Institute, 2020). Personal preferences (including personal circumstances, age and seniority) can be an additional input for organising remote work at the individual level. Personalised flexibility can boost employee experience and engagement, especially when it enables on-site coaching for junior staff and improving the work-life balance for employees with caregiving responsibilities.

Coordinating for optimal collective flexibility

Individual flexibility should not come at the expense of the collective operations. When tasks performed by different workers are highly interdependent, individual flexibility can pose externalities on the functioning of teams and departments. These externalities not only reduce efficiency, but also increase stress when team members are not available for collaboration

¹⁰ Women may experience more mirror anxiety and more cognitive load from producing nonverbal cues (women tend to display more facial expressions) and from interpreting nonverbal cues (women have better recall of nonverbal behaviour and are more accurate at judging emotions from facial expressions) (Fauville *et al*, 2021).

or support. Workers that depend on each other for the daily execution of their tasks have the greatest need for coordination of their on-site and synchronous worktime. In well-designed organisations, the highest levels of interdependence can be found within the boundaries of teams. Team members are thus a good starting point for discussions on whether fixed office days or synchronised working times are a necessity.

Interdependence between different teams is usually lower than within teams. However, for innovation and creativity, interaction across teams and knowledge exchange is still essential. The break-down of weak ties has already pushed organisations back into their silos of separate departments, with intra-team communication rising, but inter-team interaction decreasing (Microsoft Work Trend Index, 2021). This is especially worrying for innovation, since the creativity benefits from networks of weak ties have been documented extensively (see for example Baer, 2010). Organisations should be mindful not to further prevent cross-team exchanges from happening when assigning separate office days to separate teams, but can instead actively encourage cross-functional exchanges through online meet-ups or company-wide moments for on-site presence.

Box 2: Telenet's post-pandemic hybrid work policy

In March 2021, Telenet, Belgium's second-largest telecommunications company, employing over 3300 people, announced a new post-pandemic hybrid work policy and concluded a new collective labour agreement with staff (Haeck, 2021; Vanlommel and De Roest, 2020). Employees can now spend up to 60 percent of their time per quarter anywhere in the EU, meaning they could reside in remote regions of Europe for about eight weeks per quarter and spend the remaining five weeks per quarter in Belgium. The main aspects of the new agreement are:

Flexibility in space (not so much in time)

- Employees will be able to work a maximum of 60 percent remotely, with the remaining 40 percent spent in the office.
- Employees do not need to meet the 60/40 ratio on a weekly basis, but only on a quarterly basis, allowing more flexibility to meet fluctuating job demands during the quarter.
- The telework location can be anywhere in Europe and in fact, does not need to be the permanent residence of the employee.
- Telenet does not allow completely asynchronous work but expects employees to perform the work within normal office hours.

Work organisation ('blueprint')

- More roles are now opened to teleworking, for example, call centre operators, who were previously restricted to work on-site.
- Task-based allocation of the 60/40 division: teleworking for tasks that require rest and focus, and the office as a place for meeting people and creativity (eg brainstorming and introductions of new employees will still take place at the office).
- Consensus about the 60/40 balancing within the quarter has to be reached at the team level.
- No strict separation of office days between teams to allow for cross-team work.

Corporate culture ('behaviour')

- Training for managers in psychological safety and 'servant leadership' (in which the leader serves the needs of the people he or she leads).
- Check-ins at the start of meetings and frequent informal meetings without an agenda.

The new workplace(s) ('bricks')

- Transforming the headquarters into a 'meeting space', with larger rooms for safe workshops or brainstorming, outside meeting spaces and reservation systems.
- Fixed monthly allowance (not dependent on office days) for home workers to ensure they have a well-equipped workplace and can work safely and ergonomically at home.

Benefits and risks

- Talent can be attracted from less well-connected places.
- Closing of office space that housed 300-400 call centre operators.
- Less commuting, more efficient meetings, less absenteeism.
- Risk of lengthening of work hours and disturbed work-life balance.

4 A new EU framework for remote work

As we have shown, the presence of supply and demand is a necessary though not sufficient condition for a new working model to become popular. Frictions may prevent matching in labour markets and prevent valuable opportunities from being grasped: workers might not have enough guarantees that new arrangements will not be to their detriment; employers may end up facing unexpected costs.

Anticipating possible frictions, the public and the private sectors can work together on a smooth transition to new working methods and a renewed employer-employee relationship.

4.1 A framework for hybrid-work models

From a policy perspective, a first indispensable set of actions should be aimed at making smooth remote working conditions feasible in practice, for example by improving connectivity infrastructure or fostering digital skills. Ollo-López *et al* (2020) indicated that a lack of access to ICT infrastructure is a barrier to telework: improving access to infrastructure is the main prerequisite for increasing the adoption of telework. They point out that the necessary ICT usage within firms, such as real-time communication and monitoring, is more likely when a country has a better technological infrastructure that facilitates and enables teleworking. Therefore, public investment in fifth-generation mobile network technology, the implementation of cybersecurity measures, interoperability, integrated systems and higher educational levels provides the necessary ICT environment to increase the opportunities for teleworking. The ILO (2020) added to this list access to broadband internet, the likelihood of owning a personal computer, housing situations, digital authentication and mobile banking and payment systems as important environmental conditions. They found that 5 percentage points of the difference between low-income and high-income countries in their ability to facilitate telework is explained by social, physical and information technology infrastructure, compared to 10 percentage points explained by occupational structures.

A second set of actions should have the goal of minimising costs and risks for employers and employees who are willing to embrace the hybrid-work model.

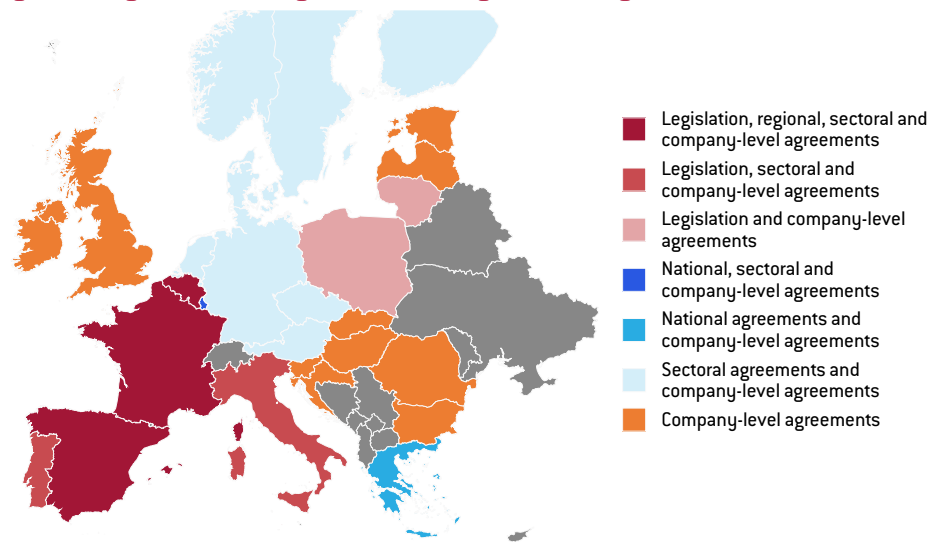
In 2002, following a European Council initiative, workers', companies' and the public sector's representatives in Europe signed a Framework Agreement on Telework (ETUC, UNICE/UEAPME, CEEP, 2002). By mid-2006, this EU framework had been adopted by most EU countries. The framework defines the concept of telework (see section 2.1) and suggests a number of measures that should be implemented by the employer to protect teleworkers, including measures to protect workers' privacy and personal data, the limiting of monitoring and ensuring workers' safety, well-being and the ability to exercise their collective rights.

After almost 20 years, with an economy that has been radically transformed by digital applications, the uptake of technologies including artificial intelligence and the internet of

things, and the dramatic events of the COVID-19 pandemic, the time is right to propose a new framework.

A Framework Agreement on Hybrid Work would update and expand the 2002 telework framework. Framework agreements stem from the European social dialogue process and are backed by Articles 154 and 155 of the Treaty on the Functioning of the European Union. Trade unions and business federations, who were the signatories to the 2002 Telework Framework, undertook to implement it at national level. Now that, thanks to the pandemic shock, a more substantial shift to telework is likely, affecting a large number of Europeans, it would seem more appropriate to use an alternative process in which social parties could back a European Commission proposal for a directive that would contain the framework agreement, therefore embedding it in EU law. The 2010 Parental Leave Directive (2010/18/EU) is an example of that process. A framework backed by an EU directive would ensure more certainty and speedier EU-wide implementation. While a directive is no guarantee for effective uniformity of rules within the European Union, it should nevertheless lead to a lower level of cross-country variation than that observed with the Telework Framework (Figure 7).

Figure 7: Legislation and agreement linking teleworking and work-life balance



Source: Eurofound (2020c).

The Framework Agreement on Hybrid Work should protect hybrid and non-hybrid workers equally, establishing minimum conditions for a healthy blending of the virtual and physical presence of workers at the employer’s premises. Likewise, the Framework could make it easier for employers to adopt profitable hybrid work solutions based on broad standard organisational settings that have proved successful. It could go as far as proposing a template for hybrid employment, providing a well-defined structure that would facilitate the emergence of solutions in every European workplace to the ‘BBBB’ challenge described in section 3. A similar approach has already proved successful in Finland for implementing the Telework Framework: in Finland, it is fairly common for sectoral-level collective agreements to include an appendix with a template for a contract to be used locally by the employer and employee if they agree on a telework arrangement (ILO, Eurofound, 2017).

The new Framework should specify key safeguards for the well-being of workers and minimum standards of quality. It would offer guidance to facilitate the blending of remote and on-site work, while allow the necessary flexibility to employers and employees to craft work arrangements that best fit their specific needs.

For example, the Framework could suggest ways in which the performance of hybrid and non-hybrid workers would be assessed periodically, ensuring fair and equal treatment, so

that no category of workers can enjoy unwarranted advantages. Employers could implement a structured system of protections to protect the health hybrid workers from new threats arising from remote work, mirroring the recommendations we have discussed in section 3.

For example, employers could establish:

- Stricter limits on management monitoring of teleworking, preventing the use of ‘spying’ technologies and requiring transparent information to be given to employees for any performance-measuring technology used.
- Well-defined video-connection rules, such as maximum amounts of daily time spent on video calls and strict ‘virtual’ commuting times between video calls/meeting.
- A ‘right to disconnect’, ie to prevent workers from engaging in work-related tasks – such as video calls, work interaction on digital platforms and emails – outside working hours (European Parliament, 2021).
- The use of technologies and processes to monitor, anticipate and prevent remote workers’ digital exhaustion, while respecting their privacy. Compared to their office-based counterparts, remote workers are more exposed to exhaustion, as they feel more pressure to flag-up their efforts, which are not as visible as they would be if they were in the office. They may thus try to produce a digital footprint that indicates that they are exceptionally hard workers, often resulting in high levels of burnout.
- Measures that guarantee the maximum protection of worker privacy and of their personal data.
- Cybersecurity assistance and protection related to their personal equipment or home appliances that are necessary for the work hybrid workers perform.

The Framework could also propose incentives for employers and employees to adopt systems, training and roles that can increase the chances of success of hybrid work models. For example:

- Adapted meeting structures, such as office-hours models in which management is regularly available ‘on call’ to interact with colleagues (see section 3); regular short meetings between team members, regardless of whether they work remotely; and the promotion of regular on-site or off-site meetings and get-togethers, depending on the needs and constraints of all employees.
- Dedicated training programmes not specifically targeted at hybrid workers but at all the workforce, in order to facilitate coordination and the blending of the different models. For example, on-site workers should learn how to facilitate the involvement of colleagues working remotely, while hybrid workers could benefit from training programmes targeted at improving their self-management skills or their ability to network through digital technologies.
- Performance assessments for every worker (hybrid and non-hybrid) that are generally more geared to assessment of outputs rather than the effort/input, in order to limit imbalances in the assessment of workers.
- Dedicated roles within companies, such as human resources professionals focusing on nurturing the relationship between remote workers and the company, ‘checking-in’ and connecting regularly with them, taking an interest in their actual and future working conditions and helping them with their career choices. In other words, hybrid workers should not feel ‘abandoned’ by their employers.

The Framework Agreement on Hybrid Work should not aim to dictate employers’ internal work organisation or workers’ choice. However, it should aim to facilitate the implementation of flexible working conditions, ensuring minimum protection levels for on-site and hybrid workers alike, while, at the same time, fostering harmonisation within the EU single market and unlocking workers’ geographical mobility.

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